# Supplementary Materials for

## Refraining from use diminishes cannabis-associated epigenetic changes in human sperm

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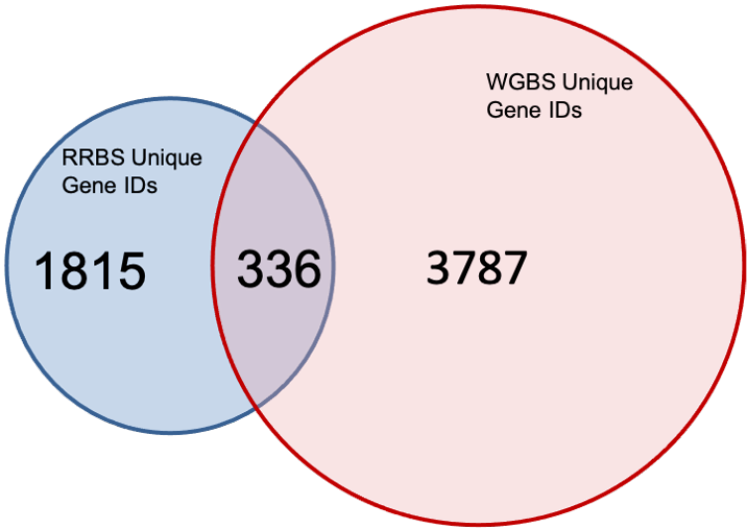
**This PDF file includes:**

Figs. S1 to S2
Tables S1 to S5




| Overlap p-value | Overlap Odds Ratio |
|---|---|
| $1.35x10^{-6}$ | 0.75 |

**Fig S1. WGBS & RRBS overlap.** Venn diagram showing the number of differentially methylated genes in common between RRBS and WGBS. A Fisher's exact test was run to confirm that there was significant overlap between these two sequencing methodologies ($p=1.35X10^{-6}$, odds ratio=0.75)

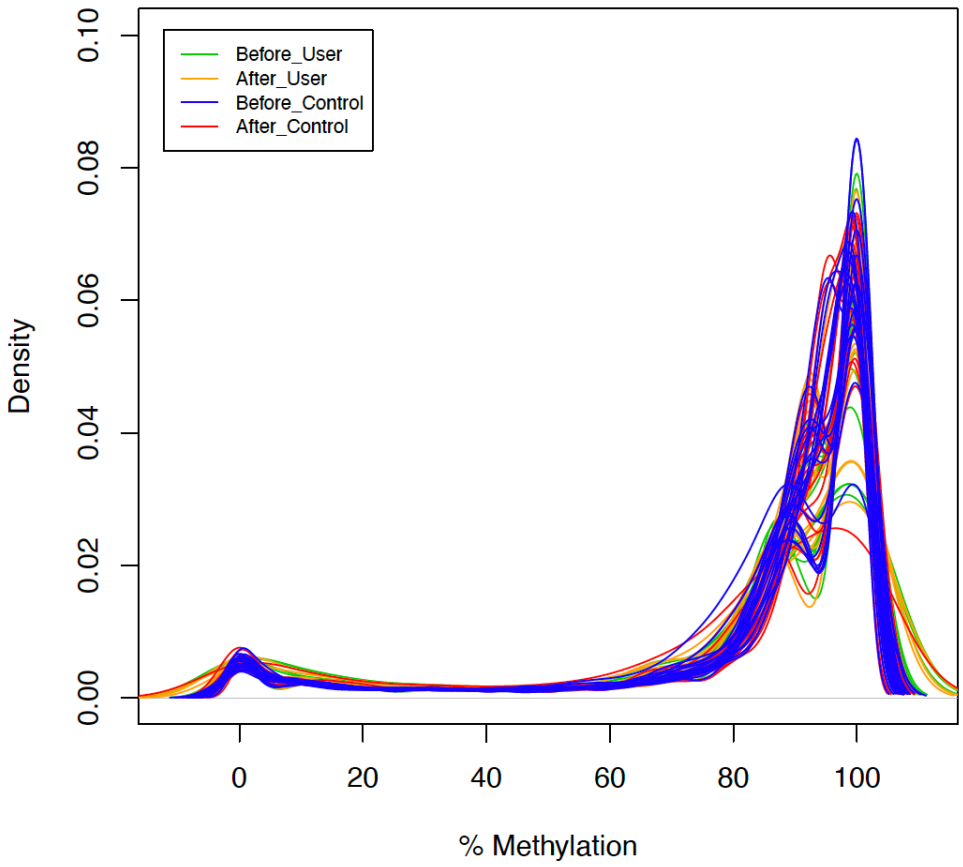



**Fig S2. Methylation distribution.** Distribution of methylation across the entire human genome for all participants analyzed via WGBS.

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| X | 21272798 | 21272798 | 1 | X_21272798 | ENSG00000283380 | AL807742.1 | 0 | INTRON | -7.7890625 | 6.75E-15 | 8.46E-08 |
| 13 | 76685551 | 76685551 | 1 | 13_76685551 | ENSG00000285572 | AL136441.1 | 0 | INTRON | 7.73994959 | 9.95E-15 | 8.46E-08 |
| 16 | 5800488 | 5800488 | 1 | 16_5800488 | ENSG00000078328 | RBFOX1 | 0 | INTRON | 7.20208331 | 5.93E-13 | 2.40E-06 |
| 11 | 98385011 | 98385011 | 1 | 11_98385011 | ENSG00000254939 | AP003038.1 | 180062 | Downstream | 7.16147705 | 7.98E-13 | 2.40E-06 |
| 3 | 35470036 | 35470036 | 1 | 3_35470036 | ENSG00000172995 | ARPP21 | 168908 | Upstream | -7.1547385 | 8.38E-13 | 2.40E-06 |
| 15 | 47430645 | 47430645 | 1 | 15_47430645 | ENSG00000137872 | SEMA6D | 0 | INTRON | 7.14474428 | 9.02E-13 | 2.40E-06 |
| 5 | 25611509 | 25611509 | 1 | 5_25611509 | ENSG00000201016 | RNU6-374P | 89707 | Downstream | -7.1322949 | 9.87E-13 | 2.40E-06 |
| 20 | 28737603 | 28737603 | 1 | 20_28737603 | ENSG00000282826 | FRG1CP | 134760 | Upstream | -7.0269655 | 2.11E-12 | 4.49E-06 |
| 4 | 28400352 | 28400352 | 1 | 4_28400352 | ENSG00000250038 | AC093791.1 | 0 | INTRON | 7.00367262 | 2.49E-12 | 4.71E-06 |
| 7 | 71210333 | 71210333 | 1 | 7_71210333 | ENSG00000185274 | GALNT17 | 0 | INTRON | 6.96721877 | 3.23E-12 | 5.38E-06 |
| 12 | 40749901 | 40749901 | 1 | 12_40749901 | ENSG00000018236 | CNTN1 | 0 | INTRON | 6.95339923 | 3.57E-12 | 5.38E-06 |
| 3 | 155668496 | 155668496 | 1 | 3_155668496 | ENSG00000114805 | PLCH1 | 0 | INTRON | 6.93977844 | 3.93E-12 | 5.38E-06 |
| 17 | 69934451 | 69934451 | 1 | 17_69934451 | ENSG00000237560 | LINC01497 | 27116 | Upstream | -6.9238945 | 4.39E-12 | 5.38E-06 |
| 13 | 110495834 | 110495834 | 1 | 13_110495834 | ENSG00000134871 | COL4A2 | 0 | INTRON | 6.91976079 | 4.52E-12 | 5.38E-06 |
| 10 | 106430877 | 106430877 | 1 | 10_106430877 | ENSG00000215002 | RPL23AP59 | 119228 | Upstream | 6.91314836 | 4.74E-12 | 5.38E-06 |
| 18 | 33691935 | 33691935 | 1 | 18_33691935 | ENSG00000141431 | ASXL3 | 0 | INTRON | 6.87723599 | 6.10E-12 | 6.49E-06 |
| 3 | 58506349 | 58506349 | 1 | 3_58506349 | ENSG00000168306 | ACOX2 | 0 | INTRON | -6.8318586 | 8.38E-12 | 8.39E-06 |
| 22 | 48407261 | 48407261 | 1 | 22_48407261 | ENSG00000285855 | Z72006.1 | 0 | INTRON | -6.7256692 | 1.75E-11 | 1.65E-05 |
| 11 | 54844268 | 54844268 | 1 | 11_54844268 | ENSG00000255078 | OR4A6P | 118452 | Downstream | -6.7096444 | 1.95E-11 | 1.72E-05 |
| 19 | 5715470 | 5715470 | 1 | 19_5715470 | ENSG00000196365 | LONP1 | 0 | INTRON | 6.70453713 | 2.02E-11 | 1.72E-05 |
| 1 | 83569102 | 83569102 | 1 | 1_83569102 | ENSG00000233008 | LINC01725 | 6673 | Downstream | 6.66602693 | 2.63E-11 | 2.13E-05 |
| X | 9754272 | 9754272 | 1 | X_9754272 | ENSG00000101850 | GPR143 | 0 | INTRON | 6.65642516 | 2.81E-11 | 2.17E-05 |
| 10 | 54748879 | 54748879 | 1 | 10_54748879 | ENSG00000150275 | PCDH15 | 0 | INTRON | 6.6412817 | 3.11E-11 | 2.26E-05 |
| X | 38897158 | 38897158 | 1 | X_38897158 | ENSG00000165175 | MID1IP1 | 90621 | Downstream | 6.6378731 | 3.18E-11 | 2.26E-05 |
| X | 56058045 | 56058045 | 1 | X_56058045 | ENSG00000227486 | AL050309.1 | 0 | INTRON | 6.59762702 | 4.18E-11 | 2.83E-05 |
| 1 | 101106614 | 101106614 | 1 | 1_101106614 | ENSG00000233184 | AC093157.1 | 16101 | Downstream | 6.59258758 | 4.32E-11 | 2.83E-05 |
| 1 | 144322776 | 144322776 | 1 | 1_144322776 | ENSG00000276756 | AC245595.1 | 17596 | Upstream | 6.58449329 | 4.56E-11 | 2.88E-05 |
| 9 | 81466501 | 81466501 | 1 | 9_81466501 | ENSG00000237072 | AL161727.1 | 21806 | Upstream | 6.55196031 | 5.68E-11 | 3.44E-05 |
| 9 | 39574050 | 39574050 | 1 | 9_39574050 | ENSG00000269692 | FKBP4P2 | 56995 | Upstream | -6.5451602 | 5.94E-11 | 3.44E-05 |
| 10 | 132486042 | 132486042 | 1 | 10_132486042 | ENSG00000226900 | AL451069.1 | 22351 | Downstream | 6.54216853 | 6.06E-11 | 3.44E-05 |
| 9 | 132474815 | 132474815 | 1 | 9_132474815 | ENSG00000188523 | CFAP77 | 0 | INTRON | -6.4950326 | 8.30E-11 | 4.36E-05 |
| 15 | 51898070 | 51898070 | 1 | 15_51898070 | ENSG00000259201 | AC090971.2 | 0 | INTRON | 6.4914853 | 8.50E-11 | 4.36E-05 |
| 12 | 130409411 | 130409411 | 1 | 12_130409411 | ENSG00000060709 | RIMBP2 | 0 | INTRON | 6.48866667 | 8.66E-11 | 4.36E-05 |
| 8 | 143860622 | 143860622 | 1 | 8_143860622 | ENSG00000261150 | EPPK1 | 0 | EXON | -6.4851739 | 8.86E-11 | 4.36E-05 |
| 1 | 147085125 | 147085125 | 1 | 1_147085125 | ENSG00000286172 | RNVU1-8 | 369 | Upstream | -6.4793536 | 9.21E-11 | 4.36E-05 |
| X | 86466844 | 86466844 | 1 | X_86466844 | ENSG00000126733 | DACH2 | 0 | INTRON | -6.4791327 | 9.23E-11 | 4.36E-05 |
| 4 | 18560255 | 18560255 | 1 | 4_18560255 | ENSG00000286046 | AC093898.1 | 0 | INTRON | -6.4478654 | 1.13E-10 | 5.22E-05 |
| 1 | 38424236 | 38424236 | 1 | 1_38424236 | ENSG00000200796 | RNU6-753P | 27471 | Downstream | -6.4363408 | 1.22E-10 | 5.48E-05 |
| 14 | 29589240 | 29589240 | 1 | 14_29589240 | ENSG00000184304 | PRKD1 | 0 | INTRON | 6.42601438 | 1.31E-10 | 5.72E-05 |
| X | 104036289 | 104036289 | 1 | X_104036289 | ENSG00000101812 | H2BFM | 3659 | Upstream | -6.412869 | 1.43E-10 | 6.07E-05 |
| 7 | 61770477 | 61770477 | 1 | 7_61770477 | ENSG00000233918 | AC128676.1 | 504883 | Downstream | -6.3930327 | 1.63E-10 | 6.58E-05 |
| 18 | 74421976 | 74421976 | 1 | 18_74421976 | ENSG00000259779 | LINC01922 | 8767 | Downstream | 6.38915129 | 1.67E-10 | 6.58E-05 |
| 4 | 76117460 | 76117460 | 1 | 4_76117460 | ENSG00000138750 | NUP54 | 0 | INTRON | 6.38718815 | 1.69E-10 | 6.58E-05 |
| 7 | 87394320 | 87394320 | 1 | 7_87394320 | ENSG00000005469 | CROT | 0 | INTRON | 6.38618116 | 1.70E-10 | 6.58E-05 |
| 10 | 125482889 | 125482889 | 1 | 10_125482889 | ENSG00000233135 | RPS27P18 | 8957 | Upstream | 6.38274698 | 1.74E-10 | 6.58E-05 |
| 2 | 18419391 | 18419391 | 1 | 2_18419391 | ENSG00000287881 | AC079148.3 | 0 | INTRON | -6.3586522 | 2.04E-10 | 7.53E-05 |
| 12 | 111352771 | 111352771 | 1 | 12_111352771 | ENSG00000111249 | CUX2 | 2217 | Downstream | 6.34610831 | 2.21E-10 | 7.95E-05 |
| 9 | 128844737 | 128844737 | 1 | 9_128844737 | ENSG00000286112 | AL441992.2 | 0 | INTRON | -6.3437259 | 2.24E-10 | 7.95E-05 |
| 15 | 85464814 | 85464814 | 1 | 15_85464814 | ENSG00000170776 | AKAP13 | 0 | INTRON | 6.32892895 | 2.47E-10 | 8.57E-05 |
| 2 | 222178774 | 222178774 | 1 | 2_222178774 | ENSG00000135903 | PAX3 | 21113 | Downstream | -6.3180345 | 2.65E-10 | 8.97E-05 |
| 1 | 120983325 | 120983325 | 1 | 1_120983325 | ENSG00000226067 | LINC00623 | 0 | INTRON | 6.31582082 | 2.69E-10 | 8.97E-05 |
| 10 | 87397558 | 87397558 | 1 | 10_87397558 | ENSG00000228055 | FAM245A | 0 | EXON | 6.30547672 | 2.87E-10 | 9.40E-05 |
| 3 | 166101504 | 166101504 | 1 | 3_166101504 | ENSG00000242178 | MTND4P17 | 58516 | Downstream | 6.30143767 | 2.95E-10 | 9.47E-05 |
| 2 | 201370235 | 201370235 | 1 | 2_201370235 | ENSG00000115993 | TRAK2 | 6971 | Downstream | 6.29654247 | 3.04E-10 | 9.54E-05 |
| 3 | 32771578 | 32771578 | 1 | 3_32771578 | ENSG00000182973 | CNOT10 | 0 | INTRON | 6.29453017 | 3.08E-10 | 9.54E-05 |
| 5 | 130017157 | 130017157 | 1 | 5_130017157 | ENSG00000198108 | CHSY3 | 0 | INTRON | 6.28771054 | 3.22E-10 | 9.79E-05 |
| 15 | 42345516 | 42345516 | 1 | 15_42345516 | ENSG00000214013 | GANC | 0 | INTRON | -6.2577664 | 3.91E-10 | 0.00011505 |
| 5 | 27867238 | 27867238 | 1 | 5_27867238 | ENSG00000250079 | AC093300.1 | 346120 | Downstream | 6.2547335 | 3.98E-10 | 0.00011505 |
| 19 | 9866463 | 9866463 | 1 | 19_9866463 | ENSG00000105088 | OLFM2 | 0 | INTRON | 6.25259319 | 4.04E-10 | 0.00011505 |
| 1 | 8669841 | 8669841 | 1 | 1_8669841 | ENSG00000142599 | RERE | 0 | INTRON | 6.25181964 | 4.06E-10 | 0.00011505 |
| 19 | 3823180 | 3823180 | 1 | 19_3823180 | ENSG00000105278 | ZFR2 | 0 | INTRON | 6.24432661 | 4.26E-10 | 0.00011873 |
| 4 | 183810132 | 183810132 | 1 | 4_183810132 | ENSG00000173320 | STOX2 | 0 | INTRON | 6.24031901 | 4.37E-10 | 0.00011985 |
| 11 | 91240812 | 91240812 | 1 | 11_91240812 | ENSG00000255187 | LINC02748 | 6424 | Downstream | -6.2340143 | 4.55E-10 | 0.00012279 |
| 11 | 12753095 | 12753095 | 1 | 11_12753095 | ENSG00000187079 | TEAD1 | 0 | INTRON | -6.2260183 | 4.78E-10 | 0.00012587 |
| 14 | 84377933 | 84377933 | 1 | 14_84377933 | ENSG00000259012 | MTCYBP27 | 200845 | Downstream | -6.2252424 | 4.81E-10 | 0.00012587 |
| 1 | 224845287 | 224845287 | 1 | 1_224845287 | ENSG00000286719 | AL391811.1 | 0 | INTRON | -6.2220761 | 4.91E-10 | 0.00012633 |
| X | 155745775 | 155745775 | 1 | X_155745775 | ENSG00000168939 | SPRY3 | 22036 | Upstream | -6.2199118 | 4.97E-10 | 0.00012633 |
| 10 | 54644627 | 54644627 | 1 | 10_54644627 | ENSG00000150275 | PCDH15 | 0 | INTRON | 6.21283952 | 5.20E-10 | 0.00012896 |
| 4 | 2768008 | 2768008 | 1 | 4_2768008 | ENSG00000168884 | TNIP2 | 11666 | Upstream | -6.2083485 | 5.35E-10 | 0.00012896 |
| 16 | 34826839 | 34826839 | 1 | 16_34826839 | ENSG00000279165 | AC135776.4 | 115137 | Upstream | -6.2082102 | 5.36E-10 | 0.00012896 |
| 8 | 102518233 | 102518233 | 1 | 8_102518233 | ENSG00000253633 | AP002852.1 | 10506 | Upstream | 6.20756845 | 5.38E-10 | 0.00012896 |
| 19 | 33129161 | 33129161 | 1 | 19_33129161 | ENSG00000076650 | GPATCH1 | 0 | INTRON | 6.18972893 | 6.03E-10 | 0.00014155 |
| 2 | 139585746 | 139585746 | 1 | 2_139585746 | ENSG00000206901 | SNORA72 | 74191 | Downstream | -6.1885281 | 6.07E-10 | 0.00014155 |
| 2 | 54859419 | 54859419 | 1 | 2_54859419 | ENSG00000214595 | EML6 | 0 | INTRON | -6.1847947 | 6.22E-10 | 0.00014299 |
| 10 | 89513191 | 89513191 | 1 | 10_89513191 | ENSG00000152779 | SLC16A12 | 0 | INTRON | -6.1729702 | 6.70E-10 | 0.00015133 |
| 7 | 25077633 | 25077633 | 1 | 7_25077633 | ENSG00000172115 | CYCS | 42457 | Downstream | 6.17162546 | 6.76E-10 | 0.00015133 |
| 13 | 38456684 | 38456684 | 1 | 13_38456684 | ENSG00000236354 | LINC00437 | 76658 | Downstream | -6.1640869 | 7.09E-10 | 0.00015508 |
| 8 | 91292262 | 91292262 | 1 | 8_91292262 | ENSG00000147606 | SLC26A7 | 0 | INTRON | 6.15959086 | 7.29E-10 | 0.00015508 |
| 3 | 51471404 | 51471404 | 1 | 3_51471404 | ENSG00000145041 | DCAF1 | 0 | INTRON | -6.1584214 | 7.35E-10 | 0.00015508 |
| 1 | 26656909 | 26656909 | 1 | 1_26656909 | ENSG00000235069 | AL627082.1 | 9228 | Downstream | -6.1582754 | 7.35E-10 | 0.00015508 |
| 10 | 94375117 | 94375117 | 1 | 10_94375117 | ENSG00000173145 | NOC3L | 12158 | Upstream | -6.1576687 | 7.38E-10 | 0.00015508 |
| Y | 10173114 | 10173114 | 1 | Y_10173114 | ENSG00000231411 | DUX4L31 | 389 | Upstream | -6.1459243 | 7.95E-10 | 0.00016379 |
| 6 | 135876640 | 135876640 | 1 | 6_135876640 | ENSG00000286313 | AL360178.1 | 0 | INTRON | 6.14324071 | 8.09E-10 | 0.00016379 |
| 17 | 6782014 | 6782014 | 1 | 17_6782014 | ENSG00000177294 | FBXO39 | 0 | INTRON | -6.1417749 | 8.16E-10 | 0.00016379 |
| 13 | 66825626 | 66825626 | 1 | 13_66825626 | ENSG00000184226 | PCDH9 | 0 | INTRON | 6.14136121 | 8.18E-10 | 0.00016379 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | 17377037 | 17377037 | 1 | 6_17377037 | ENSG00000219314 | AL034372.1 | 4329 | Upstream | 6.1392447 | 8.29E-10 | 0.00016405 |
| 18 | 36493440 | 36493440 | 1 | 18_36493440 | ENSG00000134775 | FHOD3 | 0 | INTRON | -6.1350239 | 8.51E-10 | 0.00016653 |
| 15 | 76779967 | 76779967 | 1 | 15_76779967 | ENSG00000140386 | SCAPER | 0 | INTRON | -6.1325864 | 8.65E-10 | 0.00016715 |
| 11 | 134599932 | 134599932 | 1 | 11_134599932 | ENSG00000254573 | AP004550.1 | 26876 | Downstream | 6.13066181 | 8.75E-10 | 0.00016715 |
| 2 | 144030625 | 144030625 | 1 | 2_144030625 | ENSG00000121964 | GTDC1 | 0 | INTRON | -6.1274458 | 8.93E-10 | 0.00016715 |
| 13 | 88248233 | 88248233 | 1 | 13_88248233 | ENSG00000225289 | RPL29P29 | 11264 | Upstream | 6.12728759 | 8.94E-10 | 0.00016715 |
| 4 | 20755741 | 20755741 | 1 | 4_20755741 | ENSG00000185774 | KCNIP4 | 0 | INTRON | 6.12259679 | 9.21E-10 | 0.00016905 |
| 22 | 19353927 | 19353927 | 1 | 22_19353927 | ENSG00000100084 | HIRA | 0 | INTRON | 6.12202194 | 9.24E-10 | 0.00016905 |
| 17 | 41854362 | 41854362 | 1 | 17_41854362 | ENSG00000178502 | KLHL11 | 0 | EXON | -6.118026 | 9.47E-10 | 0.0001715 |
| 2 | 80993530 | 80993530 | 1 | 2_80993530 | ENSG00000230975 | AC012355.1 | 123340 | Upstream | 6.11496956 | 9.66E-10 | 0.00017298 |
| 22 | 21435856 | 21435856 | 1 | 22_21435856 | ENSG00000169635 | HIC2 | 0 | INTRON | -6.1131217 | 9.77E-10 | 0.00017317 |
| 7 | 1539467 | 1539467 | 1 | 7_1539467 | ENSG00000198517 | MAFK | 0 | INTRON | 6.10294754 | 1.04E-09 | 0.00018266 |
| 15 | 28182343 | 28182343 | 1 | 15_28182343 | ENSG00000128731 | HERC2 | 0 | INTRON | -6.0955466 | 1.09E-09 | 0.00018937 |
| 4 | 105699863 | 105699863 | 1 | 4_105699863 | ENSG00000138785 | INTS12 | 0 | EXON | 6.08970262 | 1.13E-09 | 0.00019221 |
| 3 | 3306492 | 3306492 | 1 | 3_3306492 | ENSG00000223727 | AC034195.1 | 0 | INTRON | -6.0895487 | 1.13E-09 | 0.00019221 |
| 7 | 36422795 | 36422795 | 1 | 7_36422795 | ENSG00000011426 | ANLN | 0 | EXON | -6.0876612 | 1.15E-09 | 0.00019221 |
| 4 | 83908001 | 83908001 | 1 | 4_83908001 | ENSG00000250546 | AC079160.1 | 0 | INTRON | -6.0867563 | 1.15E-09 | 0.00019221 |
| 3 | 140283339 | 140283339 | 1 | 3_140283339 | ENSG00000158258 | CLSTN2 | 0 | INTRON | 6.08060723 | 1.20E-09 | 0.00019779 |
| 9 | 79617141 | 79617141 | 1 | 9_79617141 | ENSG00000106829 | TLE4 | 0 | INTRON | 6.0773628 | 1.22E-09 | 0.0001982 |
| 14 | 81735653 | 81735653 | 1 | 14_81735653 | ENSG00000258718 | LINC02311 | 0 | INTRON | 6.07718946 | 1.22E-09 | 0.0001982 |
| 10 | 16244514 | 16244514 | 1 | 10_16244514 | ENSG00000226140 | LINC02654 | 32356 | Upstream | -6.0722322 | 1.26E-09 | 0.00020249 |
| 9 | 76233476 | 76233476 | 1 | 9_76233476 | ENSG00000099139 | PCSK5 | 0 | EXON | 6.06913684 | 1.29E-09 | 0.00020407 |
| 11 | 76897158 | 76897158 | 1 | 11_76897158 | ENSG00000078124 | ACER3 | 0 | INTRON | 6.06798585 | 1.30E-09 | 0.00020407 |
| 21 | 10459965 | 10459965 | 1 | 21_10459965 | ENSG00000187172 | BAGE2 | 0 | INTRON | -6.064454 | 1.32E-09 | 0.00020469 |
| 1 | 176007718 | 176007718 | 1 | 1_176007718 | ENSG00000143207 | COP1 | 0 | INTRON | 6.06394001 | 1.33E-09 | 0.00020469 |
| 18 | 62349370 | 62349370 | 1 | 18_62349370 | ENSG00000141655 | TNFRSF11A | 0 | INTRON | 6.06309316 | 1.34E-09 | 0.00020469 |
| 1 | 693190 | 693190 | 1 | 1_693190 | ENSG00000230021 | AL669831.3 | 0 | INTRON | -6.0610325 | 1.35E-09 | 0.00020548 |
| 5 | 9384254 | 9384254 | 1 | 5_9384254 | ENSG00000248537 | AC091906.1 | 0 | INTRON | -6.0546661 | 1.41E-09 | 0.00021011 |
| 7 | 153268537 | 153268537 | 1 | 7_153268537 | ENSG00000234722 | LINC01287 | 86827 | Downstream | -6.0545985 | 1.41E-09 | 0.00021011 |
| 4 | 32710122 | 32710122 | 1 | 4_32710122 | ENSG00000286784 | AC116611.1 | 0 | INTRON | 6.05116307 | 1.44E-09 | 0.00021156 |
| 9 | 68545009 | 68545009 | 1 | 9_68545009 | ENSG00000234506 | LINC01506 | 0 | INTRON | 6.05069068 | 1.44E-09 | 0.00021156 |
| 8 | 102618637 | 102618637 | 1 | 8_102618637 | ENSG00000253382 | POU5F1P2 | 2871 | Downstream | 6.04564264 | 1.49E-09 | 0.00021643 |
| 9 | 1752947 | 1752947 | 1 | 9_1752947 | ENSG00000287465 | AL358053.1 | 202844 | Upstream | 6.03753119 | 1.56E-09 | 0.00022463 |
| 5 | 180230007 | 180230007 | 1 | 5_180230007 | ENSG00000229721 | AC104115.1 | 3007 | Upstream | -6.0332421 | 1.61E-09 | 0.00022463 |
| 16 | 13916665 | 13916665 | 1 | 16_13916665 | ENSG00000175595 | ERCC4 | 3491 | Upstream | -6.032386 | 1.62E-09 | 0.00022463 |
| 2 | 29630253 | 29630253 | 1 | 2_29630253 | ENSG00000171094 | ALK | 0 | INTRON | -6.0323738 | 1.62E-09 | 0.00022463 |
| 2 | 39354018 | 39354018 | 1 | 2_39354018 | ENSG00000011566 | MAP4K3 | 0 | INTRON | 6.03233043 | 1.62E-09 | 0.00022463 |
| 21 | 41403313 | 41403313 | 1 | 21_41403313 | ENSG00000183486 | MX2 | 0 | EXON | -6.03157 | 1.62E-09 | 0.00022463 |
| 1 | 188549332 | 188549332 | 1 | 1_188549332 | ENSG00000225006 | AL929288.1 | 12867 | Downstream | 6.02707273 | 1.67E-09 | 0.0002291 |
| 3 | 71300666 | 71300666 | 1 | 3_71300666 | ENSG00000114861 | FOXP1 | 0 | INTRON | 6.02296559 | 1.71E-09 | 0.00023245 |
| X | 19736110 | 19736110 | 1 | X_19736110 | ENSG00000147010 | SH3KBP1 | 0 | INTRON | 6.02213793 | 1.72E-09 | 0.00023245 |
| 21 | 30403315 | 30403315 | 1 | 21_30403315 | ENSG00000198390 | KRTAP13-1 | 6493 | Downstream | 6.01842454 | 1.76E-09 | 0.00023597 |
| 8 | 26105173 | 26105173 | 1 | 8_26105173 | ENSG00000199620 | RNA5SP258 | 31706 | Upstream | -6.0142666 | 1.81E-09 | 0.00023868 |
| 2 | 203170264 | 203170264 | 1 | 2_203170264 | ENSG00000144426 | NBEAL1 | 0 | INTRON | 6.01404492 | 1.81E-09 | 0.00023868 |
| 4 | 139577728 | 139577728 | 1 | 4_139577728 | ENSG00000145391 | SETD7 | 0 | INTRON | 6.01072276 | 1.85E-09 | 0.00024175 |
| 3 | 88219363 | 88219363 | 1 | 3_88219363 | ENSG00000179021 | C3orf38 | 50634 | Downstream | 6.00799717 | 1.88E-09 | 0.00024397 |
| 12 | 34675963 | 34675963 | 1 | 12_34675963 | ENSG00000256614 | AK6P1 | 426005 | Downstream | -6.0009307 | 1.96E-09 | 0.00025136 |
| 16 | 58714530 | 58714530 | 1 | 16_58714530 | ENSG00000125166 | GOT2 | 0 | INTRON | 6.00069683 | 1.96E-09 | 0.00025136 |
| 14 | 65716485 | 65716485 | 1 | 14_65716485 | ENSG00000033170 | FUT8 | 0 | INTRON | -5.9957551 | 2.03E-09 | 0.00025617 |
| 12 | 127355698 | 127355698 | 1 | 12_127355698 | ENSG00000256502 | AC073913.2 | 11296 | Upstream | 5.99519814 | 2.03E-09 | 0.00025617 |
| 4 | 91903261 | 91903261 | 1 | 4_91903261 | ENSG00000249052 | AC093810.1 | 0 | INTRON | 5.99314854 | 2.06E-09 | 0.00025751 |
| 5 | 41423667 | 41423667 | 1 | 5_41423667 | ENSG00000182836 | PLCXD3 | 0 | INTRON | 5.98702095 | 2.14E-09 | 0.00026544 |
| 3 | 13908063 | 13908063 | 1 | 3_13908063 | ENSG00000233121 | VN1R20P | 18749 | Upstream | -5.9843682 | 2.17E-09 | 0.00026676 |
| 5 | 112134406 | 112134406 | 1 | 5_112134406 | ENSG00000129595 | EPB41L4A | 8034 | Downstream | 5.98318708 | 2.19E-09 | 0.00026676 |
| 16 | 58258518 | 58258518 | 1 | 16_58258518 | ENSG00000103021 | CCDC113 | 0 | 3UTR | -5.982693 | 2.19E-09 | 0.00026676 |
| 11 | 117685581 | 117685581 | 1 | 11_117685581 | ENSG00000177103 | DSCAML1 | 0 | INTRON | 5.98111408 | 2.22E-09 | 0.00026744 |
| 12 | 31274227 | 31274227 | 1 | 12_31274227 | ENSG00000275097 | AC024940.6 | 6194 | Downstream | -5.9799425 | 2.23E-09 | 0.00026748 |
| 7 | 111751731 | 111751731 | 1 | 7_111751731 | ENSG00000128512 | DOCK4 | 0 | INTRON | 5.97346347 | 2.32E-09 | 0.00027638 |
| 3 | 62125204 | 62125204 | 1 | 3_62125204 | ENSG00000144724 | PTPRG | 0 | INTRON | -5.9698471 | 2.37E-09 | 0.00027913 |
| 13 | 19125298 | 19125298 | 1 | 13_19125298 | ENSG00000224778 | CENPIP1 | 1100 | Upstream | -5.969584 | 2.38E-09 | 0.00027913 |
| 8 | 143863245 | 143863245 | 1 | 8_143863245 | ENSG00000261150 | EPPK1 | 0 | EXON | -5.9637225 | 2.47E-09 | 0.00028735 |
| 17 | 68645084 | 68645084 | 1 | 17_68645084 | ENSG00000267659 | LINC01482 | 0 | INTRON | -5.9593419 | 2.53E-09 | 0.00029204 |
| 5 | 107431053 | 107431053 | 1 | 5_107431053 | ENSG00000184349 | EFNA5 | 0 | INTRON | -5.9588552 | 2.54E-09 | 0.00029204 |
| 13 | 112613856 | 112613856 | 1 | 13_112613856 | ENSG00000277159 | AL139384.2 | 7439 | Upstream | 5.95572075 | 2.59E-09 | 0.00029435 |
| 4 | 99405932 | 99405932 | 1 | 4_99405932 | ENSG00000196344 | ADH7 | 6328 | Downstream | 5.95537503 | 2.59E-09 | 0.00029435 |
| 6 | 89614233 | 89614233 | 1 | 6_89614233 | ENSG00000083099 | LYRM2 | 0 | INTRON | 5.95399673 | 2.62E-09 | 0.00029487 |
| 7 | 85430514 | 85430514 | 1 | 7_85430514 | ENSG00000225128 | LINC00972 | 0 | INTRON | -5.9522636 | 2.64E-09 | 0.00029605 |
| 18 | 38984174 | 38984174 | 1 | 18_38984174 | ENSG00000222704 | RN7SKP182 | 31872 | Downstream | -5.9510249 | 2.66E-09 | 0.00029605 |
| 15 | 20483186 | 20483186 | 1 | 15_20483186 | ENSG00000180229 | HERC2P3 | 0 | INTRON | 5.95012204 | 2.68E-09 | 0.00029605 |
| 1 | 103533786 | 103533786 | 1 | 1_103533786 | ENSG00000185946 | RNPC3 | 0 | 5UTR | -5.9472145 | 2.73E-09 | 0.00029646 |
| 13 | 52236071 | 52236071 | 1 | 13_52236071 | ENSG00000272281 | TPTE2P2 | 0 | INTRON | 5.94666953 | 2.74E-09 | 0.00029646 |
| 1 | 223816295 | 223816295 | 1 | 1_223816295 | ENSG00000143514 | TP53BP2 | 0 | INTRON | 5.94640774 | 2.74E-09 | 0.00029646 |
| 13 | 101363289 | 101363289 | 1 | 13_101363289 | ENSG00000102452 | NALCN | 0 | INTRON | -5.9453371 | 2.76E-09 | 0.00029646 |
| 1 | 90538295 | 90538295 | 1 | 1_90538295 | ENSG00000229201 | LINC02787 | 4823 | Upstream | -5.9445797 | 2.77E-09 | 0.00029646 |
| 7 | 6337132 | 6337132 | 1 | 7_6337132 | ENSG00000178397 | FAM220A | 0 | INTRON | 5.9436374 | 2.79E-09 | 0.00029646 |
| 4 | 169229773 | 169229773 | 1 | 4_169229773 | ENSG00000154447 | SH3RF1 | 0 | INTRON | 5.94037203 | 2.84E-09 | 0.00030055 |
| 12 | 47752932 | 47752932 | 1 | 12_47752932 | ENSG00000079337 | RAPGEF3 | 0 | INTRON | -5.9393125 | 2.86E-09 | 0.00030063 |
| 1 | 242925540 | 242925540 | 1 | 1_242925540 | ENSG00000277704 | AL445675.2 | 34737 | Downstream | 5.93710946 | 2.90E-09 | 0.00030283 |
| 11 | 101872386 | 101872386 | 1 | 11_101872386 | ENSG00000137672 | TRPC6 | 0 | EXON | 5.93303919 | 2.97E-09 | 0.00030854 |
| 6 | 74278135 | 74278135 | 1 | 6_74278135 | ENSG00000223786 | AL357507.1 | 0 | INTRON | 5.92989759 | 3.03E-09 | 0.0003126 |
| 14 | 57306608 | 57306608 | 1 | 14_57306608 | ENSG00000053770 | AP5M1 | 7866 | Downstream | 5.92292945 | 3.16E-09 | 0.00032418 |
| 2 | 70198572 | 70198572 | 1 | 2_70198572 | ENSG00000115998 | C2orf42 | 0 | INTRON | 5.91985477 | 3.22E-09 | 0.00032832 |
| 1 | 214779641 | 214779641 | 1 | 1_214779641 | ENSG00000185221 | GAPDHP24 | 91092 | Upstream | -5.9159977 | 3.30E-09 | 0.00032973 |
| 2 | 190074565 | 190074565 | 1 | 2_190074565 | ENSG00000187699 | C2orf88 | 0 | INTRON | 5.91571701 | 3.30E-09 | 0.00032973 |
| 20 | 35037263 | 35037263 | 1 | 20_35037263 | ENSG00000100991 | TRPC4AP | 0 | INTRON | 5.91491964 | 3.32E-09 | 0.00032973 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 121217827 | 121217827 | 1 | 2_121217827 | ENSG00000115112 | TFCP2L1 | 0 | 3UTR | -5.9143976 | 3.33E-09 | 0.00032973 |
| 1 | 227590398 | 227590398 | 1 | 1_227590398 | ENSG00000181450 | ZNF678 | 0 | INTRON | 5.91348576 | 3.35E-09 | 0.00032973 |
| 22 | 43657047 | 43657047 | 1 | 22_43657047 | ENSG00000186976 | EFCAB6 | 0 | INTRON | 5.91265588 | 3.37E-09 | 0.00032973 |
| 5 | 80468121 | 80468121 | 1 | 5_80468121 | ENSG00000039319 | ZFYVE16 | 0 | INTRON | -5.9123897 | 3.37E-09 | 0.00032973 |
| X | 68460957 | 68460957 | 1 | X_68460957 | ENSG00000225925 | AL672138.1 | 13752 | Upstream | 5.90999954 | 3.42E-09 | 0.00033032 |
| 13 | 27947515 | 27947515 | 1 | 13_27947515 | ENSG00000180389 | ATP5F1EP2 | 2100 | Downstream | 5.90998635 | 3.42E-09 | 0.00033032 |
| 15 | 74677831 | 74677831 | 1 | 15_74677831 | ENSG00000179151 | EDC3 | 0 | INTRON | 5.90928051 | 3.44E-09 | 0.00033032 |
| 2 | 224282584 | 224282584 | 1 | 2_224282584 | ENSG00000228681 | AC008072.1 | 12345 | Upstream | 5.90602127 | 3.50E-09 | 0.00033503 |
| 6 | 71769584 | 71769584 | 1 | 6_71769584 | ENSG00000202069 | RNU4-66P | 116973 | Upstream | 5.90427886 | 3.54E-09 | 0.00033631 |
| 10 | 10694317 | 10694317 | 1 | 10_10694317 | ENSG00000228997 | AL136452.1 | 81905 | Downstream | -5.9035494 | 3.56E-09 | 0.00033631 |
| 17 | 62086782 | 62086782 | 1 | 17_62086782 | ENSG00000108510 | MED13 | 21504 | Upstream | 5.88865947 | 3.89E-09 | 0.00036549 |
| 2 | 123981230 | 123981230 | 1 | 2_123981230 | ENSG00000228400 | AC079154.1 | 30753 | Downstream | -5.8874233 | 3.92E-09 | 0.00036549 |
| 7 | 148490832 | 148490832 | 1 | 7_148490832 | ENSG00000283504 | AC006974.1 | 0 | INTRON | 5.88650457 | 3.94E-09 | 0.00036549 |
| X | 65462816 | 65462816 | 1 | X_65462816 | ENSG00000102053 | ZC3H12B | 0 | INTRON | 5.88617846 | 3.95E-09 | 0.00036549 |
| 6 | 165399990 | 165399990 | 1 | 6_165399990 | ENSG00000112541 | PDE10A | 0 | INTRON | 5.87906504 | 4.13E-09 | 0.00037949 |
| 4 | 182497688 | 182497688 | 1 | 4_182497688 | ENSG00000218336 | TENM3 | 0 | INTRON | 5.87804057 | 4.15E-09 | 0.00037979 |
| 3 | 7779861 | 7779861 | 1 | 3_7779861 | ENSG00000270207 | AC077690.1 | 0 | INTRON | 5.87516474 | 4.22E-09 | 0.00038438 |
| 14 | 71759177 | 71759177 | 1 | 14_71759177 | ENSG00000197555 | SIPA1L1 | 17948 | Downstream | 5.87231498 | 4.30E-09 | 0.00038896 |
| 12 | 127321430 | 127321430 | 1 | 12_127321430 | ENSG00000253089 | RNU1-104P | 0 | EXON | 5.87093753 | 4.33E-09 | 0.00039014 |
| 2 | 123929344 | 123929344 | 1 | 2_123929344 | ENSG00000223118 | RN7SKP102 | 59774 | Upstream | 5.86679079 | 4.44E-09 | 0.00039791 |
| 6 | 157096504 | 157096504 | 1 | 6_157096504 | ENSG00000049618 | ARID1B | 0 | INTRON | -5.8654258 | 4.48E-09 | 0.00039863 |
| 9 | 42376673 | 42376673 | 1 | 9_42376673 | ENSG00000268234 | FKBP4P6 | 8131 | Upstream | -5.8647522 | 4.50E-09 | 0.00039863 |
| 21 | 42482144 | 42482144 | 1 | 21_42482144 | ENSG00000160188 | RSPH1 | 0 | INTRON | -5.8581502 | 4.68E-09 | 0.00041071 |
| 2 | 5244386 | 5244386 | 1 | 2_5244386 | ENSG00000228585 | AC073143.1 | 69353 | Downstream | 5.85770261 | 4.69E-09 | 0.00041071 |
| 9 | 114594401 | 114594401 | 1 | 9_114594401 | ENSG00000136888 | ATP6V1G1 | 0 | INTRON | -5.8568005 | 4.72E-09 | 0.00041071 |
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| 6 | 90957753 | 90957753 | 1 | 6_90957753 | ENSG00000135341 | MAP3K7 | 370681 | Upstream | 5.85468376 | 4.78E-09 | 0.00041071 |
| 12 | 78335834 | 78335834 | 1 | 12_78335834 | ENSG00000258220 | LINC02424 | 0 | INTRON | -5.8505977 | 4.90E-09 | 0.00041882 |
| 1 | 116728122 | 116728122 | 1 | 1_116728122 | ENSG00000223489 | NEFHP1 | 11858 | Downstream | 5.84562094 | 5.05E-09 | 0.00042938 |
| 7 | 131885 | 131885 | 1 | 7_131885 | ENSG00000287883 | AC093627.22 | 0 | EXON | 5.84221191 | 5.15E-09 | 0.00043579 |
| 9 | 38921730 | 38921730 | 1 | 9_38921730 | ENSG00000287838 | AL953883.1 | 28003 | Upstream | 5.84149494 | 5.17E-09 | 0.00043579 |
| 3 | 181748564 | 181748564 | 1 | 3_181748564 | ENSG00000242808 | SOX2-OT | 0 | INTRON | 5.83900325 | 5.25E-09 | 0.00043843 |
| 9 | 2116769 | 2116769 | 1 | 9_2116769 | ENSG00000080503 | SMARCA2 | 0 | INTRON | 5.83826874 | 5.27E-09 | 0.00043843 |
| 18 | 15933728 | 15933728 | 1 | 18_15933728 | ENSG00000215512 | AP005901.1 | 603446 | Upstream | -5.8380348 | 5.28E-09 | 0.00043843 |
| 4 | 107072312 | 107072312 | 1 | 4_107072312 | ENSG00000155011 | DKK2 | 0 | INTRON | 5.83574799 | 5.35E-09 | 0.00044232 |
| 1 | 60501385 | 60501385 | 1 | 1_60501385 | ENSG00000226476 | LINC01748 | 14330 | Downstream | 5.83299415 | 5.44E-09 | 0.00044752 |
| 12 | 48773918 | 48773918 | 1 | 12_48773918 | ENSG00000174233 | ADCY6 | 0 | EXON | -5.8310938 | 5.51E-09 | 0.00044842 |
| 6 | 155225175 | 155225175 | 1 | 6_155225175 | ENSG00000146426 | TIAM2 | 0 | INTRON | 5.83105592 | 5.51E-09 | 0.00044842 |
| 14 | 20858016 | 20858016 | 1 | 14_20858016 | ENSG00000259130 | AL133371.3 | 12261 | Downstream | 5.82931399 | 5.57E-09 | 0.00045096 |
| 15 | 52925241 | 52925241 | 1 | 15_52925241 | ENSG00000259612 | EEF1A1P22 | 11897 | Downstream | 5.82587022 | 5.68E-09 | 0.00045818 |
| 5 | 676933 | 676933 | 1 | 5_676933 | ENSG00000171368 | TPPP | 0 | INTRON | -5.8233906 | 5.77E-09 | 0.00046284 |
| 7 | 80387731 | 80387731 | 1 | 7_80387731 | ENSG00000232667 | AC004862.1 | 0 | INTRON | 5.82115196 | 5.84E-09 | 0.00046688 |
| 3 | 95999645 | 95999645 | 1 | 3_95999645 | ENSG00000286516 | AC106719.1 | 80093 | Downstream | 5.81933215 | 5.91E-09 | 0.00046979 |
| 7 | 62305771 | 62305771 | 1 | 7_62305771 | ENSG00000233918 | AC128676.1 | 30093 | Upstream | -5.8172456 | 5.98E-09 | 0.00047347 |
| 15 | 90066462 | 90066462 | 1 | 15_90066462 | ENSG00000140548 | ZNF710 | 0 | INTRON | 5.80485067 | 6.44E-09 | 0.00050528 |
| 6 | 9055310 | 9055310 | 1 | 6_9055310 | ENSG00000285219 | HULC | 0 | INTRON | -5.8048134 | 6.44E-09 | 0.00050528 |
| 11 | 68959727 | 68959727 | 1 | 11_68959727 | ENSG00000255741 | AP000808.1 | 16875 | Upstream | -5.8038204 | 6.48E-09 | 0.00050595 |
| 8 | 85181948 | 85181948 | 1 | 8_85181948 | ENSG00000133740 | E2F5 | 0 | INTRON | 5.79888129 | 6.68E-09 | 0.0005187 |
| 17 | 22427117 | 22427117 | 1 | 17_22427117 | ENSG00000261020 | AC132825.3 | 2386 | Downstream | -5.7965016 | 6.77E-09 | 0.00052252 |
| 14 | 106120269 | 106120269 | 1 | 14_106120269 | ENSG00000254215 | IGHVIII-11-1 | 0 | EXON | -5.7961231 | 6.79E-09 | 0.00052252 |
| 20 | 61989830 | 61989830 | 1 | 20_61989830 | ENSG00000130699 | TAF4 | 0 | INTRON | 5.79385721 | 6.88E-09 | 0.00052724 |
| 3 | 64911781 | 64911781 | 1 | 3_64911781 | ENSG00000241684 | ADAMTS9-AS2 | 0 | INTRON | 5.79285582 | 6.92E-09 | 0.00052802 |
| 5 | 157757022 | 157757022 | 1 | 5_157757022 | ENSG00000155858 | LSM11 | 0 | 3UTR | 5.78863153 | 7.10E-09 | 0.00053905 |
| 15 | 23136130 | 23136130 | 1 | 15_23136130 | ENSG00000273976 | GOLGA6L1 | 0 | INTRON | -5.7869275 | 7.17E-09 | 0.00054104 |
| 19 | 52971727 | 52971727 | 1 | 19_52971727 | ENSG00000242779 | ZNF702P | 0 | INTRON | 5.78589307 | 7.21E-09 | 0.00054104 |
| 12 | 83099347 | 83099347 | 1 | 12_83099347 | ENSG00000179104 | TMTC2 | 0 | INTRON | 5.78577779 | 7.22E-09 | 0.00054104 |
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| 9 | 64354994 | 64354994 | 1 | 9_64354994 | ENSG00000285580 | CR769776.3 | 0 | INTRON | 5.77072495 | 7.89E-09 | 0.0005859 |
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| 5 | 178634392 | 178634392 | 1 | 5_178634392 | ENSG00000113240 | CLK4 | 3777 | Upstream | -5.7684405 | 8.00E-09 | 0.00058681 |
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| 9 | 126274747 | 126274747 | 1 | 9_126274747 | ENSG00000228392 | AL162391.1 | 0 | INTRON | -5.7643151 | 8.20E-09 | 0.00059575 |
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| 16 | 89628350 | 89628350 | 1 | 16_89628350 | ENSG00000015413 | DPEP1 | 0 | INTRON | 5.76192197 | 8.32E-09 | 0.00059667 |
| 10 | 131958279 | 131958279 | 1 | 10_131958279 | ENSG00000175470 | PPP2R2D | 0 | 3UTR | 5.76155484 | 8.33E-09 | 0.00059667 |
| 15 | 54491916 | 54491916 | 1 | 15_54491916 | ENSG00000137766 | UNC13C | 0 | INTRON | 5.76132483 | 8.35E-09 | 0.00059667 |
| 20 | 29873198 | 29873198 | 1 | 20_29873198 | ENSG00000283433 | RNA5SP532 | 860 | Upstream | -5.759931 | 8.41E-09 | 0.00059753 |
| 14 | 72669974 | 72669974 | 1 | 14_72669974 | ENSG00000205683 | DPF3 | 0 | 3UTR | 5.75925459 | 8.45E-09 | 0.00059753 |
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| 1 | 18233328 | 18233328 | 1 | 1_18233328 | ENSG00000117154 | IGSF21 | 0 | INTRON | 5.7546676 | 8.68E-09 | 0.00060803 |
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| 2 | 14675125 | 14675125 | 1 | 2_14675125 | ENSG00000162981 | LRATD1 | 24311 | Downstream | -5.7536743 | 8.73E-09 | 0.00060897 |
| 5 | 53150674 | 53150674 | 1 | 5_53150674 | ENSG00000247796 | AC008966.1 | 23001 | Downstream | -5.7501102 | 8.92E-09 | 0.00061709 |
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| 21 | 38844007 | 38844007 | 1 | 21_38844007 | ENSG00000205622 | AP001042.1 | 0 | INTRON | 5.74890847 | 8.98E-09 | 0.00061878 |
| 6 | 9580561 | 9580561 | 1 | 6_9580561 | ENSG00000181355 | OFCC1 | 15548 | Downstream | -5.7474162 | 9.06E-09 | 0.00062174 |
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| 17 | 19949497 | 19949497 | 1 | 17_19949497 | ENSG00000108599 | AKAP10 | 0 | INTRON | 5.74365961 | 9.27E-09 | 0.00063062 |
| 18 | 47916311 | 47916311 | 1 | 18_47916311 | ENSG00000175387 | SMAD2 | 0 | INTRON | 5.74269249 | 9.32E-09 | 0.0006317 |
| X | 73361993 | 73361993 | 1 | X_73361993 | ENSG00000207486 | RNU6-1044P | 35537 | Downstream | 5.74088295 | 9.42E-09 | 0.00063596 |
| 2 | 60609067 | 60609067 | 1 | 2_60609067 | ENSG00000242158 | RN7SL361P | 31637 | Upstream | 5.73391658 | 9.81E-09 | 0.00065194 |
| 18 | 28537020 | 28537020 | 1 | 18_28537020 | ENSG00000265994 | AC090365.1 | 101693 | Upstream | 5.73344405 | 9.84E-09 | 0.00065194 |
| 8 | 143863223 | 143863223 | 1 | 8_143863223 | ENSG00000261150 | EPPK1 | 0 | EXON | -5.7330043 | 9.87E-09 | 0.00065194 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
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| 22 | 26902874 | 26902874 | 1 | 22_26902874 | ENSG00000223704 | LINC01422 | 0 | INTRON | -5.7327953 | 9.88E-09 | 0.00065194 |
| 9 | 77795476 | 77795476 | 1 | 9_77795476 | ENSG00000156052 | GNAQ | 0 | INTRON | 5.73272536 | 9.88E-09 | 0.00065194 |
| X | 17725761 | 17725761 | 1 | X_17725761 | ENSG00000188158 | NHS | 0 | EXON | -5.732375 | 9.90E-09 | 0.00065194 |
| 4 | 165898442 | 165898442 | 1 | 4_165898442 | ENSG00000038295 | TLL1 | 0 | INTRON | 5.73173352 | 9.94E-09 | 0.00065194 |
| 13 | 86354187 | 86354187 | 1 | 13_86354187 | ENSG00000287880 | AL445207.1 | 48794 | Downstream | 5.73137985 | 9.96E-09 | 0.00065194 |
| 7 | 70904508 | 70904508 | 1 | 7_70904508 | ENSG00000236978 | AC073873.1 | 66495 | Downstream | 5.72694243 | 1.02E-08 | 0.00066666 |
| 5 | 109730790 | 109730790 | 1 | 5_109730790 | ENSG00000112893 | MAN2A1 | 0 | INTRON | 5.72557186 | 1.03E-08 | 0.0006695 |
| 6 | 19420962 | 19420962 | 1 | 6_19420962 | ENSG00000228412 | AL022068.1 | 0 | INTRON | 5.72317308 | 1.05E-08 | 0.00067628 |
| 2 | 224729325 | 224729325 | 1 | 2_224729325 | ENSG00000283428 | CCDC195 | 12960 | Upstream | -5.7225685 | 1.05E-08 | 0.00067628 |
| 6 | 48844246 | 48844246 | 1 | 6_48844246 | ENSG00000287137 | AL391538.1 | 48733 | Upstream | 5.72181809 | 1.05E-08 | 0.00067671 |
| 16 | 31155471 | 31155471 | 1 | 16_31155471 | ENSG00000178226 | PRSS36 | 5388 | Upstream | 5.7181422 | 1.08E-08 | 0.00068891 |
| 2 | 183332303 | 183332303 | 1 | 2_183332303 | ENSG00000287621 | AC021851.2 | 0 | INTRON | -5.716173 | 1.09E-08 | 0.00069388 |
| 20 | 5005201 | 5005201 | 1 | 20_5005201 | ENSG00000089057 | SLC23A2 | 0 | INTRON | -5.715115 | 1.10E-08 | 0.00069388 |
| 4 | 92516712 | 92516712 | 1 | 4_92516712 | ENSG00000152208 | GRID2 | 0 | INTRON | 5.71501435 | 1.10E-08 | 0.00069388 |
| 14 | 23230510 | 23230510 | 1 | 14_23230510 | ENSG00000215277 | RNF212B | 0 | INTRON | 5.71095784 | 1.12E-08 | 0.00070684 |
| 20 | 12158141 | 12158141 | 1 | 20_12158141 | ENSG00000235292 | AL109838.1 | 85166 | Downstream | -5.7106071 | 1.13E-08 | 0.00070684 |
| 13 | 101089177 | 101089177 | 1 | 13_101089177 | ENSG00000102452 | NALCN | 0 | INTRON | 5.70958879 | 1.13E-08 | 0.00070846 |
| 10 | 58662535 | 58662535 | 1 | 10_58662535 | ENSG00000122870 | BICC1 | 0 | INTRON | 5.7082336 | 1.14E-08 | 0.00071151 |
| 18 | 34329404 | 34329404 | 1 | 18_34329404 | ENSG00000278052 | AC104985.2 | 102975 | Downstream | 5.70734636 | 1.15E-08 | 0.00071182 |
| 3 | 141639448 | 141639448 | 1 | 3_141639448 | ENSG00000242104 | LINC02618 | 21087 | Upstream | -5.706917 | 1.15E-08 | 0.00071182 |
| 2 | 107193297 | 107193297 | 1 | 2_107193297 | ENSG00000229457 | LINC01789 | 61393 | Downstream | -5.7042926 | 1.17E-08 | 0.00072025 |
| 1 | 160304050 | 160304050 | 1 | 1_160304050 | ENSG00000122218 | COPA | 0 | INTRON | -5.7016872 | 1.19E-08 | 0.00072871 |
| 2 | 150109755 | 150109755 | 1 | 2_150109755 | ENSG00000286081 | AC016682.1 | 40877 | Downstream | 5.7005264 | 1.19E-08 | 0.00072962 |
| 5 | 63880059 | 63880059 | 1 | 5_63880059 | ENSG00000248285 | AC122707.1 | 77833 | Downstream | 5.70007147 | 1.20E-08 | 0.00072962 |
| 16 | 36167891 | 36167891 | 1 | 16_36167891 | ENSG00000261084 | PPP1R1AP2 | 255375 | Downstream | -5.699638 | 1.20E-08 | 0.00072962 |
| 4 | 53168573 | 53168573 | 1 | 4_53168573 | ENSG00000184178 | SCFD2 | 0 | INTRON | -5.6985448 | 1.21E-08 | 0.0007317 |
| 4 | 176867249 | 176867249 | 1 | 4_176867249 | ENSG00000249458 | AC092673.1 | 0 | INTRON | -5.6975515 | 1.22E-08 | 0.00073337 |
| 11 | 131860071 | 131860071 | 1 | 11_131860071 | ENSG00000182667 | NTM | 0 | INTRON | -5.696058 | 1.23E-08 | 0.0007372 |
| 3 | 107355773 | 107355773 | 1 | 3_107355773 | ENSG00000239828 | AC063944.1 | 0 | INTRON | -5.695265 | 1.23E-08 | 0.00073803 |
| 4 | 150130067 | 150130067 | 1 | 4_150130067 | ENSG00000170390 | DCLK2 | 0 | INTRON | 5.69326365 | 1.25E-08 | 0.00074293 |
| 18 | 49444801 | 49444801 | 1 | 18_49444801 | ENSG00000263895 | AC100778.1 | 0 | INTRON | 5.69235177 | 1.25E-08 | 0.00074293 |
| 14 | 103686219 | 103686219 | 1 | 14_103686219 | ENSG00000126214 | KLC1 | 0 | 3UTR | 5.69234352 | 1.25E-08 | 0.00074293 |
| Y | 10824954 | 10824954 | 1 | Y_10824954 | ENSG00000273858 | AC140113.4 | 217767 | Downstream | -5.6912234 | 1.26E-08 | 0.00074323 |
| 17 | 22398517 | 22398517 | 1 | 17_22398517 | ENSG00000276399 | AC209154.1 | 7501 | Upstream | 5.69108872 | 1.26E-08 | 0.00074323 |
| 4 | 60626407 | 60626407 | 1 | 4_60626407 | ENSG00000249066 | LINC02496 | 124167 | Upstream | 5.69029544 | 1.27E-08 | 0.00074411 |
| 3 | 12164565 | 12164565 | 1 | 3_12164565 | ENSG00000157152 | SYN2 | 0 | INTRON | 5.68868328 | 1.28E-08 | 0.00074519 |
| 5 | 155471064 | 155471064 | 1 | 5_155471064 | ENSG00000270442 | AC008725.1 | 20271 | Upstream | -5.6885298 | 1.28E-08 | 0.00074519 |
| 5 | 136942481 | 136942481 | 1 | 5_136942481 | ENSG00000222285 | RNA5SP193 | 26718 | Downstream | 5.68809361 | 1.28E-08 | 0.00074519 |
| 16 | 28790127 | 28790127 | 1 | 16_28790127 | ENSG00000278528 | AC145285.7 | 12593 | Upstream | 5.68761396 | 1.29E-08 | 0.00074519 |
| 7 | 43781996 | 43781996 | 1 | 7_43781996 | ENSG00000106605 | BLVRA | 0 | INTRON | 5.68712917 | 1.29E-08 | 0.00074519 |
| X | 42887413 | 42887413 | 1 | X_42887413 | ENSG00000102055 | PPP1R2C | 109250 | Upstream | 5.68546836 | 1.30E-08 | 0.00074954 |
| 6 | 46642134 | 46642134 | 1 | 6_46642134 | ENSG00000146233 | CYP39A1 | 0 | INTRON | -5.6836766 | 1.32E-08 | 0.00074954 |
| 6 | 59463581 | 59463581 | 1 | 6_59463581 | ENSG00000283453 | AC244258.1 | 817862 | Upstream | -5.6835165 | 1.32E-08 | 0.00074954 |
| 9 | 37647505 | 37647505 | 1 | 9_37647505 | ENSG00000255872 | AL138752.2 | 0 | INTRON | 5.68342669 | 1.32E-08 | 0.00074954 |
| 13 | 72667041 | 72667041 | 1 | 13_72667041 | ENSG00000226617 | RPL21P110 | 36651 | Upstream | 5.68283975 | 1.32E-08 | 0.00074954 |
| 5 | 164652145 | 164652145 | 1 | 5_164652145 | ENSG00000241956 | AC109466.1 | 0 | INTRON | 5.68162143 | 1.33E-08 | 0.00074954 |
| 1 | 195389936 | 195389936 | 1 | 1_195389936 | ENSG00000287364 | AL353709.1 | 357087 | Downstream | 5.68159813 | 1.33E-08 | 0.00074954 |
| 4 | 125571019 | 125571019 | 1 | 4_125571019 | ENSG00000283550 | MIR2054 | 63712 | Downstream | -5.6815606 | 1.33E-08 | 0.00074954 |
| 7 | 71813787 | 71813787 | 1 | 7_71813787 | ENSG00000183166 | CALN1 | 0 | INTRON | -5.6799373 | 1.35E-08 | 0.0007542 |
| 3 | 182966000 | 182966000 | 1 | 3_182966000 | ENSG00000043093 | DCUN1D1 | 0 | INTRON | -5.6784737 | 1.36E-08 | 0.00075819 |
| 10 | 21102375 | 21102375 | 1 | 10_21102375 | ENSG00000078114 | NEBL | 0 | INTRON | 5.67627569 | 1.38E-08 | 0.0007646 |
| 16 | 30178165 | 30178165 | 1 | 16_30178165 | ENSG00000102879 | CORO1A | 4661 | Upstream | 5.67541823 | 1.38E-08 | 0.0007646 |
| 13 | 50046636 | 50046636 | 1 | 13_50046636 | ENSG00000231607 | DLEU2 | 0 | INTRON | -5.6753569 | 1.38E-08 | 0.0007646 |
| 7 | 139390176 | 139390176 | 1 | 7_139390176 | ENSG00000269955 | FMC1-LUC7L2 | 0 | INTRON | -5.6744296 | 1.39E-08 | 0.00076627 |
| 20 | 2825138 | 2825138 | 1 | 20_2825138 | ENSG00000198326 | TMEM239 | 4854 | Downstream | 5.67279455 | 1.40E-08 | 0.00077112 |
| 10 | 4377441 | 4377441 | 1 | 10_4377441 | ENSG00000224382 | LINC00703 | 6804 | Upstream | 5.6712263 | 1.42E-08 | 0.00077342 |
| 12 | 101788565 | 101788565 | 1 | 12_101788565 | ENSG00000111670 | GNPTAB | 0 | EXON | 5.67026383 | 1.43E-08 | 0.00077342 |
| 3 | 74124057 | 74124057 | 1 | 3_74124057 | ENSG00000213452 | AKR1B1P2 | 11901 | Upstream | 5.67017505 | 1.43E-08 | 0.00077342 |
| 12 | 49143077 | 49143077 | 1 | 12_49143077 | ENSG00000258017 | AC011603.2 | 0 | INTRON | 5.66976226 | 1.43E-08 | 0.00077342 |
| 14 | 65270613 | 65270613 | 1 | 14_65270613 | ENSG00000258760 | AL355076.2 | 0 | INTRON | 5.66948082 | 1.43E-08 | 0.00077342 |
| 7 | 50233118 | 50233118 | 1 | 7_50233118 | ENSG00000231681 | AC020743.2 | 0 | INTRON | 5.66895076 | 1.44E-08 | 0.00077342 |
| 2 | 163090825 | 163090825 | 1 | 2_163090825 | ENSG00000230282 | RPL7P61 | 61425 | Downstream | -5.667984 | 1.44E-08 | 0.00077342 |
| 1 | 197736089 | 197736089 | 1 | 1_197736089 | ENSG00000235582 | AL365258.2 | 0 | EXON | 5.66792071 | 1.45E-08 | 0.00077342 |
| 19 | 52016454 | 52016454 | 1 | 19_52016454 | ENSG00000142556 | ZNF614 | 0 | EXON | -5.666416 | 1.46E-08 | 0.00077779 |
| 15 | 71688999 | 71688999 | 1 | 15_71688999 | ENSG00000187720 | THSD4 | 0 | INTRON | 5.66514405 | 1.47E-08 | 0.00078113 |
| 10 | 131358021 | 131358021 | 1 | 10_131358021 | ENSG00000176769 | TCERG1L | 46300 | Upstream | -5.6645937 | 1.47E-08 | 0.0007812 |
| 1 | 209526357 | 209526357 | 1 | 1_209526357 | ENSG00000224260 | AL023754.1 | 2097 | Downstream | 5.66266614 | 1.49E-08 | 0.00078705 |
| 4 | 110248578 | 110248578 | 1 | 4_110248578 | ENSG00000166530 | HSBP1P2 | 3292 | Downstream | 5.66225055 | 1.49E-08 | 0.00078705 |
| 14 | 55388115 | 55388115 | 1 | 14_55388115 | ENSG00000126775 | ATG14 | 0 | INTRON | 5.65664687 | 1.54E-08 | 0.00081066 |
| 11 | 33034343 | 33034343 | 1 | 11_33034343 | ENSG00000121690 | DEPDC7 | 761 | Downstream | -5.6524264 | 1.58E-08 | 0.00082827 |
| 9 | 38260050 | 38260050 | 1 | 9_38260050 | ENSG00000223716 | AL135785.1 | 100376 | Upstream | -5.6511237 | 1.59E-08 | 0.00082948 |
| 5 | 165721833 | 165721833 | 1 | 5_165721833 | ENSG00000253693 | AC008415.1 | 0 | INTRON | 5.65112097 | 1.59E-08 | 0.00082948 |
| 19 | 55265841 | 55265841 | 1 | 19_55265841 | ENSG00000133265 | HSPBP1 | 0 | INTRON | 5.64920068 | 1.61E-08 | 0.00083418 |
| 1 | 183747762 | 183747762 | 1 | 1_183747762 | ENSG00000143344 | RGL1 | 0 | INTRON | -5.6487967 | 1.62E-08 | 0.00083418 |
| 2 | 199252480 | 199252480 | 1 | 2_199252480 | ENSG00000119042 | SATB2 | 17019 | Downstream | 5.64857977 | 1.62E-08 | 0.00083418 |
| 16 | 47818038 | 47818038 | 1 | 16_47818038 | ENSG00000261231 | LINC02133 | 0 | INTRON | 5.64759341 | 1.63E-08 | 0.00083644 |
| 6 | 10521720 | 10521720 | 1 | 6_10521720 | ENSG00000111846 | GCNT2 | 0 | INTRON | 5.64499729 | 1.65E-08 | 0.00084435 |
| 21 | 22200180 | 22200180 | 1 | 21_22200180 | ENSG00000202339 | RNU4-45P | 5011 | Upstream | -5.6444377 | 1.66E-08 | 0.00084435 |
| 1 | 38569074 | 38569074 | 1 | 1_38569074 | ENSG00000238063 | LINC01685 | 52554 | Downstream | 5.64373282 | 1.66E-08 | 0.00084435 |
| 5 | 31996209 | 31996209 | 1 | 5_31996209 | ENSG00000133401 | PDZD2 | 0 | INTRON | 5.64368925 | 1.66E-08 | 0.00084435 |
| 5 | 130530225 | 130530225 | 1 | 5_130530225 | ENSG00000249312 | ARL2BPP4 | 336 | Downstream | 5.64296005 | 1.67E-08 | 0.00084435 |
| 4 | 38977156 | 38977156 | 1 | 4_38977156 | ENSG00000121895 | TMEM156 | 0 | INTRON | 5.64288432 | 1.67E-08 | 0.00084435 |
| 3 | 24732493 | 24732493 | 1 | 3_24732493 | ENSG00000237838 | AC092422.1 | 0 | INTRON | -5.6417132 | 1.68E-08 | 0.0008476 |
| 6 | 200542 | 200542 | 1 | 6_200542 | ENSG00000263667 | AL035696.3 | 0 | INTRON | -5.6407777 | 1.69E-08 | 0.0008497 |
| 10 | 29543197 | 29543197 | 1 | 10_29543197 | ENSG00000197321 | SVIL | 0 | INTRON | 5.63928663 | 1.71E-08 | 0.00085457 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 17 | 63345758 | 63345758 | 1 | 17_63345758 | ENSG00000170921 | TANC2 | 0 | INTRON | -5.6385705 | 1.71E-08 | 0.00085498 |
| 3 | 76306628 | 76306628 | 1 | 3_76306628 | ENSG00000185008 | ROBO2 | 0 | INTRON | -5.6381944 | 1.72E-08 | 0.00085498 |
| 6 | 78657017 | 78657017 | 1 | 6_78657017 | ENSG00000230309 | AL121718.1 | 50981 | Upstream | 5.63656411 | 1.73E-08 | 0.00085992 |
| 12 | 91582709 | 91582709 | 1 | 12_91582709 | ENSG00000274647 | AC126175.1 | 50202 | Downstream | 5.6361973 | 1.74E-08 | 0.00085992 |
| 6 | 160265187 | 160265187 | 1 | 6_160265187 | ENSG00000112499 | SLC22A2 | 0 | INTRON | 5.63552199 | 1.75E-08 | 0.00086079 |
| 12 | 116451845 | 116451845 | 1 | 12_116451845 | ENSG00000264037 | MIR4472-2 | 23527 | Upstream | 5.63457617 | 1.75E-08 | 0.0008612 |
| 7 | 60916735 | 60916735 | 1 | 7_60916735 | ENSG00000233918 | AC128676.1 | 1358625 | Downstream | -5.6341974 | 1.76E-08 | 0.0008612 |
| 16 | 33928306 | 33928306 | 1 | 16_33928306 | ENSG00000260781 | ARHGAP23P1 | 0 | EXON | 5.63308404 | 1.77E-08 | 0.0008612 |
| 14 | 53495983 | 53495983 | 1 | 14_53495983 | ENSG00000237356 | AL365295.1 | 0 | INTRON | 5.63299267 | 1.77E-08 | 0.0008612 |
| 12 | 85667873 | 85667873 | 1 | 12_85667873 | ENSG00000257855 | AC126471.1 | 99634 | Downstream | 5.63256241 | 1.78E-08 | 0.0008612 |
| 2 | 60512753 | 60512753 | 1 | 2_60512753 | ENSG00000119866 | BCL11A | 0 | INTRON | 5.63246965 | 1.78E-08 | 0.0008612 |
| 8 | 2958038 | 2958038 | 1 | 8_2958038 | ENSG00000183117 | CSMD1 | 0 | INTRON | 5.63170503 | 1.78E-08 | 0.00086257 |
| 1 | 7523705 | 7523705 | 1 | 1_7523705 | ENSG00000171735 | CAMTA1 | 0 | INTRON | 5.63014252 | 1.80E-08 | 0.00086528 |
| 4 | 154881323 | 154881323 | 1 | 4_154881323 | ENSG00000151962 | RBM46 | 52510 | Downstream | -5.6287128 | 1.82E-08 | 0.00086528 |
| 10 | 91862682 | 91862682 | 1 | 10_91862682 | ENSG00000107854 | TNKS2 | 0 | INTRON | -5.6279279 | 1.82E-08 | 0.00086528 |
| 20 | 62251659 | 62251659 | 1 | 20_62251659 | ENSG00000130703 | OSBPL2 | 0 | INTRON | -5.6274283 | 1.83E-08 | 0.00086528 |
| 20 | 31297138 | 31297138 | 1 | 20_31297138 | ENSG00000215545 | DEFB116 | 6073 | Downstream | -5.6274015 | 1.83E-08 | 0.00086528 |
| 21 | 23837303 | 23837303 | 1 | 21_23837303 | ENSG00000287612 | AP000474.2 | 19777 | Upstream | 5.62732217 | 1.83E-08 | 0.00086528 |
| 13 | 105212594 | 105212594 | 1 | 13_105212594 | ENSG00000286929 | AL138954.1 | 198221 | Upstream | -5.6271524 | 1.83E-08 | 0.00086528 |
| 7 | 122436210 | 122436210 | 1 | 7_122436210 | ENSG00000081803 | CADPS2 | 0 | INTRON | 5.62681592 | 1.84E-08 | 0.00086528 |
| 4 | 11719752 | 11719752 | 1 | 4_11719752 | ENSG00000249631 | AC005699.1 | 0 | INTRON | 5.62669532 | 1.84E-08 | 0.00086528 |
| 5 | 170249716 | 170249716 | 1 | 5_170249716 | ENSG00000234511 | C5orf58 | 0 | INTRON | -5.6263311 | 1.84E-08 | 0.00086528 |
| 20 | 10165601 | 10165601 | 1 | 20_10165601 | ENSG00000227906 | SNAP25-AS1 | 0 | INTRON | -5.6249862 | 1.86E-08 | 0.00086964 |
| 14 | 44937231 | 44937231 | 1 | 14_44937231 | ENSG00000179454 | KLHL28 | 0 | INTRON | 5.62318189 | 1.87E-08 | 0.00087403 |
| 7 | 73775885 | 73775885 | 1 | 7_73775885 | ENSG00000165215 | CLDN3 | 5615 | Upstream | -5.623168 | 1.87E-08 | 0.00087403 |
| 11 | 12150765 | 12150765 | 1 | 11_12150765 | ENSG00000133816 | MICAL2 | 0 | INTRON | 5.62230987 | 1.88E-08 | 0.00087573 |
| 15 | 34850323 | 34850323 | 1 | 15_34850323 | ENSG00000259751 | AC018868.2 | 0 | EXON | -5.6218253 | 1.89E-08 | 0.00087573 |
| 8 | 52993909 | 52993909 | 1 | 8_52993909 | ENSG00000248911 | AC009800.1 | 17793 | Upstream | 5.62128297 | 1.90E-08 | 0.00087573 |
| 15 | 46772884 | 46772884 | 1 | 15_46772884 | ENSG00000259255 | AC073941.1 | 0 | INTRON | 5.62063713 | 1.90E-08 | 0.00087573 |
| 9 | 114058140 | 114058140 | 1 | 9_114058140 | ENSG00000157657 | ZNF618 | 1549 | Downstream | -5.6197345 | 1.91E-08 | 0.00087573 |
| 21 | 16003500 | 16003500 | 1 | 21_16003500 | ENSG00000215386 | MIR99AHG | 0 | INTRON | 5.61952089 | 1.91E-08 | 0.00087573 |
| 15 | 73661398 | 73661398 | 1 | 15_73661398 | ENSG00000103855 | CD276 | 22567 | Upstream | -5.6188926 | 1.92E-08 | 0.00087573 |
| 13 | 96391665 | 96391665 | 1 | 13_96391665 | ENSG00000185352 | HS6ST3 | 0 | INTRON | -5.6187826 | 1.92E-08 | 0.00087573 |
| 16 | 82916528 | 82916528 | 1 | 16_82916528 | ENSG00000140945 | CDH13 | 0 | INTRON | -5.6186253 | 1.92E-08 | 0.00087573 |
| 2 | 32303292 | 32303292 | 1 | 2_32303292 | ENSG00000119820 | YIPF4 | 0 | INTRON | 5.61696163 | 1.94E-08 | 0.00088184 |
| 11 | 105732463 | 105732463 | 1 | 11_105732463 | ENSG00000152578 | GRIA4 | 0 | INTRON | 5.61510581 | 1.96E-08 | 0.00088899 |
| 13 | 31708455 | 31708455 | 1 | 13_31708455 | ENSG00000133105 | RXFP2 | 31070 | Upstream | -5.6137394 | 1.98E-08 | 0.00089061 |
| 3 | 119496186 | 119496186 | 1 | 3_119496186 | ENSG00000163389 | POGLUT1 | 1478 | Downstream | 5.61355974 | 1.98E-08 | 0.00089061 |
| 8 | 71152429 | 71152429 | 1 | 8_71152429 | ENSG00000285579 | AC015687.1 | 0 | INTRON | 5.61341624 | 1.98E-08 | 0.00089061 |
| 3 | 18219763 | 18219763 | 1 | 3_18219763 | ENSG00000131374 | TBC1D5 | 0 | INTRON | -5.6123251 | 2.00E-08 | 0.00089389 |
| 10 | 75977428 | 75977428 | 1 | 10_75977428 | ENSG00000148655 | LRMDA | 0 | INTRON | 5.61151798 | 2.01E-08 | 0.00089571 |
| 14 | 23230522 | 23230522 | 1 | 14_23230522 | ENSG00000215277 | RNF212B | 0 | INTRON | 5.61104242 | 2.01E-08 | 0.00089583 |
| 19 | 36373048 | 36373048 | 1 | 19_36373048 | ENSG00000142065 | ZFP14 | 0 | INTRON | -5.6061122 | 2.07E-08 | 0.0009193 |
| 17 | 26877568 | 26877568 | 1 | 17_26877568 | ENSG00000263433 | AC069061.1 | 104125 | Upstream | -5.6051945 | 2.08E-08 | 0.00092178 |
| 9 | 31518203 | 31518203 | 1 | 9_31518203 | ENSG00000229080 | MTCO3P30 | 11588 | Downstream | 5.60358774 | 2.10E-08 | 0.00092738 |
| 21 | 32982619 | 32982619 | 1 | 21_32982619 | ENSG00000227757 | AP000282.1 | 0 | INTRON | 5.60291867 | 2.11E-08 | 0.00092738 |
| 3 | 25151119 | 25151119 | 1 | 3_25151119 | ENSG00000237838 | AC092422.1 | 0 | INTRON | -5.6027978 | 2.11E-08 | 0.00092738 |
| 3 | 116356918 | 116356918 | 1 | 3_116356918 | ENSG00000185565 | LSAMP | 0 | INTRON | 5.60089179 | 2.13E-08 | 0.00093187 |
| 6 | 5154035 | 5154035 | 1 | 6_5154035 | ENSG00000214113 | LYRM4 | 0 | INTRON | -5.6007433 | 2.13E-08 | 0.00093187 |
| 18 | 67191879 | 67191879 | 1 | 18_67191879 | ENSG00000264054 | RPL31P9 | 54128 | Upstream | 5.60045149 | 2.14E-08 | 0.00093187 |
| 2 | 189698898 | 189698898 | 1 | 2_189698898 | ENSG00000151687 | ANKAR | 0 | INTRON | 5.60017723 | 2.14E-08 | 0.00093187 |
| 11 | 104713304 | 104713304 | 1 | 11_104713304 | ENSG00000270449 | AP001485.1 | 30723 | Upstream | -5.5990397 | 2.16E-08 | 0.00093415 |
| X | 3656223 | 3656223 | 1 | X_3656223 | ENSG00000183943 | PRKX | 0 | INTRON | -5.5988693 | 2.16E-08 | 0.00093415 |
| 3 | 122074215 | 122074215 | 1 | 3_122074215 | ENSG00000114013 | CD86 | 0 | INTRON | 5.59808458 | 2.17E-08 | 0.00093601 |
| 16 | 34668416 | 34668416 | 1 | 16_34668416 | ENSG00000286968 | FP325313.2 | 219550 | Downstream | -5.5975449 | 2.17E-08 | 0.00093655 |
| 5 | 30987349 | 30987349 | 1 | 5_30987349 | ENSG00000241668 | RPL19P11 | 66215 | Upstream | 5.59544804 | 2.20E-08 | 0.00094555 |
| 15 | 24298339 | 24298339 | 1 | 15_24298339 | ENSG00000259905 | PWRN1 | 0 | INTRON | 5.59407178 | 2.22E-08 | 0.00095067 |
| 16 | 58845974 | 58845974 | 1 | 16_58845974 | ENSG00000245768 | AC106793.1 | 0 | INTRON | -5.5928116 | 2.23E-08 | 0.00095275 |
| 9 | 94664788 | 94664788 | 1 | 9_94664788 | ENSG00000165140 | FBP1 | 24539 | Upstream | -5.5924319 | 2.24E-08 | 0.00095275 |
| 18 | 62463738 | 62463738 | 1 | 18_62463738 | ENSG00000266920 | ACTBP9 | 20612 | Downstream | -5.5923863 | 2.24E-08 | 0.00095275 |
| 16 | 33716450 | 33716450 | 1 | 16_33716450 | ENSG00000282924 | AC136428.4 | 6905 | Downstream | -5.5909766 | 2.26E-08 | 0.00095813 |
| 6 | 142452300 | 142452300 | 1 | 6_142452300 | ENSG00000112414 | ADGRG6 | 6034 | Downstream | -5.5891204 | 2.28E-08 | 0.00096601 |
| 11 | 45384425 | 45384425 | 1 | 11_45384425 | ENSG00000255267 | LINC02687 | 0 | INTRON | -5.5882238 | 2.29E-08 | 0.0009686 |
| 6 | 9120014 | 9120014 | 1 | 6_9120014 | ENSG00000285219 | HULC | 0 | INTRON | -5.5867686 | 2.31E-08 | 0.00097433 |
| 11 | 58945242 | 58945242 | 1 | 11_58945242 | ENSG00000166840 | GLYATL1 | 0 | INTRON | -5.5856349 | 2.33E-08 | 0.00097703 |
| 16 | 32764048 | 32764048 | 1 | 16_32764048 | ENSG00000260644 | HERC2P5 | 0 | INTRON | 5.58490006 | 2.34E-08 | 0.00097703 |
| 3 | 149300739 | 149300739 | 1 | 3_149300739 | ENSG00000244468 | AC093001.1 | 0 | INTRON | 5.58454622 | 2.34E-08 | 0.00097703 |
| 7 | 354880 | 354880 | 1 | 7_354880 | ENSG00000287342 | AC188616.1 | 21708 | Upstream | 5.58408471 | 2.35E-08 | 0.00097703 |
| 8 | 82245481 | 82245481 | 1 | 8_82245481 | ENSG00000254394 | AC060765.2 | 0 | INTRON | 5.58370958 | 2.35E-08 | 0.00097703 |
| 5 | 140976507 | 140976507 | 1 | 5_140976507 | ENSG00000204965 | PCDHA5 | 0 | INTRON | -5.5833813 | 2.36E-08 | 0.00097703 |
| 3 | 44355905 | 44355905 | 1 | 3_44355905 | ENSG00000179152 | TCAIM | 0 | INTRON | 5.58330363 | 2.36E-08 | 0.00097703 |
| X | 3420150 | 3420150 | 1 | X_3420150 | ENSG00000213487 | ASS1P4 | 51768 | Downstream | -5.5826301 | 2.37E-08 | 0.00097844 |
| 15 | 65765266 | 65765266 | 1 | 15_65765266 | ENSG00000174485 | DENND4A | 0 | INTRON | 5.5801189 | 2.40E-08 | 0.00099027 |
| 2 | 157971156 | 157971156 | 1 | 2_157971156 | ENSG00000007001 | UPP2 | 0 | INTRON | -5.5792781 | 2.42E-08 | 0.00099266 |
| 8 | 33011014 | 33011014 | 1 | 8_33011014 | ENSG00000247134 | AC090204.1 | 0 | INTRON | -5.5771182 | 2.45E-08 | 0.00099594 |
| 16 | 65923916 | 65923916 | 1 | 16_65923916 | ENSG00000261234 | AC025281.1 | 14272 | Downstream | -5.5770663 | 2.45E-08 | 0.00099594 |
| 1 | 166991831 | 166991831 | 1 | 1_166991831 | ENSG00000143194 | MAEL | 0 | INTRON | 5.57702848 | 2.45E-08 | 0.00099594 |
| 19 | 14668165 | 14668165 | 1 | 19_14668165 | ENSG00000131355 | ADGRE3 | 0 | INTRON | 5.57662832 | 2.45E-08 | 0.00099594 |
| 7 | 220830 | 220830 | 1 | 7_220830 | ENSG00000177706 | FAM20C | 0 | INTRON | -5.5766163 | 2.45E-08 | 0.00099594 |
| 7 | 116609710 | 116609710 | 1 | 7_116609710 | ENSG00000231210 | LINC01510 | 0 | INTRON | -5.5748598 | 2.48E-08 | 0.00100175 |
| 2 | 31688050 | 31688050 | 1 | 2_31688050 | ENSG00000270422 | AL133247.2 | 36188 | Downstream | -5.5747739 | 2.48E-08 | 0.00100175 |
| X | 16867839 | 16867839 | 1 | X_16867839 | ENSG00000102054 | RBBP7 | 0 | INTRON | 5.57386406 | 2.49E-08 | 0.00100247 |
| 2 | 110848189 | 110848189 | 1 | 2_110848189 | ENSG00000153093 | ACOXL | 0 | INTRON | 5.57382463 | 2.49E-08 | 0.00100247 |
| X | 72686249 | 72686249 | 1 | X_72686249 | ENSG00000067177 | PHKA1 | 0 | INTRON | 5.57107536 | 2.53E-08 | 0.00101489 |
| 16 | 9166598 | 9166598 | 1 | 16_9166598 | ENSG00000220793 | RPL21P119 | 9717 | Upstream | 5.57085859 | 2.53E-08 | 0.00101489 |

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| 14 | 71811108 | 71811108 | 1 | 14_71811108 | ENSG00000266869 | AC005993.1 | 37497 | Upstream | 5.57022187 | 2.54E-08 | 0.00101621 |
| 17 | 52497893 | 52497893 | 1 | 17_52497893 | ENSG00000263317 | LINC01982 | 0 | INTRON | -5.5687844 | 2.57E-08 | 0.00101959 |
| 15 | 71877981 | 71877981 | 1 | 15_71877981 | ENSG00000066933 | MYO9A | 0 | INTRON | -5.568292 | 2.57E-08 | 0.00101959 |
| 8 | 3914313 | 3914313 | 1 | 8_3914313 | ENSG00000183117 | CSMD1 | 0 | INTRON | 5.56815299 | 2.57E-08 | 0.00101959 |
| 9 | 116568414 | 116568414 | 1 | 9_116568414 | ENSG00000230894 | AL133284.1 | 0 | EXON | -5.5680156 | 2.58E-08 | 0.00101959 |
| 4 | 23724756 | 23724756 | 1 | 4_23724756 | ENSG00000251292 | ERVH-1 | 0 | INTRON | 5.56716393 | 2.59E-08 | 0.00102151 |
| 14 | 99935960 | 99935960 | 1 | 14_99935960 | ENSG00000066629 | EML1 | 0 | INTRON | -5.5668787 | 2.59E-08 | 0.00102151 |
| 18 | 73778406 | 73778406 | 1 | 18_73778406 | ENSG00000241866 | RN7SL401P | 33174 | Downstream | 5.56547832 | 2.61E-08 | 0.00102737 |
| 6 | 116173271 | 116173271 | 1 | 6_116173271 | ENSG00000178425 | NT5DC1 | 0 | INTRON | -5.5649985 | 2.62E-08 | 0.00102782 |
| 10 | 53601710 | 53601710 | 1 | 10_53601710 | ENSG00000252161 | RNA5SP318 | 143422 | Downstream | -5.56345 | 2.64E-08 | 0.00103461 |
| 11 | 36275994 | 36275994 | 1 | 11_36275994 | ENSG00000110442 | COMMD9 | 0 | INTRON | 5.56249456 | 2.66E-08 | 0.00103617 |
| 4 | 25573240 | 25573240 | 1 | 4_25573240 | ENSG00000248545 | AC105290.1 | 0 | INTRON | -5.5621265 | 2.67E-08 | 0.00103617 |
| 17 | 6295069 | 6295069 | 1 | 17_6295069 | ENSG00000262609 | BTF3P14 | 27343 | Downstream | 5.56198791 | 2.67E-08 | 0.00103617 |
| 3 | 174760831 | 174760831 | 1 | 3_174760831 | ENSG00000177694 | NAALADL2 | 0 | INTRON | 5.55771007 | 2.73E-08 | 0.00105946 |
| 21 | 33679846 | 33679846 | 1 | 21_33679846 | ENSG00000205726 | ITSN1 | 0 | INTRON | -5.555987 | 2.76E-08 | 0.00106748 |
| 6 | 124616550 | 124616550 | 1 | 6_124616550 | ENSG00000188580 | NKAIN2 | 0 | INTRON | 5.55559882 | 2.77E-08 | 0.00106748 |
| 5 | 138400998 | 138400998 | 1 | 5_138400998 | ENSG00000120733 | KDM3B | 0 | INTRON | -5.5548824 | 2.78E-08 | 0.00106805 |
| 3 | 180127856 | 180127856 | 1 | 3_180127856 | ENSG00000201822 | RNA5SP149 | 34029 | Downstream | -5.5547161 | 2.78E-08 | 0.00106805 |
| 1 | 218705451 | 218705451 | 1 | 1_218705451 | ENSG00000212610 | U3 | 163552 | Upstream | -5.5528336 | 2.81E-08 | 0.00107403 |
| 4 | 54473303 | 54473303 | 1 | 4_54473303 | ENSG00000251264 | AC098868.1 | 26580 | Upstream | -5.5527319 | 2.81E-08 | 0.00107403 |
| 16 | 78560500 | 78560500 | 1 | 16_78560500 | ENSG00000186153 | WWOX | 0 | INTRON | -5.5525609 | 2.82E-08 | 0.00107403 |
| 7 | 60926181 | 60926181 | 1 | 7_60926181 | ENSG00000233918 | AC128676.1 | 1349179 | Downstream | -5.5497637 | 2.86E-08 | 0.0010878 |
| 1 | 233874049 | 233874049 | 1 | 1_233874049 | ENSG00000286666 | AL663058.2 | 8679 | Upstream | 5.54955261 | 2.86E-08 | 0.0010878 |
| 1 | 20521886 | 20521886 | 1 | 1_20521886 | ENSG00000215520 | RPS4XP4 | 4102 | Upstream | -5.5484516 | 2.88E-08 | 0.00108917 |
| 12 | 54150127 | 54150127 | 1 | 12_54150127 | ENSG00000123415 | SMUG1 | 0 | INTRON | -5.5484115 | 2.88E-08 | 0.00108917 |
| 11 | 70801086 | 70801086 | 1 | 11_70801086 | ENSG00000162105 | SHANK2 | 0 | INTRON | 5.54816514 | 2.89E-08 | 0.00108917 |
| 11 | 62809282 | 62809282 | 1 | 11_62809282 | ENSG00000162236 | STX5 | 0 | INTRON | 5.54734412 | 2.90E-08 | 0.00109187 |
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| 10 | 19489765 | 19489765 | 1 | 10_19489765 | ENSG00000204740 | MALRD1 | 0 | INTRON | 5.54492745 | 2.94E-08 | 0.00110218 |
| 6 | 37541061 | 37541061 | 1 | 6_37541061 | ENSG00000229559 | AL353597.2 | 2491 | Downstream | 5.54389119 | 2.96E-08 | 0.00110629 |
| 16 | 61035218 | 61035218 | 1 | 16_61035218 | ENSG00000224631 | RPS27AP16 | 20180 | Downstream | 5.54342361 | 2.97E-08 | 0.00110682 |
| 1 | 214737140 | 214737140 | 1 | 1_214737140 | ENSG00000117724 | CENPF | 72569 | Downstream | 5.54243649 | 2.98E-08 | 0.00110961 |
| 19 | 428348 | 428348 | 1 | 19_428348 | ENSG00000129946 | SHC2 | 0 | INTRON | 5.54221672 | 2.99E-08 | 0.00110961 |
| 1 | 81353778 | 81353778 | 1 | 1_81353778 | ENSG00000117114 | ADGRL2 | 0 | INTRON | -5.5408593 | 3.01E-08 | 0.00110972 |
| 7 | 23526421 | 23526421 | 1 | 7_23526421 | ENSG00000164548 | TRA2A | 0 | INTRON | 5.5408592 | 3.01E-08 | 0.00110972 |
| 11 | 121090973 | 121090973 | 1 | 11_121090973 | ENSG00000285509 | AP000646.1 | 0 | INTRON | 5.54080628 | 3.01E-08 | 0.00110972 |
| 4 | 72590447 | 72590447 | 1 | 4_72590447 | ENSG00000156140 | ADAMTS3 | 21226 | Upstream | -5.540678 | 3.01E-08 | 0.00110972 |
| 6 | 152563383 | 152563383 | 1 | 6_152563383 | ENSG00000131018 | SYNE1 | 0 | INTRON | -5.5395435 | 3.03E-08 | 0.00111452 |
| 1 | 125166750 | 125166750 | 1 | 1_125166750 | ENSG00000224857 | LINC01691 | 3586226 | Upstream | -5.5391088 | 3.04E-08 | 0.00111488 |
| 3 | 80485936 | 80485936 | 1 | 3_80485936 | ENSG00000242586 | AC108740.1 | 43631 | Downstream | 5.53845402 | 3.05E-08 | 0.00111665 |
| 13 | 84577992 | 84577992 | 1 | 13_84577992 | ENSG00000233349 | LINC00333 | 14756 | Downstream | 5.53487842 | 3.11E-08 | 0.00113716 |
| 8 | 137082273 | 137082273 | 1 | 8_137082273 | ENSG00000254101 | LINC02055 | 0 | INTRON | 5.53451291 | 3.12E-08 | 0.00113716 |
| 2 | 216622439 | 216622439 | 1 | 2_216622439 | ENSG00000115457 | IGFBP2 | 10388 | Upstream | 5.53393069 | 3.13E-08 | 0.0011385 |
| 3 | 95039381 | 95039381 | 1 | 3_95039381 | ENSG00000239589 | LINC00879 | 0 | INTRON | 5.53333938 | 3.14E-08 | 0.00113991 |
| 17 | 79208189 | 79208189 | 1 | 17_79208189 | ENSG00000167281 | RBFOX3 | 0 | INTRON | -5.53246 | 3.16E-08 | 0.00114321 |
| 15 | 56953613 | 56953613 | 1 | 15_56953613 | ENSG00000140262 | TCF12 | 0 | INTRON | 5.53108003 | 3.18E-08 | 0.00114679 |
| 11 | 108135109 | 108135109 | 1 | 11_108135109 | ENSG00000075239 | ACAT1 | 0 | INTRON | 5.53093639 | 3.19E-08 | 0.00114679 |
| 9 | 38126026 | 38126026 | 1 | 9_38126026 | ENSG00000200026 | U8 | 21401 | Upstream | 5.53079471 | 3.19E-08 | 0.00114679 |
| 11 | 47171105 | 47171105 | 1 | 11_47171105 | ENSG00000149182 | ARFGAP2 | 0 | INTRON | 5.52982425 | 3.21E-08 | 0.00114923 |
| 2 | 81625578 | 81625578 | 1 | 2_81625578 | ENSG00000233444 | AC013262.1 | 40898 | Downstream | 5.52968176 | 3.21E-08 | 0.00114923 |
| 17 | 71730195 | 71730195 | 1 | 17_71730195 | ENSG00000286387 | AC007432.1 | 0 | INTRON | 5.52919694 | 3.22E-08 | 0.00114999 |
| 1 | 78662824 | 78662824 | 1 | 1_78662824 | ENSG00000137965 | IFI44 | 0 | EXON | 5.52864347 | 3.23E-08 | 0.00115121 |
| 10 | 12671334 | 12671334 | 1 | 10_12671334 | ENSG00000183049 | CAMK1D | 0 | INTRON | -5.5279723 | 3.24E-08 | 0.0011532 |
| 2 | 74360232 | 74360232 | 1 | 2_74360232 | ENSG00000264324 | AC006030.1 | 0 | INTRON | 5.52719409 | 3.25E-08 | 0.00115591 |
| 2 | 215640375 | 215640375 | 1 | 2_215640375 | ENSG00000235770 | LINC00607 | 0 | INTRON | 5.52636569 | 3.27E-08 | 0.00115689 |
| 2 | 59832033 | 59832033 | 1 | 2_59832033 | ENSG00000271955 | AC007100.1 | 0 | INTRON | -5.5262061 | 3.27E-08 | 0.00115689 |
| 12 | 113681420 | 113681420 | 1 | 12_113681420 | ENSG00000249550 | LINC01234 | 0 | INTRON | 5.52594972 | 3.28E-08 | 0.00115689 |
| 2 | 129282711 | 129282711 | 1 | 2_129282711 | ENSG00000204460 | LINC01854 | 8863 | Upstream | 5.5233646 | 3.33E-08 | 0.00117076 |
| 11 | 48516341 | 48516341 | 1 | 11_48516341 | ENSG00000254832 | OR4A40P | 3121 | Downstream | -5.5230326 | 3.33E-08 | 0.00117076 |
| 19 | 26807948 | 26807948 | 1 | 19_26807948 | ENSG00000267696 | ERVK-28 | 830534 | Downstream | 5.52276664 | 3.34E-08 | 0.00117076 |
| 5 | 119760350 | 119760350 | 1 | 5_119760350 | ENSG00000234259 | AC008550.1 | 79270 | Downstream | 5.52226157 | 3.35E-08 | 0.00117172 |
| 13 | 44387975 | 44387975 | 1 | 13_44387975 | ENSG00000151778 | SERP2 | 0 | INTRON | 5.52124598 | 3.37E-08 | 0.0011752 |
| 5 | 128763023 | 128763023 | 1 | 5_128763023 | ENSG00000113396 | SLC27A6 | 0 | INTRON | -5.5210195 | 3.37E-08 | 0.0011752 |
| 5 | 80287902 | 80287902 | 1 | 5_80287902 | ENSG00000249438 | KRT18P45 | 546 | Upstream | -5.5201587 | 3.39E-08 | 0.00117855 |
| 16 | 62960944 | 62960944 | 1 | 16_62960944 | ENSG00000261502 | AC040174.1 | 95841 | Downstream | 5.51966484 | 3.40E-08 | 0.00117946 |
| 7 | 70462200 | 70462200 | 1 | 7_70462200 | ENSG00000158321 | AUTS2 | 0 | INTRON | 5.51783243 | 3.43E-08 | 0.00118939 |
| 2 | 71639937 | 71639937 | 1 | 2_71639937 | ENSG00000135636 | DYSF | 0 | INTRON | 5.51583075 | 3.47E-08 | 0.00120056 |
| 14 | 54012005 | 54012005 | 1 | 14_54012005 | ENSG00000224004 | ATP5F1CP1 | 20010 | Upstream | 5.51426747 | 3.50E-08 | 0.00120883 |
| 6 | 94415349 | 94415349 | 1 | 6_94415349 | ENSG00000279403 | AL078595.3 | 16520 | Downstream | 5.51347529 | 3.52E-08 | 0.00121182 |
| 16 | 70938567 | 70938567 | 1 | 16_70938567 | ENSG00000157423 | HYDIN | 0 | INTRON | -5.5110798 | 3.57E-08 | 0.00122595 |
| 1 | 8433048 | 8433048 | 1 | 1_8433048 | ENSG00000232912 | RERE-AS1 | 0 | INTRON | 5.5105839 | 3.58E-08 | 0.00122693 |
| Y | 10079974 | 10079974 | 1 | Y_10079974 | ENSG00000278478 | AC006987.1 | 9565 | Downstream | -5.5074104 | 3.64E-08 | 0.00124674 |
| 3 | 1260292 | 1260292 | 1 | 3_1260292 | ENSG00000134115 | CNTN6 | 0 | INTRON | -5.5067945 | 3.65E-08 | 0.00124859 |
| 15 | 64983240 | 64983240 | 1 | 15_64983240 | ENSG00000090487 | SPG21 | 0 | INTRON | 5.50510291 | 3.69E-08 | 0.00125812 |
| 14 | 44904999 | 44904999 | 1 | 14_44904999 | ENSG00000179476 | C14orf28 | 0 | EXON | -5.5039705 | 3.71E-08 | 0.00126198 |
| 5 | 154880045 | 154880045 | 1 | 5_154880045 | ENSG00000155508 | CNOT8 | 3252 | Downstream | 5.50385829 | 3.72E-08 | 0.00126198 |
| X | 6518542 | 6518542 | 1 | X_6518542 | ENSG00000169059 | VCX3A | 15075 | Downstream | 5.50326857 | 3.73E-08 | 0.00126369 |
| 6 | 62741627 | 62741627 | 1 | 6_62741627 | ENSG00000262566 | AL355375.2 | 130300 | Upstream | 5.50256159 | 3.74E-08 | 0.00126624 |
| 7 | 72361223 | 72361223 | 1 | 7_72361223 | ENSG00000183166 | CALN1 | 0 | INTRON | 5.50151379 | 3.77E-08 | 0.00127039 |
| 6 | 109707849 | 109707849 | 1 | 6_109707849 | ENSG00000112367 | FIG4 | 0 | INTRON | -5.5012857 | 3.77E-08 | 0.00127039 |
| 17 | 66584515 | 66584515 | 1 | 17_66584515 | ENSG00000154229 | PRKCA | 0 | INTRON | 5.50013223 | 3.80E-08 | 0.00127194 |
| 2 | 225000777 | 225000777 | 1 | 2_225000777 | ENSG00000135905 | DOCK10 | 0 | INTRON | -5.5000683 | 3.80E-08 | 0.00127194 |
| 9 | 17103403 | 17103403 | 1 | 9_17103403 | ENSG00000237153 | AL162725.2 | 0 | INTRON | -5.4999175 | 3.80E-08 | 0.00127194 |
| 8 | 76569093 | 76569093 | 1 | 8_76569093 | ENSG00000253661 | ZFHX4-AS1 | 0 | INTRON | -5.4996794 | 3.80E-08 | 0.00127194 |
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| 8 | 55808086 | 55808086 | 1 | 8_55808086 | ENSG00000137574 | TGS1 | 0 | INTRON | -5.4949024 | 3.91E-08 | 0.0012992 |
| 16 | 18284650 | 18284650 | 1 | 16_18284650 | ENSG00000276484 | AC126755.4 | 28643 | Upstream | 5.4937395 | 3.94E-08 | 0.00130524 |
| 7 | 151921012 | 151921012 | 1 | 7_151921012 | ENSG00000222941 | Y_RNA | 4594 | Downstream | -5.4928419 | 3.96E-08 | 0.00130742 |
| 10 | 82680558 | 82680558 | 1 | 10_82680558 | ENSG00000185737 | NRG3 | 0 | INTRON | 5.49239082 | 3.97E-08 | 0.00130742 |
| 1 | 242433771 | 242433771 | 1 | 1_242433771 | ENSG00000180287 | PLD5 | 0 | INTRON | -5.4922697 | 3.97E-08 | 0.00130742 |
| 7 | 151365706 | 151365706 | 1 | 7_151365706 | ENSG00000013374 | NUB1 | 0 | INTRON | -5.4917391 | 3.98E-08 | 0.00130742 |
| 12 | 25866831 | 25866831 | 1 | 12_25866831 | ENSG00000283603 | MIR4302 | 7188 | Downstream | -5.491732 | 3.98E-08 | 0.00130742 |
| 6 | 166564239 | 166564239 | 1 | 6_166564239 | ENSG00000071242 | RPS6KA2 | 0 | INTRON | 5.49123168 | 3.99E-08 | 0.00130861 |
| 7 | 859633 | 859633 | 1 | 7_859633 | ENSG00000164828 | SUN1 | 0 | INTRON | -5.4903296 | 4.01E-08 | 0.00131108 |
| 6 | 111829699 | 111829699 | 1 | 6_111829699 | ENSG00000010810 | FYN | 0 | INTRON | 5.49021888 | 4.01E-08 | 0.00131108 |
| 2 | 140214572 | 140214572 | 1 | 2_140214572 | ENSG00000227149 | MTCO1P44 | 2424 | Downstream | -5.4884083 | 4.06E-08 | 0.00131972 |
| 18 | 4198931 | 4198931 | 1 | 18_4198931 | ENSG00000170579 | DLGAP1 | 0 | INTRON | 5.48838123 | 4.06E-08 | 0.00131972 |
| 16 | 53991408 | 53991408 | 1 | 16_53991408 | ENSG00000280392 | AC007496.3 | 0 | EXON | -5.487932 | 4.07E-08 | 0.00132056 |
| 18 | 65963660 | 65963660 | 1 | 18_65963660 | ENSG00000263622 | AC023394.1 | 42718 | Upstream | 5.48729816 | 4.08E-08 | 0.0013214 |
| 16 | 2506644 | 2506644 | 1 | 16_2506644 | ENSG00000260272 | AC093525.2 | 0 | INTRON | -5.487146 | 4.08E-08 | 0.0013214 |
| 8 | 133472378 | 133472378 | 1 | 8_133472378 | ENSG00000008513 | ST3GAL1 | 0 | INTRON | 5.48563934 | 4.12E-08 | 0.00132803 |
| 4 | 181695800 | 181695800 | 1 | 4_181695800 | ENSG00000287948 | AC084741.1 | 0 | INTRON | -5.485338 | 4.13E-08 | 0.00132803 |
| 17 | 53161266 | 53161266 | 1 | 17_53161266 | ENSG00000262902 | MTCO1P40 | 54908 | Downstream | -5.4852561 | 4.13E-08 | 0.00132803 |
| 16 | 12002510 | 12002510 | 1 | 16_12002510 | ENSG00000048471 | SNX29 | 0 | INTRON | -5.4843391 | 4.15E-08 | 0.00133242 |
| 12 | 119976620 | 119976620 | 1 | 12_119976620 | ENSG00000135127 | BICDL1 | 13248 | Upstream | 5.48349015 | 4.17E-08 | 0.00133427 |
| 13 | 92397172 | 92397172 | 1 | 13_92397172 | ENSG00000179399 | GPC5 | 0 | INTRON | 5.48342842 | 4.17E-08 | 0.00133427 |
| 8 | 93637704 | 93637704 | 1 | 8_93637704 | ENSG00000246662 | LINC00535 | 0 | INTRON | 5.48305431 | 4.18E-08 | 0.00133458 |
| 19 | 13711186 | 13711186 | 1 | 19_13711186 | ENSG00000104957 | CCDC130 | 20573 | Upstream | 5.48041032 | 4.24E-08 | 0.00135174 |
| 2 | 136413523 | 136413523 | 1 | 2_136413523 | ENSG00000251976 | RN7SKP141 | 22854 | Downstream | 5.47991852 | 4.26E-08 | 0.00135174 |
| 15 | 37207390 | 37207390 | 1 | 15_37207390 | ENSG00000274216 | Metazoa_SRP | 9226 | Upstream | 5.47964933 | 4.26E-08 | 0.00135174 |
| 13 | 23670841 | 23670841 | 1 | 13_23670841 | ENSG00000127863 | TNFRSF19 | 0 | INTRON | 5.47947226 | 4.27E-08 | 0.00135174 |
| 11 | 28567548 | 28567548 | 1 | 11_28567548 | ENSG00000169519 | METTL15 | 40507 | Downstream | 5.47875294 | 4.28E-08 | 0.00135327 |
| 2 | 112399252 | 112399252 | 1 | 2_112399252 | ENSG00000169629 | RGPD8 | 0 | 3UTR | -5.4786138 | 4.29E-08 | 0.00135327 |
| 4 | 184512367 | 184512367 | 1 | 4_184512367 | ENSG00000271538 | LINC02427 | 0 | INTRON | -5.4781857 | 4.30E-08 | 0.00135404 |
| 13 | 98094872 | 98094872 | 1 | 13_98094872 | ENSG00000152767 | FARP1 | 47689 | Upstream | -5.4771192 | 4.32E-08 | 0.00135971 |
| 1 | 27769977 | 27769977 | 1 | 1_27769977 | ENSG00000117758 | STX12 | 3241 | Upstream | 5.47662791 | 4.34E-08 | 0.00136066 |
| 11 | 88318778 | 88318778 | 1 | 11_88318778 | ENSG00000109861 | CTSC | 0 | INTRON | 5.47589111 | 4.35E-08 | 0.00136066 |
| 14 | 56901938 | 56901938 | 1 | 14_56901938 | ENSG00000248550 | OTX2-AS1 | 0 | INTRON | 5.47579303 | 4.36E-08 | 0.00136066 |
| 12 | 20136310 | 20136310 | 1 | 12_20136310 | ENSG00000256499 | LINC02468 | 147 | Upstream | 5.47569077 | 4.36E-08 | 0.00136066 |
| 21 | 35426452 | 35426452 | 1 | 21_35426452 | ENSG00000159216 | RUNX1 | 0 | INTRON | 5.47414388 | 4.40E-08 | 0.00137008 |
| 6 | 34626071 | 34626071 | 1 | 6_34626071 | ENSG00000196821 | ILRUN | 0 | INTRON | 5.47341579 | 4.41E-08 | 0.00137156 |
| 6 | 97606644 | 97606644 | 1 | 6_97606644 | ENSG00000271860 | AL589740.1 | 0 | INTRON | 5.47330569 | 4.42E-08 | 0.00137156 |
| 7 | 115940945 | 115940945 | 1 | 7_115940945 | ENSG00000105967 | TFEC | 0 | 3UTR | 5.46836863 | 4.54E-08 | 0.00140774 |
| 12 | 102437169 | 102437169 | 1 | 12_102437169 | ENSG00000283052 | LINC02456 | 0 | INTRON | -5.4676758 | 4.56E-08 | 0.00141068 |
| 11 | 54797740 | 54797740 | 1 | 11_54797740 | ENSG00000255078 | OR4A6P | 71924 | Downstream | -5.466664 | 4.59E-08 | 0.00141618 |
| 19 | 55400367 | 55400367 | 1 | 19_55400367 | ENSG00000108106 | UBE2S | 0 | 3UTR | 5.46605817 | 4.60E-08 | 0.00141845 |
| 1 | 103362902 | 103362902 | 1 | 1_103362902 | ENSG00000230759 | AC095032.2 | 51976 | Upstream | 5.46560883 | 4.61E-08 | 0.00141948 |
| 3 | 54044928 | 54044928 | 1 | 3_54044928 | ENSG00000288029 | AC115282.2 | 0 | INTRON | -5.4647293 | 4.64E-08 | 0.00142396 |
| 7 | 70831687 | 70831687 | 1 | 7_70831687 | ENSG00000236978 | AC073873.1 | 6050 | Upstream | -5.4628734 | 4.68E-08 | 0.00143634 |
| 2 | 70714380 | 70714380 | 1 | 2_70714380 | ENSG00000075340 | ADD2 | 0 | INTRON | 5.4625417 | 4.69E-08 | 0.00143644 |
| X | 111882777 | 111882777 | 1 | X_111882777 | ENSG00000204025 | TRPC5OS | 0 | INTRON | -5.4617378 | 4.71E-08 | 0.00143912 |
| 7 | 84680712 | 84680712 | 1 | 7_84680712 | ENSG00000235139 | AC003984.1 | 96390 | Downstream | 5.46126644 | 4.73E-08 | 0.00143912 |
| 7 | 62923809 | 62923809 | 1 | 7_62923809 | ENSG00000207443 | RNU6-417P | 87653 | Downstream | 5.46122168 | 4.73E-08 | 0.00143912 |
| 3 | 7497502 | 7497502 | 1 | 3_7497502 | ENSG00000196277 | GRM7 | 0 | INTRON | -5.4609386 | 4.74E-08 | 0.00143912 |
| 12 | 43776370 | 43776370 | 1 | 12_43776370 | ENSG00000198001 | IRAK4 | 0 | INTRON | 5.45981473 | 4.77E-08 | 0.00144568 |
| 2 | 107240104 | 107240104 | 1 | 2_107240104 | ENSG00000229457 | LINC01789 | 14586 | Downstream | -5.4589331 | 4.79E-08 | 0.00144945 |
| 1 | 84488219 | 84488219 | 1 | 1_84488219 | ENSG00000117133 | RPF1 | 0 | INTRON | -5.4587125 | 4.80E-08 | 0.00144945 |
| 6 | 37918366 | 37918366 | 1 | 6_37918366 | ENSG00000156639 | ZFAND3 | 0 | INTRON | 5.45840503 | 4.80E-08 | 0.00144945 |
| 1 | 158753944 | 158753944 | 1 | 1_158753944 | ENSG00000197403 | OR6N1 | 0 | INTRON | -5.4565407 | 4.86E-08 | 0.00145989 |
| 6 | 169833633 | 169833633 | 1 | 6_169833633 | ENSG00000236173 | AL049612.1 | 23531 | Upstream | 5.45650146 | 4.86E-08 | 0.00145989 |
| 12 | 93154095 | 93154095 | 1 | 12_93154095 | ENSG00000257322 | AC138123.1 | 0 | INTRON | 5.45530546 | 4.89E-08 | 0.00146635 |
| 3 | 175581167 | 175581167 | 1 | 3_175581167 | ENSG00000177694 | NAALADL2 | 0 | EXON | -5.4550897 | 4.89E-08 | 0.00146635 |
| 1 | 80750095 | 80750095 | 1 | 1_80750095 | ENSG00000234184 | LINC01781 | 103304 | Downstream | -5.4537616 | 4.93E-08 | 0.00147296 |
| 21 | 35567098 | 35567098 | 1 | 21_35567098 | ENSG00000159216 | RUNX1 | 0 | INTRON | 5.45366601 | 4.93E-08 | 0.00147296 |
| 16 | 6784258 | 6784258 | 1 | 16_6784258 | ENSG00000078328 | RBFOX1 | 0 | INTRON | -5.4532631 | 4.95E-08 | 0.00147353 |
| 18 | 60215087 | 60215087 | 1 | 18_60215087 | ENSG00000267620 | AC090771.1 | 16915 | Downstream | 5.4529751 | 4.95E-08 | 0.00147353 |
| 17 | 6948884 | 6948884 | 1 | 17_6948884 | ENSG00000215067 | ALOX12-AS1 | 0 | INTRON | -5.4517474 | 4.99E-08 | 0.00148002 |
| 8 | 81136153 | 81136153 | 1 | 8_81136153 | ENSG00000253214 | AC079209.1 | 12953 | Upstream | 5.4515724 | 4.99E-08 | 0.00148002 |
| 6 | 124060108 | 124060108 | 1 | 6_124060108 | ENSG00000188580 | NKAIN2 | 0 | INTRON | 5.45006289 | 5.04E-08 | 0.00148661 |
| 1 | 80546671 | 80546671 | 1 | 1_80546671 | ENSG00000234184 | LINC01781 | 0 | INTRON | 5.45001958 | 5.04E-08 | 0.00148661 |
| 7 | 85681697 | 85681697 | 1 | 7_85681697 | ENSG00000227785 | AC092013.1 | 45353 | Upstream | -5.4498557 | 5.04E-08 | 0.00148661 |
| 7 | 70014206 | 70014206 | 1 | 7_70014206 | ENSG00000158321 | AUTS2 | 0 | INTRON | 5.44814822 | 5.09E-08 | 0.00149835 |
| 10 | 29444948 | 29444948 | 1 | 10_29444948 | ENSG00000224597 | SVIL-AS1 | 0 | INTRON | 5.44759807 | 5.11E-08 | 0.0015004 |
| 19 | 7593276 | 7593276 | 1 | 19_7593276 | ENSG00000076826 | CAMSAP3 | 2625 | Upstream | -5.4467689 | 5.13E-08 | 0.00150481 |
| 20 | 29495948 | 29495948 | 1 | 20_29495948 | ENSG00000282995 | FRG1EP | 0 | INTRON | 5.44593547 | 5.15E-08 | 0.00150733 |
| 6 | 17162333 | 17162333 | 1 | 6_17162333 | ENSG00000230873 | STMND1 | 30961 | Downstream | 5.44547294 | 5.17E-08 | 0.00150733 |
| 2 | 184169091 | 184169091 | 1 | 2_184169091 | ENSG00000286152 | AC096555.1 | 0 | INTRON | 5.44535488 | 5.17E-08 | 0.00150733 |
| 8 | 142273894 | 142273894 | 1 | 8_142273894 | ENSG00000171045 | TSNARE1 | 0 | INTRON | 5.44524821 | 5.17E-08 | 0.00150733 |
| 9 | 106286744 | 106286744 | 1 | 9_106286744 | ENSG00000234323 | LINC01505 | 0 | INTRON | -5.4444254 | 5.20E-08 | 0.00150853 |
| 8 | 48053129 | 48053129 | 1 | 8_48053129 | ENSG00000169139 | UBE2V2 | 0 | INTRON | 5.44433381 | 5.20E-08 | 0.00150853 |
| 8 | 55064341 | 55064341 | 1 | 8_55064341 | ENSG00000286348 | AC084834.1 | 3243 | Downstream | 5.44419359 | 5.20E-08 | 0.00150853 |
| 6 | 111957349 | 111957349 | 1 | 6_111957349 | ENSG00000227012 | LINC02527 | 47929 | Upstream | -5.4437306 | 5.22E-08 | 0.00150908 |
| 1 | 246079155 | 246079155 | 1 | 1_246079155 | ENSG00000185420 | SMYD3 | 0 | INTRON | 5.44352351 | 5.22E-08 | 0.00150908 |
| 14 | 66691699 | 66691699 | 1 | 14_66691699 | ENSG00000171723 | GPHN | 0 | INTRON | 5.44241987 | 5.26E-08 | 0.00151589 |
| 14 | 66577102 | 66577102 | 1 | 14_66577102 | ENSG00000171723 | GPHN | 0 | INTRON | -5.4417929 | 5.27E-08 | 0.00151866 |
| 1 | 2535502 | 2535502 | 1 | 1_2535502 | ENSG00000272449 | AL139246.5 | 0 | INTRON | -5.440459 | 5.31E-08 | 0.00152749 |
| 16 | 75418650 | 75418650 | 1 | 16_75418650 | ENSG00000153774 | CFDP1 | 0 | INTRON | -5.4397004 | 5.34E-08 | 0.00153142 |
| 6 | 133397742 | 133397742 | 1 | 6_133397742 | ENSG00000112319 | EYA4 | 0 | INTRON | -5.4383931 | 5.38E-08 | 0.0015401 |
| 3 | 190094937 | 190094937 | 1 | 3_190094937 | ENSG00000090530 | P3H2 | 0 | INTRON | 5.43791496 | 5.39E-08 | 0.00154165 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | 43843409 | 43843409 | 1 | 3_43843409 | ENSG00000235886 | AC006055.1 | 63427 | Upstream | 5.43744185 | 5.41E-08 | 0.00154179 |
| 8 | 143863252 | 143863252 | 1 | 8_143863252 | ENSG00000261150 | EPPK1 | 0 | EXON | -5.4368479 | 5.42E-08 | 0.00154179 |
| 19 | 35342811 | 35342811 | 1 | 19_35342811 | ENSG00000012124 | CD22 | 0 | INTRON | 5.4367756 | 5.43E-08 | 0.00154179 |
| 22 | 41974908 | 41974908 | 1 | 22_41974908 | ENSG00000100167 | SEPTIN3 | 0 | INTRON | 5.43670361 | 5.43E-08 | 0.00154179 |
| 15 | 96169554 | 96169554 | 1 | 15_96169554 | ENSG00000275443 | AC012409.2 | 0 | INTRON | 5.4359024 | 5.45E-08 | 0.00154616 |
| 4 | 125704372 | 125704372 | 1 | 4_125704372 | ENSG00000250149 | AC104664.1 | 0 | INTRON | 5.43459783 | 5.49E-08 | 0.00155492 |
| 15 | 45241086 | 45241086 | 1 | 15_45241086 | ENSG00000259520 | AC051619.5 | 0 | INTRON | -5.4330408 | 5.54E-08 | 0.00156595 |
| 4 | 117527379 | 117527379 | 1 | 4_117527379 | ENSG00000236922 | LINC01378 | 0 | INTRON | 5.43187229 | 5.58E-08 | 0.00157163 |
| 1 | 1991551 | 1991551 | 1 | 1_1991551 | ENSG00000142609 | CFAP74 | 0 | INTRON | 5.43177931 | 5.58E-08 | 0.00157163 |
| 4 | 87992509 | 87992509 | 1 | 4_87992509 | ENSG00000286618 | AC131944.1 | 0 | INTRON | -5.4314747 | 5.59E-08 | 0.00157163 |
| 19 | 10630992 | 10630992 | 1 | 19_10630992 | ENSG00000129353 | SLC44A2 | 0 | INTRON | 5.43103461 | 5.60E-08 | 0.00157163 |
| 3 | 21577912 | 21577912 | 1 | 3_21577912 | ENSG00000225542 | ZNF385D-AS1 | 0 | INTRON | -5.4309196 | 5.61E-08 | 0.00157163 |
| 7 | 117263159 | 117263159 | 1 | 7_117263159 | ENSG00000230785 | AC006326.1 | 0 | EXON | 5.43021383 | 5.63E-08 | 0.00157377 |
| 6 | 20092008 | 20092008 | 1 | 6_20092008 | ENSG00000172197 | MBOAT1 | 7675 | Downstream | 5.43008907 | 5.63E-08 | 0.00157377 |
| 5 | 97389361 | 97389361 | 1 | 5_97389361 | ENSG00000251513 | LIX1-AS1 | 0 | INTRON | 5.42900347 | 5.67E-08 | 0.00158078 |
| 7 | 140825039 | 140825039 | 1 | 7_140825039 | ENSG00000157764 | BRAF | 0 | INTRON | 5.42718372 | 5.73E-08 | 0.00159436 |
| 1 | 53552271 | 53552271 | 1 | 1_53552271 | ENSG00000174332 | GLIS1 | 0 | INTRON | 5.42645558 | 5.75E-08 | 0.00159826 |
| 1 | 218458594 | 218458594 | 1 | 1_218458594 | ENSG00000228208 | C1orf143 | 670 | Upstream | 5.42588686 | 5.77E-08 | 0.00159888 |
| 7 | 27538612 | 27538612 | 1 | 7_27538612 | ENSG00000106049 | HIBADH | 0 | INTRON | -5.4258036 | 5.77E-08 | 0.00159888 |
| 3 | 73093125 | 73093125 | 1 | 3_73093125 | ENSG00000252651 | RNU6-557P | 868 | Upstream | 5.42525265 | 5.79E-08 | 0.00160121 |
| 2 | 43833630 | 43833630 | 1 | 2_43833630 | ENSG00000143921 | ABCG8 | 0 | INTRON | 5.42271982 | 5.87E-08 | 0.00161761 |
| 8 | 100696031 | 100696031 | 1 | 8_100696031 | ENSG00000070756 | PABPC1 | 0 | INTRON | -5.4225349 | 5.88E-08 | 0.00161761 |
| 6 | 72799195 | 72799195 | 1 | 6_72799195 | ENSG00000185760 | KCNQ5 | 0 | INTRON | -5.4223081 | 5.88E-08 | 0.00161761 |
| 2 | 19426489 | 19426489 | 1 | 2_19426489 | ENSG00000234597 | AC010096.1 | 31730 | Downstream | 5.42201865 | 5.89E-08 | 0.00161761 |
| 4 | 15081846 | 15081846 | 1 | 4_15081846 | ENSG00000249252 | AC098829.1 | 0 | INTRON | 5.42198519 | 5.89E-08 | 0.00161761 |
| 15 | 45379892 | 45379892 | 1 | 15_45379892 | ENSG00000275672 | AC025580.3 | 0 | EXON | 5.42165137 | 5.91E-08 | 0.00161803 |
| 9 | 93500926 | 93500926 | 1 | 9_93500926 | ENSG00000048828 | FAM120A | 0 | INTRON | 5.42100575 | 5.93E-08 | 0.00161858 |
| 13 | 23281200 | 23281200 | 1 | 13_23281200 | ENSG00000102683 | SGCG | 0 | INTRON | 5.42091082 | 5.93E-08 | 0.00161858 |
| 1 | 182001447 | 182001447 | 1 | 1_182001447 | ENSG00000287452 | AL161734.2 | 2462 | Upstream | 5.42072861 | 5.94E-08 | 0.00161858 |
| X | 123130235 | 123130235 | 1 | X_123130235 | ENSG00000224236 | MRRFP1 | 12454 | Upstream | 5.42024813 | 5.95E-08 | 0.00162034 |
| 4 | 156392329 | 156392329 | 1 | 4_156392329 | ENSG00000251511 | AC096736.3 | 193649 | Upstream | -5.4198823 | 5.96E-08 | 0.00162107 |
| 1 | 51585503 | 51585503 | 1 | 1_51585503 | ENSG00000117859 | OSBPL9 | 0 | INTRON | -5.4181131 | 6.02E-08 | 0.00163426 |
| 5 | 65164442 | 65164442 | 1 | 5_65164442 | ENSG00000049192 | ADAMTS6 | 0 | INTRON | 5.41786331 | 6.03E-08 | 0.00163426 |
| 4 | 164583055 | 164583055 | 1 | 4_164583055 | ENSG00000251162 | AC074198.2 | 14663 | Upstream | 5.41689317 | 6.06E-08 | 0.00164053 |
| 3 | 108408549 | 108408549 | 1 | 3_108408549 | ENSG00000144821 | MYH15 | 0 | INTRON | 5.41653724 | 6.08E-08 | 0.00164053 |
| 20 | 2573629 | 2573629 | 1 | 20_2573629 | ENSG00000149488 | TMC2 | 0 | INTRON | -5.4163259 | 6.08E-08 | 0.00164053 |
| 1 | 4025872 | 4025872 | 1 | 1_4025872 | ENSG00000284703 | AL805961.1 | 6364 | Upstream | 5.41602823 | 6.09E-08 | 0.00164066 |
| 12 | 102462550 | 102462550 | 1 | 12_102462550 | ENSG00000017427 | IGF1 | 0 | INTRON | -5.4142684 | 6.15E-08 | 0.00165426 |
| 13 | 112628492 | 112628492 | 1 | 13_112628492 | ENSG00000197595 | ATP11AUN | 18551 | Upstream | 5.41360989 | 6.18E-08 | 0.00165774 |
| 2 | 210760105 | 210760105 | 1 | 2_210760105 | ENSG00000021826 | CPS1 | 80998 | Downstream | 5.41247507 | 6.22E-08 | 0.00166565 |
| 14 | 68947304 | 68947304 | 1 | 14_68947304 | ENSG00000072110 | ACTN1 | 0 | INTRON | 5.41168431 | 6.24E-08 | 0.00166796 |
| 19 | 18277954 | 18277954 | 1 | 19_18277954 | ENSG00000130522 | JUND | 1739 | Downstream | -5.4116647 | 6.24E-08 | 0.00166796 |
| 5 | 71935643 | 71935643 | 1 | 5_71935643 | ENSG00000285804 | AC025774.1 | 152138 | Downstream | -5.4082834 | 6.36E-08 | 0.00169708 |
| 2 | 201013902 | 201013902 | 1 | 2_201013902 | ENSG00000155744 | FAM126B | 0 | INTRON | -5.4078985 | 6.38E-08 | 0.00169807 |
| 3 | 137383431 | 137383431 | 1 | 3_137383431 | ENSG00000201325 | RNA5SP142 | 134702 | Downstream | -5.4068649 | 6.41E-08 | 0.00170187 |
| 8 | 50144761 | 50144761 | 1 | 8_50144761 | ENSG00000147481 | SNTG1 | 0 | INTRON | 5.40664497 | 6.42E-08 | 0.00170187 |
| 11 | 34243199 | 34243199 | 1 | 11_34243199 | ENSG00000166016 | ABTB2 | 0 | INTRON | 5.40661144 | 6.42E-08 | 0.00170187 |
| 1 | 194578335 | 194578335 | 1 | 1_194578335 | ENSG00000251813 | RNU6-983P | 90130 | Upstream | 5.40638031 | 6.43E-08 | 0.00170187 |
| X | 126600888 | 126600888 | 1 | X_126600888 | ENSG00000198889 | DCAF12L1 | 48074 | Upstream | -5.4050795 | 6.48E-08 | 0.00170686 |
| 4 | 140074518 | 140074518 | 1 | 4_140074518 | ENSG00000196782 | MAML3 | 0 | INTRON | 5.40486985 | 6.49E-08 | 0.00170686 |
| 4 | 149870015 | 149870015 | 1 | 4_149870015 | ENSG00000234828 | IQCM | 0 | INTRON | -5.4047757 | 6.49E-08 | 0.00170686 |
| 5 | 120201863 | 120201863 | 1 | 5_120201863 | ENSG00000251293 | AC008574.1 | 43584 | Downstream | 5.40474363 | 6.49E-08 | 0.00170686 |
| 6 | 58156260 | 58156260 | 1 | 6_58156260 | ENSG00000225096 | AL445250.1 | 0 | INTRON | -5.4039732 | 6.52E-08 | 0.0017097 |
| 2 | 228906073 | 228906073 | 1 | 2_228906073 | ENSG00000153823 | PID1 | 0 | INTRON | -5.4038932 | 6.52E-08 | 0.0017097 |
| 2 | 148867055 | 148867055 | 1 | 2_148867055 | ENSG00000231079 | AC105402.3 | 0 | INTRON | -5.403615 | 6.53E-08 | 0.00170972 |
| 4 | 31353028 | 31353028 | 1 | 4_31353028 | ENSG00000251434 | AC104071.1 | 1303 | Downstream | -5.4028678 | 6.56E-08 | 0.00171422 |
| 4 | 66926298 | 66926298 | 1 | 4_66926298 | ENSG00000252890 | RNU6-699P | 28927 | Downstream | 5.40258134 | 6.57E-08 | 0.00171433 |
| 2 | 3550784 | 3550784 | 1 | 2_3550784 | ENSG00000286905 | AC108488.2 | 0 | INTRON | 5.40107432 | 6.62E-08 | 0.00172124 |
| 15 | 78135219 | 78135219 | 1 | 15_78135219 | ENSG00000166411 | IDH3A | 0 | INTRON | 5.40072638 | 6.64E-08 | 0.00172124 |
| 4 | 107828899 | 107828899 | 1 | 4_107828899 | ENSG00000164023 | SGMS2 | 0 | INTRON | 5.40068177 | 6.64E-08 | 0.00172124 |
| 11 | 40911733 | 40911733 | 1 | 11_40911733 | ENSG00000148948 | LRRC4C | 0 | INTRON | 5.40041996 | 6.65E-08 | 0.00172124 |
| 19 | 12409766 | 12409766 | 1 | 19_12409766 | ENSG00000268870 | AC008758.5 | 0 | INTRON | -5.400363 | 6.65E-08 | 0.00172124 |
| 4 | 83439390 | 83439390 | 1 | 4_83439390 | ENSG00000163312 | HELQ | 0 | INTRON | 5.40021625 | 6.66E-08 | 0.00172124 |
| 6 | 43603327 | 43603327 | 1 | 6_43603327 | ENSG00000170734 | POLH | 0 | INTRON | -5.3994227 | 6.69E-08 | 0.00172625 |
| 9 | 125956260 | 125956260 | 1 | 9_125956260 | ENSG00000167081 | PBX3 | 0 | INTRON | 5.3989687 | 6.70E-08 | 0.001728 |
| 3 | 163987984 | 163987984 | 1 | 3_163987984 | ENSG00000214210 | AC084017.1 | 13621 | Downstream | -5.3986448 | 6.71E-08 | 0.0017285 |
| 17 | 47496445 | 47496445 | 1 | 17_47496445 | ENSG00000228782 | MRPL45P2 | 3953 | Upstream | 5.39788177 | 6.74E-08 | 0.00173325 |
| 9 | 69807937 | 69807937 | 1 | 9_69807937 | ENSG00000225626 | C9orf135-DT | 10456 | Downstream | -5.3972651 | 6.77E-08 | 0.00173634 |
| 8 | 94946611 | 94946611 | 1 | 8_94946611 | ENSG00000156170 | NDUFAF6 | 0 | INTRON | -5.3970205 | 6.78E-08 | 0.00173634 |
| 17 | 55962107 | 55962107 | 1 | 17_55962107 | ENSG00000153930 | ANKFN1 | 0 | EXON | -5.395785 | 6.82E-08 | 0.00174477 |
| 7 | 132798612 | 132798612 | 1 | 7_132798612 | ENSG00000106554 | CHCHD3 | 0 | INTRON | 5.39561067 | 6.83E-08 | 0.00174477 |
| 9 | 6813519 | 6813519 | 1 | 9_6813519 | ENSG00000107077 | KDM4C | 0 | INTRON | 5.39438912 | 6.88E-08 | 0.00175405 |
| 5 | 126881214 | 126881214 | 1 | 5_126881214 | ENSG00000173926 | MARCH3 | 0 | INTRON | 5.39387665 | 6.90E-08 | 0.00175618 |
| 6 | 166177464 | 166177464 | 1 | 6_166177464 | ENSG00000164458 | TBXT | 8764 | Upstream | -5.3936334 | 6.90E-08 | 0.00175618 |
| 21 | 46293665 | 46293665 | 1 | 21_46293665 | ENSG00000182362 | YBEY | 0 | INTRON | 5.3929667 | 6.93E-08 | 0.00176008 |
| 2 | 124169905 | 124169905 | 1 | 2_124169905 | ENSG00000155052 | CNTNAP5 | 0 | INTRON | -5.3917923 | 6.98E-08 | 0.00176785 |
| 4 | 59656621 | 59656621 | 1 | 4_59656621 | ENSG00000249392 | AC096588.1 | 26297 | Upstream | 5.39164045 | 6.98E-08 | 0.00176785 |
| 5 | 114356576 | 114356576 | 1 | 5_114356576 | ENSG00000080709 | KCNN2 | 0 | INTRON | 5.39040636 | 7.03E-08 | 0.00177509 |
| 4 | 68439212 | 68439212 | 1 | 4_68439212 | ENSG00000087128 | TMPRSS11E | 8250 | Upstream | 5.39017619 | 7.04E-08 | 0.00177509 |
| 7 | 48794908 | 48794908 | 1 | 7_48794908 | ENSG00000225705 | AC004899.1 | 51517 | Downstream | 5.39010582 | 7.04E-08 | 0.00177509 |
| 3 | 157493193 | 157493193 | 1 | 3_157493193 | ENSG00000197415 | VEPH1 | 0 | 3UTR | -5.3898395 | 7.05E-08 | 0.00177509 |
| 1 | 18390520 | 18390520 | 1 | 1_18390520 | ENSG00000225387 | AL591896.1 | 2006 | Downstream | 5.38868048 | 7.10E-08 | 0.00178202 |
| 7 | 158798929 | 158798929 | 1 | 7_158798929 | ENSG00000117868 | ESYT2 | 0 | INTRON | 5.38860812 | 7.10E-08 | 0.00178202 |
| 22 | 18183161 | 18183161 | 1 | 22_18183161 | ENSG00000187979 | FAM230D | 0 | EXON | 5.38765026 | 7.14E-08 | 0.00178678 |
| 3 | 123917419 | 123917419 | 1 | 3_123917419 | ENSG00000175455 | CCDC14 | 0 | INTRON | -5.3874392 | 7.15E-08 | 0.00178678 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 186498241 | 186498241 | 1 | 2_186498241 | ENSG00000065548 | ZC3H15 | 0 | INTRON | -5.3873353 | 7.15E-08 | 0.00178678 |
| 2 | 177755392 | 177755392 | 1 | 2_177755392 | ENSG00000128655 | PDE11A | 0 | INTRON | -5.3858952 | 7.21E-08 | 0.0017985 |
| 12 | 45347131 | 45347131 | 1 | 12_45347131 | ENSG00000177119 | ANO6 | 0 | EXON | -5.3853914 | 7.23E-08 | 0.00180091 |
| 5 | 157025998 | 157025998 | 1 | 5_157025998 | ENSG00000113249 | HAVCR1 | 3414 | Downstream | -5.3850568 | 7.24E-08 | 0.00180162 |
| 2 | 174533967 | 174533967 | 1 | 2_174533967 | ENSG00000279884 | AC010894.5 | 11417 | Downstream | -5.383993 | 7.29E-08 | 0.00180966 |
| 6 | 94553930 | 94553930 | 1 | 6_94553930 | ENSG00000216853 | MTCYBP36 | 106751 | Upstream | 5.38346523 | 7.31E-08 | 0.00181036 |
| 3 | 113968487 | 113968487 | 1 | 3_113968487 | ENSG00000163617 | CCDC191 | 0 | INTRON | -5.383307 | 7.31E-08 | 0.00181036 |
| 12 | 99570385 | 99570385 | 1 | 12_99570385 | ENSG00000185046 | ANKS1B | 0 | INTRON | 5.38313713 | 7.32E-08 | 0.00181036 |
| 2 | 2003148 | 2003148 | 1 | 2_2003148 | ENSG00000186487 | MYT1L | 0 | INTRON | 5.38257058 | 7.34E-08 | 0.00181199 |
| 13 | 52037506 | 52037506 | 1 | 13_52037506 | ENSG00000197168 | NEK5 | 0 | INTRON | -5.382173 | 7.36E-08 | 0.00181199 |
| 1 | 178807048 | 178807048 | 1 | 1_178807048 | ENSG00000116191 | RALGPS2 | 0 | INTRON | -5.3820129 | 7.37E-08 | 0.00181199 |
| 4 | 33979999 | 33979999 | 1 | 4_33979999 | ENSG00000250723 | AC016687.2 | 0 | EXON | 5.38193283 | 7.37E-08 | 0.00181199 |
| 7 | 52767952 | 52767952 | 1 | 7_52767952 | ENSG00000234304 | SGO1P2 | 123884 | Downstream | 5.37949325 | 7.47E-08 | 0.00183406 |
| 12 | 7633987 | 7633987 | 1 | 12_7633987 | ENSG00000285142 | AC006927.5 | 3408 | Downstream | 5.37874445 | 7.50E-08 | 0.00183905 |
| 8 | 70265356 | 70265356 | 1 | 8_70265356 | ENSG00000140396 | NCOA2 | 0 | INTRON | -5.3781639 | 7.52E-08 | 0.00184168 |
| 16 | 59810964 | 59810964 | 1 | 16_59810964 | ENSG00000261807 | LINC02141 | 44388 | Upstream | 5.37781229 | 7.54E-08 | 0.00184168 |
| 15 | 89919029 | 89919029 | 1 | 15_89919029 | ENSG00000242498 | ARPIN | 6077 | Upstream | 5.37771053 | 7.54E-08 | 0.00184168 |
| 2 | 163522193 | 163522193 | 1 | 2_163522193 | ENSG00000182263 | FIGN | 71202 | Downstream | -5.377295 | 7.56E-08 | 0.00184196 |
| 14 | 84090639 | 84090639 | 1 | 14_84090639 | ENSG00000285826 | AL356807.1 | 0 | INTRON | 5.37716645 | 7.57E-08 | 0.00184196 |
| 14 | 78591834 | 78591834 | 1 | 14_78591834 | ENSG00000021645 | NRXN3 | 0 | INTRON | -5.3763799 | 7.60E-08 | 0.00184712 |
| 14 | 72120462 | 72120462 | 1 | 14_72120462 | ENSG00000182732 | RGS6 | 0 | INTRON | 5.376148 | 7.61E-08 | 0.00184712 |
| 16 | 36135204 | 36135204 | 1 | 16_36135204 | ENSG00000261084 | PPP1R1AP2 | 222688 | Downstream | -5.3754554 | 7.64E-08 | 0.0018516 |
| 9 | 128828455 | 128828455 | 1 | 9_128828455 | ENSG00000286112 | AL441992.2 | 0 | INTRON | 5.37503502 | 7.66E-08 | 0.00185316 |
| 1 | 81778777 | 81778777 | 1 | 1_81778777 | ENSG00000117114 | ADGRL2 | 0 | INTRON | 5.3747905 | 7.67E-08 | 0.00185316 |
| 4 | 74310068 | 74310068 | 1 | 4_74310068 | ENSG00000182585 | EPGN | 0 | INTRON | 5.3744629 | 7.68E-08 | 0.0018539 |
| X | 13690539 | 13690539 | 1 | X_13690539 | ENSG00000123595 | RAB9A | 0 | INTRON | 5.3741838 | 7.69E-08 | 0.00185414 |
| 7 | 29068839 | 29068839 | 1 | 7_29068839 | ENSG00000106066 | CPVL | 0 | INTRON | 5.37375744 | 7.71E-08 | 0.00185515 |
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| 1 | 55316590 | 55316590 | 1 | 1_55316590 | ENSG00000231090 | MIR4422HG | 0 | INTRON | -5.3726938 | 7.76E-08 | 0.00186163 |
| 1 | 216268080 | 216268080 | 1 | 1_216268080 | ENSG00000042781 | USH2A | 0 | INTRON | 5.37165366 | 7.80E-08 | 0.00186976 |
| 14 | 85984631 | 85984631 | 1 | 14_85984631 | ENSG00000258733 | LINC02328 | 0 | INTRON | 5.37127883 | 7.82E-08 | 0.00187102 |
| 5 | 133998396 | 133998396 | 1 | 5_133998396 | ENSG00000213585 | VDAC1 | 0 | INTRON | 5.37000706 | 7.87E-08 | 0.00187803 |
| 3 | 59908744 | 59908744 | 1 | 3_59908744 | ENSG00000189283 | FHIT | 0 | INTRON | -5.3699313 | 7.88E-08 | 0.00187803 |
| 3 | 155676320 | 155676320 | 1 | 3_155676320 | ENSG00000114805 | PLCH1 | 0 | 5UTR | -5.3698449 | 7.88E-08 | 0.00187803 |
| 12 | 123285803 | 123285803 | 1 | 12_123285803 | ENSG00000199845 | RNA5SP375 | 2769 | Upstream | 5.36944541 | 7.90E-08 | 0.00187866 |
| 1 | 216617414 | 216617414 | 1 | 1_216617414 | ENSG00000196482 | ESRRG | 0 | INTRON | -5.36928 | 7.91E-08 | 0.00187866 |
| 11 | 8912827 | 8912827 | 1 | 11_8912827 | ENSG00000166452 | AKIP1 | 0 | INTRON | 5.36693202 | 8.01E-08 | 0.00189888 |
| 6 | 28638458 | 28638458 | 1 | 6_28638458 | ENSG00000287279 | AL121932.2 | 0 | INTRON | 5.36684554 | 8.01E-08 | 0.00189888 |
| 6 | 11046617 | 11046617 | 1 | 6_11046617 | ENSG00000230314 | ELOVL2-AS1 | 0 | INTRON | 5.36556474 | 8.07E-08 | 0.00190975 |
| 14 | 56455818 | 56455818 | 1 | 14_56455818 | ENSG00000259719 | LINC02284 | 28786 | Downstream | -5.365217 | 8.09E-08 | 0.00191077 |
| 2 | 58185705 | 58185705 | 1 | 2_58185705 | ENSG00000115392 | FANCL | 0 | INTRON | -5.3641789 | 8.13E-08 | 0.00191913 |
| 3 | 22348053 | 22348053 | 1 | 3_22348053 | ENSG00000151789 | ZNF385D | 0 | INTRON | -5.3636602 | 8.16E-08 | 0.00192198 |
| 19 | 47718689 | 47718689 | 1 | 19_47718689 | ENSG00000268746 | AC010519.1 | 0 | INTRON | 5.36334774 | 8.17E-08 | 0.00192265 |
| 11 | 711245 | 711245 | 1 | 11_711245 | ENSG00000269915 | AP006621.4 | 0 | INTRON | 5.36257372 | 8.20E-08 | 0.0019254 |
| 16 | 25695640 | 25695640 | 1 | 16_25695640 | ENSG00000182601 | HS3ST4 | 0 | INTRON | 5.36253492 | 8.21E-08 | 0.0019254 |
| 2 | 228610886 | 228610886 | 1 | 2_228610886 | ENSG00000232023 | LINC01807 | 0 | INTRON | 5.36234149 | 8.22E-08 | 0.0019254 |
| 6 | 104103690 | 104103690 | 1 | 6_104103690 | ENSG00000214428 | NPM1P10 | 76927 | Upstream | -5.3619763 | 8.23E-08 | 0.00192665 |
| 1 | 200630759 | 200630759 | 1 | 1_200630759 | ENSG00000118197 | DDX59 | 0 | INTRON | -5.3599211 | 8.33E-08 | 0.00194602 |
| 2 | 202522377 | 202522377 | 1 | 2_202522377 | ENSG00000204217 | BMPR2 | 0 | INTRON | -5.358649 | 8.38E-08 | 0.00195098 |
| 10 | 70199860 | 70199860 | 1 | 10_70199860 | ENSG00000232142 | RPS25P9 | 621 | Upstream | -5.3583997 | 8.40E-08 | 0.00195098 |
| 14 | 76369111 | 76369111 | 1 | 14_76369111 | ENSG00000119715 | ESRRB | 0 | INTRON | -5.3582307 | 8.40E-08 | 0.00195098 |
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| 8 | 75387056 | 75387056 | 1 | 8_75387056 | ENSG00000254023 | PKMP4 | 10042 | Downstream | 5.35817738 | 8.41E-08 | 0.00195098 |
| 11 | 3629639 | 3629639 | 1 | 11_3629639 | ENSG00000182048 | TRPC2 | 0 | INTRON | 5.35797743 | 8.42E-08 | 0.00195098 |
| 7 | 113964147 | 113964147 | 1 | 7_113964147 | ENSG00000154415 | PPP1R3A | 0 | INTRON | 5.35605879 | 8.51E-08 | 0.00196912 |
| 6 | 165084198 | 165084198 | 1 | 6_165084198 | ENSG00000287877 | AL133538.1 | 6703 | Downstream | 5.35369759 | 8.62E-08 | 0.00199129 |
| 17 | 64896591 | 64896591 | 1 | 17_64896591 | ENSG00000176809 | LRRC37A3 | 0 | EXON | 5.35342647 | 8.63E-08 | 0.00199129 |
| 8 | 52520864 | 52520864 | 1 | 8_52520864 | ENSG00000196711 | ALKAL1 | 13172 | Downstream | -5.3532514 | 8.64E-08 | 0.00199129 |
| 3 | 150913372 | 150913372 | 1 | 3_150913372 | ENSG00000243273 | AC020636.1 | 0 | INTRON | 5.35280466 | 8.66E-08 | 0.00199129 |
| 15 | 36844080 | 36844080 | 1 | 15_36844080 | ENSG00000212511 | U3 | 8559 | Upstream | 5.35236222 | 8.68E-08 | 0.00199129 |
| 3 | 50710380 | 50710380 | 1 | 3_50710380 | ENSG00000088538 | DOCK3 | 0 | INTRON | 5.35231106 | 8.68E-08 | 0.00199129 |
| 4 | 125210341 | 125210341 | 1 | 4_125210341 | ENSG00000196159 | FAT4 | 106057 | Upstream | -5.3522437 | 8.69E-08 | 0.00199129 |
| 2 | 148398339 | 148398339 | 1 | 2_148398339 | ENSG00000204406 | MBD5 | 0 | INTRON | 5.35207613 | 8.70E-08 | 0.00199129 |
| 20 | 54187345 | 54187345 | 1 | 20_54187345 | ENSG00000286587 | AL133335.2 | 4216 | Downstream | 5.35048052 | 8.77E-08 | 0.00200505 |
| 16 | 68753628 | 68753628 | 1 | 16_68753628 | ENSG00000039068 | CDH1 | 0 | INTRON | -5.3503439 | 8.78E-08 | 0.00200505 |
| 14 | 32192667 | 32192667 | 1 | 14_32192667 | ENSG00000286527 | AL161665.2 | 7765 | Downstream | 5.34997476 | 8.80E-08 | 0.00200645 |
| 8 | 40439374 | 40439374 | 1 | 8_40439374 | ENSG00000253354 | AC105999.1 | 37364 | Downstream | -5.3478243 | 8.90E-08 | 0.00202772 |
| 17 | 39968590 | 39968590 | 1 | 17_39968590 | ENSG00000167914 | GSDMA | 0 | INTRON | 5.34705688 | 8.94E-08 | 0.00203361 |
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| 16 | 47119402 | 47119402 | 1 | 16_47119402 | ENSG00000171208 | NETO2 | 0 | INTRON | 5.34565339 | 9.01E-08 | 0.00204124 |
| 3 | 185418976 | 185418976 | 1 | 3_185418976 | ENSG00000073803 | MAP3K13 | 0 | INTRON | 5.34467699 | 9.06E-08 | 0.00204955 |
| 7 | 103217019 | 103217019 | 1 | 7_103217019 | ENSG00000170629 | DPY19L2P2 | 0 | INTRON | -5.3443931 | 9.07E-08 | 0.00205003 |
| 6 | 85638335 | 85638335 | 1 | 6_85638335 | ENSG00000135316 | SYNCRIP | 0 | INTRON | -5.3440881 | 9.09E-08 | 0.00205076 |
| 19 | 30475166 | 30475166 | 1 | 19_30475166 | ENSG00000198597 | ZNF536 | 0 | INTRON | -5.3435564 | 9.11E-08 | 0.00205407 |
| 4 | 94957587 | 94957587 | 1 | 4_94957587 | ENSG00000138696 | BMPR1B | 0 | INTRON | -5.341475 | 9.22E-08 | 0.00207505 |
| 10 | 50162076 | 50162076 | 1 | 10_50162076 | ENSG00000233011 | SLC9A3P1 | 9789 | Downstream | 5.34061334 | 9.26E-08 | 0.00208218 |
| 4 | 158808883 | 158808883 | 1 | 4_158808883 | ENSG00000052795 | FNIP2 | 0 | INTRON | 5.33983225 | 9.30E-08 | 0.00208575 |
| 9 | 20105322 | 20105322 | 1 | 9_20105322 | ENSG00000277711 | AL591222.3 | 137328 | Upstream | 5.33982481 | 9.30E-08 | 0.00208575 |
| 3 | 8750567 | 8750567 | 1 | 3_8750567 | ENSG00000180914 | OXTR | 0 | 3UTR | -5.3392824 | 9.33E-08 | 0.00208924 |
| 14 | 63223808 | 63223808 | 1 | 14_63223808 | ENSG00000126785 | RHOJ | 0 | INTRON | 5.33889587 | 9.35E-08 | 0.00209095 |
| 11 | 116175197 | 116175197 | 1 | 11_116175197 | ENSG00000239600 | AP000797.1 | 223706 | Upstream | -5.3386231 | 9.37E-08 | 0.00209135 |
| 10 | 110410567 | 110410567 | 1 | 10_110410567 | ENSG00000273143 | AL355512.1 | 18272 | Downstream | 5.33836756 | 9.38E-08 | 0.00209156 |
| 16 | 47839313 | 47839313 | 1 | 16_47839313 | ENSG00000261231 | LINC02133 | 0 | INTRON | 5.33557646 | 9.52E-08 | 0.00212121 |
| 7 | 127602057 | 127602057 | 1 | 7_127602057 | ENSG00000106328 | FSCN3 | 0 | 3UTR | 5.33506657 | 9.55E-08 | 0.0021244 |

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| 16 | 20559437 | 20559437 | 1 | 16_20559437 | ENSG00000066813 | ACSM2B | 0 | 5UTR | -5.3342599 | 9.59E-08 | 0.00212743 |
| 4 | 98679796 | 98679796 | 1 | 4_98679796 | ENSG00000260641 | AC114811.2 | 15246 | Downstream | 5.33409768 | 9.60E-08 | 0.00212743 |
| 20 | 3379160 | 3379160 | 1 | 20_3379160 | ENSG00000088854 | C20orf194 | 0 | INTRON | -5.3336973 | 9.62E-08 | 0.00212935 |
| 12 | 15099532 | 15099532 | 1 | 12_15099532 | ENSG00000134533 | RERG | 8250 | Downstream | 5.33271318 | 9.68E-08 | 0.00213815 |
| X | 108513229 | 108513229 | 1 | X_108513229 | ENSG00000188153 | COL4A5 | 0 | INTRON | 5.33241278 | 9.69E-08 | 0.00213891 |
| 18 | 23518362 | 23518362 | 1 | 18_23518362 | ENSG00000141452 | RMC1 | 0 | INTRON | 5.33205509 | 9.71E-08 | 0.00214 |
| 6 | 45794343 | 45794343 | 1 | 6_45794343 | ENSG00000112782 | CLIC5 | 86483 | Downstream | -5.3318504 | 9.72E-08 | 0.00214 |
| 2 | 175370079 | 175370079 | 1 | 2_175370079 | ENSG00000229066 | AC093459.1 | 0 | INTRON | 5.33156769 | 9.74E-08 | 0.00214056 |
| 21 | 42285823 | 42285823 | 1 | 21_42285823 | ENSG00000160179 | ABCG1 | 0 | INTRON | 5.3307294 | 9.78E-08 | 0.00214769 |
| 4 | 152662729 | 152662729 | 1 | 4_152662729 | ENSG00000170006 | TMEM154 | 0 | INTRON | 5.33035128 | 9.80E-08 | 0.00214788 |
| 6 | 117070338 | 117070338 | 1 | 6_117070338 | ENSG00000200248 | RNA5SP214 | 9539 | Downstream | 5.33018691 | 9.81E-08 | 0.00214788 |
| 10 | 88698294 | 88698294 | 1 | 10_88698294 | ENSG00000271408 | NAPGP1 | 1388 | Upstream | -5.3300119 | 9.82E-08 | 0.00214788 |
| 18 | 77990254 | 77990254 | 1 | 18_77990254 | ENSG00000265843 | LINC01029 | 0 | INTRON | 5.32968899 | 9.84E-08 | 0.00214894 |
| 1 | 201319159 | 201319159 | 1 | 1_201319159 | ENSG00000081277 | PKP1 | 0 | INTRON | -5.3294105 | 9.85E-08 | 0.00214948 |
| 1 | 114549074 | 114549074 | 1 | 1_114549074 | ENSG00000236480 | PKMP1 | 11234 | Downstream | -5.3291106 | 9.87E-08 | 0.00215028 |
| 4 | 143447270 | 143447270 | 1 | 4_143447270 | ENSG00000109458 | GAB1 | 0 | INTRON | 5.32868911 | 9.89E-08 | 0.00215252 |
| 2 | 233051301 | 233051301 | 1 | 2_233051301 | ENSG00000168918 | INPP5D | 8665 | Upstream | -5.3284171 | 9.91E-08 | 0.00215299 |
| 10 | 123946336 | 123946336 | 1 | 10_123946336 | ENSG00000287768 | BX469938.1 | 2237 | Upstream | -5.3276231 | 9.95E-08 | 0.00215966 |
| 14 | 41595882 | 41595882 | 1 | 14_41595882 | ENSG00000258636 | AL121821.2 | 0 | INTRON | 5.32732426 | 9.97E-08 | 0.00215984 |
| 2 | 15119411 | 15119411 | 1 | 2_15119411 | ENSG00000151779 | NBAS | 47502 | Downstream | -5.3270001 | 9.98E-08 | 0.00215984 |
| 14 | 38115555 | 38115555 | 1 | 14_38115555 | ENSG00000259048 | AL392023.2 | 0 | INTRON | 5.32691432 | 9.99E-08 | 0.00215984 |
| 7 | 26437432 | 26437432 | 1 | 7_26437432 | ENSG00000214870 | AC004540.1 | 0 | INTRON | -5.3263347 | 1.00E-07 | 0.00216231 |
| 4 | 16586100 | 16586100 | 1 | 4_16586100 | ENSG00000169744 | LDB2 | 0 | INTRON | 5.32624504 | 1.00E-07 | 0.00216231 |
| 14 | 35714694 | 35714694 | 1 | 14_35714694 | ENSG00000174373 | RALGAPA1 | 0 | INTRON | 5.32572323 | 1.01E-07 | 0.00216578 |
| 19 | 33077327 | 33077327 | 1 | 19_33077327 | ENSG00000076650 | GPATCH1 | 3571 | Upstream | -5.3254258 | 1.01E-07 | 0.00216659 |
| 10 | 130808822 | 130808822 | 1 | 10_130808822 | ENSG00000264803 | MIR378C | 153765 | Downstream | 5.32394735 | 1.02E-07 | 0.00218152 |
| 12 | 89415223 | 89415223 | 1 | 12_89415223 | ENSG00000286608 | AC010201.3 | 0 | INTRON | 5.32302831 | 1.02E-07 | 0.00218981 |
| 2 | 82854516 | 82854516 | 1 | 2_82854516 | ENSG00000286211 | AC098817.1 | 0 | INTRON | 5.32199053 | 1.03E-07 | 0.00219946 |
| 3 | 174384977 | 174384977 | 1 | 3_174384977 | ENSG00000213169 | AC069218.1 | 6972 | Downstream | -5.3217709 | 1.03E-07 | 0.00219946 |
| 3 | 41012201 | 41012201 | 1 | 3_41012201 | ENSG00000233096 | AC099541.1 | 40623 | Upstream | 5.32140325 | 1.03E-07 | 0.00220114 |
| 14 | 85588024 | 85588024 | 1 | 14_85588024 | ENSG00000185070 | FLRT2 | 0 | INTRON | -5.32069 | 1.03E-07 | 0.00220478 |
| 2 | 5471594 | 5471594 | 1 | 2_5471594 | ENSG00000232835 | AC107057.1 | 78185 | Downstream | -5.3206461 | 1.03E-07 | 0.00220478 |
| 12 | 85470646 | 85470646 | 1 | 12_85470646 | ENSG00000257855 | AC126471.1 | 97231 | Upstream | -5.3198811 | 1.04E-07 | 0.0022113 |
| 9 | 82495092 | 82495092 | 1 | 9_82495092 | ENSG00000228430 | AL162726.3 | 0 | INTRON | -5.3196211 | 1.04E-07 | 0.0022117 |
| 12 | 32540207 | 32540207 | 1 | 12_32540207 | ENSG00000139132 | FGD4 | 0 | INTRON | 5.31907547 | 1.04E-07 | 0.00221557 |
| 8 | 98247686 | 98247686 | 1 | 8_98247686 | ENSG00000104361 | NIPAL2 | 0 | INTRON | 5.31852253 | 1.05E-07 | 0.00221954 |
| 12 | 54431302 | 54431302 | 1 | 12_54431302 | ENSG00000258137 | AC079313.2 | 0 | INTRON | 5.31795787 | 1.05E-07 | 0.00222366 |
| 6 | 167082412 | 167082412 | 1 | 6_167082412 | ENSG00000213066 | FGFR1OP | 0 | INTRON | 5.31749648 | 1.05E-07 | 0.00222654 |
| 2 | 117360444 | 117360444 | 1 | 2_117360444 | ENSG00000286370 | AC064856.1 | 175942 | Upstream | 5.31557186 | 1.06E-07 | 0.00224741 |
| 18 | 34848623 | 34848623 | 1 | 18_34848623 | ENSG00000134769 | DTNA | 0 | INTRON | -5.3152832 | 1.06E-07 | 0.00224744 |
| 4 | 119143665 | 119143665 | 1 | 4_119143665 | ENSG00000172399 | MYOZ2 | 0 | INTRON | 5.31511755 | 1.07E-07 | 0.00224744 |
| 17 | 80839617 | 80839617 | 1 | 17_80839617 | ENSG00000141564 | RPTOR | 0 | INTRON | 5.31465897 | 1.07E-07 | 0.00225032 |
| 1 | 51772125 | 51772125 | 1 | 1_51772125 | ENSG00000117859 | OSBPL9 | 0 | 3UTR | 5.31277625 | 1.08E-07 | 0.00226566 |
| 5 | 109217583 | 109217583 | 1 | 5_109217583 | ENSG00000249476 | AC008467.1 | 19536 | Downstream | 5.31275968 | 1.08E-07 | 0.00226566 |
| 13 | 76354162 | 76354162 | 1 | 13_76354162 | ENSG00000285572 | AL136441.1 | 198644 | Downstream | 5.31274626 | 1.08E-07 | 0.00226566 |
| 15 | 62859785 | 62859785 | 1 | 15_62859785 | ENSG00000259370 | AC103740.1 | 0 | INTRON | -5.3121962 | 1.08E-07 | 0.00226971 |
| 11 | 78345108 | 78345108 | 1 | 11_78345108 | ENSG00000033327 | GAB2 | 0 | INTRON | -5.3108228 | 1.09E-07 | 0.00228287 |
| 20 | 26633778 | 26633778 | 1 | 20_26633778 | ENSG00000227195 | MIR663AHG | 382232 | Upstream | -5.3106948 | 1.09E-07 | 0.00228287 |
| 5 | 6771855 | 6771855 | 1 | 5_6771855 | ENSG00000251365 | LINC02236 | 0 | EXON | 5.3102034 | 1.10E-07 | 0.00228622 |
| 10 | 17029520 | 17029520 | 1 | 10_17029520 | ENSG00000107611 | CUBN | 0 | INTRON | 5.30960328 | 1.10E-07 | 0.00229095 |
| 2 | 209614078 | 209614078 | 1 | 2_209614078 | ENSG00000078018 | MAP2 | 0 | INTRON | 5.30925657 | 1.10E-07 | 0.00229251 |
| 16 | 83669643 | 83669643 | 1 | 16_83669643 | ENSG00000140945 | CDH13 | 0 | INTRON | -5.3072763 | 1.11E-07 | 0.002312 |
| X | 77773491 | 77773491 | 1 | X_77773491 | ENSG00000085224 | ATRX | 0 | INTRON | 5.30697235 | 1.11E-07 | 0.002312 |
| 3 | 1130333 | 1130333 | 1 | 3_1130333 | ENSG00000134115 | CNTN6 | 0 | INTRON | -5.3065621 | 1.12E-07 | 0.002312 |
| 3 | 175956094 | 175956094 | 1 | 3_175956094 | ENSG00000260217 | AC104640.1 | 15057 | Upstream | -5.3063481 | 1.12E-07 | 0.002312 |
| 4 | 128026117 | 128026117 | 1 | 4_128026117 | ENSG00000164074 | ABHD18 | 0 | INTRON | 5.30628359 | 1.12E-07 | 0.002312 |
| 15 | 37225247 | 37225247 | 1 | 15_37225247 | ENSG00000274216 | Metazoa_SRP | 8349 | Downstream | -5.3061969 | 1.12E-07 | 0.002312 |
| 6 | 77185480 | 77185480 | 1 | 6_77185480 | ENSG00000271945 | AL355612.1 | 87692 | Downstream | 5.30615736 | 1.12E-07 | 0.002312 |
| 1 | 227877379 | 227877379 | 1 | 1_227877379 | ENSG00000185888 | PRSS38 | 30909 | Downstream | -5.3053712 | 1.12E-07 | 0.00231762 |
| 10 | 87726258 | 87726258 | 1 | 10_87726258 | ENSG00000198682 | PAPSS2 | 0 | INTRON | -5.3052253 | 1.13E-07 | 0.00231762 |
| 5 | 22852170 | 22852170 | 1 | 5_22852170 | ENSG00000154162 | CDH12 | 0 | INTRON | 5.30485576 | 1.13E-07 | 0.00231762 |
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| 13 | 72753401 | 72753401 | 1 | 13_72753401 | ENSG00000083520 | DIS3 | 0 | 3UTR | 5.30410254 | 1.13E-07 | 0.00232078 |
| 10 | 38433045 | 38433045 | 1 | 10_38433045 | ENSG00000276805 | AL133216.2 | 0 | INTRON | 5.30391047 | 1.13E-07 | 0.00232078 |
| 17 | 59548897 | 59548897 | 1 | 17_59548897 | ENSG00000200889 | RNU4-13P | 11398 | Upstream | 5.30389498 | 1.13E-07 | 0.00232078 |
| 11 | 98931291 | 98931291 | 1 | 11_98931291 | ENSG00000254830 | AP002428.1 | 7620 | Downstream | 5.30355277 | 1.14E-07 | 0.00232078 |
| 8 | 37183275 | 37183275 | 1 | 8_37183275 | ENSG00000253650 | SMARCE1P4 | 87885 | Downstream | -5.3034839 | 1.14E-07 | 0.00232078 |
| 13 | 67243435 | 67243435 | 1 | 13_67243435 | ENSG00000184226 | PCDH9 | 12990 | Upstream | 5.30289711 | 1.14E-07 | 0.00232547 |
| 7 | 54436587 | 54436587 | 1 | 7_54436587 | ENSG00000231427 | LINC01445 | 0 | INTRON | -5.302217 | 1.14E-07 | 0.00233135 |
| 8 | 23468717 | 23468717 | 1 | 8_23468717 | ENSG00000253390 | AC104561.1 | 0 | INTRON | 5.3011372 | 1.15E-07 | 0.00234164 |
| 3 | 125162456 | 125162456 | 1 | 3_125162456 | ENSG00000221955 | SLC12A8 | 0 | INTRON | 5.30097655 | 1.15E-07 | 0.00234164 |
| 10 | 114461536 | 114461536 | 1 | 10_114461536 | ENSG00000099204 | ABLIM1 | 0 | INTRON | -5.3004591 | 1.16E-07 | 0.00234348 |
| 9 | 9599272 | 9599272 | 1 | 9_9599272 | ENSG00000153707 | PTPRD | 0 | INTRON | -5.300398 | 1.16E-07 | 0.00234348 |
| 5 | 128988840 | 128988840 | 1 | 5_128988840 | ENSG00000113396 | SLC27A6 | 0 | INTRON | -5.2998794 | 1.16E-07 | 0.00234734 |
| 4 | 188780802 | 188780802 | 1 | 4_188780802 | ENSG00000250626 | AC093909.4 | 0 | INTRON | -5.2990817 | 1.16E-07 | 0.00235176 |
| 11 | 67170634 | 67170634 | 1 | 11_67170634 | ENSG00000173120 | KDM2A | 0 | INTRON | -5.2988371 | 1.17E-07 | 0.00235176 |
| 18 | 29020288 | 29020288 | 1 | 18_29020288 | ENSG00000251719 | RNU6-408P | 28331 | Upstream | 5.29856242 | 1.17E-07 | 0.00235176 |
| 5 | 107222127 | 107222127 | 1 | 5_107222127 | ENSG00000250273 | PSMC1P5 | 26795 | Downstream | 5.29839093 | 1.17E-07 | 0.00235176 |
| 5 | 62765913 | 62765913 | 1 | 5_62765913 | ENSG00000217416 | ISCA1P1 | 10963 | Downstream | -5.2983525 | 1.17E-07 | 0.00235176 |
| 11 | 114415241 | 114415241 | 1 | 11_114415241 | ENSG00000255663 | AP002373.1 | 0 | INTRON | -5.2981298 | 1.17E-07 | 0.00235176 |
| 12 | 106387926 | 106387926 | 1 | 12_106387926 | ENSG00000013503 | POLR3B | 0 | INTRON | 5.29802106 | 1.17E-07 | 0.00235176 |
| 16 | 9843354 | 9843354 | 1 | 16_9843354 | ENSG00000183454 | GRIN2A | 0 | INTRON | -5.2963391 | 1.18E-07 | 0.00237071 |
| 20 | 61164755 | 61164755 | 1 | 20_61164755 | ENSG00000229606 | LINC01718 | 81005 | Downstream | 5.29555337 | 1.19E-07 | 0.00237812 |
| 21 | 34261065 | 34261065 | 1 | 21_34261065 | ENSG00000272657 | AP000317.2 | 0 | INTRON | 5.29478028 | 1.19E-07 | 0.0023854 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | 54830840 | 54830840 | 1 | 3_54830840 | ENSG00000157445 | CACNA2D3 | 0 | INTRON | -5.2945056 | 1.19E-07 | 0.00238618 |
| 1 | 167863768 | 167863768 | 1 | 1_167863768 | ENSG00000143199 | ADCY10 | 0 | INTRON | -5.2936792 | 1.20E-07 | 0.00239418 |
| 5 | 157795899 | 157795899 | 1 | 5_157795899 | ENSG00000113282 | CLINT1 | 0 | EXON | 5.29182156 | 1.21E-07 | 0.00241256 |
| 20 | 20308538 | 20308538 | 1 | 20_20308538 | ENSG00000089101 | CFAP61 | 0 | INTRON | 5.29168776 | 1.21E-07 | 0.00241256 |
| 2 | 113152929 | 113152929 | 1 | 2_113152929 | ENSG00000125637 | PSD4 | 4395 | Upstream | 5.29163861 | 1.21E-07 | 0.00241256 |
| 4 | 36227682 | 36227682 | 1 | 4_36227682 | ENSG00000047365 | ARAP2 | 0 | INTRON | 5.29106156 | 1.22E-07 | 0.00241736 |
| 7 | 16631910 | 16631910 | 1 | 7_16631910 | ENSG00000106524 | ANKMY2 | 0 | INTRON | 5.290598 | 1.22E-07 | 0.00241851 |
| 1 | 209594258 | 209594258 | 1 | 1_209594258 | ENSG00000008118 | CAMK1G | 0 | INTRON | -5.2905472 | 1.22E-07 | 0.00241851 |
| 7 | 139896942 | 139896942 | 1 | 7_139896942 | ENSG00000059377 | TBXAS1 | 0 | INTRON | 5.28947296 | 1.23E-07 | 0.00242608 |
| 14 | 67099172 | 67099172 | 1 | 14_67099172 | ENSG00000171723 | GPHN | 0 | INTRON | 5.2890951 | 1.23E-07 | 0.00242608 |
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| 3 | 44245774 | 44245774 | 1 | 3_44245774 | ENSG00000173769 | TOPAZ1 | 0 | INTRON | 5.2890214 | 1.23E-07 | 0.00242608 |
| 15 | 48300495 | 48300495 | 1 | 15_48300495 | ENSG00000074803 | SLC12A1 | 0 | INTRON | -5.2889129 | 1.23E-07 | 0.00242608 |
| 18 | 79878308 | 79878308 | 1 | 18_79878308 | ENSG00000178342 | KCNG2 | 0 | INTRON | -5.2885112 | 1.23E-07 | 0.0024286 |
| 19 | 1162394 | 1162394 | 1 | 19_1162394 | ENSG00000064932 | SBNO2 | 0 | INTRON | 5.28795096 | 1.24E-07 | 0.00243173 |
| 11 | 45190365 | 45190365 | 1 | 11_45190365 | ENSG00000019485 | PRDM11 | 0 | INTRON | 5.28772503 | 1.24E-07 | 0.00243173 |
| 3 | 69407143 | 69407143 | 1 | 3_69407143 | ENSG00000114541 | FRMD4B | 0 | INTRON | 5.28722399 | 1.24E-07 | 0.00243173 |
| 6 | 92769191 | 92769191 | 1 | 6_92769191 | ENSG00000221455 | U3 | 21261 | Upstream | 5.2869595 | 1.24E-07 | 0.00243173 |
| 13 | 113648440 | 113648440 | 1 | 13_113648440 | ENSG00000186009 | ATP4B | 363 | Downstream | -5.286678 | 1.25E-07 | 0.00243173 |
| 3 | 197814121 | 197814121 | 1 | 3_197814121 | ENSG00000186001 | LRCH3 | 0 | INTRON | 5.2865317 | 1.25E-07 | 0.00243173 |
| 6 | 37363917 | 37363917 | 1 | 6_37363917 | ENSG00000112130 | RNF8 | 0 | INTRON | 5.28650076 | 1.25E-07 | 0.00243173 |
| 3 | 15787508 | 15787508 | 1 | 3_15787508 | ENSG00000206560 | ANKRD28 | 0 | INTRON | -5.2863818 | 1.25E-07 | 0.00243173 |
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| 22 | 17482280 | 17482280 | 1 | 22_17482280 | ENSG00000099954 | CECR2 | 0 | INTRON | 5.28586853 | 1.25E-07 | 0.00243173 |
| 9 | 26127305 | 26127305 | 1 | 9_26127305 | ENSG00000276759 | AL353753.1 | 8897 | Downstream | -5.2855868 | 1.25E-07 | 0.00243173 |
| 6 | 88159660 | 88159660 | 1 | 6_88159660 | ENSG00000118432 | CNR1 | 0 | INTRON | -5.285217 | 1.26E-07 | 0.00243173 |
| 2 | 174914793 | 174914793 | 1 | 2_174914793 | ENSG00000128656 | CHN1 | 0 | INTRON | -5.2851693 | 1.26E-07 | 0.00243173 |
| 12 | 31560986 | 31560986 | 1 | 12_31560986 | ENSG00000170456 | DENND5B | 0 | INTRON | -5.2851401 | 1.26E-07 | 0.00243173 |
| 16 | 15349212 | 15349212 | 1 | 16_15349212 | ENSG00000277770 | AC137803.1 | 9765 | Upstream | -5.2851216 | 1.26E-07 | 0.00243173 |
| 12 | 61338849 | 61338849 | 1 | 12_61338849 | ENSG00000257308 | AC090017.1 | 105912 | Upstream | 5.28491783 | 1.26E-07 | 0.00243173 |
| 6 | 13912290 | 13912290 | 1 | 6_13912290 | ENSG00000180537 | RNF182 | 12155 | Upstream | -5.284145 | 1.26E-07 | 0.00243924 |
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| 9 | 63163603 | 63163603 | 1 | 9_63163603 | ENSG00000176115 | AQP7P4 | 20202 | Downstream | 5.28236609 | 1.28E-07 | 0.00245747 |
| 2 | 232688305 | 232688305 | 1 | 2_232688305 | ENSG00000115468 | EFHD1 | 5525 | Downstream | 5.28203731 | 1.28E-07 | 0.0024591 |
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| 4 | 2780383 | 2780383 | 1 | 4_2780383 | ENSG00000087266 | SH3BP2 | 12687 | Upstream | -5.2809407 | 1.29E-07 | 0.00246829 |
| 7 | 81860897 | 81860897 | 1 | 7_81860897 | ENSG00000153956 | CACNA2D1 | 85546 | Downstream | 5.27898611 | 1.30E-07 | 0.00248419 |
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| 6 | 127796376 | 127796376 | 1 | 6_127796376 | ENSG00000172673 | THEMIS | 0 | INTRON | 5.27879819 | 1.30E-07 | 0.00248419 |
| 6 | 62044178 | 62044178 | 1 | 6_62044178 | ENSG00000112232 | KHDRBS2 | 0 | INTRON | -5.278792 | 1.30E-07 | 0.00248419 |
| 7 | 109508652 | 109508652 | 1 | 7_109508652 | ENSG00000234273 | AC073071.1 | 13328 | Downstream | 5.27873277 | 1.30E-07 | 0.00248419 |
| 4 | 157945091 | 157945091 | 1 | 4_157945091 | ENSG00000286862 | AC017037.5 | 0 | INTRON | 5.27811956 | 1.31E-07 | 0.00248512 |
| 11 | 64012060 | 64012060 | 1 | 11_64012060 | ENSG00000133315 | MACROD1 | 0 | INTRON | 5.27750591 | 1.31E-07 | 0.00248512 |
| Y | 11793541 | 11793541 | 1 | Y_11793541 | ENSG00000234385 | RCC2P1 | 11014 | Upstream | -5.2774386 | 1.31E-07 | 0.00248512 |
| 9 | 119049747 | 119049747 | 1 | 9_119049747 | ENSG00000078725 | BRINP1 | 103710 | Downstream | 5.27742827 | 1.31E-07 | 0.00248512 |
| 3 | 150724682 | 150724682 | 1 | 3_150724682 | ENSG00000240137 | ERICH6-AS1 | 1677 | Downstream | 5.27711133 | 1.31E-07 | 0.00248512 |
| 9 | 119681832 | 119681832 | 1 | 9_119681832 | ENSG00000260970 | AC006288.1 | 157707 | Downstream | 5.27706328 | 1.31E-07 | 0.00248512 |
| 2 | 60475190 | 60475190 | 1 | 2_60475190 | ENSG00000119866 | BCL11A | 0 | INTRON | 5.2770578 | 1.31E-07 | 0.00248512 |
| 4 | 33754708 | 33754708 | 1 | 4_33754708 | ENSG00000250954 | AC016687.3 | 20789 | Downstream | 5.27675196 | 1.31E-07 | 0.00248512 |
| 8 | 41071600 | 41071600 | 1 | 8_41071600 | ENSG00000206867 | RNU6-356P | 38602 | Downstream | 5.27657834 | 1.32E-07 | 0.00248512 |
| 10 | 80829196 | 80829196 | 1 | 10_80829196 | ENSG00000231060 | FARSBP1 | 51108 | Upstream | -5.276491 | 1.32E-07 | 0.00248512 |
| 17 | 26834000 | 26834000 | 1 | 17_26834000 | ENSG00000263433 | AC069061.1 | 147693 | Upstream | -5.2764153 | 1.32E-07 | 0.00248512 |
| 15 | 95969492 | 95969492 | 1 | 15_95969492 | ENSG00000275443 | AC012409.2 | 21089 | Upstream | 5.27509931 | 1.33E-07 | 0.00250024 |
| 8 | 5477936 | 5477936 | 1 | 8_5477936 | ENSG00000240486 | RPL23AP54 | 970 | Downstream | -5.2745072 | 1.33E-07 | 0.00250555 |
| 7 | 65459592 | 65459592 | 1 | 7_65459592 | ENSG00000238124 | AC114501.3 | 3478 | Upstream | -5.2740487 | 1.33E-07 | 0.00250779 |
| 8 | 42570972 | 42570972 | 1 | 8_42570972 | ENSG00000176209 | SMIM19 | 15779 | Downstream | 5.27393094 | 1.34E-07 | 0.00250779 |
| 14 | 62503854 | 62503854 | 1 | 14_62503854 | ENSG00000258638 | AL389895.1 | 11017 | Downstream | -5.2737362 | 1.34E-07 | 0.00250779 |
| 8 | 136451027 | 136451027 | 1 | 8_136451027 | ENSG00000254101 | LINC02055 | 0 | INTRON | 5.27291583 | 1.34E-07 | 0.00251625 |
| 8 | 38191478 | 38191478 | 1 | 8_38191478 | ENSG00000156735 | BAG4 | 0 | INTRON | -5.2725278 | 1.35E-07 | 0.00251856 |
| 5 | 87566615 | 87566615 | 1 | 5_87566615 | ENSG00000285190 | AC018754.1 | 67275 | Downstream | 5.27215514 | 1.35E-07 | 0.00251856 |
| 12 | 96607941 | 96607941 | 1 | 12_96607941 | ENSG00000188596 | CFAP54 | 0 | INTRON | 5.27214206 | 1.35E-07 | 0.00251856 |
| 7 | 140970537 | 140970537 | 1 | 7_140970537 | ENSG00000242703 | CCT4P1 | 27414 | Downstream | 5.27027575 | 1.36E-07 | 0.00252814 |
| Y | 10985001 | 10985001 | 1 | Y_10985001 | ENSG00000273858 | AC140113.4 | 57720 | Downstream | -5.2702642 | 1.36E-07 | 0.00252814 |
| 22 | 37382085 | 37382085 | 1 | 22_37382085 | ENSG00000243902 | FP325335.1 | 0 | INTRON | 5.27011259 | 1.36E-07 | 0.00252814 |
| 21 | 29408324 | 29408324 | 1 | 21_29408324 | ENSG00000156273 | BACH1 | 0 | INTRON | -5.2697881 | 1.37E-07 | 0.00252814 |
| X | 131777486 | 131777486 | 1 | X_131777486 | ENSG00000213468 | FIRRE | 0 | INTRON | 5.2697791 | 1.37E-07 | 0.00252814 |
| 8 | 70659013 | 70659013 | 1 | 8_70659013 | ENSG00000147592 | LACTB2 | 0 | INTRON | 5.26975469 | 1.37E-07 | 0.00252814 |
| 5 | 159633003 | 159633003 | 1 | 5_159633003 | ENSG00000249738 | AC008691.1 | 0 | INTRON | 5.26964679 | 1.37E-07 | 0.00252814 |
| 10 | 45254651 | 45254651 | 1 | 10_45254651 | ENSG00000224402 | OR6D1P | 988 | Upstream | 5.26962314 | 1.37E-07 | 0.00252814 |
| 11 | 82952987 | 82952987 | 1 | 11_82952987 | ENSG00000165490 | DDIAS | 0 | INTRON | 5.26962307 | 1.37E-07 | 0.00252814 |
| 19 | 5100389 | 5100389 | 1 | 19_5100389 | ENSG00000127663 | KDM4B | 0 | INTRON | 5.26931513 | 1.37E-07 | 0.00252814 |
| 16 | 12259772 | 12259772 | 1 | 16_12259772 | ENSG00000048471 | SNX29 | 0 | INTRON | 5.26924257 | 1.37E-07 | 0.00252814 |
| 19 | 50474304 | 50474304 | 1 | 19_50474304 | ENSG00000142530 | FAM71E1 | 0 | INTRON | 5.26787645 | 1.38E-07 | 0.00254427 |
| 8 | 102878351 | 102878351 | 1 | 8_102878351 | ENSG00000253320 | AZIN1-AS1 | 0 | INTRON | 5.26746364 | 1.38E-07 | 0.00254723 |
| 13 | 74103139 | 74103139 | 1 | 13_74103139 | ENSG00000118922 | KLF12 | 108083 | Upstream | 5.2663933 | 1.39E-07 | 0.00255935 |
| 5 | 100996717 | 100996717 | 1 | 5_100996717 | ENSG00000113532 | ST8SIA4 | 93435 | Upstream | 5.26585476 | 1.40E-07 | 0.00256409 |
| X | 2665014 | 2665014 | 1 | X_2665014 | ENSG00000223773 | CD99P1 | 7785 | Downstream | 5.26550173 | 1.40E-07 | 0.00256626 |
| 19 | 14087922 | 14087922 | 1 | 19_14087922 | ENSG00000141858 | SAMD1 | 0 | 3UTR | -5.2646052 | 1.40E-07 | 0.00257603 |
| X | 120418497 | 120418497 | 1 | X_120418497 | ENSG00000005893 | LAMP2 | 9329 | Downstream | 5.26411456 | 1.41E-07 | 0.00258014 |
| 14 | 62716314 | 62716314 | 1 | 14_62716314 | ENSG00000140015 | KCNH5 | 0 | INTRON | 5.2631071 | 1.42E-07 | 0.00259153 |
| 9 | 115333911 | 115333911 | 1 | 9_115333911 | ENSG00000228714 | AL691420.1 | 0 | INTRON | -5.2628996 | 1.42E-07 | 0.00259167 |
| 15 | 71618867 | 71618867 | 1 | 15_71618867 | ENSG00000187720 | THSD4 | 0 | INTRON | 5.26183136 | 1.43E-07 | 0.00259352 |
| 22 | 42934976 | 42934976 | 1 | 22_42934976 | ENSG00000100266 | PACSIN2 | 0 | INTRON | -5.2618176 | 1.43E-07 | 0.00259352 |
| 11 | 88540187 | 88540187 | 1 | 11_88540187 | ENSG00000168959 | GRM5 | 0 | INTRON | 5.26164678 | 1.43E-07 | 0.00259352 |
| 2 | 26835021 | 26835021 | 1 | 2_26835021 | ENSG00000145835 | CDKN2AIPNLP2 | 7501 | Upstream | 5.26131794 | 1.43E-07 | 0.00259352 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 111920712 | 111920712 | 1 | 1_111920712 | ENSG00000171385 | KCND3 | 0 | INTRON | -5.2607995 | 1.43E-07 | 0.00259352 |
| 6 | 118497073 | 118497073 | 1 | 6_118497073 | ENSG00000111860 | CEP85L | 0 | INTRON | 5.26072662 | 1.43E-07 | 0.00259352 |
| 17 | 15589719 | 15589719 | 1 | 17_15589719 | ENSG00000251537 | AC005324.3 | 0 | INTRON | -5.2606899 | 1.44E-07 | 0.00259352 |
| 16 | 22489239 | 22489239 | 1 | 16_22489239 | ENSG00000237296 | SMG1P1 | 0 | EXON | 5.26063213 | 1.44E-07 | 0.00259352 |
| 12 | 31769657 | 31769657 | 1 | 12_31769657 | ENSG00000223722 | AC023157.1 | 14536 | Downstream | 5.26059882 | 1.44E-07 | 0.00259352 |
| 4 | 46427480 | 46427480 | 1 | 4_46427480 | ENSG00000249330 | AC095060.1 | 0 | INTRON | 5.26050855 | 1.44E-07 | 0.00259352 |
| 4 | 57079363 | 57079363 | 1 | 4_57079363 | ENSG00000163453 | IGFBP7 | 0 | INTRON | 5.26049314 | 1.44E-07 | 0.00259352 |
| 13 | 106074724 | 106074724 | 1 | 13_106074724 | ENSG00000287923 | AL138701.2 | 10655 | Upstream | 5.26041461 | 1.44E-07 | 0.00259352 |
| 16 | 89956408 | 89956408 | 1 | 16_89956408 | ENSG00000140995 | DEF8 | 0 | INTRON | 5.25988993 | 1.44E-07 | 0.00259817 |
| 8 | 85814624 | 85814624 | 1 | 8_85814624 | ENSG00000277436 | REXO1L5P | 142 | Downstream | 5.2592982 | 1.45E-07 | 0.00260041 |
| 16 | 8503053 | 8503053 | 1 | 16_8503053 | ENSG00000260379 | AC074052.1 | 5015 | Upstream | -5.2592092 | 1.45E-07 | 0.00260041 |
| 4 | 143548012 | 143548012 | 1 | 4_143548012 | ENSG00000153147 | SMARCA5 | 0 | EXON | -5.2591483 | 1.45E-07 | 0.00260041 |
| 1 | 168744758 | 168744758 | 1 | 1_168744758 | ENSG00000285622 | AL135926.1 | 0 | INTRON | 5.25883554 | 1.45E-07 | 0.00260209 |
| 7 | 139022912 | 139022912 | 1 | 7_139022912 | ENSG00000146858 | ZC3HAV1L | 2793 | Downstream | 5.25804793 | 1.46E-07 | 0.0026105 |
| 10 | 25146532 | 25146532 | 1 | 10_25146532 | ENSG00000231422 | LINC01516 | 0 | INTRON | -5.2577006 | 1.46E-07 | 0.0026114 |
| 4 | 75030754 | 75030754 | 1 | 4_75030754 | ENSG00000248165 | AC110760.1 | 0 | INTRON | 5.2575972 | 1.46E-07 | 0.0026114 |
| 2 | 44871325 | 44871325 | 1 | 2_44871325 | ENSG00000259439 | LINC01833 | 49751 | Downstream | -5.2568257 | 1.47E-07 | 0.00261472 |
| 15 | 44540172 | 44540172 | 1 | 15_44540172 | ENSG00000104131 | EIF3J | 0 | INTRON | -5.2567961 | 1.47E-07 | 0.00261472 |
| 8 | 83969690 | 83969690 | 1 | 8_83969690 | ENSG00000254202 | AC015522.1 | 0 | INTRON | 5.25678371 | 1.47E-07 | 0.00261472 |
| 3 | 91386454 | 91386454 | 1 | 3_91386454 | ENSG00000283544 | ABBA01000935.2 | 0 | INTRON | -5.2547242 | 1.48E-07 | 0.00264098 |
| X | 42765700 | 42765700 | 1 | X_42765700 | ENSG00000287223 | Z94277.1 | 9808 | Upstream | -5.2545599 | 1.48E-07 | 0.00264098 |
| 10 | 87483267 | 87483267 | 1 | 10_87483267 | ENSG00000286445 | AL355334.2 | 17069 | Downstream | 5.25372969 | 1.49E-07 | 0.00265014 |
| 3 | 89056696 | 89056696 | 1 | 3_89056696 | ENSG00000241861 | GAPDHP50 | 8262 | Upstream | 5.2534919 | 1.49E-07 | 0.0026508 |
| 8 | 64624848 | 64624848 | 1 | 8_64624848 | ENSG00000172817 | CYP7B1 | 0 | INTRON | 5.25217054 | 1.50E-07 | 0.00266591 |
| 2 | 4410596 | 4410596 | 1 | 2_4410596 | ENSG00000231821 | NPM1P48 | 103607 | Downstream | 5.25204453 | 1.50E-07 | 0.00266591 |
| 6 | 34688727 | 34688727 | 1 | 6_34688727 | ENSG00000196821 | ILRUN | 0 | INTRON | 5.25186965 | 1.51E-07 | 0.00266591 |
| 2 | 23598054 | 23598054 | 1 | 2_23598054 | ENSG00000119771 | KLHL29 | 0 | INTRON | 5.25110413 | 1.51E-07 | 0.00267423 |
| 7 | 58067193 | 58067193 | 1 | 7_58067193 | ENSG00000231484 | AC023141.7 | 230147 | Downstream | -5.2505789 | 1.52E-07 | 0.00267908 |
| 16 | 72889121 | 72889121 | 1 | 16_72889121 | ENSG00000140836 | ZFHX3 | 0 | INTRON | 5.25033178 | 1.52E-07 | 0.0026799 |
| 11 | 80004535 | 80004535 | 1 | 11_80004535 | ENSG00000254471 | AP001284.1 | 14905 | Downstream | -5.24959 | 1.52E-07 | 0.00268728 |
| 11 | 35267068 | 35267068 | 1 | 11_35267068 | ENSG00000110436 | SLC1A2 | 0 | INTRON | -5.2494431 | 1.53E-07 | 0.00268728 |
| 16 | 48266284 | 48266284 | 1 | 16_48266284 | ENSG00000102910 | LONP2 | 0 | INTRON | -5.2484769 | 1.53E-07 | 0.00269199 |
| 7 | 39847338 | 39847338 | 1 | 7_39847338 | ENSG00000237251 | AC004987.3 | 0 | INTRON | 5.24842808 | 1.53E-07 | 0.00269199 |
| 4 | 177296271 | 177296271 | 1 | 4_177296271 | ENSG00000287544 | AC097518.2 | 0 | INTRON | -5.2483896 | 1.53E-07 | 0.00269199 |
| 17 | 83224811 | 83224811 | 1 | 17_83224811 | ENSG00000262094 | AC139099.1 | 0 | INTRON | 5.24835906 | 1.53E-07 | 0.00269199 |
| 21 | 32250086 | 32250086 | 1 | 21_32250086 | ENSG00000261610 | AP000265.1 | 9717 | Downstream | 5.24783127 | 1.54E-07 | 0.00269618 |
| 14 | 106644886 | 106644886 | 1 | 14_106644886 | ENSG00000253132 | IGHV3-62 | 1301 | Upstream | 5.24769346 | 1.54E-07 | 0.00269618 |
| 13 | 88975198 | 88975198 | 1 | 13_88975198 | ENSG00000233211 | GRPEL2P1 | 3248 | Downstream | 5.24745439 | 1.54E-07 | 0.0026969 |
| 22 | 19964187 | 19964187 | 1 | 22_19964187 | ENSG00000093010 | COMT | 0 | EXON | -5.2471862 | 1.54E-07 | 0.00269806 |
| 2 | 98284301 | 98284301 | 1 | 2_98284301 | ENSG00000168658 | VWA3B | 0 | INTRON | 5.24688114 | 1.55E-07 | 0.00269975 |
| 9 | 84541263 | 84541263 | 1 | 9_84541263 | ENSG00000285987 | AL157886.1 | 0 | INTRON | -5.2464677 | 1.55E-07 | 0.00270151 |
| 7 | 120927289 | 120927289 | 1 | 7_120927289 | ENSG00000071243 | ING3 | 23473 | Upstream | 5.24630124 | 1.55E-07 | 0.00270151 |
| 2 | 55667572 | 55667572 | 1 | 2_55667572 | ENSG00000138035 | PNPT1 | 0 | INTRON | 5.24619517 | 1.55E-07 | 0.00270151 |
| 16 | 33500378 | 33500378 | 1 | 16_33500378 | ENSG00000262090 | AC136944.5 | 4285 | Upstream | 5.24543628 | 1.56E-07 | 0.00270982 |
| 17 | 9836880 | 9836880 | 1 | 17_9836880 | ENSG00000065325 | GLP2R | 0 | INTRON | -5.2452525 | 1.56E-07 | 0.00270982 |
| 17 | 82397350 | 82397350 | 1 | 17_82397350 | ENSG00000181396 | OGFOD3 | 0 | INTRON | -5.245048 | 1.56E-07 | 0.00271006 |
| 6 | 111255862 | 111255862 | 1 | 6_111255862 | ENSG00000231046 | AL360227.1 | 0 | INTRON | -5.2444376 | 1.57E-07 | 0.00271628 |
| 3 | 69673800 | 69673800 | 1 | 3_69673800 | ENSG00000187098 | MITF | 65634 | Upstream | 5.24408567 | 1.57E-07 | 0.0027187 |
| 7 | 1056768 | 1056768 | 1 | 7_1056768 | ENSG00000164849 | GPR146 | 0 | 5UTR | -5.2430502 | 1.58E-07 | 0.00273122 |
| 9 | 103271455 | 103271455 | 1 | 9_103271455 | ENSG00000225564 | LINC01492 | 0 | INTRON | 5.2422769 | 1.59E-07 | 0.00273689 |
| 13 | 93306881 | 93306881 | 1 | 13_93306881 | ENSG00000183098 | GPC6 | 0 | INTRON | 5.24216294 | 1.59E-07 | 0.00273689 |
| X | 106763592 | 106763592 | 1 | X_106763592 | ENSG00000133135 | RNF128 | 0 | INTRON | 5.24210651 | 1.59E-07 | 0.00273689 |
| 6 | 115175939 | 115175939 | 1 | 6_115175939 | ENSG00000287097 | AL590550.1 | 173659 | Downstream | 5.24054148 | 1.60E-07 | 0.00275681 |
| 3 | 115103641 | 115103641 | 1 | 3_115103641 | ENSG00000181722 | ZBTB20 | 0 | INTRON | 5.24034583 | 1.60E-07 | 0.00275681 |
| 8 | 3802003 | 3802003 | 1 | 8_3802003 | ENSG00000183117 | CSMD1 | 0 | INTRON | -5.2400552 | 1.61E-07 | 0.00275681 |
| 2 | 74120938 | 74120938 | 1 | 2_74120938 | ENSG00000257800 | FNBP1P1 | 0 | EXON | 5.24002223 | 1.61E-07 | 0.00275681 |
| 4 | 18302866 | 18302866 | 1 | 4_18302866 | ENSG00000286046 | AC093898.1 | 115795 | Upstream | -5.238389 | 1.62E-07 | 0.00277271 |
| 8 | 46541397 | 46541397 | 1 | 8_46541397 | ENSG00000253425 | HSPA8P13 | 7691 | Upstream | -5.2383242 | 1.62E-07 | 0.00277271 |
| 14 | 29356171 | 29356171 | 1 | 14_29356171 | ENSG00000257522 | AL133166.1 | 0 | INTRON | -5.2383004 | 1.62E-07 | 0.00277271 |
| 15 | 99147286 | 99147286 | 1 | 15_99147286 | ENSG00000103852 | TTC23 | 0 | INTRON | -5.2382174 | 1.62E-07 | 0.00277271 |
| 7 | 117368202 | 117368202 | 1 | 7_117368202 | ENSG00000154438 | ASZ1 | 0 | EXON | -5.2378416 | 1.62E-07 | 0.00277557 |
| 10 | 45583219 | 45583219 | 1 | 10_45583219 | ENSG00000165406 | MARCH8 | 0 | INTRON | -5.237233 | 1.63E-07 | 0.00277598 |
| 17 | 50862184 | 50862184 | 1 | 17_50862184 | ENSG00000141232 | TOB1 | 38 | Downstream | -5.2372021 | 1.63E-07 | 0.00277598 |
| 21 | 8435718 | 8435718 | 1 | 21_8435718 | ENSG00000280441 | FP236383.3 | 0 | INTRON | 5.23719208 | 1.63E-07 | 0.00277598 |
| 9 | 14094546 | 14094546 | 1 | 9_14094546 | ENSG00000147862 | NFIB | 0 | INTRON | 5.23691979 | 1.63E-07 | 0.00277598 |
| 2 | 138827231 | 138827231 | 1 | 2_138827231 | ENSG00000222826 | RN7SKP286 | 36365 | Downstream | 5.23679463 | 1.63E-07 | 0.00277598 |
| 3 | 137805642 | 137805642 | 1 | 3_137805642 | ENSG00000261146 | AC007159.1 | 8964 | Downstream | -5.2367057 | 1.63E-07 | 0.00277598 |
| 22 | 49981163 | 49981163 | 1 | 22_49981163 | ENSG00000188263 | IL17REL | 13349 | Downstream | 5.23491252 | 1.65E-07 | 0.00279822 |
| 8 | 62232722 | 62232722 | 1 | 8_62232722 | ENSG00000285971 | AC023095.1 | 0 | INTRON | 5.23486354 | 1.65E-07 | 0.00279822 |
| 1 | 72467318 | 72467318 | 1 | 1_72467318 | ENSG00000286863 | AL513166.1 | 0 | INTRON | -5.2341636 | 1.66E-07 | 0.00280398 |
| 1 | 78806751 | 78806751 | 1 | 1_78806751 | ENSG00000235400 | AC104837.1 | 56092 | Downstream | -5.2341161 | 1.66E-07 | 0.00280398 |
| 12 | 8109116 | 8109116 | 1 | 12_8109116 | ENSG00000284697 | AC006511.5 | 0 | INTRON | -5.2338612 | 1.66E-07 | 0.00280506 |
| 1 | 234292027 | 234292027 | 1 | 1_234292027 | ENSG00000183780 | SLC35F3 | 0 | INTRON | 5.2328962 | 1.67E-07 | 0.00281696 |
| 12 | 75008848 | 75008848 | 1 | 12_75008848 | ENSG00000257434 | AC073525.1 | 12120 | Upstream | 5.23260415 | 1.67E-07 | 0.00281862 |
| 1 | 71329802 | 71329802 | 1 | 1_71329802 | ENSG00000229956 | ZRANB2-AS2 | 0 | INTRON | -5.2315342 | 1.68E-07 | 0.00282961 |
| 7 | 146172659 | 146172659 | 1 | 7_146172659 | ENSG00000174469 | CNTNAP2 | 0 | INTRON | 5.23151844 | 1.68E-07 | 0.00282961 |
| 15 | 94512332 | 94512332 | 1 | 15_94512332 | ENSG00000287950 | AC009432.2 | 0 | INTRON | 5.23115718 | 1.68E-07 | 0.00283235 |
| 3 | 74737844 | 74737844 | 1 | 3_74737844 | ENSG00000113805 | CNTN3 | 216704 | Upstream | 5.23018188 | 1.69E-07 | 0.00284452 |
| 2 | 151663521 | 151663521 | 1 | 2_151663521 | ENSG00000183091 | NEB | 0 | INTRON | -5.2291614 | 1.70E-07 | 0.00285685 |
| 13 | 104607428 | 104607428 | 1 | 13_104607428 | ENSG00000225823 | RPL7P45 | 206898 | Upstream | 5.22901773 | 1.70E-07 | 0.00285685 |
| 4 | 175213382 | 175213382 | 1 | 4_175213382 | ENSG00000286494 | AC022325.2 | 0 | INTRON | -5.2280727 | 1.71E-07 | 0.00286866 |
| 6 | 156549538 | 156549538 | 1 | 6_156549538 | ENSG00000227360 | AL512658.1 | 44527 | Upstream | -5.2275084 | 1.72E-07 | 0.0028746 |
| 2 | 130742126 | 130742126 | 1 | 2_130742126 | ENSG00000229797 | AC140481.1 | 832 | Downstream | -5.227119 | 1.72E-07 | 0.00287725 |
| 4 | 3012461 | 3012461 | 1 | 4_3012461 | ENSG00000125388 | GRK4 | 0 | INTRON | 5.22682043 | 1.72E-07 | 0.00287725 |
| 6 | 17440083 | 17440083 | 1 | 6_17440083 | ENSG00000112186 | CAP2 | 0 | INTRON | 5.2266365 | 1.73E-07 | 0.00287725 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
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| 13 | 82633031 | 82633031 | 1 | 13_82633031 | ENSG00000286385 | AL445255.1 | 145176 | Downstream | 5.22645402 | 1.73E-07 | 0.00287725 |
| 14 | 55021677 | 55021677 | 1 | 14_55021677 | ENSG00000198554 | WDHD1 | 0 | INTRON | 5.22643092 | 1.73E-07 | 0.00287725 |
| 5 | 93300114 | 93300114 | 1 | 5_93300114 | ENSG00000213730 | POLD2P1 | 31689 | Downstream | 5.2258893 | 1.73E-07 | 0.00288286 |
| 5 | 113410095 | 113410095 | 1 | 5_113410095 | ENSG00000232633 | AC079465.1 | 0 | INTRON | -5.2251796 | 1.74E-07 | 0.00288897 |
| 2 | 178099310 | 178099310 | 1 | 2_178099310 | ENSG00000284741 | PDE11A | 0 | INTRON | -5.2248146 | 1.74E-07 | 0.00288897 |
| 1 | 248062796 | 248062796 | 1 | 1_248062796 | ENSG00000198128 | OR2L3 | 0 | 3UTR | -5.2247702 | 1.74E-07 | 0.00288897 |
| 3 | 167324601 | 167324601 | 1 | 3_167324601 | ENSG00000169064 | ZBBX | 0 | INTRON | 5.22463233 | 1.75E-07 | 0.00288897 |
| 13 | 107174944 | 107174944 | 1 | 13_107174944 | ENSG00000204442 | FAM155A | 0 | INTRON | 5.22459558 | 1.75E-07 | 0.00288897 |
| 8 | 110672826 | 110672826 | 1 | 8_110672826 | ENSG00000253122 | AC025366.1 | 40432 | Downstream | 5.22421567 | 1.75E-07 | 0.00288934 |
| 4 | 183425359 | 183425359 | 1 | 4_183425359 | ENSG00000248376 | AC112698.1 | 5554 | Upstream | -5.2242119 | 1.75E-07 | 0.00288934 |
| 11 | 20805550 | 20805550 | 1 | 11_20805550 | ENSG00000165973 | NELL1 | 0 | INTRON | -5.2233096 | 1.76E-07 | 0.00290065 |
| 8 | 111639695 | 111639695 | 1 | 8_111639695 | ENSG00000253434 | LINC02237 | 0 | INTRON | 5.22259517 | 1.76E-07 | 0.00290904 |
| 9 | 131420560 | 131420560 | 1 | 9_131420560 | ENSG00000130723 | PRRC2B | 0 | INTRON | -5.2219802 | 1.77E-07 | 0.0029159 |
| 5 | 11206380 | 11206380 | 1 | 5_11206380 | ENSG00000169862 | CTNND2 | 0 | INTRON | 5.22173075 | 1.77E-07 | 0.00291697 |
| 2 | 3863602 | 3863602 | 1 | 2_3863602 | ENSG00000214866 | DCDC2C | 15594 | Downstream | 5.22142775 | 1.78E-07 | 0.00291697 |
| 2 | 1264003 | 1264003 | 1 | 2_1264003 | ENSG00000172554 | SNTG2 | 0 | INTRON | 5.22131338 | 1.78E-07 | 0.00291697 |
| 16 | 35937190 | 35937190 | 1 | 16_35937190 | ENSG00000261084 | PPP1R1AP2 | 24674 | Downstream | -5.2211968 | 1.78E-07 | 0.00291697 |
| 1 | 35902100 | 35902100 | 1 | 1_35902100 | ENSG00000092847 | AGO1 | 0 | INTRON | -5.2207969 | 1.78E-07 | 0.00291909 |
| 13 | 84886773 | 84886773 | 1 | 13_84886773 | ENSG00000288038 | AL445588.1 | 0 | INTRON | 5.22059601 | 1.78E-07 | 0.00291909 |
| X | 18349890 | 18349890 | 1 | X_18349890 | ENSG00000102098 | SCML2 | 0 | INTRON | 5.22042496 | 1.79E-07 | 0.00291909 |
| 7 | 128801368 | 128801368 | 1 | 7_128801368 | ENSG00000128596 | CCDC136 | 0 | EXON | 5.2203494 | 1.79E-07 | 0.00291909 |
| 1 | 169154595 | 169154595 | 1 | 1_169154595 | ENSG00000143156 | NME7 | 0 | INTRON | -5.2196992 | 1.79E-07 | 0.00292654 |
| 7 | 9945865 | 9945865 | 1 | 7_9945865 | ENSG00000235431 | AC010991.1 | 0 | INTRON | 5.21947716 | 1.79E-07 | 0.00292724 |
| 10 | 131426880 | 131426880 | 1 | 10_131426880 | ENSG00000176769 | TCERG1L | 115159 | Upstream | 5.21895842 | 1.80E-07 | 0.00293264 |
| 10 | 24973898 | 24973898 | 1 | 10_24973898 | ENSG00000285859 | AL512598.2 | 0 | INTRON | -5.2186123 | 1.80E-07 | 0.00293531 |
| 19 | 31940157 | 31940157 | 1 | 19_31940157 | ENSG00000267489 | LINC01837 | 0 | INTRON | 5.21813215 | 1.81E-07 | 0.00293811 |
| 9 | 38286067 | 38286067 | 1 | 9_38286067 | ENSG00000223716 | AL135785.1 | 74359 | Upstream | -5.2180818 | 1.81E-07 | 0.00293811 |
| 7 | 76511581 | 76511581 | 1 | 7_76511581 | ENSG00000243566 | UPK3B | 0 | EXON | 5.21777799 | 1.81E-07 | 0.00294012 |
| 9 | 123614759 | 123614759 | 1 | 9_123614759 | ENSG00000119522 | DENND1A | 0 | INTRON | 5.21727178 | 1.82E-07 | 0.00294536 |
| 13 | 73303602 | 73303602 | 1 | 13_73303602 | ENSG00000206697 | RNY1P8 | 76342 | Downstream | -5.2169244 | 1.82E-07 | 0.00294807 |
| 2 | 216730889 | 216730889 | 1 | 2_216730889 | ENSG00000236886 | AC007563.2 | 0 | INTRON | -5.2164942 | 1.82E-07 | 0.00295211 |
| X | 115614693 | 115614693 | 1 | X_115614693 | ENSG00000102024 | PLS3 | 0 | INTRON | 5.21621106 | 1.83E-07 | 0.00295382 |
| 11 | 42609251 | 42609251 | 1 | 11_42609251 | ENSG00000254914 | AC109810.1 | 330523 | Upstream | -5.2152071 | 1.84E-07 | 0.00296704 |
| 18 | 27851053 | 27851053 | 1 | 18_27851053 | ENSG00000286426 | AC090936.1 | 55416 | Downstream | 5.21495464 | 1.84E-07 | 0.00296826 |
| 2 | 17921676 | 17921676 | 1 | 2_17921676 | ENSG00000170745 | KCNS3 | 0 | INTRON | 5.21404488 | 1.85E-07 | 0.00298004 |
| 11 | 87204012 | 87204012 | 1 | 11_87204012 | ENSG00000166575 | TMEM135 | 0 | INTRON | -5.2138089 | 1.85E-07 | 0.00298101 |
| 7 | 148991143 | 148991143 | 1 | 7_148991143 | ENSG00000281189 | GHET1 | 1711 | Downstream | 5.21299779 | 1.86E-07 | 0.00299125 |
| 8 | 73145310 | 73145310 | 1 | 8_73145310 | ENSG00000164764 | SBSPON | 21222 | Upstream | 5.21272087 | 1.86E-07 | 0.00299288 |
| 10 | 15101584 | 15101584 | 1 | 10_15101584 | ENSG00000152464 | RPP38 | 0 | INTRON | 5.21219926 | 1.87E-07 | 0.00299848 |
| 12 | 98669164 | 98669164 | 1 | 12_98669164 | ENSG00000120868 | APAF1 | 0 | INTRON | -5.2118833 | 1.87E-07 | 0.00300076 |
| 10 | 91701866 | 91701866 | 1 | 10_91701866 | ENSG00000213449 | GAPDHP28 | 34084 | Upstream | 5.21123134 | 1.88E-07 | 0.00300849 |
| 1 | 221137375 | 221137375 | 1 | 1_221137375 | ENSG00000226211 | AL445466.1 | 3154 | Upstream | 5.21090921 | 1.88E-07 | 0.00301088 |
| 1 | 244871277 | 244871277 | 1 | 1_244871277 | ENSG00000273175 | BX323046.1 | 6005 | Downstream | 5.20982996 | 1.89E-07 | 0.00302481 |
| 16 | 48778729 | 48778729 | 1 | 16_48778729 | ENSG00000260086 | AC007611.1 | 32411 | Downstream | 5.20970344 | 1.89E-07 | 0.00302481 |
| 4 | 139783615 | 139783615 | 1 | 4_139783615 | ENSG00000196782 | MAML3 | 0 | INTRON | -5.2094148 | 1.89E-07 | 0.00302668 |
| 21 | 46531019 | 46531019 | 1 | 21_46531019 | ENSG00000160305 | DIP2A | 0 | INTRON | 5.20918483 | 1.90E-07 | 0.00302759 |
| 10 | 45943283 | 45943283 | 1 | 10_45943283 | ENSG00000239883 | PARGP1 | 0 | INTRON | 5.20824386 | 1.91E-07 | 0.00304013 |
| 11 | 81054740 | 81054740 | 1 | 11_81054740 | ENSG00000285568 | AP003398.2 | 14504 | Downstream | 5.20702938 | 1.92E-07 | 0.00305722 |
| 15 | 76539670 | 76539670 | 1 | 15_76539670 | ENSG00000140386 | SCAPER | 0 | INTRON | 5.2063369 | 1.93E-07 | 0.00306439 |
| 5 | 109554226 | 109554226 | 1 | 5_109554226 | ENSG00000214794 | KRT18P42 | 34111 | Upstream | 5.20610789 | 1.93E-07 | 0.00306439 |
| 17 | 57486530 | 57486530 | 1 | 17_57486530 | ENSG00000153944 | MSI2 | 0 | INTRON | 5.20606977 | 1.93E-07 | 0.00306439 |
| 6 | 74115531 | 74115531 | 1 | 6_74115531 | ENSG00000223786 | AL357507.1 | 0 | INTRON | 5.2058204 | 1.93E-07 | 0.00306439 |
| 2 | 131291284 | 131291284 | 1 | 2_131291284 | ENSG00000115762 | PLEKHB2 | 0 | INTRON | -5.205727 | 1.93E-07 | 0.00306439 |
| 15 | 22558203 | 22558203 | 1 | 15_22558203 | ENSG00000276550 | HERC2P2 | 0 | INTRON | -5.2053759 | 1.94E-07 | 0.00306732 |
| 3 | 117696676 | 117696676 | 1 | 3_117696676 | ENSG00000239268 | AC092691.1 | 0 | INTRON | 5.20520409 | 1.94E-07 | 0.00306732 |
| 4 | 6185508 | 6185508 | 1 | 4_6185508 | ENSG00000152969 | JAKMIP1 | 0 | INTRON | 5.20473193 | 1.94E-07 | 0.00307209 |
| 4 | 99857594 | 99857594 | 1 | 4_99857594 | ENSG00000070190 | DAPP1 | 0 | INTRON | 5.20457045 | 1.94E-07 | 0.00307209 |
| 4 | 153956075 | 153956075 | 1 | 4_153956075 | ENSG00000280241 | AC079298.3 | 0 | INTRON | -5.2037288 | 1.95E-07 | 0.00308318 |
| 2 | 82821986 | 82821986 | 1 | 2_82821986 | ENSG00000227789 | MTCYBP7 | 2722 | Downstream | 5.20292737 | 1.96E-07 | 0.00309147 |
| 14 | 61391568 | 61391568 | 1 | 14_61391568 | ENSG00000027075 | PRKCH | 0 | INTRON | -5.202673 | 1.96E-07 | 0.00309147 |
| 2 | 33962036 | 33962036 | 1 | 2_33962036 | ENSG00000228262 | LINC01320 | 0 | INTRON | 5.20262675 | 1.96E-07 | 0.00309147 |
| 16 | 2409104 | 2409104 | 1 | 16_2409104 | ENSG00000238098 | ABCA17P | 0 | INTRON | 5.20233393 | 1.97E-07 | 0.00309147 |
| 4 | 181952402 | 181952402 | 1 | 4_181952402 | ENSG00000177822 | TENM3-AS1 | 0 | INTRON | -5.2021746 | 1.97E-07 | 0.00309147 |
| 1 | 15627022 | 15627022 | 1 | 1_15627022 | ENSG00000197312 | DDI2 | 0 | EXON | -5.2019313 | 1.97E-07 | 0.00309147 |
| 1 | 76013917 | 76013917 | 1 | 1_76013917 | ENSG00000225605 | AC092813.1 | 0 | INTRON | -5.2018979 | 1.97E-07 | 0.00309147 |
| 8 | 79138672 | 79138672 | 1 | 8_79138672 | ENSG00000253659 | AC138646.1 | 120729 | Upstream | -5.2017795 | 1.97E-07 | 0.00309147 |
| 12 | 95371074 | 95371074 | 1 | 12_95371074 | ENSG00000257943 | AC084879.1 | 0 | INTRON | 5.20152166 | 1.98E-07 | 0.00309147 |
| X | 1182437 | 1182437 | 1 | X_1182437 | ENSG00000205755 | CRLF2 | 5111 | Downstream | 5.20151442 | 1.98E-07 | 0.00309147 |
| 3 | 143810804 | 143810804 | 1 | 3_143810804 | ENSG00000181804 | SLC9A9 | 0 | INTRON | 5.20098857 | 1.98E-07 | 0.00309738 |
| 13 | 86341204 | 86341204 | 1 | 13_86341204 | ENSG00000287880 | AL445207.1 | 61777 | Downstream | -5.1999831 | 1.99E-07 | 0.00310792 |
| 8 | 127434907 | 127434907 | 1 | 8_127434907 | ENSG00000246228 | CASC8 | 0 | INTRON | 5.19988915 | 1.99E-07 | 0.00310792 |
| 21 | 35443148 | 35443148 | 1 | 21_35443148 | ENSG00000159216 | RUNX1 | 0 | INTRON | 5.1998459 | 1.99E-07 | 0.00310792 |
| 3 | 65858908 | 65858908 | 1 | 3_65858908 | ENSG00000151276 | MAGI1 | 0 | INTRON | 5.1994483 | 2.00E-07 | 0.00311173 |
| 7 | 62299624 | 62299624 | 1 | 7_62299624 | ENSG00000233918 | AC128676.1 | 23946 | Upstream | -5.1987359 | 2.01E-07 | 0.00312033 |
| 8 | 49485288 | 49485288 | 1 | 8_49485288 | ENSG00000253380 | AC090155.2 | 11474 | Downstream | -5.1985954 | 2.01E-07 | 0.00312033 |
| 10 | 102736892 | 102736892 | 1 | 10_102736892 | ENSG00000156398 | SFXN2 | 0 | INTRON | 5.19822457 | 2.01E-07 | 0.00312168 |
| 3 | 185084521 | 185084521 | 1 | 3_185084521 | ENSG00000187068 | C3orf70 | 0 | INTRON | -5.1981758 | 2.01E-07 | 0.00312168 |
| 3 | 150594825 | 150594825 | 1 | 3_150594825 | ENSG00000120742 | SERP1 | 0 | INTRON | 5.19758858 | 2.02E-07 | 0.00312734 |
| 11 | 66632995 | 66632995 | 1 | 11_66632995 | ENSG00000248643 | RBM14-RBM4 | 0 | INTRON | -5.1975 | 2.02E-07 | 0.00312734 |
| 8 | 74810707 | 74810707 | 1 | 8_74810707 | ENSG00000254349 | MIR2052HG | 0 | INTRON | -5.1961615 | 2.03E-07 | 0.00314707 |
| 6 | 14978464 | 14978464 | 1 | 6_14978464 | ENSG00000234261 | AL138720.1 | 0 | INTRON | 5.19441105 | 2.05E-07 | 0.00317381 |
| 17 | 65014399 | 65014399 | 1 | 17_65014399 | ENSG00000120063 | GNA13 | 0 | EXON | -5.1942496 | 2.06E-07 | 0.00317381 |
| 4 | 166998673 | 166998673 | 1 | 4_166998673 | ENSG00000196104 | SPOCK3 | 0 | INTRON | -5.1938977 | 2.06E-07 | 0.00317532 |
| 14 | 99126730 | 99126730 | 1 | 14_99126730 | ENSG00000229402 | AL162151.1 | 31685 | Upstream | -5.1937964 | 2.06E-07 | 0.00317532 |
| 1 | 212962067 | 212962067 | 1 | 1_212962067 | ENSG00000143494 | VASH2 | 0 | INTRON | 5.19352578 | 2.06E-07 | 0.00317532 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 | 26782751 | 26782751 | 1 | 7_26782751 | ENSG00000005020 | SKAP2 | 0 | INTRON | 5.19346584 | 2.06E-07 | 0.00317532 |
| 8 | 73036418 | 73036418 | 1 | 8_73036418 | ENSG00000147601 | TERF1 | 0 | INTRON | 5.19331833 | 2.07E-07 | 0.00317532 |
| 4 | 120560652 | 120560652 | 1 | 4_120560652 | ENSG00000250938 | AC073475.1 | 0 | INTRON | -5.1927532 | 2.07E-07 | 0.00317839 |
| 15 | 63546700 | 63546700 | 1 | 15_63546700 | ENSG00000140455 | USP3 | 0 | INTRON | -5.1926409 | 2.07E-07 | 0.00317839 |
| 18 | 66988412 | 66988412 | 1 | 18_66988412 | ENSG00000238680 | RNU6-1037P | 42190 | Downstream | 5.19263529 | 2.07E-07 | 0.00317839 |
| X | 77287926 | 77287926 | 1 | X_77287926 | ENSG00000234404 | SPRYD7P1 | 86285 | Upstream | 5.19170168 | 2.08E-07 | 0.00319015 |
| 2 | 40102501 | 40102501 | 1 | 2_40102501 | ENSG00000183023 | SLC8A1 | 0 | 3UTR | -5.1916126 | 2.08E-07 | 0.00319015 |
| 15 | 65075411 | 65075411 | 1 | 15_65075411 | ENSG00000103710 | RASL12 | 0 | INTRON | 5.19139489 | 2.09E-07 | 0.00319101 |
| 10 | 14410633 | 14410633 | 1 | 10_14410633 | ENSG00000151474 | FRMD4A | 0 | INTRON | 5.1907949 | 2.09E-07 | 0.00319453 |
| 4 | 96062977 | 96062977 | 1 | 4_96062977 | ENSG00000201744 | RNU6-34P | 89319 | Downstream | -5.1906984 | 2.10E-07 | 0.00319453 |
| 6 | 81908623 | 81908623 | 1 | 6_81908623 | ENSG00000226453 | LINC02542 | 0 | INTRON | -5.1905598 | 2.10E-07 | 0.00319453 |
| 17 | 44213240 | 44213240 | 1 | 17_44213240 | ENSG00000108312 | UBTF | 0 | EXON | 5.19040929 | 2.10E-07 | 0.00319453 |
| 4 | 178102812 | 178102812 | 1 | 4_178102812 | ENSG00000253000 | RNU1-45P | 13908 | Downstream | 5.19035515 | 2.10E-07 | 0.00319453 |
| 1 | 54349384 | 54349384 | 1 | 1_54349384 | ENSG00000157216 | SSBP3 | 0 | INTRON | -5.1889959 | 2.11E-07 | 0.0032138 |
| 19 | 54942365 | 54942365 | 1 | 19_54942365 | ENSG00000167634 | NLRP7 | 0 | INTRON | -5.1889025 | 2.12E-07 | 0.0032138 |
| 11 | 135040330 | 135040330 | 1 | 11_135040330 | ENSG00000255512 | LINC02684 | 21450 | Downstream | -5.1885673 | 2.12E-07 | 0.00321672 |
| 2 | 92197451 | 92197451 | 1 | 2_92197451 | ENSG00000223816 | IGKV1OR2-2 | 162451 | Upstream | -5.1878739 | 2.13E-07 | 0.00322228 |
| 22 | 39072947 | 39072947 | 1 | 22_39072947 | ENSG00000259421 | AL022318.2 | 2276 | Downstream | 5.18775226 | 2.13E-07 | 0.00322228 |
| 10 | 14380534 | 14380534 | 1 | 10_14380534 | ENSG00000151474 | FRMD4A | 0 | INTRON | -5.1876639 | 2.13E-07 | 0.00322228 |
| X | 30450306 | 30450306 | 1 | X_30450306 | ENSG00000120280 | CXorf21 | 108502 | Downstream | 5.18758231 | 2.13E-07 | 0.00322228 |
| X | 50898097 | 50898097 | 1 | X_50898097 | ENSG00000226881 | H3F3AP5 | 7340 | Upstream | -5.186317 | 2.14E-07 | 0.00324135 |
| 18 | 22131267 | 22131267 | 1 | 18_22131267 | ENSG00000221363 | RNU6ATAC20P | 538 | Upstream | -5.1858047 | 2.15E-07 | 0.00324739 |
| 22 | 32612023 | 32612023 | 1 | 22_32612023 | ENSG00000185666 | SYN3 | 0 | INTRON | 5.18532452 | 2.16E-07 | 0.00325289 |
| 12 | 39947239 | 39947239 | 1 | 12_39947239 | ENSG00000151229 | SLC2A13 | 0 | INTRON | -5.1849638 | 2.16E-07 | 0.00325402 |
| 22 | 49030627 | 49030627 | 1 | 22_49030627 | ENSG00000286381 | AL078622.1 | 16856 | Downstream | -5.1849121 | 2.16E-07 | 0.00325402 |
| 5 | 627025 | 627025 | 1 | 5_627025 | ENSG00000112877 | CEP72 | 0 | INTRON | 5.18461368 | 2.16E-07 | 0.00325402 |
| 4 | 133240554 | 133240554 | 1 | 4_133240554 | ENSG00000286467 | AC108052.1 | 20467 | Downstream | 5.18437211 | 2.17E-07 | 0.00325402 |
| 11 | 31842395 | 31842395 | 1 | 11_31842395 | ENSG00000285283 | AL035078.4 | 0 | INTRON | 5.18429501 | 2.17E-07 | 0.00325402 |
| 1 | 63689695 | 63689695 | 1 | 1_63689695 | ENSG00000079739 | PGM1 | 29450 | Downstream | -5.1842708 | 2.17E-07 | 0.00325402 |
| 14 | 46205417 | 46205417 | 1 | 14_46205417 | ENSG00000258700 | LINC00871 | 0 | INTRON | 5.18346944 | 2.18E-07 | 0.00326263 |
| 18 | 49225396 | 49225396 | 1 | 18_49225396 | ENSG00000141627 | DYM | 0 | INTRON | 5.18344981 | 2.18E-07 | 0.00326263 |
| 15 | 59755053 | 59755053 | 1 | 15_59755053 | ENSG00000234797 | RPS3AP6 | 13298 | Upstream | 5.1829449 | 2.18E-07 | 0.0032686 |
| 9 | 123198429 | 123198429 | 1 | 9_123198429 | ENSG00000165209 | STRBP | 0 | INTRON | 5.1824564 | 2.19E-07 | 0.00327187 |
| 6 | 119452968 | 119452968 | 1 | 6_119452968 | ENSG00000287100 | AL078600.1 | 61139 | Downstream | -5.1823822 | 2.19E-07 | 0.00327187 |
| 2 | 23946556 | 23946556 | 1 | 2_23946556 | ENSG00000173960 | UBXN2A | 0 | INTRON | 5.18226722 | 2.19E-07 | 0.00327187 |
| 16 | 65472848 | 65472848 | 1 | 16_65472848 | ENSG00000261742 | LINC00922 | 0 | INTRON | 5.18203674 | 2.19E-07 | 0.00327304 |
| 15 | 28644962 | 28644962 | 1 | 15_28644962 | ENSG00000206149 | HERC2P9 | 0 | INTRON | -5.1813066 | 2.20E-07 | 0.00328014 |
| 21 | 19100339 | 19100339 | 1 | 21_19100339 | ENSG00000229289 | AP000431.1 | 30183 | Upstream | 5.18110993 | 2.21E-07 | 0.00328014 |
| 2 | 242025686 | 242025686 | 1 | 2_242025686 | ENSG00000226423 | AC093642.1 | 0 | INTRON | -5.1808766 | 2.21E-07 | 0.00328014 |
| 5 | 167483841 | 167483841 | 1 | 5_167483841 | ENSG00000145934 | TENM2 | 0 | INTRON | 5.18086095 | 2.21E-07 | 0.00328014 |
| 1 | 190598418 | 190598418 | 1 | 1_190598418 | ENSG00000231175 | LINC01720 | 26471 | Upstream | -5.1808174 | 2.21E-07 | 0.00328014 |
| 12 | 1328545 | 1328545 | 1 | 12_1328545 | ENSG00000082805 | ERC1 | 0 | INTRON | -5.1797862 | 2.22E-07 | 0.0032931 |
| 12 | 4475240 | 4475240 | 1 | 12_4475240 | ENSG00000047621 | C12orf4 | 12494 | Downstream | 5.17967807 | 2.22E-07 | 0.0032931 |
| 15 | 50554993 | 50554993 | 1 | 15_50554993 | ENSG00000092439 | TRPM7 | 0 | INTRON | 5.1795942 | 2.22E-07 | 0.0032931 |
| 1 | 56980057 | 56980057 | 1 | 1_56980057 | ENSG00000236341 | AL161740.1 | 0 | INTRON | -5.1791255 | 2.23E-07 | 0.00329851 |
| 1 | 167224793 | 167224793 | 1 | 1_167224793 | ENSG00000143190 | POU2F1 | 0 | INTRON | 5.17879297 | 2.23E-07 | 0.00330153 |
| 2 | 200544344 | 200544344 | 1 | 2_200544344 | ENSG00000163535 | SGO2 | 0 | INTRON | 5.17861539 | 2.24E-07 | 0.0033018 |
| 18 | 69168906 | 69168906 | 1 | 18_69168906 | ENSG00000264705 | AC090337.1 | 43370 | Upstream | 5.17844627 | 2.24E-07 | 0.00330193 |
| 4 | 61665397 | 61665397 | 1 | 4_61665397 | ENSG00000150471 | ADGRL3 | 0 | INTRON | 5.17802423 | 2.24E-07 | 0.00330654 |
| 2 | 70242089 | 70242089 | 1 | 2_70242089 | ENSG00000116001 | TIA1 | 0 | INTRON | -5.1774984 | 2.25E-07 | 0.003313 |
| 9 | 99979007 | 99979007 | 1 | 9_99979007 | ENSG00000023318 | ERP44 | 177 | Downstream | 5.17705438 | 2.25E-07 | 0.00331802 |
| 8 | 36192323 | 36192323 | 1 | 8_36192323 | ENSG00000253452 | AC124290.1 | 1129 | Downstream | -5.1767774 | 2.26E-07 | 0.00332007 |
| 2 | 40779619 | 40779619 | 1 | 2_40779619 | ENSG00000233128 | LINC01794 | 12167 | Downstream | -5.176542 | 2.26E-07 | 0.00332139 |
| 21 | 24238647 | 24238647 | 1 | 21_24238647 | ENSG00000224018 | AP000470.1 | 45723 | Upstream | 5.17542165 | 2.27E-07 | 0.0033385 |
| 2 | 519995 | 519995 | 1 | 2_519995 | ENSG00000223985 | LINC01874 | 16090 | Upstream | -5.1747714 | 2.28E-07 | 0.00334577 |
| X | 102575102 | 102575102 | 1 | X_102575102 | ENSG00000196970 | NXF4 | 3407 | Downstream | -5.1746253 | 2.28E-07 | 0.00334577 |
| 7 | 76147209 | 76147209 | 1 | 7_76147209 | ENSG00000224273 | AC005077.2 | 15022 | Upstream | -5.1745147 | 2.29E-07 | 0.00334577 |
| 4 | 169478469 | 169478469 | 1 | 4_169478469 | ENSG00000137601 | NEK1 | 0 | INTRON | -5.1743721 | 2.29E-07 | 0.00334577 |
| 5 | 119100430 | 119100430 | 1 | 5_119100430 | ENSG00000172869 | DMXL1 | 0 | INTRON | -5.1740315 | 2.29E-07 | 0.003349 |
| 3 | 76492869 | 76492869 | 1 | 3_76492869 | ENSG00000185008 | ROBO2 | 0 | INTRON | 5.17342354 | 2.30E-07 | 0.00335351 |
| 12 | 65615393 | 65615393 | 1 | 12_65615393 | ENSG00000250748 | AC025419.1 | 0 | INTRON | -5.1733947 | 2.30E-07 | 0.00335351 |
| 2 | 149414646 | 149414646 | 1 | 2_149414646 | ENSG00000187123 | LYPD6 | 0 | INTRON | -5.1732998 | 2.30E-07 | 0.00335351 |
| 7 | 43669668 | 43669668 | 1 | 7_43669668 | ENSG00000106603 | COA1 | 0 | INTRON | 5.17296753 | 2.30E-07 | 0.00335561 |
| 14 | 73098665 | 73098665 | 1 | 14_73098665 | ENSG00000119707 | RBM25 | 0 | INTRON | 5.17276242 | 2.31E-07 | 0.00335561 |
| 9 | 122537367 | 122537367 | 1 | 9_122537367 | ENSG00000234156 | AL359636.2 | 0 | INTRON | -5.172703 | 2.31E-07 | 0.00335561 |
| 15 | 57372802 | 57372802 | 1 | 15_57372802 | ENSG00000128849 | CGNL1 | 3164 | Upstream | 5.1725297 | 2.31E-07 | 0.00335586 |
| 2 | 28569747 | 28569747 | 1 | 2_28569747 | ENSG00000163803 | PLB1 | 0 | INTRON | 5.17110192 | 2.33E-07 | 0.00337872 |
| 13 | 39627367 | 39627367 | 1 | 13_39627367 | ENSG00000183722 | LHFPL6 | 23839 | Upstream | -5.1707731 | 2.33E-07 | 0.00338069 |
| 14 | 35839478 | 35839478 | 1 | 14_35839478 | ENSG00000100916 | BRMS1L | 0 | INTRON | 5.17067427 | 2.33E-07 | 0.00338069 |
| 11 | 91698420 | 91698420 | 1 | 11_91698420 | ENSG00000255332 | LINC02756 | 95898 | Upstream | 5.17001099 | 2.34E-07 | 0.00338196 |
| Y | 10811845 | 10811845 | 1 | Y_10811845 | ENSG00000273858 | AC140113.4 | 230876 | Downstream | -5.1699821 | 2.34E-07 | 0.00338196 |
| 11 | 77199654 | 77199654 | 1 | 11_77199654 | ENSG00000137474 | MYO7A | 0 | EXON | -5.1699689 | 2.34E-07 | 0.00338196 |
| 4 | 126122676 | 126122676 | 1 | 4_126122676 | ENSG00000251005 | AC105758.1 | 15753 | Upstream | 5.16972643 | 2.34E-07 | 0.00338196 |
| 11 | 69771217 | 69771217 | 1 | 11_69771217 | ENSG00000075388 | FGF4 | 0 | 3UTR | -5.1696777 | 2.34E-07 | 0.00338196 |
| 7 | 33008069 | 33008069 | 1 | 7_33008069 | ENSG00000122642 | FKBP9 | 1139 | Downstream | -5.169554 | 2.35E-07 | 0.00338196 |
| 5 | 39559760 | 39559760 | 1 | 5_39559760 | ENSG00000251515 | CCDC11P1 | 11717 | Downstream | 5.16949351 | 2.35E-07 | 0.00338196 |
| 8 | 74706560 | 74706560 | 1 | 8_74706560 | ENSG00000254349 | MIR2052HG | 0 | INTRON | -5.169206 | 2.35E-07 | 0.0033843 |
| 2 | 224773694 | 224773694 | 1 | 2_224773694 | ENSG00000135905 | DOCK10 | 0 | INTRON | 5.16812158 | 2.36E-07 | 0.00339976 |
| 10 | 125706506 | 125706506 | 1 | 10_125706506 | ENSG00000224023 | EDRF1-DT | 0 | EXON | -5.1680379 | 2.37E-07 | 0.00339976 |
| 11 | 62782186 | 62782186 | 1 | 11_62782186 | ENSG00000162227 | TAF6L | 0 | EXON | 5.16726933 | 2.38E-07 | 0.00340686 |
| 12 | 55325998 | 55325998 | 1 | 12_55325998 | ENSG00000205330 | OR6C1 | 3634 | Downstream | 5.16721584 | 2.38E-07 | 0.00340686 |
| 8 | 49536132 | 49536132 | 1 | 8_49536132 | ENSG00000253206 | AC090155.1 | 253 | Downstream | 5.16717472 | 2.38E-07 | 0.00340686 |
| 10 | 108032332 | 108032332 | 1 | 10_108032332 | ENSG00000229981 | LINC01435 | 0 | INTRON | -5.1667767 | 2.38E-07 | 0.00340912 |
| 11 | 97515558 | 97515558 | 1 | 11_97515558 | ENSG00000199315 | RNA5SP347 | 141905 | Upstream | -5.1667359 | 2.38E-07 | 0.00340912 |
| 3 | 70515558 | 70515558 | 1 | 3_70515558 | ENSG00000240405 | SAMMSON | 0 | INTRON | -5.1661599 | 2.39E-07 | 0.00341677 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
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| 1 | 106333393 | 106333393 | 1 | 1_106333393 | ENSG00000237480 | AL355306.2 | 208829 | Downstream | 5.16566889 | 2.40E-07 | 0.00342142 |
| 13 | 73844487 | 73844487 | 1 | 13_73844487 | ENSG00000118922 | KLF12 | 0 | INTRON | 5.16558268 | 2.40E-07 | 0.00342142 |
| 13 | 29425876 | 29425876 | 1 | 13_29425876 | ENSG00000132938 | MTUS2 | 0 | INTRON | 5.16543412 | 2.40E-07 | 0.00342142 |
| 6 | 51576747 | 51576747 | 1 | 6_51576747 | ENSG00000228689 | AL355997.1 | 22975 | Upstream | -5.1650113 | 2.40E-07 | 0.00342466 |
| 7 | 17807815 | 17807815 | 1 | 7_17807815 | ENSG00000071189 | SNX13 | 0 | INTRON | 5.16488752 | 2.41E-07 | 0.00342466 |
| 1 | 5388030 | 5388030 | 1 | 1_5388030 | ENSG00000284616 | AL139823.1 | 80636 | Upstream | -5.1647571 | 2.41E-07 | 0.00342466 |
| 4 | 112014375 | 112014375 | 1 | 4_112014375 | ENSG00000249815 | AC004704.1 | 0 | INTRON | -5.1646311 | 2.41E-07 | 0.00342466 |
| 2 | 132947188 | 132947188 | 1 | 2_132947188 | ENSG00000176771 | NCKAP5 | 0 | INTRON | 5.16419468 | 2.41E-07 | 0.00342555 |
| 12 | 117181839 | 117181839 | 1 | 12_117181839 | ENSG00000135108 | FBXO21 | 0 | INTRON | -5.1641146 | 2.42E-07 | 0.00342555 |
| 16 | 68980137 | 68980137 | 1 | 16_68980137 | ENSG00000103047 | TANGO6 | 0 | INTRON | -5.1641141 | 2.42E-07 | 0.00342555 |
| 2 | 214673920 | 214673920 | 1 | 2_214673920 | ENSG00000197585 | AC068051.1 | 0 | INTRON | 5.16363915 | 2.42E-07 | 0.0034314 |
| 2 | 160870302 | 160870302 | 1 | 2_160870302 | ENSG00000244372 | RN7SL423P | 7244 | Upstream | -5.1632954 | 2.43E-07 | 0.00343485 |
| 8 | 143863258 | 143863258 | 1 | 8_143863258 | ENSG00000261150 | EPPK1 | 0 | EXON | -5.1629684 | 2.43E-07 | 0.003438 |
| 2 | 152051054 | 152051054 | 1 | 2_152051054 | ENSG00000182389 | CACNB4 | 0 | INTRON | -5.1625853 | 2.44E-07 | 0.00344219 |
| 17 | 55892625 | 55892625 | 1 | 17_55892625 | ENSG00000153930 | ANKFN1 | 0 | INTRON | -5.1623984 | 2.44E-07 | 0.00344277 |
| 5 | 63109933 | 63109933 | 1 | 5_63109933 | ENSG00000249579 | AC113420.1 | 86444 | Upstream | 5.16193491 | 2.44E-07 | 0.00344844 |
| 4 | 106919519 | 106919519 | 1 | 4_106919519 | ENSG00000286147 | AC092445.1 | 0 | INTRON | -5.1610654 | 2.46E-07 | 0.00346163 |
| 1 | 52314692 | 52314692 | 1 | 1_52314692 | ENSG00000157077 | ZFYVE9 | 0 | INTRON | -5.1603138 | 2.47E-07 | 0.00347268 |
| X | 65455407 | 65455407 | 1 | X_65455407 | ENSG00000102053 | ZC3H12B | 0 | INTRON | 5.15963042 | 2.47E-07 | 0.00348249 |
| X | 58080515 | 58080515 | 1 | X_58080515 | ENSG00000235124 | KRT8P17 | 94382 | Downstream | -5.1588549 | 2.48E-07 | 0.00349179 |
| 5 | 109318531 | 109318531 | 1 | 5_109318531 | ENSG00000249476 | AC008467.1 | 0 | INTRON | 5.15882168 | 2.49E-07 | 0.00349179 |
| 16 | 35263630 | 35263630 | 1 | 16_35263630 | ENSG00000260958 | AC023824.3 | 0 | INTRON | 5.15805491 | 2.50E-07 | 0.00350323 |
| 9 | 111399390 | 111399390 | 1 | 9_111399390 | ENSG00000136813 | ECPAS | 0 | INTRON | -5.1576616 | 2.50E-07 | 0.0035077 |
| 8 | 57740655 | 57740655 | 1 | 8_57740655 | ENSG00000253322 | AC104051.1 | 0 | INTRON | 5.15734995 | 2.50E-07 | 0.0035087 |
| 12 | 110855706 | 110855706 | 1 | 12_110855706 | ENSG00000173093 | CCDC63 | 0 | INTRON | 5.15729922 | 2.51E-07 | 0.0035087 |
| 9 | 125897799 | 125897799 | 1 | 9_125897799 | ENSG00000167081 | PBX3 | 0 | INTRON | 5.15660595 | 2.51E-07 | 0.00351736 |
| 15 | 44508223 | 44508223 | 1 | 15_44508223 | ENSG00000137770 | CTDSPL2 | 0 | INTRON | 5.1565293 | 2.52E-07 | 0.00351736 |
| 6 | 133870035 | 133870035 | 1 | 6_133870035 | ENSG00000223586 | LINC01312 | 0 | INTRON | -5.1553619 | 2.53E-07 | 0.00353495 |
| 11 | 91874702 | 91874702 | 1 | 11_91874702 | ENSG00000255332 | LINC02756 | 2616 | Downstream | 5.15528742 | 2.53E-07 | 0.00353495 |
| Y | 3703213 | 3703213 | 1 | Y_3703213 | ENSG00000232927 | USP12PY | 19345 | Downstream | 5.15459696 | 2.54E-07 | 0.00354509 |
| 14 | 92874387 | 92874387 | 1 | 14_92874387 | ENSG00000258742 | LINC02833 | 11964 | Upstream | 5.15331164 | 2.56E-07 | 0.00356656 |
| 22 | 25363110 | 25363110 | 1 | 22_25363110 | ENSG00000100068 | LRP5L | 0 | INTRON | 5.15298926 | 2.56E-07 | 0.00356978 |
| 3 | 11873215 | 11873215 | 1 | 3_11873215 | ENSG00000230342 | FANCD2P2 | 0 | INTRON | 5.15262292 | 2.57E-07 | 0.00357383 |
| 12 | 87956197 | 87956197 | 1 | 12_87956197 | ENSG00000240721 | RPS4XP15 | 5378 | Downstream | 5.15211672 | 2.58E-07 | 0.00357593 |
| 18 | 72953725 | 72953725 | 1 | 18_72953725 | ENSG00000263958 | AC091138.1 | 72326 | Downstream | -5.1520866 | 2.58E-07 | 0.00357593 |
| 1 | 64336390 | 64336390 | 1 | 1_64336390 | ENSG00000238653 | RNU7-62P | 48007 | Downstream | -5.151959 | 2.58E-07 | 0.00357593 |
| 15 | 54194629 | 54194629 | 1 | 15_54194629 | ENSG00000137766 | UNC13C | 0 | INTRON | -5.1518199 | 2.58E-07 | 0.00357593 |
| 12 | 67105636 | 67105636 | 1 | 12_67105636 | ENSG00000257083 | AC073530.1 | 9226 | Upstream | -5.1514893 | 2.58E-07 | 0.00357593 |
| 22 | 16830008 | 16830008 | 1 | 22_16830008 | ENSG00000229027 | HSFY1P1 | 673 | Downstream | -5.1514546 | 2.58E-07 | 0.00357593 |
| 11 | 104125929 | 104125929 | 1 | 11_104125929 | ENSG00000170962 | PDGFD | 0 | INTRON | 5.15130603 | 2.59E-07 | 0.00357593 |
| 1 | 28240759 | 28240759 | 1 | 1_28240759 | ENSG00000270605 | AL353622.1 | 0 | EXON | 5.15129052 | 2.59E-07 | 0.00357593 |
| 7 | 128752941 | 128752941 | 1 | 7_128752941 | ENSG00000128595 | CALU | 0 | INTRON | -5.1505044 | 2.60E-07 | 0.00358281 |
| 6 | 6045047 | 6045047 | 1 | 6_6045047 | ENSG00000124785 | NRN1 | 37442 | Upstream | 5.15039458 | 2.60E-07 | 0.00358281 |
| 6 | 143212696 | 143212696 | 1 | 6_143212696 | ENSG00000146416 | AIG1 | 0 | INTRON | 5.15033389 | 2.60E-07 | 0.00358281 |
| 13 | 44899652 | 44899652 | 1 | 13_44899652 | ENSG00000083635 | NUFIP1 | 39596 | Downstream | 5.15018818 | 2.60E-07 | 0.00358281 |
| 15 | 19898224 | 19898224 | 1 | 15_19898224 | ENSG00000258463 | AC138701.2 | 1109 | Upstream | -5.1501701 | 2.60E-07 | 0.00358281 |
| 2 | 161049081 | 161049081 | 1 | 2_161049081 | ENSG00000232337 | AC009313.2 | 0 | EXON | -5.1496422 | 2.61E-07 | 0.00359 |
| 12 | 29639169 | 29639169 | 1 | 12_29639169 | ENSG00000133687 | TMTC1 | 0 | INTRON | 5.14924954 | 2.62E-07 | 0.00359349 |
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| 7 | 147557212 | 147557212 | 1 | 7_147557212 | ENSG00000174469 | CNTNAP2 | 0 | INTRON | -5.1490058 | 2.62E-07 | 0.00359349 |
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| 1 | 208358262 | 208358262 | 1 | 1_208358262 | ENSG00000286198 | AL606753.2 | 87595 | Upstream | 5.14644769 | 2.65E-07 | 0.0036311 |
| 11 | 19442150 | 19442150 | 1 | 11_19442150 | ENSG00000166833 | NAV2 | 0 | INTRON | 5.14613742 | 2.66E-07 | 0.00363329 |
| 1 | 68288891 | 68288891 | 1 | 1_68288891 | ENSG00000225242 | COX6B1P7 | 6269 | Downstream | -5.1460183 | 2.66E-07 | 0.00363329 |
| 2 | 28194644 | 28194644 | 1 | 2_28194644 | ENSG00000158019 | BABAM2 | 0 | INTRON | -5.1458827 | 2.66E-07 | 0.00363329 |
| 1 | 182300108 | 182300108 | 1 | 1_182300108 | ENSG00000228918 | LINC01344 | 0 | INTRON | -5.145519 | 2.67E-07 | 0.0036365 |
| 3 | 154151691 | 154151691 | 1 | 3_154151691 | ENSG00000114790 | ARHGEF26 | 0 | INTRON | 5.1452692 | 2.67E-07 | 0.0036365 |
| 5 | 172018079 | 172018079 | 1 | 5_172018079 | ENSG00000072803 | FBXW11 | 11206 | Upstream | -5.1452658 | 2.67E-07 | 0.0036365 |
| 3 | 194764074 | 194764074 | 1 | 3_194764074 | ENSG00000237222 | LINC01968 | 0 | INTRON | 5.14499668 | 2.68E-07 | 0.0036388 |
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| 5 | 42555537 | 42555537 | 1 | 5_42555537 | ENSG00000112964 | GHR | 0 | INTRON | -5.144108 | 2.69E-07 | 0.00365023 |
| 13 | 49709177 | 49709177 | 1 | 13_49709177 | ENSG00000102753 | KPNA3 | 0 | INTRON | -5.143953 | 2.69E-07 | 0.00365033 |
| 9 | 116002067 | 116002067 | 1 | 9_116002067 | ENSG00000228707 | AL691426.1 | 10293 | Upstream | 5.14349952 | 2.70E-07 | 0.00365624 |
| 4 | 184687725 | 184687725 | 1 | 4_184687725 | ENSG00000164306 | PRIMPOL | 0 | INTRON | 5.1432186 | 2.70E-07 | 0.0036588 |
| Y | 10872381 | 10872381 | 1 | Y_10872381 | ENSG00000273858 | AC140113.4 | 170340 | Downstream | -5.1425539 | 2.71E-07 | 0.00366435 |
| 17 | 72470343 | 72470343 | 1 | 17_72470343 | ENSG00000227036 | LINC00511 | 0 | EXON | -5.1425152 | 2.71E-07 | 0.00366435 |
| 2 | 65076580 | 65076580 | 1 | 2_65076580 | ENSG00000138069 | RAB1A | 0 | INTRON | -5.1422758 | 2.71E-07 | 0.00366435 |
| 14 | 68845820 | 68845820 | 1 | 14_68845820 | ENSG00000270975 | MAGOH3P | 15941 | Upstream | -5.1422671 | 2.71E-07 | 0.00366435 |
| 15 | 89592221 | 89592221 | 1 | 15_89592221 | ENSG00000140534 | TICRR | 0 | INTRON | -5.1420736 | 2.72E-07 | 0.00366435 |
| 4 | 47049575 | 47049575 | 1 | 4_47049575 | ENSG00000163288 | GABRB1 | 0 | INTRON | -5.1420391 | 2.72E-07 | 0.00366435 |
| 1 | 3406243 | 3406243 | 1 | 1_3406243 | ENSG00000142611 | PRDM16 | 0 | INTRON | 5.14146408 | 2.73E-07 | 0.00367267 |
| 10 | 14048737 | 14048737 | 1 | 10_14048737 | ENSG00000151474 | FRMD4A | 0 | INTRON | 5.14105209 | 2.73E-07 | 0.00367783 |
| 6 | 77577163 | 77577163 | 1 | 6_77577163 | ENSG00000269964 | MEI4 | 73110 | Upstream | 5.14061472 | 2.74E-07 | 0.00368348 |
| 20 | 33872399 | 33872399 | 1 | 20_33872399 | ENSG00000101421 | CHMP4B | 18033 | Downstream | -5.1395788 | 2.75E-07 | 0.0037002 |
| 2 | 232064196 | 232064196 | 1 | 2_232064196 | ENSG00000144535 | DIS3L2 | 0 | INTRON | -5.1394669 | 2.76E-07 | 0.0037002 |
| 20 | 3019224 | 3019224 | 1 | 20_3019224 | ENSG00000132670 | PTPRA | 0 | INTRON | 5.13896842 | 2.76E-07 | 0.00370711 |
| 4 | 57340845 | 57340845 | 1 | 4_57340845 | ENSG00000243920 | RPS26P24 | 12153 | Downstream | 5.13877368 | 2.77E-07 | 0.00370802 |
| 5 | 16283912 | 16283912 | 1 | 5_16283912 | ENSG00000248150 | LINC02150 | 89448 | Downstream | 5.13848739 | 2.77E-07 | 0.00370981 |
| 17 | 83213229 | 83213229 | 1 | 17_83213229 | ENSG00000262898 | AC139099.2 | 0 | INTRON | 5.13838068 | 2.77E-07 | 0.00370981 |
| 7 | 89339228 | 89339228 | 1 | 7_89339228 | ENSG00000182348 | ZNF804B | 700 | Downstream | 5.13820788 | 2.77E-07 | 0.00370981 |
| 2 | 123942892 | 123942892 | 1 | 2_123942892 | ENSG00000228400 | AC079154.1 | 69091 | Downstream | 5.13809185 | 2.78E-07 | 0.00370981 |
| 2 | 191863622 | 191863622 | 1 | 2_191863622 | ENSG00000233766 | AC098617.1 | 0 | INTRON | -5.1375749 | 2.78E-07 | 0.0037171 |
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| 2 | 75254781 | 75254781 | 1 | 2_75254781 | ENSG00000115353 | TACR1 | 55261 | Upstream | 5.13656997 | 2.80E-07 | 0.00372781 |
| 15 | 72396806 | 72396806 | 1 | 15_72396806 | ENSG00000187806 | TMEM202 | 1495 | Upstream | 5.13644459 | 2.80E-07 | 0.00372781 |
| 11 | 39902842 | 39902842 | 1 | 11_39902842 | ENSG00000270588 | AC021749.1 | 28454 | Downstream | 5.136107 | 2.80E-07 | 0.00373159 |
| 1 | 37727975 | 37727975 | 1 | 1_37727975 | ENSG00000183317 | EPHA10 | 0 | INTRON | 5.13547433 | 2.81E-07 | 0.00374124 |
| 15 | 35838931 | 35838931 | 1 | 15_35838931 | ENSG00000248079 | DPH6-DT | 0 | INTRON | -5.1352825 | 2.82E-07 | 0.00374214 |
| 15 | 81489644 | 81489644 | 1 | 15_81489644 | ENSG00000259343 | TMC3-AS1 | 0 | INTRON | -5.1349006 | 2.82E-07 | 0.00374368 |
| 16 | 8063952 | 8063952 | 1 | 16_8063952 | ENSG00000260289 | AC093515.1 | 0 | INTRON | 5.13479198 | 2.82E-07 | 0.00374368 |
| 11 | 13487175 | 13487175 | 1 | 11_13487175 | ENSG00000255401 | AC021269.2 | 1436 | Upstream | 5.13476522 | 2.82E-07 | 0.00374368 |
| 18 | 25209039 | 25209039 | 1 | 18_25209039 | ENSG00000285595 | AC105114.2 | 0 | INTRON | 5.1345121 | 2.83E-07 | 0.0037458 |
| 16 | 50266496 | 50266496 | 1 | 16_50266496 | ENSG00000121281 | ADCY7 | 0 | INTRON | -5.1343036 | 2.83E-07 | 0.00374704 |
| 7 | 60969741 | 60969741 | 1 | 7_60969741 | ENSG00000233918 | AC128676.1 | 1305619 | Downstream | 5.13404452 | 2.84E-07 | 0.00374929 |
| 1 | 26721372 | 26721372 | 1 | 1_26721372 | ENSG00000117713 | ARID1A | 0 | INTRON | 5.13375957 | 2.84E-07 | 0.00375206 |
| 4 | 137508766 | 137508766 | 1 | 4_137508766 | ENSG00000189184 | PCDH18 | 10151 | Downstream | 5.13283364 | 2.85E-07 | 0.00376765 |
| 6 | 10592669 | 10592669 | 1 | 6_10592669 | ENSG00000111846 | GCNT2 | 0 | INTRON | -5.1326575 | 2.86E-07 | 0.00376825 |
| 18 | 63454516 | 63454516 | 1 | 18_63454516 | ENSG00000206075 | SERPINB5 | 22441 | Upstream | 5.1320465 | 2.87E-07 | 0.00377758 |
| 14 | 34602147 | 34602147 | 1 | 14_34602147 | ENSG00000129515 | SNX6 | 0 | INTRON | 5.13170583 | 2.87E-07 | 0.0037815 |
| 6 | 15720456 | 15720456 | 1 | 6_15720456 | ENSG00000047579 | DTNBP1 | 57398 | Upstream | 5.1315001 | 2.87E-07 | 0.0037827 |
| 8 | 92627073 | 92627073 | 1 | 8_92627073 | ENSG00000253634 | AC091096.1 | 0 | INTRON | 5.13120296 | 2.88E-07 | 0.00378572 |
| 7 | 54305355 | 54305355 | 1 | 7_54305355 | ENSG00000231427 | LINC01445 | 25314 | Upstream | 5.13105914 | 2.88E-07 | 0.00378572 |
| 1 | 52830500 | 52830500 | 1 | 1_52830500 | ENSG00000162378 | ZYG11B | 3164 | Downstream | 5.13034213 | 2.89E-07 | 0.00379602 |
| 22 | 45098351 | 45098351 | 1 | 22_45098351 | ENSG00000226328 | NUP50-DT | 34668 | Downstream | -5.1302575 | 2.89E-07 | 0.00379602 |
| 14 | 34513254 | 34513254 | 1 | 14_34513254 | ENSG00000129518 | EAPP | 2683 | Downstream | 5.12958248 | 2.90E-07 | 0.00380672 |
| 9 | 25915520 | 25915520 | 1 | 9_25915520 | ENSG00000270683 | FAM71BP1 | 22391 | Upstream | -5.1292841 | 2.91E-07 | 0.00380982 |
| 5 | 161482201 | 161482201 | 1 | 5_161482201 | ENSG00000145864 | GABRB2 | 0 | INTRON | 5.12879376 | 2.92E-07 | 0.00381466 |
| 9 | 129773850 | 129773850 | 1 | 9_129773850 | ENSG00000233909 | UBE2V1P4 | 17345 | Upstream | 5.12875562 | 2.92E-07 | 0.00381466 |
| 6 | 117090479 | 117090479 | 1 | 6_117090479 | ENSG00000200248 | RNA5SP214 | 29680 | Downstream | 5.12839329 | 2.92E-07 | 0.00381907 |
| 6 | 60480854 | 60480854 | 1 | 6_60480854 | ENSG00000283453 | AC244258.1 | 0 | INTRON | 5.12818376 | 2.93E-07 | 0.00381921 |
| 18 | 53583738 | 53583738 | 1 | 18_53583738 | ENSG00000263438 | LINC01919 | 0 | INTRON | -5.1279397 | 2.93E-07 | 0.00381921 |
| 11 | 32629463 | 32629463 | 1 | 11_32629463 | ENSG00000186714 | CCDC73 | 0 | INTRON | 5.12785148 | 2.93E-07 | 0.00381921 |
| 7 | 49475385 | 49475385 | 1 | 7_49475385 | ENSG00000286995 | AC092448.1 | 48822 | Upstream | -5.1276853 | 2.93E-07 | 0.00381921 |
| 12 | 45232652 | 45232652 | 1 | 12_45232652 | ENSG00000177119 | ANO6 | 0 | INTRON | 5.12766466 | 2.93E-07 | 0.00381921 |
| 12 | 74223048 | 74223048 | 1 | 12_74223048 | ENSG00000251138 | AC090015.1 | 0 | INTRON | -5.1273947 | 2.94E-07 | 0.00381923 |
| 15 | 35736594 | 35736594 | 1 | 15_35736594 | ENSG00000248079 | DPH6-DT | 0 | INTRON | -5.1273055 | 2.94E-07 | 0.00381923 |
| 3 | 11241704 | 11241704 | 1 | 3_11241704 | ENSG00000196639 | HRH1 | 0 | INTRON | 5.12713862 | 2.94E-07 | 0.00381923 |
| 3 | 159841249 | 159841249 | 1 | 3_159841249 | ENSG00000283154 | IQCJ-SCHIP1 | 0 | INTRON | 5.12706676 | 2.94E-07 | 0.00381923 |
| X | 19017493 | 19017493 | 1 | X_19017493 | ENSG00000173698 | ADGRG2 | 0 | INTRON | 5.12692032 | 2.95E-07 | 0.00381923 |
| 4 | 74474643 | 74474643 | 1 | 4_74474643 | ENSG00000109321 | AREG | 19638 | Downstream | -5.1267482 | 2.95E-07 | 0.00381923 |
| 5 | 82309692 | 82309692 | 1 | 5_82309692 | ENSG00000205464 | ATP6AP1L | 0 | EXON | -5.1265082 | 2.95E-07 | 0.00381923 |
| 9 | 137232588 | 137232588 | 1 | 9_137232588 | ENSG00000198569 | SLC34A3 | 0 | EXON | 5.12649271 | 2.95E-07 | 0.00381923 |
| 12 | 89811834 | 89811834 | 1 | 12_89811834 | ENSG00000258216 | AC009522.1 | 0 | INTRON | -5.1262494 | 2.96E-07 | 0.00381923 |
| 12 | 120305068 | 120305068 | 1 | 12_120305068 | ENSG00000089163 | SIRT4 | 0 | INTRON | 5.12622813 | 2.96E-07 | 0.00381923 |
| 9 | 80116665 | 80116665 | 1 | 9_80116665 | ENSG00000230945 | LINC01507 | 82110 | Downstream | 5.12571758 | 2.96E-07 | 0.00382669 |
| 5 | 151783047 | 151783047 | 1 | 5_151783047 | ENSG00000145907 | G3BP1 | 0 | INTRON | -5.1247443 | 2.98E-07 | 0.00384359 |
| 4 | 46759606 | 46759606 | 1 | 4_46759606 | ENSG00000170516 | COX7B2 | 0 | INTRON | 5.12417238 | 2.99E-07 | 0.00385236 |
| 4 | 107166687 | 107166687 | 1 | 4_107166687 | ENSG00000155011 | DKK2 | 0 | INTRON | 5.12363283 | 3.00E-07 | 0.00385468 |
| 9 | 85725921 | 85725921 | 1 | 9_85725921 | ENSG00000135049 | AGTPBP1 | 0 | INTRON | 5.12350301 | 3.00E-07 | 0.00385468 |
| 13 | 92609754 | 92609754 | 1 | 13_92609754 | ENSG00000179399 | GPC5 | 0 | INTRON | 5.12345752 | 3.00E-07 | 0.00385468 |
| 7 | 139983725 | 139983725 | 1 | 7_139983725 | ENSG00000059377 | TBXAS1 | 0 | INTRON | -5.1233986 | 3.00E-07 | 0.00385468 |
| 1 | 116482212 | 116482212 | 1 | 1_116482212 | ENSG00000233154 | LINC01762 | 3370 | Upstream | -5.1233464 | 3.00E-07 | 0.00385468 |
| 9 | 69349337 | 69349337 | 1 | 9_69349337 | ENSG00000135063 | FAM189A2 | 0 | INTRON | 5.12306055 | 3.01E-07 | 0.0038552 |
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| 10 | 33983322 | 33983322 | 1 | 10_33983322 | ENSG00000223470 | LINC02629 | 65518 | Downstream | -5.1227893 | 3.01E-07 | 0.00385735 |
| 7 | 48234242 | 48234242 | 1 | 7_48234242 | ENSG00000179869 | ABCA13 | 0 | INTRON | -5.1225432 | 3.01E-07 | 0.00385949 |
| 7 | 74641231 | 74641231 | 1 | 7_74641231 | ENSG00000279005 | AC211433.3 | 7347 | Upstream | -5.1223107 | 3.02E-07 | 0.00386134 |
| 2 | 71684087 | 71684087 | 1 | 2_71684087 | ENSG00000135636 | DYSF | 0 | INTRON | -5.1220502 | 3.02E-07 | 0.00386378 |
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| 14 | 79333852 | 79333852 | 1 | 14_79333852 | ENSG00000021645 | NRXN3 | 0 | INTRON | 5.12068129 | 3.04E-07 | 0.00388609 |
| 6 | 98509178 | 98509178 | 1 | 6_98509178 | ENSG00000271860 | AL589740.1 | 108309 | Downstream | 5.12006814 | 3.05E-07 | 0.00389369 |
| 6 | 156412696 | 156412696 | 1 | 6_156412696 | ENSG00000287092 | AL589693.1 | 15107 | Upstream | -5.1200303 | 3.05E-07 | 0.00389369 |
| 1 | 248683093 | 248683093 | 1 | 1_248683093 | ENSG00000286015 | CR589904.2 | 0 | INTRON | 5.11975871 | 3.06E-07 | 0.00389638 |
| 10 | 14229562 | 14229562 | 1 | 10_14229562 | ENSG00000151474 | FRMD4A | 0 | INTRON | 5.11945368 | 3.06E-07 | 0.00389919 |
| 12 | 113662472 | 113662472 | 1 | 12_113662472 | ENSG00000249550 | LINC01234 | 0 | INTRON | -5.119341 | 3.07E-07 | 0.00389919 |
| 11 | 34074081 | 34074081 | 1 | 11_34074081 | ENSG00000135387 | CAPRIN1 | 0 | INTRON | 5.11889513 | 3.07E-07 | 0.00390377 |
| 18 | 1055989 | 1055989 | 1 | 18_1055989 | ENSG00000263551 | AP000829.1 | 0 | INTRON | 5.11883786 | 3.07E-07 | 0.00390377 |
| 5 | 52431625 | 52431625 | 1 | 5_52431625 | ENSG00000250827 | MFSD4BP1 | 147929 | Downstream | -5.1180982 | 3.09E-07 | 0.00391618 |
| 1 | 146336495 | 146336495 | 1 | 1_146336495 | ENSG00000277406 | SEC22B4P | 0 | INTRON | 5.1176242 | 3.09E-07 | 0.00392311 |
| 1 | 90058768 | 90058768 | 1 | 1_90058768 | ENSG00000287015 | AL161797.1 | 11659 | Downstream | -5.1168866 | 3.11E-07 | 0.003933 |
| 21 | 44626125 | 44626125 | 1 | 21_44626125 | ENSG00000175894 | TSPEAR | 0 | INTRON | 5.11686807 | 3.11E-07 | 0.003933 |
| 6 | 160351361 | 160351361 | 1 | 6_160351361 | ENSG00000146477 | SLC22A3 | 0 | INTRON | 5.11643219 | 3.11E-07 | 0.00393916 |
| 4 | 90069566 | 90069566 | 1 | 4_90069566 | ENSG00000184305 | CCSER1 | 57968 | Upstream | 5.1162466 | 3.12E-07 | 0.00394011 |
| 20 | 60207447 | 60207447 | 1 | 20_60207447 | ENSG00000228340 | MIR646HG | 0 | INTRON | 5.11582494 | 3.12E-07 | 0.00394599 |
| 20 | 39602763 | 39602763 | 1 | 20_39602763 | ENSG00000286083 | AL132981.1 | 52561 | Downstream | -5.1152853 | 3.13E-07 | 0.0039543 |
| 13 | 85239501 | 85239501 | 1 | 13_85239501 | ENSG00000286906 | AL160154.1 | 91380 | Upstream | -5.1151478 | 3.13E-07 | 0.0039543 |
| 16 | 30333976 | 30333976 | 1 | 16_30333976 | ENSG00000183604 | SMG1P5 | 0 | INTRON | 5.11469814 | 3.14E-07 | 0.0039605 |
| 7 | 130979829 | 130979829 | 1 | 7_130979829 | ENSG00000231721 | LINC-PINT | 0 | INTRON | 5.11457268 | 3.14E-07 | 0.0039605 |
| 1 | 232432796 | 232432796 | 1 | 1_232432796 | ENSG00000116991 | SIPA1L2 | 0 | INTRON | 5.11418555 | 3.15E-07 | 0.00396569 |
| 11 | 98293190 | 98293190 | 1 | 11_98293190 | ENSG00000255380 | AP001317.1 | 161992 | Upstream | 5.11330298 | 3.17E-07 | 0.00398133 |
| 7 | 79252017 | 79252017 | 1 | 7_79252017 | ENSG00000187391 | MAGI2 | 0 | INTRON | 5.11295885 | 3.17E-07 | 0.00398344 |
| 19 | 37300416 | 37300416 | 1 | 19_37300416 | ENSG00000267605 | AC016590.1 | 0 | INTRON | -5.1129241 | 3.17E-07 | 0.00398344 |
| 2 | 149212115 | 149212115 | 1 | 2_149212115 | ENSG00000150556 | LYPD6B | 0 | INTRON | 5.11275759 | 3.17E-07 | 0.00398401 |
| 15 | 62100790 | 62100790 | 1 | 15_62100790 | ENSG00000259466 | NPM1P47 | 17485 | Upstream | -5.1123886 | 3.18E-07 | 0.00398886 |
| 13 | 32932712 | 32932712 | 1 | 13_32932712 | ENSG00000226968 | LINC00423 | 21062 | Upstream | 5.11201579 | 3.19E-07 | 0.0039912 |
| 18 | 18419444 | 18419444 | 1 | 18_18419444 | ENSG00000067900 | ROCK1 | 2527461 | Downstream | -5.1119493 | 3.19E-07 | 0.0039912 |
| 4 | 39802811 | 39802811 | 1 | 4_39802811 | ENSG00000078140 | UBE2K | 20019 | Downstream | 5.11174172 | 3.19E-07 | 0.0039912 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| X | 137792757 | 137792757 | 1 | X_137792757 | ENSG00000283692 | Z96074.1 | 0 | INTRON | -5.1116028 | 3.19E-07 | 0.0039912 |
| X | 39517655 | 39517655 | 1 | X_39517655 | ENSG00000234191 | LINC01283 | 82831 | Upstream | 5.1115834 | 3.19E-07 | 0.0039912 |
| 22 | 33122451 | 33122451 | 1 | 22_33122451 | ENSG00000231253 | LINC01640 | 0 | INTRON | 5.11093232 | 3.21E-07 | 0.00400204 |
| 11 | 125700961 | 125700961 | 1 | 11_125700961 | ENSG00000134940 | ACRV1 | 20087 | Upstream | 5.11027343 | 3.22E-07 | 0.00401308 |
| 16 | 21251796 | 21251796 | 1 | 16_21251796 | ENSG00000175311 | ANKS4B | 0 | 3UTR | -5.109614 | 3.23E-07 | 0.0040208 |
| 2 | 60024726 | 60024726 | 1 | 2_60024726 | ENSG00000271955 | AC007100.1 | 0 | INTRON | -5.1095383 | 3.23E-07 | 0.0040208 |
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| 1 | 203925235 | 203925235 | 1 | 1_203925235 | ENSG00000232917 | HSPE1P6 | 21222 | Upstream | -5.1078018 | 3.26E-07 | 0.00404221 |
| 1 | 235396219 | 235396219 | 1 | 1_235396219 | ENSG00000284770 | TBCE | 0 | INTRON | 5.10698086 | 3.27E-07 | 0.00405463 |
| 5 | 73826330 | 73826330 | 1 | 5_73826330 | ENSG00000214944 | ARHGEF28 | 0 | INTRON | 5.10694649 | 3.27E-07 | 0.00405463 |
| 19 | 29726801 | 29726801 | 1 | 19_29726801 | ENSG00000131943 | C19orf12 | 11012 | Upstream | 5.10668656 | 3.28E-07 | 0.00405725 |
| 1 | 47546774 | 47546774 | 1 | 1_47546774 | ENSG00000227883 | ATP6V0E1P4 | 3421 | Upstream | -5.1065288 | 3.28E-07 | 0.00405769 |
| 1 | 78943475 | 78943475 | 1 | 1_78943475 | ENSG00000162618 | ADGRL4 | 0 | INTRON | 5.10607035 | 3.29E-07 | 0.00406459 |
| 3 | 52590067 | 52590067 | 1 | 3_52590067 | ENSG00000163939 | PBRM1 | 0 | INTRON | -5.1053839 | 3.30E-07 | 0.00407641 |
| 3 | 31409972 | 31409972 | 1 | 3_31409972 | ENSG00000227339 | THRAP3P1 | 42859 | Upstream | 5.10499503 | 3.31E-07 | 0.00407883 |
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| 6 | 29304071 | 29304071 | 1 | 6_29304071 | ENSG00000204695 | OR14J1 | 0 | INTRON | -5.1048464 | 3.31E-07 | 0.00407883 |
| 16 | 216031 | 216031 | 1 | 16_216031 | ENSG00000007392 | LUC7L | 0 | INTRON | 5.10472341 | 3.31E-07 | 0.00407883 |
| 12 | 105684637 | 105684637 | 1 | 12_105684637 | ENSG00000286520 | AC079851.1 | 14530 | Downstream | 5.10440312 | 3.32E-07 | 0.0040804 |
| 1 | 173429358 | 173429358 | 1 | 1_173429358 | ENSG00000203739 | AL645568.1 | 0 | INTRON | 5.10437726 | 3.32E-07 | 0.0040804 |
| 5 | 53407741 | 53407741 | 1 | 5_53407741 | ENSG00000240052 | AC108114.1 | 5762 | Upstream | 5.10350643 | 3.33E-07 | 0.00409401 |
| X | 53868557 | 53868557 | 1 | X_53868557 | ENSG00000201618 | RNA5SP505 | 40496 | Upstream | -5.1031594 | 3.34E-07 | 0.00409401 |
| 11 | 17406876 | 17406876 | 1 | 11_17406876 | ENSG00000006071 | ABCC8 | 0 | 3UTR | -5.1031584 | 3.34E-07 | 0.00409401 |
| 8 | 128574296 | 128574296 | 1 | 8_128574296 | ENSG00000254275 | LINC00824 | 9617 | Upstream | -5.1030703 | 3.34E-07 | 0.00409401 |
| 17 | 29643434 | 29643434 | 1 | 17_29643434 | ENSG00000141298 | SSH2 | 0 | INTRON | -5.103026 | 3.34E-07 | 0.00409401 |
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| X | 20972019 | 20972019 | 1 | X_20972019 | ENSG00000283380 | AL807742.1 | 0 | INTRON | 5.10279303 | 3.35E-07 | 0.00409401 |
| 18 | 61633208 | 61633208 | 1 | 18_61633208 | ENSG00000267175 | AC105094.2 | 0 | INTRON | 5.10245826 | 3.35E-07 | 0.00409594 |
| 8 | 71965030 | 71965030 | 1 | 8_71965030 | ENSG00000235531 | MSC-AS1 | 0 | INTRON | -5.1024322 | 3.35E-07 | 0.00409594 |
| 4 | 57434116 | 57434116 | 1 | 4_57434116 | ENSG00000248505 | LINC02380 | 0 | INTRON | 5.10221571 | 3.36E-07 | 0.00409769 |
| X | 65666133 | 65666133 | 1 | X_65666133 | ENSG00000147065 | MSN | 0 | INTRON | -5.1019632 | 3.36E-07 | 0.00410022 |
| 4 | 74599254 | 74599254 | 1 | 4_74599254 | ENSG00000249942 | AC239584.1 | 9773 | Upstream | 5.10002508 | 3.40E-07 | 0.00413454 |
| 7 | 152078492 | 152078492 | 1 | 7_152078492 | ENSG00000178234 | GALNT11 | 0 | INTRON | -5.0998366 | 3.40E-07 | 0.00413454 |
| 4 | 145693883 | 145693883 | 1 | 4_145693883 | ENSG00000237136 | C4orf51 | 0 | INTRON | -5.0998127 | 3.40E-07 | 0.00413454 |
| 14 | 61368339 | 61368339 | 1 | 14_61368339 | ENSG00000027075 | PRKCH | 0 | INTRON | -5.0997348 | 3.40E-07 | 0.00413454 |
| 1 | 97432243 | 97432243 | 1 | 1_97432243 | ENSG00000188641 | DPYD | 0 | INTRON | 5.09970885 | 3.40E-07 | 0.00413454 |
| 8 | 7591431 | 7591431 | 1 | 8_7591431 | ENSG00000233176 | OR7E157P | 574 | Upstream | -5.0983966 | 3.43E-07 | 0.00415659 |
| 3 | 55388809 | 55388809 | 1 | 3_55388809 | ENSG00000242775 | AC121764.3 | 26980 | Upstream | 5.09831783 | 3.43E-07 | 0.00415659 |
| 5 | 162358932 | 162358932 | 1 | 5_162358932 | ENSG00000254186 | AC113414.1 | 65109 | Downstream | 5.09807252 | 3.43E-07 | 0.00415659 |
| 17 | 29134814 | 29134814 | 1 | 17_29134814 | ENSG00000196535 | MYO18A | 0 | INTRON | 5.09805137 | 3.43E-07 | 0.00415659 |
| 5 | 54403797 | 54403797 | 1 | 5_54403797 | ENSG00000249069 | LINC01033 | 0 | INTRON | 5.09802691 | 3.43E-07 | 0.00415659 |
| 2 | 192848768 | 192848768 | 1 | 2_192848768 | ENSG00000227418 | PCGEM1 | 71869 | Downstream | 5.09744223 | 3.44E-07 | 0.00416648 |
| 18 | 58639857 | 58639857 | 1 | 18_58639857 | ENSG00000239659 | RPL9P31 | 7737 | Downstream | -5.0967053 | 3.46E-07 | 0.00417975 |
| 20 | 2850705 | 2850705 | 1 | 20_2850705 | ENSG00000215305 | VPS16 | 0 | INTRON | 5.09651066 | 3.46E-07 | 0.00418075 |
| 6 | 105447632 | 105447632 | 1 | 6_105447632 | ENSG00000085377 | PREP | 0 | INTRON | 5.09629723 | 3.46E-07 | 0.00418075 |
| 1 | 85080176 | 85080176 | 1 | 1_85080176 | ENSG00000162643 | WDR63 | 0 | INTRON | 5.09622171 | 3.46E-07 | 0.00418075 |
| X | 154073638 | 154073638 | 1 | X_154073638 | ENSG00000169057 | MECP2 | 0 | INTRON | 5.09603179 | 3.47E-07 | 0.00418075 |
| 5 | 181136812 | 181136812 | 1 | 5_181136812 | ENSG00000185372 | OR2V1 | 5643 | Upstream | -5.0959878 | 3.47E-07 | 0.00418075 |
| 14 | 43086291 | 43086291 | 1 | 14_43086291 | ENSG00000259047 | AL163153.1 | 96808 | Downstream | 5.09557735 | 3.48E-07 | 0.00418629 |
| 2 | 185383543 | 185383543 | 1 | 2_185383543 | ENSG00000286797 | AC009315.1 | 41519 | Upstream | 5.09546913 | 3.48E-07 | 0.00418629 |
| 4 | 188535929 | 188535929 | 1 | 4_188535929 | ENSG00000249378 | LINC01060 | 0 | INTRON | 5.09507395 | 3.49E-07 | 0.00418969 |
| 1 | 76506604 | 76506604 | 1 | 1_76506604 | ENSG00000184005 | ST6GALNAC3 | 0 | INTRON | -5.0949422 | 3.49E-07 | 0.00418969 |
| 8 | 32535499 | 32535499 | 1 | 8_32535499 | ENSG00000157168 | NRG1 | 0 | INTRON | 5.09479648 | 3.49E-07 | 0.00418969 |
| 19 | 9889897 | 9889897 | 1 | 19_9889897 | ENSG00000105088 | OLFM2 | 0 | INTRON | 5.09474251 | 3.49E-07 | 0.00418969 |
| 1 | 52043090 | 52043090 | 1 | 1_52043090 | ENSG00000223390 | AL445685.1 | 0 | INTRON | 5.09464669 | 3.49E-07 | 0.00418969 |
| 3 | 139896633 | 139896633 | 1 | 3_139896633 | ENSG00000251471 | AC016933.1 | 36739 | Downstream | -5.0940417 | 3.51E-07 | 0.00419796 |
| 17 | 3337736 | 3337736 | 1 | 17_3337736 | ENSG00000221882 | OR3A2 | 0 | INTRON | -5.094006 | 3.51E-07 | 0.00419796 |
| 12 | 74144292 | 74144292 | 1 | 12_74144292 | ENSG00000251138 | AC090015.1 | 0 | INTRON | 5.09317618 | 3.52E-07 | 0.00421342 |
| 1 | 31789512 | 31789512 | 1 | 1_31789512 | ENSG00000254545 | AL354919.2 | 0 | INTRON | 5.09242659 | 3.54E-07 | 0.00422714 |
| 11 | 60631465 | 60631465 | 1 | 11_60631465 | ENSG00000181995 | LINC00301 | 0 | INTRON | -5.0922346 | 3.54E-07 | 0.00422846 |
| 12 | 8216097 | 8216097 | 1 | 12_8216097 | ENSG00000226711 | FAM66C | 0 | EXON | -5.0919507 | 3.54E-07 | 0.00423182 |
| X | 55219923 | 55219923 | 1 | X_55219923 | ENSG00000158639 | PAGE5 | 431 | Upstream | 5.0913777 | 3.55E-07 | 0.00424166 |
| 6 | 125806723 | 125806723 | 1 | 6_125806723 | ENSG00000111912 | NCOA7 | 0 | INTRON | 5.09089644 | 3.56E-07 | 0.00424688 |
| 8 | 90823271 | 90823271 | 1 | 8_90823271 | ENSG00000123119 | NECAB1 | 0 | INTRON | 5.09059862 | 3.57E-07 | 0.00424688 |
| 12 | 100179017 | 100179017 | 1 | 12_100179017 | ENSG00000257489 | AC010203.1 | 0 | INTRON | 5.0905705 | 3.57E-07 | 0.00424688 |
| 3 | 84447414 | 84447414 | 1 | 3_84447414 | ENSG00000242641 | LINC00971 | 190990 | Downstream | 5.09047655 | 3.57E-07 | 0.00424688 |
| 20 | 50647683 | 50647683 | 1 | 20_50647683 | ENSG00000234693 | AL353653.1 | 0 | INTRON | 5.09045737 | 3.57E-07 | 0.00424688 |
| 4 | 120287534 | 120287534 | 1 | 4_120287534 | ENSG00000250938 | AC073475.1 | 0 | INTRON | -5.0903483 | 3.57E-07 | 0.00424688 |
| 3 | 51573584 | 51573584 | 1 | 3_51573584 | ENSG00000164080 | RAD54L2 | 0 | INTRON | -5.0900917 | 3.58E-07 | 0.00424966 |
| 5 | 14393298 | 14393298 | 1 | 5_14393298 | ENSG00000038382 | TRIO | 0 | INTRON | 5.08994135 | 3.58E-07 | 0.00425007 |
| 6 | 71259379 | 71259379 | 1 | 6_71259379 | ENSG00000232295 | AL589935.1 | 0 | INTRON | -5.0896461 | 3.59E-07 | 0.00425101 |
| 12 | 119614338 | 119614338 | 1 | 12_119614338 | ENSG00000224982 | TMEM233 | 0 | INTRON | -5.089635 | 3.59E-07 | 0.00425101 |
| 17 | 40865306 | 40865306 | 1 | 17_40865306 | ENSG00000187242 | KRT12 | 0 | EXON | 5.08935888 | 3.59E-07 | 0.00425424 |
| 10 | 13046354 | 13046354 | 1 | 10_13046354 | ENSG00000151468 | CCDC3 | 0 | INTRON | 5.08910069 | 3.60E-07 | 0.00425708 |
| 12 | 93697335 | 93697335 | 1 | 12_93697335 | ENSG00000169372 | CRADD | 0 | INTRON | -5.0888782 | 3.60E-07 | 0.00425792 |
| X | 41617728 | 41617728 | 1 | X_41617728 | ENSG00000147044 | CASK | 0 | INTRON | 5.08879937 | 3.60E-07 | 0.00425792 |
| 15 | 96187901 | 96187901 | 1 | 15_96187901 | ENSG00000275443 | AC012409.2 | 0 | INTRON | 5.08842728 | 3.61E-07 | 0.00426332 |
| 2 | 126340467 | 126340467 | 1 | 2_126340467 | ENSG00000235774 | AC023347.1 | 0 | INTRON | 5.08793136 | 3.62E-07 | 0.00426584 |
| 8 | 52762815 | 52762815 | 1 | 8_52762815 | ENSG00000023287 | RB1CC1 | 16972 | Upstream | -5.0878712 | 3.62E-07 | 0.00426584 |
| 10 | 23756420 | 23756420 | 1 | 10_23756420 | ENSG00000120549 | KIAA1217 | 0 | INTRON | -5.0876385 | 3.63E-07 | 0.00426584 |
| 12 | 128793044 | 128793044 | 1 | 12_128793044 | ENSG00000139370 | SLC15A4 | 149 | Downstream | 5.08761813 | 3.63E-07 | 0.00426584 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
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| 1 | 169958467 | 169958467 | 1 | 1_169958467 | ENSG00000075945 | KIFAP3 | 0 | INTRON | -5.0875018 | 3.63E-07 | 0.00426584 |
| 5 | 95981671 | 95981671 | 1 | 5_95981671 | ENSG00000251314 | AC104123.1 | 0 | INTRON | -5.087498 | 3.63E-07 | 0.00426584 |
| 6 | 128830797 | 128830797 | 1 | 6_128830797 | ENSG00000196569 | LAMA2 | 52343 | Upstream | -5.0872969 | 3.63E-07 | 0.00426584 |
| 3 | 34189990 | 34189990 | 1 | 3_34189990 | ENSG00000226320 | LINC01811 | 0 | INTRON | -5.0872649 | 3.63E-07 | 0.00426584 |
| 14 | 19636167 | 19636167 | 1 | 14_19636167 | ENSG00000273639 | AL512310.11 | 0 | INTRON | -5.0870441 | 3.64E-07 | 0.00426787 |
| 3 | 130936677 | 130936677 | 1 | 3_130936677 | ENSG00000017260 | ATP2C1 | 0 | INTRON | 5.08683804 | 3.64E-07 | 0.00426956 |
| 8 | 87740956 | 87740956 | 1 | 8_87740956 | ENSG00000253500 | AF121898.1 | 0 | INTRON | -5.0864512 | 3.65E-07 | 0.00427533 |
| 14 | 71250023 | 71250023 | 1 | 14_71250023 | ENSG00000286423 | AC004817.5 | 6182 | Upstream | 5.086075 | 3.66E-07 | 0.00428086 |
| 20 | 22444155 | 22444155 | 1 | 20_22444155 | ENSG00000204684 | AL133464.1 | 0 | INTRON | 5.08585651 | 3.66E-07 | 0.00428285 |
| 3 | 95120853 | 95120853 | 1 | 3_95120853 | ENSG00000239589 | LINC00879 | 0 | INTRON | 5.08505061 | 3.68E-07 | 0.0042958 |
| 2 | 171002019 | 171002019 | 1 | 2_171002019 | ENSG00000198586 | TLK1 | 0 | INTRON | 5.08502241 | 3.68E-07 | 0.0042958 |
| 13 | 42609347 | 42609347 | 1 | 13_42609347 | ENSG00000120659 | TNFSF11 | 1334 | Downstream | -5.0846766 | 3.68E-07 | 0.00430068 |
| 7 | 28544325 | 28544325 | 1 | 7_28544325 | ENSG00000146592 | CREB5 | 0 | INTRON | -5.0844265 | 3.69E-07 | 0.00430122 |
| 18 | 4508129 | 4508129 | 1 | 18_4508129 | ENSG00000265545 | AP005403.1 | 48671 | Downstream | 5.08429555 | 3.69E-07 | 0.00430122 |
| 13 | 57494530 | 57494530 | 1 | 13_57494530 | ENSG00000225352 | RPL31P53 | 103012 | Upstream | 5.08426254 | 3.69E-07 | 0.00430122 |
| 10 | 897531 | 897531 | 1 | 10_897531 | ENSG00000107929 | LARP4B | 0 | INTRON | -5.0836429 | 3.70E-07 | 0.00431233 |
| 17 | 68694052 | 68694052 | 1 | 17_68694052 | ENSG00000283376 | AC011591.2 | 0 | EXON | 5.08338394 | 3.71E-07 | 0.00431526 |
| 6 | 153621017 | 153621017 | 1 | 6_153621017 | ENSG00000217160 | MTCO2P31 | 44689 | Upstream | 5.08278122 | 3.72E-07 | 0.00432359 |
| Y | 7518913 | 7518913 | 1 | Y_7518913 | ENSG00000252472 | RNU6-521P | 95755 | Upstream | -5.0825435 | 3.72E-07 | 0.00432359 |
| 4 | 89718089 | 89718089 | 1 | 4_89718089 | ENSG00000251095 | AC093866.1 | 0 | INTRON | -5.0825271 | 3.72E-07 | 0.00432359 |
| 2 | 217082026 | 217082026 | 1 | 2_217082026 | ENSG00000287498 | AC007749.2 | 17208 | Upstream | -5.082499 | 3.73E-07 | 0.00432359 |
| 7 | 64783607 | 64783607 | 1 | 7_64783607 | ENSG00000197008 | ZNF138 | 10780 | Upstream | 5.08234094 | 3.73E-07 | 0.00432394 |
| 7 | 6062993 | 6062993 | 1 | 7_6062993 | ENSG00000086232 | EIF2AK1 | 3818 | Upstream | 5.08219656 | 3.73E-07 | 0.00432394 |
| 5 | 129466746 | 129466746 | 1 | 5_129466746 | ENSG00000145808 | ADAMTS19 | 0 | INTRON | -5.0820956 | 3.73E-07 | 0.00432394 |
| 11 | 45271710 | 45271710 | 1 | 11_45271710 | ENSG00000019505 | SYT13 | 0 | INTRON | 5.0818178 | 3.74E-07 | 0.00432732 |
| 16 | 19211615 | 19211615 | 1 | 16_19211615 | ENSG00000103528 | SYT17 | 0 | INTRON | -5.0815838 | 3.74E-07 | 0.00432798 |
| 16 | 63389342 | 63389342 | 1 | 16_63389342 | ENSG00000260658 | AC138305.1 | 0 | INTRON | 5.08153077 | 3.74E-07 | 0.00432798 |
| 2 | 169496863 | 169496863 | 1 | 2_169496863 | ENSG00000251569 | AC093899.2 | 0 | INTRON | 5.08126314 | 3.75E-07 | 0.00433114 |
| 8 | 12902503 | 12902503 | 1 | 8_12902503 | ENSG00000250305 | TRMT9B | 43138 | Upstream | -5.0810364 | 3.75E-07 | 0.00433337 |
| 21 | 33171074 | 33171074 | 1 | 21_33171074 | ENSG00000229086 | LINC01548 | 425 | Upstream | -5.0802272 | 3.77E-07 | 0.00434363 |
| 10 | 59293322 | 59293322 | 1 | 10_59293322 | ENSG00000148541 | FAM13C | 0 | INTRON | 5.08022573 | 3.77E-07 | 0.00434363 |
| 13 | 108619509 | 108619509 | 1 | 13_108619509 | ENSG00000041515 | MYO16 | 0 | INTRON | -5.0801836 | 3.77E-07 | 0.00434363 |
| 1 | 185693876 | 185693876 | 1 | 1_185693876 | ENSG00000261729 | AL133383.1 | 36708 | Downstream | 5.07999662 | 3.77E-07 | 0.00434363 |
| 6 | 5418738 | 5418738 | 1 | 6_5418738 | ENSG00000145982 | FARS2 | 0 | INTRON | -5.0798814 | 3.78E-07 | 0.00434363 |
| 18 | 33174150 | 33174150 | 1 | 18_33174150 | ENSG00000166960 | CCDC178 | 0 | INTRON | 5.07981535 | 3.78E-07 | 0.00434363 |
| 7 | 141012981 | 141012981 | 1 | 7_141012981 | ENSG00000090263 | MRPS33 | 0 | INTRON | -5.0788811 | 3.80E-07 | 0.00436099 |
| 11 | 25342025 | 25342025 | 1 | 11_25342025 | ENSG00000255368 | AC087373.1 | 201002 | Upstream | 5.07872407 | 3.80E-07 | 0.00436099 |
| 1 | 9329641 | 9329641 | 1 | 1_9329641 | ENSG00000171621 | SPSB1 | 0 | INTRON | 5.07859296 | 3.80E-07 | 0.00436099 |
| 10 | 119837540 | 119837540 | 1 | 10_119837540 | ENSG00000197771 | MCMBP | 0 | INTRON | -5.0785263 | 3.80E-07 | 0.00436099 |
| 21 | 19786328 | 19786328 | 1 | 21_19786328 | ENSG00000215353 | C1QBPP1 | 26200 | Upstream | -5.078293 | 3.81E-07 | 0.00436099 |
| 7 | 44474362 | 44474362 | 1 | 7_44474362 | ENSG00000015676 | NUDCD3 | 0 | INTRON | 5.07828879 | 3.81E-07 | 0.00436099 |
| 1 | 195286501 | 195286501 | 1 | 1_195286501 | ENSG00000285718 | AL353072.2 | 355191 | Upstream | -5.0780689 | 3.81E-07 | 0.00436128 |
| 17 | 38837550 | 38837550 | 1 | 17_38837550 | ENSG00000275489 | C17orf98 | 0 | INTRON | 5.07802081 | 3.81E-07 | 0.00436128 |
| 1 | 113890902 | 113890902 | 1 | 1_113890902 | ENSG00000226167 | AP4B1-AS1 | 0 | INTRON | -5.0776085 | 3.82E-07 | 0.00436215 |
| 7 | 105546639 | 105546639 | 1 | 7_105546639 | ENSG00000135249 | RINT1 | 0 | INTRON | 5.07725664 | 3.83E-07 | 0.00436215 |
| 9 | 98208728 | 98208728 | 1 | 9_98208728 | ENSG00000095383 | TBC1D2 | 0 | EXON | -5.077104 | 3.83E-07 | 0.00436215 |
| 19 | 16474892 | 16474892 | 1 | 19_16474892 | ENSG00000127527 | EPS15L1 | 2807 | Upstream | 5.0770679 | 3.83E-07 | 0.00436215 |
| 14 | 43804430 | 43804430 | 1 | 14_43804430 | ENSG00000258969 | LINC02307 | 186108 | Downstream | -5.0768701 | 3.84E-07 | 0.00436215 |
| 6 | 94775063 | 94775063 | 1 | 6_94775063 | ENSG00000216853 | MTCYBP36 | 327884 | Upstream | 5.07671375 | 3.84E-07 | 0.00436215 |
| 1 | 13033155 | 13033155 | 1 | 1_13033155 | ENSG00000274178 | PRAMEF28P | 1025 | Downstream | -5.0766564 | 3.84E-07 | 0.00436215 |
| 9 | 20968690 | 20968690 | 1 | 9_20968690 | ENSG00000188352 | FOCAD | 0 | INTRON | -5.0765785 | 3.84E-07 | 0.00436215 |
| 13 | 70136266 | 70136266 | 1 | 13_70136266 | ENSG00000230223 | ATXN8OS | 0 | INTRON | 5.07644552 | 3.85E-07 | 0.00436215 |
| 4 | 160481915 | 160481915 | 1 | 4_160481915 | ENSG00000250997 | AC093853.1 | 39913 | Downstream | 5.07626193 | 3.85E-07 | 0.00436215 |
| 7 | 117170440 | 117170440 | 1 | 7_117170440 | ENSG00000004866 | ST7 | 0 | INTRON | -5.0760297 | 3.85E-07 | 0.00436215 |
| 4 | 9232122 | 9232122 | 1 | 4_9232122 | ENSG00000288075 | AC108519.1 | 0 | INTRON | -5.0759787 | 3.86E-07 | 0.00436215 |
| 9 | 38326949 | 38326949 | 1 | 9_38326949 | ENSG00000223716 | AL135785.1 | 33477 | Upstream | 5.07585385 | 3.86E-07 | 0.00436215 |
| 20 | 11102837 | 11102837 | 1 | 20_11102837 | ENSG00000125899 | C20orf187 | 73382 | Downstream | 5.07580554 | 3.86E-07 | 0.00436215 |
| 4 | 148750183 | 148750183 | 1 | 4_148750183 | ENSG00000287292 | AC002460.2 | 0 | INTRON | 5.07579445 | 3.86E-07 | 0.00436215 |
| 10 | 52543313 | 52543313 | 1 | 10_52543313 | ENSG00000231131 | LNCAROD | 0 | INTRON | -5.0757631 | 3.86E-07 | 0.00436215 |
| 4 | 80324190 | 80324190 | 1 | 4_80324190 | ENSG00000138675 | FGF5 | 0 | INTRON | 5.07573471 | 3.86E-07 | 0.00436215 |
| 2 | 194284860 | 194284860 | 1 | 2_194284860 | ENSG00000225539 | LINC01821 | 59329 | Upstream | 5.07569696 | 3.86E-07 | 0.00436215 |
| 5 | 31145397 | 31145397 | 1 | 5_31145397 | ENSG00000254138 | AC113386.1 | 0 | INTRON | -5.0751931 | 3.87E-07 | 0.00437083 |
| 10 | 111555668 | 111555668 | 1 | 10_111555668 | ENSG00000230809 | RPS6P15 | 56727 | Upstream | 5.07466565 | 3.88E-07 | 0.00437711 |
| 2 | 229358100 | 229358100 | 1 | 2_229358100 | ENSG00000187957 | DNER | 0 | 3UTR | 5.07445905 | 3.89E-07 | 0.00437711 |
| 15 | 32184531 | 32184531 | 1 | 15_32184531 | ENSG00000279912 | AC068448.1 | 0 | EXON | -5.0742511 | 3.89E-07 | 0.00437711 |
| 2 | 78783697 | 78783697 | 1 | 2_78783697 | ENSG00000286260 | AC092604.1 | 97015 | Downstream | 5.07408066 | 3.89E-07 | 0.00437711 |
| 16 | 51357724 | 51357724 | 1 | 16_51357724 | ENSG00000285367 | AC087564.1 | 0 | INTRON | -5.0740141 | 3.90E-07 | 0.00437711 |
| 4 | 158743635 | 158743635 | 1 | 4_158743635 | ENSG00000171497 | PPID | 20239 | Upstream | -5.0740129 | 3.90E-07 | 0.00437711 |
| 4 | 146616074 | 146616074 | 1 | 4_146616074 | ENSG00000151615 | POU4F2 | 22818 | Upstream | 5.0738524 | 3.90E-07 | 0.00437711 |
| 9 | 97945936 | 97945936 | 1 | 9_97945936 | ENSG00000136929 | HEMGN | 1080 | Upstream | 5.07375882 | 3.90E-07 | 0.00437711 |
| Y | 5194777 | 5194777 | 1 | Y_5194777 | ENSG00000099715 | PCDH11Y | 0 | INTRON | -5.0735812 | 3.90E-07 | 0.00437711 |
| 1 | 188266657 | 188266657 | 1 | 1_188266657 | ENSG00000224278 | AL592447.1 | 23979 | Upstream | 5.07343785 | 3.91E-07 | 0.00437711 |
| 5 | 149598560 | 149598560 | 1 | 5_149598560 | ENSG00000183111 | ARHGEF37 | 0 | INTRON | -5.0734066 | 3.91E-07 | 0.00437711 |
| 18 | 44500079 | 44500079 | 1 | 18_44500079 | ENSG00000267337 | LINC01478 | 0 | INTRON | 5.07339234 | 3.91E-07 | 0.00437711 |
| 20 | 59838454 | 59838454 | 1 | 20_59838454 | ENSG00000087495 | PHACTR3 | 0 | INTRON | 5.0732166 | 3.91E-07 | 0.00437711 |
| 5 | 134428079 | 134428079 | 1 | 5_134428079 | ENSG00000250564 | AC109454.3 | 971 | Downstream | 5.07306686 | 3.91E-07 | 0.00437711 |
| Y | 10888663 | 10888663 | 1 | Y_10888663 | ENSG00000273858 | AC140113.4 | 154058 | Downstream | -5.0730364 | 3.92E-07 | 0.00437711 |
| 7 | 28058773 | 28058773 | 1 | 7_28058773 | ENSG00000153814 | JAZF1 | 0 | INTRON | -5.0728854 | 3.92E-07 | 0.00437771 |
| 4 | 180107261 | 180107261 | 1 | 4_180107261 | ENSG00000287775 | AC096747.1 | 0 | INTRON | -5.0724279 | 3.93E-07 | 0.00438537 |
| 6 | 163998463 | 163998463 | 1 | 6_163998463 | ENSG00000235538 | AL078602.1 | 0 | INTRON | -5.072114 | 3.93E-07 | 0.0043857 |
| 4 | 55349331 | 55349331 | 1 | 4_55349331 | ENSG00000128039 | SRD5A3 | 0 | INTRON | -5.072072 | 3.94E-07 | 0.0043857 |
| 6 | 57777525 | 57777525 | 1 | 6_57777525 | ENSG00000272541 | AL021368.3 | 78365 | Downstream | 5.07203937 | 3.94E-07 | 0.0043857 |
| 7 | 147615730 | 147615730 | 1 | 7_147615730 | ENSG00000174469 | CNTNAP2 | 0 | INTRON | 5.0713523 | 3.95E-07 | 0.00439074 |
| 7 | 101792632 | 101792632 | 1 | 7_101792632 | ENSG00000257923 | CUX1 | 23271 | Upstream | 5.07128563 | 3.95E-07 | 0.00439074 |
| 5 | 124292327 | 124292327 | 1 | 5_124292327 | ENSG00000253807 | LINC01170 | 0 | INTRON | 5.07122837 | 3.95E-07 | 0.00439074 |

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| 11 | 130338630 | 130338630 | 1 | 11_130338630 | ENSG00000175773 | ZBTB44-DT | 0 | INTRON | 5.07119893 | 3.95E-07 | 0.00439074 |
| 10 | 43513519 | 43513519 | 1 | 10_43513519 | ENSG00000236114 | AL450326.2 | 9736 | Upstream | 5.07055124 | 3.97E-07 | 0.00440284 |
| 21 | 42615976 | 42615976 | 1 | 21_42615976 | ENSG00000225431 | LINC01671 | 918 | Upstream | -5.0692981 | 3.99E-07 | 0.00442903 |
| 7 | 158159107 | 158159107 | 1 | 7_158159107 | ENSG00000155093 | PTPRN2 | 0 | INTRON | 5.06907364 | 4.00E-07 | 0.00443137 |
| 2 | 112632260 | 112632260 | 1 | 2_112632260 | ENSG00000237753 | AC079922.2 | 9571 | Downstream | -5.0688115 | 4.00E-07 | 0.00443459 |
| 12 | 84562532 | 84562532 | 1 | 12_84562532 | ENSG00000257296 | AC093027.1 | 109065 | Upstream | 5.06834981 | 4.01E-07 | 0.00444246 |
| 10 | 34823222 | 34823222 | 1 | 10_34823222 | ENSG00000226386 | PARD3-AS1 | 6836 | Downstream | 5.06800108 | 4.02E-07 | 0.00444771 |
| 11 | 5144421 | 5144421 | 1 | 11_5144421 | ENSG00000182070 | OR52A1 | 0 | 3UTR | 5.06773352 | 4.03E-07 | 0.00445107 |
| 12 | 2522374 | 2522374 | 1 | 12_2522374 | ENSG00000151067 | CACNA1C | 0 | INTRON | 5.0672141 | 4.04E-07 | 0.00445742 |
| 4 | 145369668 | 145369668 | 1 | 4_145369668 | ENSG00000251333 | RTN3P1 | 5874 | Upstream | 5.06715975 | 4.04E-07 | 0.00445742 |
| 4 | 156753891 | 156753891 | 1 | 4_156753891 | ENSG00000145431 | PDGFC | 6562 | Downstream | -5.0670436 | 4.04E-07 | 0.00445742 |
| 19 | 31216187 | 31216187 | 1 | 19_31216187 | ENSG00000267777 | LINC01791 | 0 | INTRON | -5.066968 | 4.04E-07 | 0.00445742 |
| 7 | 50817793 | 50817793 | 1 | 7_50817793 | ENSG00000236046 | AC004920.1 | 21569 | Downstream | -5.0666337 | 4.05E-07 | 0.00446186 |
| 21 | 28696608 | 28696608 | 1 | 21_28696608 | ENSG00000232855 | AF165147.1 | 21760 | Upstream | 5.06653179 | 4.05E-07 | 0.00446186 |
| 4 | 95792609 | 95792609 | 1 | 4_95792609 | ENSG00000163114 | PDHA2 | 47483 | Upstream | 5.06610943 | 4.06E-07 | 0.00446887 |
| 3 | 78896955 | 78896955 | 1 | 3_78896955 | ENSG00000169855 | ROBO1 | 0 | INTRON | -5.0652145 | 4.08E-07 | 0.00448701 |
| 4 | 39566743 | 39566743 | 1 | 4_39566743 | ENSG00000163683 | SMIM14 | 0 | INTRON | 5.06470879 | 4.09E-07 | 0.00449366 |
| 9 | 78023987 | 78023987 | 1 | 9_78023987 | ENSG00000156052 | GNAQ | 0 | INTRON | 5.06450753 | 4.09E-07 | 0.00449366 |
| 1 | 228302936 | 228302936 | 1 | 1_228302936 | ENSG00000154358 | OBSCN | 0 | 3UTR | 5.06428862 | 4.10E-07 | 0.00449366 |
| 3 | 62628108 | 62628108 | 1 | 3_62628108 | ENSG00000163618 | CADPS | 0 | INTRON | 5.06424428 | 4.10E-07 | 0.00449366 |
| 14 | 55408568 | 55408568 | 1 | 14_55408568 | ENSG00000126775 | ATG14 | 0 | INTRON | 5.06424392 | 4.10E-07 | 0.00449366 |
| 3 | 85410444 | 85410444 | 1 | 3_85410444 | ENSG00000175161 | CADM2 | 0 | INTRON | 5.06416469 | 4.10E-07 | 0.00449366 |
| 9 | 62141788 | 62141788 | 1 | 9_62141788 | ENSG00000231527 | FAM27C | 44868 | Downstream | -5.0640723 | 4.10E-07 | 0.00449366 |
| 16 | 32345 | 32345 | 1 | 16_32345 | ENSG00000226942 | IL9RP3 | 0 | INTRON | -5.0637239 | 4.11E-07 | 0.00449899 |
| 3 | 157455864 | 157455864 | 1 | 3_157455864 | ENSG00000197415 | VEPH1 | 0 | INTRON | 5.06257833 | 4.14E-07 | 0.00451634 |
| 11 | 14345820 | 14345820 | 1 | 11_14345820 | ENSG00000133818 | RRAS2 | 0 | INTRON | 5.06248001 | 4.14E-07 | 0.00451634 |
| 10 | 64661995 | 64661995 | 1 | 10_64661995 | ENSG00000228566 | AC013287.1 | 0 | INTRON | 5.06237685 | 4.14E-07 | 0.00451634 |
| 4 | 125961427 | 125961427 | 1 | 4_125961427 | ENSG00000250149 | AC104664.1 | 0 | INTRON | -5.0623226 | 4.14E-07 | 0.00451634 |
| 9 | 685293 | 685293 | 1 | 9_685293 | ENSG00000107104 | KANK1 | 0 | INTRON | -5.0622799 | 4.14E-07 | 0.00451634 |
| 8 | 16458488 | 16458488 | 1 | 8_16458488 | ENSG00000038945 | MSR1 | 0 | INTRON | 5.06220373 | 4.14E-07 | 0.00451634 |
| 1 | 219917867 | 219917867 | 1 | 1_219917867 | ENSG00000196660 | SLC30A10 | 0 | INTRON | 5.06213463 | 4.15E-07 | 0.00451634 |
| 18 | 9395677 | 9395677 | 1 | 18_9395677 | ENSG00000128791 | TWSG1 | 0 | INTRON | 5.06156373 | 4.16E-07 | 0.00452699 |
| 3 | 136866908 | 136866908 | 1 | 3_136866908 | ENSG00000158092 | NCK1 | 0 | INTRON | -5.0613409 | 4.16E-07 | 0.00452938 |
| 4 | 43754543 | 43754543 | 1 | 4_43754543 | ENSG00000286891 | AC080132.1 | 8590 | Upstream | 5.06115742 | 4.17E-07 | 0.00453085 |
| 1 | 84655929 | 84655929 | 1 | 1_84655929 | ENSG00000117155 | SSX2IP | 0 | EXON | 5.06093953 | 4.17E-07 | 0.00453313 |
| 3 | 136444325 | 136444325 | 1 | 3_136444325 | ENSG00000118007 | STAG1 | 0 | INTRON | 5.06002644 | 4.19E-07 | 0.00455199 |
| 3 | 167084428 | 167084428 | 1 | 3_167084428 | ENSG00000220343 | PPIAP74 | 18108 | Downstream | -5.0596779 | 4.20E-07 | 0.00455591 |
| 1 | 98847919 | 98847919 | 1 | 1_98847919 | ENSG00000117598 | PLPPR5 | 42325 | Downstream | 5.05961885 | 4.20E-07 | 0.00455591 |
| 4 | 86789661 | 86789661 | 1 | 4_86789661 | ENSG00000163629 | PTPN13 | 0 | INTRON | 5.05939 | 4.21E-07 | 0.00455848 |
| 17 | 2461150 | 2461150 | 1 | 17_2461150 | ENSG00000127804 | METTL16 | 0 | INTRON | 5.05912931 | 4.21E-07 | 0.00456181 |
| 12 | 63071150 | 63071150 | 1 | 12_63071150 | ENSG00000257664 | RSL24D1P5 | 15385 | Upstream | 5.05887043 | 4.22E-07 | 0.00456265 |
| 22 | 40304636 | 40304636 | 1 | 22_40304636 | ENSG00000100354 | TNRC6B | 0 | INTRON | 5.05885171 | 4.22E-07 | 0.00456265 |
| 8 | 39555801 | 39555801 | 1 | 8_39555801 | ENSG00000254067 | AC123767.1 | 0 | INTRON | -5.0584638 | 4.23E-07 | 0.00456903 |
| 10 | 49280479 | 49280479 | 1 | 10_49280479 | ENSG00000236208 | C10orf71-AS1 | 15632 | Downstream | 5.05827245 | 4.23E-07 | 0.00457071 |
| 12 | 11860388 | 11860388 | 1 | 12_11860388 | ENSG00000139083 | ETV6 | 0 | INTRON | -5.0580581 | 4.24E-07 | 0.00457295 |
| 2 | 121521505 | 121521505 | 1 | 2_121521505 | ENSG00000074054 | CLASP1 | 0 | INTRON | -5.0577203 | 4.24E-07 | 0.00457815 |
| 4 | 108529054 | 108529054 | 1 | 4_108529054 | ENSG00000234492 | RPL34-AS1 | 9135 | Downstream | -5.0570899 | 4.26E-07 | 0.0045891 |
| 7 | 84947630 | 84947630 | 1 | 7_84947630 | ENSG00000280325 | AC074183.2 | 7374 | Upstream | -5.0570227 | 4.26E-07 | 0.0045891 |
| 12 | 30943296 | 30943296 | 1 | 12_30943296 | ENSG00000110900 | TSPAN11 | 0 | INTRON | 5.05678797 | 4.26E-07 | 0.00459184 |
| 6 | 105473682 | 105473682 | 1 | 6_105473682 | ENSG00000286084 | AL096794.1 | 0 | INTRON | 5.05659525 | 4.27E-07 | 0.00459358 |
| 3 | 149625717 | 149625717 | 1 | 3_149625717 | ENSG00000018408 | WWTR1 | 0 | INTRON | 5.05547549 | 4.29E-07 | 0.00461519 |
| 17 | 12786907 | 12786907 | 1 | 17_12786907 | ENSG00000265489 | AC005358.2 | 0 | INTRON | -5.0554583 | 4.29E-07 | 0.00461519 |
| 10 | 125899776 | 125899776 | 1 | 10_125899776 | ENSG00000203780 | FANK1 | 0 | INTRON | 5.05485998 | 4.31E-07 | 0.00462516 |
| 4 | 62809733 | 62809733 | 1 | 4_62809733 | ENSG00000180673 | EXOC5P1 | 7092 | Upstream | 5.05480549 | 4.31E-07 | 0.00462516 |
| X | 119240032 | 119240032 | 1 | X_119240032 | ENSG00000101856 | PGRMC1 | 0 | INTRON | 5.05425053 | 4.32E-07 | 0.0046357 |
| 15 | 49472158 | 49472158 | 1 | 15_49472158 | ENSG00000166262 | FAM227B | 0 | INTRON | -5.0540287 | 4.33E-07 | 0.00463817 |
| 12 | 51331692 | 51331692 | 1 | 12_51331692 | ENSG00000139610 | CELA1 | 0 | INTRON | 5.05354322 | 4.34E-07 | 0.00464705 |
| 19 | 36831095 | 36831095 | 1 | 19_36831095 | ENSG00000267254 | ZNF790-AS1 | 0 | EXON | 5.05298353 | 4.35E-07 | 0.00465524 |
| 19 | 38463479 | 38463479 | 1 | 19_38463479 | ENSG00000196218 | RYR1 | 0 | EXON | 5.05296674 | 4.35E-07 | 0.00465524 |
| 1 | 102654369 | 102654369 | 1 | 1_102654369 | ENSG00000230864 | AC099567.1 | 108952 | Downstream | -5.0526446 | 4.36E-07 | 0.00465588 |
| 11 | 110070188 | 110070188 | 1 | 11_110070188 | ENSG00000137710 | RDX | 0 | INTRON | -5.0525766 | 4.36E-07 | 0.00465588 |
| 16 | 48439996 | 48439996 | 1 | 16_48439996 | ENSG00000196470 | SIAH1 | 0 | INTRON | 5.05241629 | 4.36E-07 | 0.00465588 |
| 1 | 21095466 | 21095466 | 1 | 1_21095466 | ENSG00000075151 | EIF4G3 | 0 | INTRON | -5.0524041 | 4.36E-07 | 0.00465588 |
| 1 | 245139216 | 245139216 | 1 | 1_245139216 | ENSG00000201170 | RNU1-132P | 5126 | Upstream | -5.0523413 | 4.36E-07 | 0.00465588 |
| 5 | 40210796 | 40210796 | 1 | 5_40210796 | ENSG00000250585 | LINC00604 | 29370 | Upstream | 5.05220707 | 4.37E-07 | 0.00465623 |
| 13 | 44281260 | 44281260 | 1 | 13_44281260 | ENSG00000230731 | AL589745.1 | 24664 | Upstream | -5.0518817 | 4.37E-07 | 0.00466125 |
| 9 | 28772280 | 28772280 | 1 | 9_28772280 | ENSG00000215966 | MIR876 | 91345 | Downstream | 5.0516725 | 4.38E-07 | 0.00466223 |
| 8 | 74032073 | 74032073 | 1 | 8_74032073 | ENSG00000154589 | LY96 | 2994 | Downstream | -5.0516026 | 4.38E-07 | 0.00466223 |
| 11 | 134136001 | 134136001 | 1 | 11_134136001 | ENSG00000166086 | JAM3 | 0 | INTRON | -5.0514596 | 4.38E-07 | 0.00466281 |
| 8 | 130098504 | 130098504 | 1 | 8_130098504 | ENSG00000153317 | ASAP1 | 0 | INTRON | -5.0509355 | 4.40E-07 | 0.00466814 |
| 11 | 6275522 | 6275522 | 1 | 11_6275522 | ENSG00000110148 | CCKBR | 3395 | Downstream | 5.0507933 | 4.40E-07 | 0.00466814 |
| 2 | 29030475 | 29030475 | 1 | 2_29030475 | ENSG00000189350 | TOGARAM2 | 0 | INTRON | 5.0507692 | 4.40E-07 | 0.00466814 |
| X | 127183519 | 127183519 | 1 | X_127183519 | ENSG00000230538 | Z82209.1 | 206822 | Upstream | 5.05076445 | 4.40E-07 | 0.00466814 |
| 16 | 78911051 | 78911051 | 1 | 16_78911051 | ENSG00000186153 | WWOX | 0 | INTRON | -5.0505782 | 4.40E-07 | 0.00466978 |
| 4 | 81993450 | 81993450 | 1 | 4_81993450 | ENSG00000138670 | RASGEF1B | 0 | INTRON | -5.0496278 | 4.43E-07 | 0.0046886 |
| 10 | 130891110 | 130891110 | 1 | 10_130891110 | ENSG00000264803 | MIR378C | 71477 | Downstream | 5.04957192 | 4.43E-07 | 0.0046886 |
| 7 | 146169911 | 146169911 | 1 | 7_146169911 | ENSG00000174469 | CNTNAP2 | 0 | INTRON | 5.0488494 | 4.44E-07 | 0.00470232 |
| 18 | 48299736 | 48299736 | 1 | 18_48299736 | ENSG00000184828 | ZBTB7C | 0 | INTRON | -5.0487762 | 4.45E-07 | 0.00470232 |
| 7 | 91617754 | 91617754 | 1 | 7_91617754 | ENSG00000223665 | AC000058.1 | 21092 | Downstream | 5.04862678 | 4.45E-07 | 0.00470308 |
| 6 | 52685699 | 52685699 | 1 | 6_52685699 | ENSG00000096092 | TMEM14A | 0 | INTRON | -5.0482828 | 4.46E-07 | 0.00470395 |
| 1 | 222146343 | 222146343 | 1 | 1_222146343 | ENSG00000236230 | AL356108.1 | 0 | INTRON | 5.04808571 | 4.46E-07 | 0.00470395 |
| 3 | 61480490 | 61480490 | 1 | 3_61480490 | ENSG00000144724 | PTPRG | 81078 | Upstream | 5.04803609 | 4.46E-07 | 0.00470395 |
| 19 | 37107920 | 37107920 | 1 | 19_37107920 | ENSG00000196967 | ZNF585A | 0 | INTRON | 5.04797369 | 4.47E-07 | 0.00470395 |
| 10 | 66365473 | 66365473 | 1 | 10_66365473 | ENSG00000183230 | CTNNA3 | 0 | INTRON | -5.0477848 | 4.47E-07 | 0.00470395 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 | 136825179 | 136825179 | 1 | 7_136825179 | ENSG00000234352 | AC009264.1 | 0 | INTRON | -5.0475402 | 4.48E-07 | 0.00470395 |
| 1 | 40522159 | 40522159 | 1 | 1_40522159 | ENSG00000238186 | AL603839.2 | 4985 | Upstream | -5.0474338 | 4.48E-07 | 0.00470395 |
| 9 | 63314535 | 63314535 | 1 | 9_63314535 | ENSG00000237238 | BMS1P10 | 0 | INTRON | -5.0472759 | 4.48E-07 | 0.00470395 |
| 1 | 124855540 | 124855540 | 1 | 1_124855540 | ENSG00000224857 | LINC01691 | 3275016 | Upstream | -5.0472595 | 4.48E-07 | 0.00470395 |
| 6 | 78508477 | 78508477 | 1 | 6_78508477 | ENSG00000230309 | AL121718.1 | 95989 | Downstream | 5.04718273 | 4.48E-07 | 0.00470395 |
| 2 | 239084456 | 239084456 | 1 | 2_239084456 | ENSG00000068024 | HDAC4 | 0 | INTRON | -5.0471364 | 4.48E-07 | 0.00470395 |
| 1 | 152286596 | 152286596 | 1 | 1_152286596 | ENSG00000237975 | FLG-AS1 | 0 | INTRON | 5.04712559 | 4.49E-07 | 0.00470395 |
| 9 | 109985735 | 109985735 | 1 | 9_109985735 | ENSG00000157654 | PALM2-AKAP2 | 0 | INTRON | 5.04698138 | 4.49E-07 | 0.00470395 |
| 5 | 57986311 | 57986311 | 1 | 5_57986311 | ENSG00000249584 | LINC02225 | 87149 | Upstream | 5.04684718 | 4.49E-07 | 0.00470395 |
| 19 | 32936085 | 32936085 | 1 | 19_32936085 | ENSG00000121289 | CEP89 | 0 | INTRON | 5.04681891 | 4.49E-07 | 0.00470395 |
| 3 | 70905608 | 70905608 | 1 | 3_70905608 | ENSG00000114861 | FOXP1 | 47208 | Downstream | 5.04669344 | 4.50E-07 | 0.00470415 |
| 13 | 19741807 | 19741807 | 1 | 13_19741807 | ENSG00000121390 | PSPC1 | 0 | INTRON | 5.04638504 | 4.50E-07 | 0.00470752 |
| 17 | 40297164 | 40297164 | 1 | 17_40297164 | ENSG00000094804 | CDC6 | 0 | INTRON | -5.0462955 | 4.50E-07 | 0.00470752 |
| 11 | 57345926 | 57345926 | 1 | 11_57345926 | ENSG00000109991 | P2RX3 | 0 | INTRON | 5.04620414 | 4.51E-07 | 0.00470752 |
| 21 | 12972208 | 12972208 | 1 | 21_12972208 | ENSG00000229306 | AP001464.1 | 27467 | Downstream | -5.0456896 | 4.52E-07 | 0.00471731 |
| 14 | 52360124 | 52360124 | 1 | 14_52360124 | ENSG00000125384 | PTGER2 | 31526 | Downstream | 5.04516585 | 4.53E-07 | 0.00472463 |
| 1 | 105721497 | 105721497 | 1 | 1_105721497 | ENSG00000227850 | SEPTIN2P1 | 23279 | Downstream | -5.0451588 | 4.53E-07 | 0.00472463 |
| 17 | 40926625 | 40926625 | 1 | 17_40926625 | ENSG00000108244 | KRT23 | 0 | INTRON | 5.04464128 | 4.54E-07 | 0.00473453 |
| 20 | 56201401 | 56201401 | 1 | 20_56201401 | ENSG00000222118 | RNA5SP487 | 3650 | Downstream | 5.04387902 | 4.56E-07 | 0.0047486 |
| X | 153702527 | 153702527 | 1 | X_153702527 | ENSG00000185825 | BCAP31 | 0 | INTRON | 5.04376906 | 4.56E-07 | 0.0047486 |
| X | 103275155 | 103275155 | 1 | X_103275155 | ENSG00000204065 | TCEAL5 | 0 | INTRON | 5.04369994 | 4.57E-07 | 0.0047486 |
| 1 | 62453335 | 62453335 | 1 | 1_62453335 | ENSG00000116641 | DOCK7 | 962 | Downstream | -5.0434478 | 4.57E-07 | 0.0047486 |
| 2 | 222563557 | 222563557 | 1 | 2_222563557 | ENSG00000163082 | SGPP2 | 936 | Downstream | 5.04339319 | 4.57E-07 | 0.0047486 |
| 13 | 73160526 | 73160526 | 1 | 13_73160526 | ENSG00000201253 | RNU4-10P | 31001 | Upstream | 5.04337229 | 4.57E-07 | 0.0047486 |
| 7 | 153379455 | 153379455 | 1 | 7_153379455 | ENSG00000234722 | LINC01287 | 0 | INTRON | 5.04312618 | 4.58E-07 | 0.00475164 |
| 9 | 12877992 | 12877992 | 1 | 9_12877992 | ENSG00000222658 | Y_RNA | 7328 | Upstream | 5.04301702 | 4.58E-07 | 0.00475164 |
| 9 | 111824136 | 111824136 | 1 | 9_111824136 | ENSG00000206907 | RNU6-1013P | 15691 | Upstream | -5.0426993 | 4.59E-07 | 0.00475664 |
| 5 | 81955039 | 81955039 | 1 | 5_81955039 | ENSG00000152348 | ATG10 | 16983 | Upstream | -5.0424754 | 4.60E-07 | 0.00475931 |
| 10 | 14581763 | 14581763 | 1 | 10_14581763 | ENSG00000065809 | FAM107B | 0 | INTRON | 5.04235688 | 4.60E-07 | 0.00475936 |
| 3 | 141505795 | 141505795 | 1 | 3_141505795 | ENSG00000155903 | RASA2 | 0 | INTRON | -5.0406411 | 4.64E-07 | 0.00479621 |
| 8 | 143858617 | 143858617 | 1 | 8_143858617 | ENSG00000261150 | EPPK1 | 0 | EXON | -5.0404849 | 4.64E-07 | 0.00479621 |
| 2 | 67957208 | 67957208 | 1 | 2_67957208 | ENSG00000235968 | AC079112.1 | 66485 | Downstream | -5.0404294 | 4.64E-07 | 0.00479621 |
| 8 | 48036999 | 48036999 | 1 | 8_48036999 | ENSG00000169139 | UBE2V2 | 0 | INTRON | -5.0404002 | 4.65E-07 | 0.00479621 |
| 4 | 108533609 | 108533609 | 1 | 4_108533609 | ENSG00000234492 | RPL34-AS1 | 4580 | Downstream | -5.0401086 | 4.65E-07 | 0.00479621 |
| 16 | 25846110 | 25846110 | 1 | 16_25846110 | ENSG00000285882 | AC093516.1 | 0 | INTRON | 5.04008698 | 4.65E-07 | 0.00479621 |
| 5 | 88164423 | 88164423 | 1 | 5_88164423 | ENSG00000287862 | AC114971.1 | 19968 | Upstream | 5.04002856 | 4.65E-07 | 0.00479621 |
| 1 | 62941602 | 62941602 | 1 | 1_62941602 | ENSG00000229537 | LINC01739 | 34148 | Downstream | -5.0399522 | 4.66E-07 | 0.00479621 |
| 4 | 89357761 | 89357761 | 1 | 4_89357761 | ENSG00000185477 | GPRIN3 | 49961 | Upstream | 5.03940673 | 4.67E-07 | 0.00480699 |
| 13 | 112808276 | 112808276 | 1 | 13_112808276 | ENSG00000068650 | ATP11A | 0 | INTRON | -5.0390693 | 4.68E-07 | 0.00480859 |
| 22 | 20867653 | 20867653 | 1 | 22_20867653 | ENSG00000099940 | SNAP29 | 0 | INTRON | 5.03902588 | 4.68E-07 | 0.00480859 |
| 4 | 42072539 | 42072539 | 1 | 4_42072539 | ENSG00000014824 | SLC30A9 | 0 | INTRON | -5.0389961 | 4.68E-07 | 0.00480859 |
| 12 | 96700170 | 96700170 | 1 | 12_96700170 | ENSG00000188596 | CFAP54 | 0 | INTRON | 5.03863074 | 4.69E-07 | 0.00480956 |
| 15 | 23458277 | 23458277 | 1 | 15_23458277 | ENSG00000174450 | GOLGA6L2 | 11034 | Upstream | 5.03852585 | 4.69E-07 | 0.00480956 |
| 14 | 28510260 | 28510260 | 1 | 14_28510260 | ENSG00000240179 | RPL26P3 | 19898 | Downstream | 5.03848484 | 4.69E-07 | 0.00480956 |
| 2 | 20592364 | 20592364 | 1 | 2_20592364 | ENSG00000231948 | HS1BP3-IT1 | 0 | INTRON | -5.0383949 | 4.69E-07 | 0.00480956 |
| 5 | 61524182 | 61524182 | 1 | 5_61524182 | ENSG00000130449 | ZSWIM6 | 0 | INTRON | 5.03838033 | 4.69E-07 | 0.00480956 |
| 13 | 102694612 | 102694612 | 1 | 13_102694612 | ENSG00000139780 | METTL21C | 108 | Upstream | 5.03818916 | 4.70E-07 | 0.00481147 |
| 2 | 9902957 | 9902957 | 1 | 2_9902957 | ENSG00000115750 | TAF1B | 0 | INTRON | 5.03737993 | 4.72E-07 | 0.00482894 |
| 7 | 135491492 | 135491492 | 1 | 7_135491492 | ENSG00000080802 | CNOT4 | 0 | INTRON | -5.0371953 | 4.72E-07 | 0.0048307 |
| 14 | 57354546 | 57354546 | 1 | 14_57354546 | ENSG00000259008 | AL355834.1 | 899 | Upstream | 5.03663911 | 4.74E-07 | 0.00484184 |
| 1 | 154243649 | 154243649 | 1 | 1_154243649 | ENSG00000143569 | UBAP2L | 0 | INTRON | 5.03634086 | 4.75E-07 | 0.00484647 |
| 15 | 38797725 | 38797725 | 1 | 15_38797725 | ENSG00000175779 | LINC02694 | 0 | INTRON | 5.03595542 | 4.75E-07 | 0.00484806 |
| 6 | 2701328 | 2701328 | 1 | 6_2701328 | ENSG00000145949 | MYLK4 | 0 | INTRON | -5.0359418 | 4.76E-07 | 0.00484806 |
| 12 | 108337502 | 108337502 | 1 | 12_108337502 | ENSG00000174600 | CMKLR1 | 0 | INTRON | 5.03593364 | 4.76E-07 | 0.00484806 |
| 16 | 50278515 | 50278515 | 1 | 16_50278515 | ENSG00000121281 | ADCY7 | 0 | INTRON | 5.03561792 | 4.76E-07 | 0.00485315 |
| 17 | 689716 | 689716 | 1 | 17_689716 | ENSG00000141252 | VPS53 | 0 | INTRON | 5.03522748 | 4.77E-07 | 0.00486014 |
| 9 | 112345885 | 112345885 | 1 | 9_112345885 | ENSG00000119314 | PTBP3 | 12218 | Upstream | 5.03506856 | 4.78E-07 | 0.00486127 |
| 3 | 30392663 | 30392663 | 1 | 3_30392663 | ENSG00000287774 | AC025614.2 | 87626 | Downstream | -5.0347261 | 4.79E-07 | 0.00486254 |
| 2 | 59317717 | 59317717 | 1 | 2_59317717 | ENSG00000233891 | AC007179.2 | 0 | INTRON | 5.03469765 | 4.79E-07 | 0.00486254 |
| 21 | 42993314 | 42993314 | 1 | 21_42993314 | ENSG00000160199 | PKNOX1 | 0 | INTRON | -5.0346748 | 4.79E-07 | 0.00486254 |
| 6 | 57240194 | 57240194 | 1 | 6_57240194 | ENSG00000112210 | RAB23 | 17887 | Upstream | 5.03402023 | 4.80E-07 | 0.0048725 |
| 2 | 240887230 | 240887230 | 1 | 2_240887230 | ENSG00000172478 | MAB21L4 | 0 | INTRON | -5.0339133 | 4.81E-07 | 0.0048725 |
| 13 | 72183245 | 72183245 | 1 | 13_72183245 | ENSG00000232881 | RPS10P21 | 269067 | Upstream | -5.0338253 | 4.81E-07 | 0.0048725 |
| 7 | 130515493 | 130515493 | 1 | 7_130515493 | ENSG00000158623 | COPG2 | 0 | INTRON | 5.03367938 | 4.81E-07 | 0.0048725 |
| 1 | 43896289 | 43896289 | 1 | 1_43896289 | ENSG00000126091 | ST3GAL3 | 0 | INTRON | 5.03362735 | 4.81E-07 | 0.0048725 |
| 9 | 22539642 | 22539642 | 1 | 9_22539642 | ENSG00000176399 | DMRTA1 | 83902 | Downstream | -5.0335105 | 4.82E-07 | 0.0048725 |
| 5 | 106341177 | 106341177 | 1 | 5_106341177 | ENSG00000251204 | AC027313.1 | 74398 | Downstream | 5.03348394 | 4.82E-07 | 0.0048725 |
| 6 | 7556850 | 7556850 | 1 | 6_7556850 | ENSG00000096696 | DSP | 0 | INTRON | -5.032774 | 4.83E-07 | 0.00488768 |
| 19 | 55817392 | 55817392 | 1 | 19_55817392 | ENSG00000179873 | NLRP11 | 0 | INTRON | -5.0325468 | 4.84E-07 | 0.00489052 |
| 17 | 78025443 | 78025443 | 1 | 17_78025443 | ENSG00000078687 | TNRC6C | 0 | INTRON | -5.0323523 | 4.84E-07 | 0.00489052 |
| 13 | 23392125 | 23392125 | 1 | 13_23392125 | ENSG00000151835 | SACS | 0 | INTRON | 5.03232146 | 4.85E-07 | 0.00489052 |
| 16 | 3279173 | 3279173 | 1 | 16_3279173 | ENSG00000006194 | ZNF263 | 0 | INTRON | -5.0318718 | 4.86E-07 | 0.0048991 |
| 20 | 21189434 | 21189434 | 1 | 20_21189434 | ENSG00000232712 | KIZ-AS1 | 0 | INTRON | -5.0316393 | 4.86E-07 | 0.00490092 |
| 3 | 176221008 | 176221008 | 1 | 3_176221008 | ENSG00000238026 | AC117434.1 | 106471 | Upstream | 5.03149255 | 4.87E-07 | 0.00490092 |
| 10 | 131272087 | 131272087 | 1 | 10_131272087 | ENSG00000176769 | TCERG1L | 0 | INTRON | -5.0314194 | 4.87E-07 | 0.00490092 |
| X | 30312292 | 30312292 | 1 | X_30312292 | ENSG00000169297 | NR0B1 | 2902 | Upstream | -5.031167 | 4.88E-07 | 0.00490092 |
| 5 | 68999226 | 68999226 | 1 | 5_68999226 | ENSG00000249352 | LINC02198 | 0 | INTRON | -5.0311581 | 4.88E-07 | 0.00490092 |
| 11 | 12812982 | 12812982 | 1 | 11_12812982 | ENSG00000187079 | TEAD1 | 0 | INTRON | 5.03111995 | 4.88E-07 | 0.00490092 |
| 4 | 97723205 | 97723205 | 1 | 4_97723205 | ENSG00000163116 | STPG2 | 0 | INTRON | 5.0300469 | 4.90E-07 | 0.00492552 |
| 16 | 1549229 | 1549229 | 1 | 16_1549229 | ENSG00000131634 | TMEM204 | 0 | INTRON | 5.02981104 | 4.91E-07 | 0.00492867 |
| 9 | 116723833 | 116723833 | 1 | 9_116723833 | ENSG00000148219 | ASTN2 | 0 | INTRON | -5.0295541 | 4.92E-07 | 0.00493237 |
| 14 | 40982239 | 40982239 | 1 | 14_40982239 | ENSG00000251363 | LINC02315 | 0 | INTRON | 5.02926289 | 4.92E-07 | 0.00493664 |
| 10 | 2431018 | 2431018 | 1 | 10_2431018 | ENSG00000234170 | LINC02645 | 0 | INTRON | -5.0291622 | 4.93E-07 | 0.00493664 |
| 10 | 87252987 | 87252987 | 1 | 10_87252987 | ENSG00000223482 | NUTM2A-AS1 | 0 | INTRON | -5.029001 | 4.93E-07 | 0.00493788 |
| 22 | 46141457 | 46141457 | 1 | 22_46141457 | ENSG00000186951 | PPARA | 9063 | Upstream | 5.02820207 | 4.95E-07 | 0.00495279 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | 141706506 | 141706506 | 1 | 6_141706506 | ENSG00000218351 | RPS3AP23 | 70003 | Upstream | 5.02819729 | 4.95E-07 | 0.00495279 |
| 10 | 88904162 | 88904162 | 1 | 10_88904162 | ENSG00000138134 | STAMBPL1 | 0 | INTRON | -5.0278596 | 4.96E-07 | 0.00495317 |
| 4 | 80203945 | 80203945 | 1 | 4_80203945 | ENSG00000152784 | PRDM8 | 0 | 3UTR | -5.0274873 | 4.97E-07 | 0.00495317 |
| 2 | 179475319 | 179475319 | 1 | 2_179475319 | ENSG00000144331 | ZNF385B | 0 | INTRON | -5.0274708 | 4.97E-07 | 0.00495317 |
| 18 | 38364065 | 38364065 | 1 | 18_38364065 | ENSG00000268566 | AC100781.1 | 291143 | Downstream | 5.02741738 | 4.97E-07 | 0.00495317 |
| 2 | 241337868 | 241337868 | 1 | 2_241337868 | ENSG00000168385 | SEPTIN2 | 0 | INTRON | -5.0273779 | 4.97E-07 | 0.00495317 |
| 11 | 80046883 | 80046883 | 1 | 11_80046883 | ENSG00000254471 | AP001284.1 | 57253 | Downstream | -5.027361 | 4.97E-07 | 0.00495317 |
| 20 | 20630041 | 20630041 | 1 | 20_20630041 | ENSG00000188559 | RALGAPA2 | 0 | INTRON | 5.02731501 | 4.97E-07 | 0.00495317 |
| 7 | 80445436 | 80445436 | 1 | 7_80445436 | ENSG00000135218 | CD36 | 0 | INTRON | 5.02728258 | 4.97E-07 | 0.00495317 |
| 17 | 678505 | 678505 | 1 | 17_678505 | ENSG00000141252 | VPS53 | 0 | INTRON | 5.02637675 | 5.00E-07 | 0.00497332 |
| 9 | 15338764 | 15338764 | 1 | 9_15338764 | ENSG00000215236 | RPL7P33 | 22628 | Upstream | -5.0262795 | 5.00E-07 | 0.00497332 |
| 8 | 11039130 | 11039130 | 1 | 8_11039130 | ENSG00000171044 | XKR6 | 0 | INTRON | 5.02614979 | 5.00E-07 | 0.00497377 |
| X | 8493236 | 8493236 | 1 | X_8493236 | ENSG00000287171 | AC006062.1 | 0 | INTRON | 5.02585083 | 5.01E-07 | 0.0049771 |
| 5 | 65821156 | 65821156 | 1 | 5_65821156 | ENSG00000123213 | NLN | 0 | INTRON | 5.0257048 | 5.02E-07 | 0.0049771 |
| 18 | 59875767 | 59875767 | 1 | 18_59875767 | ENSG00000141682 | PMAIP1 | 24180 | Upstream | 5.02558399 | 5.02E-07 | 0.0049771 |
| 1 | 8247256 | 8247256 | 1 | 1_8247256 | ENSG00000233645 | AL358876.2 | 26727 | Upstream | 5.02557368 | 5.02E-07 | 0.0049771 |
| X | 88110912 | 88110912 | 1 | X_88110912 | ENSG00000230956 | AL024493.1 | 13687 | Upstream | 5.0253641 | 5.02E-07 | 0.00497964 |
| 7 | 99760025 | 99760025 | 1 | 7_99760025 | ENSG00000160868 | CYP3A4 | 0 | INTRON | -5.0248394 | 5.04E-07 | 0.00498649 |
| 7 | 139605854 | 139605854 | 1 | 7_139605854 | ENSG00000064393 | HIPK2 | 0 | INTRON | -5.024769 | 5.04E-07 | 0.00498649 |
| 15 | 85300995 | 85300995 | 1 | 15_85300995 | ENSG00000218052 | ADAMTS7P4 | 0 | INTRON | -5.024765 | 5.04E-07 | 0.00498649 |
| 5 | 5457094 | 5457094 | 1 | 5_5457094 | ENSG00000164151 | ICE1 | 0 | INTRON | 5.02444393 | 5.05E-07 | 0.00499194 |
| 18 | 35612819 | 35612819 | 1 | 18_35612819 | ENSG00000141429 | GALNT1 | 0 | INTRON | 5.02385306 | 5.06E-07 | 0.00499966 |
| 3 | 106125290 | 106125290 | 1 | 3_106125290 | ENSG00000287421 | AC131237.1 | 35126 | Upstream | 5.02378683 | 5.07E-07 | 0.00499966 |
| 16 | 7048480 | 7048480 | 1 | 16_7048480 | ENSG00000078328 | RBFOX1 | 0 | INTRON | -5.0237175 | 5.07E-07 | 0.00499966 |
| 16 | 18323381 | 18323381 | 1 | 16_18323381 | ENSG00000214940 | NPIPA8 | 0 | INTRON | 5.02370164 | 5.07E-07 | 0.00499966 |
| 2 | 197114916 | 197114916 | 1 | 2_197114916 | ENSG00000065413 | ANKRD44 | 0 | INTRON | -5.0233429 | 5.08E-07 | 0.00500562 |
| 4 | 174352463 | 174352463 | 1 | 4_174352463 | ENSG00000249875 | AC116616.1 | 2390 | Downstream | 5.02325064 | 5.08E-07 | 0.00500562 |
| 12 | 101909500 | 101909500 | 1 | 12_101909500 | ENSG00000136048 | DRAM1 | 0 | INTRON | 5.02303184 | 5.09E-07 | 0.00500843 |
| 11 | 118475595 | 118475595 | 1 | 11_118475595 | ENSG00000118058 | KMT2A | 0 | INTRON | -5.0227006 | 5.09E-07 | 0.00501417 |
| 13 | 29859396 | 29859396 | 1 | 13_29859396 | ENSG00000278172 | Metazoa_SRP | 4975 | Downstream | -5.0225225 | 5.10E-07 | 0.00501592 |
| 4 | 56206679 | 56206679 | 1 | 4_56206679 | ENSG00000109265 | KIAA1211 | 0 | INTRON | 5.02177226 | 5.12E-07 | 0.0050303 |
| 13 | 33368746 | 33368746 | 1 | 13_33368746 | ENSG00000230490 | AL139383.1 | 0 | INTRON | 5.02142913 | 5.13E-07 | 0.0050303 |
| 4 | 110331577 | 110331577 | 1 | 4_110331577 | ENSG00000138792 | ENPEP | 34155 | Upstream | 5.02131526 | 5.13E-07 | 0.0050303 |
| 10 | 101250293 | 101250293 | 1 | 10_101250293 | ENSG00000227128 | LBX1-AS1 | 0 | INTRON | 5.02118894 | 5.14E-07 | 0.0050303 |
| 18 | 57002663 | 57002663 | 1 | 18_57002663 | ENSG00000091157 | WDR7 | 0 | INTRON | -5.0211038 | 5.14E-07 | 0.0050303 |
| 4 | 167224886 | 167224886 | 1 | 4_167224886 | ENSG00000196104 | SPOCK3 | 0 | INTRON | 5.02096408 | 5.14E-07 | 0.0050303 |
| 4 | 174552720 | 174552720 | 1 | 4_174552720 | ENSG00000251584 | AC096751.2 | 11673 | Downstream | 5.02083665 | 5.14E-07 | 0.0050303 |
| 11 | 104058833 | 104058833 | 1 | 11_104058833 | ENSG00000170962 | PDGFD | 0 | INTRON | 5.02077475 | 5.15E-07 | 0.0050303 |
| 2 | 62389975 | 62389975 | 1 | 2_62389975 | ENSG00000270335 | AC093159.2 | 39236 | Upstream | 5.02072463 | 5.15E-07 | 0.0050303 |
| 6 | 66602431 | 66602431 | 1 | 6_66602431 | ENSG00000270521 | AL450336.1 | 107810 | Downstream | 5.02061995 | 5.15E-07 | 0.0050303 |
| 1 | 27852669 | 27852669 | 1 | 1_27852669 | ENSG00000117751 | PPP1R8 | 993 | Downstream | 5.02059557 | 5.15E-07 | 0.0050303 |
| X | 124348462 | 124348462 | 1 | X_124348462 | ENSG00000183918 | SH2D1A | 0 | INTRON | 5.02058233 | 5.15E-07 | 0.0050303 |
| 5 | 16950591 | 16950591 | 1 | 5_16950591 | ENSG00000201436 | RNU6-660P | 8640 | Upstream | -5.0204969 | 5.15E-07 | 0.0050303 |
| 6 | 146800781 | 146800781 | 1 | 6_146800781 | ENSG00000118492 | ADGB | 0 | INTRON | -5.0203193 | 5.16E-07 | 0.0050303 |
| 3 | 11367944 | 11367944 | 1 | 3_11367944 | ENSG00000197548 | ATG7 | 0 | INTRON | -5.0203152 | 5.16E-07 | 0.0050303 |
| 7 | 48939803 | 48939803 | 1 | 7_48939803 | ENSG00000218305 | CDC14C | 12349 | Downstream | -5.020096 | 5.16E-07 | 0.00503314 |
| 11 | 121465550 | 121465550 | 1 | 11_121465550 | ENSG00000137642 | SORL1 | 0 | INTRON | -5.0199865 | 5.17E-07 | 0.00503314 |
| 19 | 1841148 | 1841148 | 1 | 19_1841148 | ENSG00000079313 | REXO1 | 0 | INTRON | -5.0197309 | 5.17E-07 | 0.00503682 |
| 1 | 36932898 | 36932898 | 1 | 1_36932898 | ENSG00000163873 | GRIK3 | 0 | INTRON | 5.01962623 | 5.18E-07 | 0.00503682 |
| 10 | 22668316 | 22668316 | 1 | 10_22668316 | ENSG00000150867 | PIP4K2A | 0 | INTRON | 5.01878114 | 5.20E-07 | 0.00505614 |
| 1 | 69699052 | 69699052 | 1 | 1_69699052 | ENSG00000033122 | LRRC7 | 0 | INTRON | 5.01857251 | 5.21E-07 | 0.00505874 |
| 11 | 134077722 | 134077722 | 1 | 11_134077722 | ENSG00000166086 | JAM3 | 0 | INTRON | -5.0180986 | 5.22E-07 | 0.00506834 |
| 12 | 48134266 | 48134266 | 1 | 12_48134266 | ENSG00000152556 | PFKM | 0 | 3UTR | -5.017885 | 5.22E-07 | 0.0050695 |
| 1 | 188699505 | 188699505 | 1 | 1_188699505 | ENSG00000231022 | RPS3AP9 | 4394 | Downstream | 5.01783523 | 5.23E-07 | 0.0050695 |
| 4 | 70707827 | 70707827 | 1 | 4_70707827 | ENSG00000018189 | RUFY3 | 0 | INTRON | 5.01761348 | 5.23E-07 | 0.00507246 |
| 8 | 32158776 | 32158776 | 1 | 8_32158776 | ENSG00000157168 | NRG1 | 0 | INTRON | 5.01697875 | 5.25E-07 | 0.00508391 |
| 2 | 179023040 | 179023040 | 1 | 2_179023040 | ENSG00000163492 | CCDC141 | 0 | INTRON | -5.0168346 | 5.25E-07 | 0.00508391 |
| 7 | 136270370 | 136270370 | 1 | 7_136270370 | ENSG00000232053 | AC078845.1 | 0 | INTRON | 5.01666261 | 5.26E-07 | 0.00508391 |
| 2 | 215488136 | 215488136 | 1 | 2_215488136 | ENSG00000225166 | AC012462.1 | 1497 | Downstream | -5.0166454 | 5.26E-07 | 0.00508391 |
| 16 | 36141725 | 36141725 | 1 | 16_36141725 | ENSG00000261084 | PPP1R1AP2 | 229209 | Downstream | -5.0166333 | 5.26E-07 | 0.00508391 |
| 5 | 104368788 | 104368788 | 1 | 5_104368788 | ENSG00000251026 | LINC02163 | 0 | INTRON | 5.01609541 | 5.27E-07 | 0.00509526 |
| 4 | 62430563 | 62430563 | 1 | 4_62430563 | ENSG00000248847 | AC074087.1 | 58931 | Downstream | 5.01568179 | 5.28E-07 | 0.00510253 |
| 5 | 158181092 | 158181092 | 1 | 5_158181092 | ENSG00000253673 | AC025437.4 | 0 | INTRON | 5.0156034 | 5.29E-07 | 0.00510253 |
| X | 41244527 | 41244527 | 1 | X_41244527 | ENSG00000124486 | USP9X | 7948 | Downstream | 5.01539737 | 5.29E-07 | 0.0051051 |
| 2 | 231814893 | 231814893 | 1 | 2_231814893 | ENSG00000261096 | AC073476.3 | 2541 | Downstream | -5.0152084 | 5.30E-07 | 0.00510651 |
| 2 | 134622831 | 134622831 | 1 | 2_134622831 | ENSG00000152128 | TMEM163 | 0 | INTRON | 5.01511611 | 5.30E-07 | 0.00510651 |
| 1 | 44446544 | 44446544 | 1 | 1_44446544 | ENSG00000187147 | RNF220 | 0 | INTRON | -5.0150176 | 5.30E-07 | 0.00510651 |
| 2 | 76432227 | 76432227 | 1 | 2_76432227 | ENSG00000200488 | RN7SKP203 | 12851 | Downstream | 5.01462072 | 5.31E-07 | 0.005114 |
| 7 | 19073953 | 19073953 | 1 | 7_19073953 | ENSG00000122691 | TWIST1 | 0 | INTRON | -5.0144732 | 5.32E-07 | 0.005114 |
| 16 | 12737114 | 12737114 | 1 | 16_12737114 | ENSG00000103381 | CPPED1 | 0 | INTRON | -5.0144098 | 5.32E-07 | 0.005114 |
| 1 | 212653664 | 212653664 | 1 | 1_212653664 | ENSG00000237980 | LINC02773 | 0 | EXON | -5.014038 | 5.33E-07 | 0.005121 |
| 6 | 26761623 | 26761623 | 1 | 6_26761623 | ENSG00000261584 | AL513548.1 | 73659 | Downstream | 5.01385533 | 5.34E-07 | 0.00512297 |
| 17 | 5835390 | 5835390 | 1 | 17_5835390 | ENSG00000284837 | AC007846.1 | 0 | INTRON | -5.013725 | 5.34E-07 | 0.00512356 |
| 14 | 58910531 | 58910531 | 1 | 14_58910531 | ENSG00000258583 | LINC01500 | 0 | INTRON | 5.01253663 | 5.37E-07 | 0.00515066 |
| 8 | 139988181 | 139988181 | 1 | 8_139988181 | ENSG00000167632 | TRAPPC9 | 0 | INTRON | -5.0124935 | 5.37E-07 | 0.00515066 |
| 10 | 130891650 | 130891650 | 1 | 10_130891650 | ENSG00000264803 | MIR378C | 70937 | Downstream | -5.0116984 | 5.40E-07 | 0.00516908 |
| 6 | 93876778 | 93876778 | 1 | 6_93876778 | ENSG00000252249 | AL391336.2 | 2327 | Upstream | -5.0110552 | 5.41E-07 | 0.00518347 |
| 3 | 68733866 | 68733866 | 1 | 3_68733866 | ENSG00000163377 | TAFA4 | 0 | INTRON | 5.01085664 | 5.42E-07 | 0.0051859 |
| 3 | 172103758 | 172103758 | 1 | 3_172103758 | ENSG00000075420 | FNDC3B | 0 | INTRON | 5.01053355 | 5.43E-07 | 0.00519129 |
| 21 | 34700403 | 34700403 | 1 | 21_34700403 | ENSG00000159212 | CLIC6 | 0 | INTRON | 5.01044042 | 5.43E-07 | 0.00519129 |
| 2 | 97840474 | 97840474 | 1 | 2_97840474 | ENSG00000075568 | TMEM131 | 0 | INTRON | -5.0102084 | 5.44E-07 | 0.00519463 |
| 5 | 107068339 | 107068339 | 1 | 5_107068339 | ENSG00000251027 | LINC01950 | 57287 | Upstream | 5.0098686 | 5.45E-07 | 0.00519717 |
| 4 | 150863618 | 150863618 | 1 | 4_150863618 | ENSG00000198589 | LRBA | 0 | INTRON | 5.00985791 | 5.45E-07 | 0.00519717 |
| 11 | 23509892 | 23509892 | 1 | 11_23509892 | ENSG00000240881 | AC068472.1 | 10429 | Upstream | 5.0097907 | 5.45E-07 | 0.00519717 |
| 10 | 121739673 | 121739673 | 1 | 10_121739673 | ENSG00000224250 | AC025947.1 | 0 | EXON | -5.0095944 | 5.45E-07 | 0.00519956 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | 16256346 | 16256346 | 1 | 3_16256346 | ENSG00000154813 | DPH3 | 714 | Downstream | -5.0094021 | 5.46E-07 | 0.00520002 |
| 2 | 139323696 | 139323696 | 1 | 2_139323696 | ENSG00000286778 | AC013265.1 | 224 | Upstream | 5.00932249 | 5.46E-07 | 0.00520002 |
| 10 | 97288452 | 97288452 | 1 | 10_97288452 | ENSG00000269891 | ARHGAP19-SLIT1 | 0 | INTRON | -5.0092542 | 5.46E-07 | 0.00520002 |
| 8 | 3040526 | 3040526 | 1 | 8_3040526 | ENSG00000183117 | CSMD1 | 0 | INTRON | -5.0090432 | 5.47E-07 | 0.00520281 |
| 3 | 102649911 | 102649911 | 1 | 3_102649911 | ENSG00000241754 | AC063938.1 | 0 | INTRON | 5.00857462 | 5.48E-07 | 0.00521258 |
| 1 | 66975912 | 66975912 | 1 | 1_66975912 | ENSG00000198160 | MIER1 | 0 | INTRON | 5.00834632 | 5.49E-07 | 0.00521585 |
| 2 | 34564957 | 34564957 | 1 | 2_34564957 | ENSG00000228262 | LINC01320 | 0 | INTRON | 5.00814315 | 5.50E-07 | 0.00521844 |
| 15 | 64467737 | 64467737 | 1 | 15_64467737 | ENSG00000180357 | ZNF609 | 0 | INTRON | 5.00792302 | 5.50E-07 | 0.0052215 |
| 4 | 42224455 | 42224455 | 1 | 4_42224455 | ENSG00000285454 | AC111006.1 | 0 | INTRON | 5.00663435 | 5.54E-07 | 0.00525363 |
| 16 | 435183 | 435183 | 1 | 16_435183 | ENSG00000090565 | RAB11FIP3 | 0 | INTRON | -5.0057881 | 5.56E-07 | 0.00527383 |
| 6 | 58413440 | 58413440 | 1 | 6_58413440 | ENSG00000225096 | AL445250.1 | 0 | INTRON | 5.00550464 | 5.57E-07 | 0.00527817 |
| 21 | 30029882 | 30029882 | 1 | 21_30029882 | ENSG00000259981 | AF096876.1 | 59834 | Upstream | 5.00533255 | 5.58E-07 | 0.00527817 |
| 3 | 24746390 | 24746390 | 1 | 3_24746390 | ENSG00000237838 | AC092422.1 | 0 | INTRON | 5.00530788 | 5.58E-07 | 0.00527817 |
| 15 | 39386884 | 39386884 | 1 | 15_39386884 | ENSG00000259345 | AC013652.1 | 0 | INTRON | -5.0051715 | 5.58E-07 | 0.00527818 |
| 22 | 44815659 | 44815659 | 1 | 22_44815659 | ENSG00000248405 | PRR5-ARHGAP8 | 0 | INTRON | 5.00509335 | 5.58E-07 | 0.00527818 |
| 2 | 76110441 | 76110441 | 1 | 2_76110441 | ENSG00000287474 | AC110614.1 | 0 | INTRON | -5.0046264 | 5.60E-07 | 0.00528805 |
| 2 | 177124536 | 177124536 | 1 | 2_177124536 | ENSG00000229337 | AC079305.3 | 0 | INTRON | 5.0044872 | 5.60E-07 | 0.00528894 |
| 9 | 82737541 | 82737541 | 1 | 9_82737541 | ENSG00000228430 | AL162726.3 | 0 | INTRON | 5.00430458 | 5.61E-07 | 0.00529067 |
| 2 | 24455986 | 24455986 | 1 | 2_24455986 | ENSG00000084676 | NCOA1 | 35927 | Upstream | 5.00417747 | 5.61E-07 | 0.00529067 |
| 6 | 52232990 | 52232990 | 1 | 6_52232990 | ENSG00000112116 | IL17F | 3690 | Downstream | -5.0039362 | 5.62E-07 | 0.00529067 |
| 20 | 23249456 | 23249456 | 1 | 20_23249456 | ENSG00000230387 | AL118508.1 | 59037 | Downstream | 5.00375218 | 5.62E-07 | 0.00529067 |
| 5 | 144353305 | 144353305 | 1 | 5_144353305 | ENSG00000183775 | KCTD16 | 0 | INTRON | -5.003625 | 5.63E-07 | 0.00529067 |
| 5 | 30247265 | 30247265 | 1 | 5_30247265 | ENSG00000250587 | HPRT1P2 | 1084 | Upstream | 5.00361933 | 5.63E-07 | 0.00529067 |
| 10 | 41847365 | 41847365 | 1 | 10_41847365 | ENSG00000229485 | KSR1P1 | 301944 | Downstream | -5.0035897 | 5.63E-07 | 0.00529067 |
| 5 | 107004697 | 107004697 | 1 | 5_107004697 | ENSG00000251027 | LINC01950 | 0 | INTRON | 5.00357076 | 5.63E-07 | 0.00529067 |
| 17 | 59802937 | 59802937 | 1 | 17_59802937 | ENSG00000062716 | VMP1 | 0 | INTRON | 5.00332125 | 5.64E-07 | 0.0052946 |
| 11 | 63817935 | 63817935 | 1 | 11_63817935 | ENSG00000168005 | SPINDOC | 0 | EXON | 5.00291295 | 5.65E-07 | 0.00529693 |
| 1 | 185094351 | 185094351 | 1 | 1_185094351 | ENSG00000121481 | RNF2 | 0 | INTRON | 5.00289439 | 5.65E-07 | 0.00529693 |
| 5 | 92549635 | 92549635 | 1 | 5_92549635 | ENSG00000249776 | AC124854.1 | 0 | INTRON | -5.0028555 | 5.65E-07 | 0.00529693 |
| 2 | 96001086 | 96001086 | 1 | 2_96001086 | ENSG00000275961 | RN7SL210P | 3476 | Downstream | 5.00281136 | 5.65E-07 | 0.00529693 |
| 2 | 121551480 | 121551480 | 1 | 2_121551480 | ENSG00000074054 | CLASP1 | 0 | INTRON | 5.00269692 | 5.65E-07 | 0.00529716 |
| 16 | 19907287 | 19907287 | 1 | 16_19907287 | ENSG00000167191 | GPRC5B | 21120 | Upstream | 5.00236609 | 5.66E-07 | 0.00530334 |
| 3 | 47909041 | 47909041 | 1 | 3_47909041 | ENSG00000047849 | MAP4 | 0 | EXON | 5.00205611 | 5.67E-07 | 0.00530546 |
| 12 | 12600560 | 12600560 | 1 | 12_12600560 | ENSG00000111269 | CREBL2 | 11266 | Upstream | -5.0020023 | 5.67E-07 | 0.00530546 |
| 6 | 107148829 | 107148829 | 1 | 6_107148829 | ENSG00000164494 | PDSS2 | 3732 | Downstream | -5.0019712 | 5.67E-07 | 0.00530546 |
| 4 | 95136693 | 95136693 | 1 | 4_95136693 | ENSG00000138696 | BMPR1B | 0 | INTRON | 5.00170982 | 5.68E-07 | 0.00530564 |
| 2 | 41626171 | 41626171 | 1 | 2_41626171 | ENSG00000287145 | AC009413.2 | 89961 | Upstream | 5.00167304 | 5.68E-07 | 0.00530564 |
| 19 | 52202878 | 52202878 | 1 | 19_52202878 | ENSG00000105568 | PPP2R1A | 0 | INTRON | 5.00164697 | 5.68E-07 | 0.00530564 |
| 4 | 177139929 | 177139929 | 1 | 4_177139929 | ENSG00000287544 | AC097518.2 | 0 | INTRON | 5.00144884 | 5.69E-07 | 0.00530779 |
| 1 | 29842767 | 29842767 | 1 | 1_29842767 | ENSG00000284676 | AL645944.2 | 52170 | Downstream | 5.0013576 | 5.69E-07 | 0.00530779 |
| 5 | 167626319 | 167626319 | 1 | 5_167626319 | ENSG00000145934 | TENM2 | 0 | INTRON | -5.0010834 | 5.70E-07 | 0.00530811 |
| 3 | 134731847 | 134731847 | 1 | 3_134731847 | ENSG00000154928 | EPHB1 | 0 | INTRON | -5.0010252 | 5.70E-07 | 0.00530811 |
| 12 | 45155693 | 45155693 | 1 | 12_45155693 | ENSG00000287386 | AC009248.3 | 8492 | Upstream | 5.00099478 | 5.70E-07 | 0.00530811 |
| 1 | 118611720 | 118611720 | 1 | 1_118611720 | ENSG00000226126 | PSMC1P12 | 2612 | Downstream | 5.00088272 | 5.71E-07 | 0.00530811 |
| 18 | 74338813 | 74338813 | 1 | 18_74338813 | ENSG00000206043 | C18orf63 | 0 | EXON | 5.00079049 | 5.71E-07 | 0.00530811 |
| 4 | 51938651 | 51938651 | 1 | 4_51938651 | ENSG00000272576 | AC027271.1 | 19270 | Downstream | -5.0007134 | 5.71E-07 | 0.00530811 |
| 12 | 49467263 | 49467263 | 1 | 12_49467263 | ENSG00000123352 | SPATS2 | 0 | INTRON | -5.0005372 | 5.72E-07 | 0.00531006 |
| 10 | 14859144 | 14859144 | 1 | 10_14859144 | ENSG00000187522 | HSPA14 | 0 | INTRON | 5.00019704 | 5.73E-07 | 0.00531653 |
| 1 | 157943415 | 157943415 | 1 | 1_157943415 | ENSG00000236957 | AL139010.1 | 0 | INTRON | 4.99958461 | 5.75E-07 | 0.00532996 |
| 8 | 7290626 | 7290626 | 1 | 8_7290626 | ENSG00000215373 | FAM90A5P | 224 | Downstream | -4.9994712 | 5.75E-07 | 0.00532996 |
| 13 | 101945533 | 101945533 | 1 | 13_101945533 | ENSG00000102466 | FGF14 | 0 | INTRON | -4.9993953 | 5.75E-07 | 0.00532996 |
| 5 | 124278247 | 124278247 | 1 | 5_124278247 | ENSG00000253807 | LINC01170 | 0 | INTRON | 4.99889313 | 5.77E-07 | 0.00534095 |
| 20 | 59084646 | 59084646 | 1 | 20_59084646 | ENSG00000232925 | MRPS16P2 | 28577 | Upstream | 4.99853228 | 5.78E-07 | 0.00534804 |
| 3 | 66756059 | 66756059 | 1 | 3_66756059 | ENSG00000288039 | AC098969.2 | 24016 | Downstream | -4.9981178 | 5.79E-07 | 0.00535663 |
| 1 | 194416742 | 194416742 | 1 | 1_194416742 | ENSG00000231714 | AL513348.1 | 64316 | Downstream | -4.997957 | 5.79E-07 | 0.00535681 |
| 20 | 54205593 | 54205593 | 1 | 20_54205593 | ENSG00000101132 | PFDN4 | 2493 | Upstream | 4.99790193 | 5.80E-07 | 0.00535681 |
| 1 | 55505835 | 55505835 | 1 | 1_55505835 | ENSG00000234810 | AL603840.1 | 0 | INTRON | 4.99773429 | 5.80E-07 | 0.00535856 |
| 14 | 65761308 | 65761308 | 1 | 14_65761308 | ENSG00000033170 | FUT8 | 17187 | Downstream | -4.9974119 | 5.81E-07 | 0.00536461 |
| 1 | 217165116 | 217165116 | 1 | 1_217165116 | ENSG00000196482 | ESRRG | 27361 | Upstream | 4.99727205 | 5.81E-07 | 0.00536559 |
| X | 64230416 | 64230416 | 1 | X_64230416 | ENSG00000287370 | AL356317.2 | 0 | INTRON | 4.99699332 | 5.82E-07 | 0.00537043 |
| 2 | 95774289 | 95774289 | 1 | 2_95774289 | ENSG00000237510 | GPAT2P1 | 15364 | Upstream | -4.99684 | 5.83E-07 | 0.00537179 |
| 8 | 133589549 | 133589549 | 1 | 8_133589549 | ENSG00000261220 | AC103706.1 | 15688 | Downstream | 4.99645626 | 5.84E-07 | 0.00537569 |
| 2 | 2483876 | 2483876 | 1 | 2_2483876 | ENSG00000186487 | MYT1L | 152212 | Upstream | -4.9963743 | 5.84E-07 | 0.00537569 |
| 1 | 234706736 | 234706736 | 1 | 1_234706736 | ENSG00000282097 | AL160408.6 | 2646 | Upstream | 4.99629206 | 5.84E-07 | 0.00537569 |
| 6 | 93147438 | 93147438 | 1 | 6_93147438 | ENSG00000235099 | AL138731.1 | 44054 | Downstream | 4.99625465 | 5.85E-07 | 0.00537569 |
| 18 | 45299365 | 45299365 | 1 | 18_45299365 | ENSG00000132874 | SLC14A2 | 0 | INTRON | -4.996178 | 5.85E-07 | 0.00537569 |
| 11 | 86140340 | 86140340 | 1 | 11_86140340 | ENSG00000200877 | RNU6-560P | 12886 | Upstream | 4.99532093 | 5.87E-07 | 0.00539487 |
| 12 | 66431505 | 66431505 | 1 | 12_66431505 | ENSG00000155974 | GRIP1 | 0 | INTRON | -4.9951981 | 5.88E-07 | 0.00539487 |
| 16 | 76579000 | 76579000 | 1 | 16_76579000 | ENSG00000287694 | AC106741.1 | 0 | INTRON | 4.99510831 | 5.88E-07 | 0.00539487 |
| 1 | 218664895 | 218664895 | 1 | 1_218664895 | ENSG00000212610 | U3 | 122996 | Upstream | -4.9950744 | 5.88E-07 | 0.00539487 |
| 17 | 43804861 | 43804861 | 1 | 17_43804861 | ENSG00000161647 | MPP3 | 0 | INTRON | 4.99429515 | 5.91E-07 | 0.00541377 |
| 11 | 34802719 | 34802719 | 1 | 11_34802719 | ENSG00000149089 | APIP | 50374 | Downstream | -4.9940561 | 5.91E-07 | 0.00541756 |
| 1 | 26142347 | 26142347 | 1 | 1_26142347 | ENSG00000197245 | FAM110D | 16731 | Upstream | 4.9937683 | 5.92E-07 | 0.00542019 |
| 7 | 53431609 | 53431609 | 1 | 7_53431609 | ENSG00000222154 | RN7SKP218 | 58538 | Downstream | -4.993755 | 5.92E-07 | 0.00542019 |
| 18 | 64791321 | 64791321 | 1 | 18_64791321 | ENSG00000286800 | AC090348.1 | 80942 | Downstream | 4.99339006 | 5.93E-07 | 0.00542659 |
| 10 | 16844687 | 16844687 | 1 | 10_16844687 | ENSG00000107611 | CUBN | 0 | INTRON | 4.99331936 | 5.94E-07 | 0.00542659 |
| 2 | 67714500 | 67714500 | 1 | 2_67714500 | ENSG00000235495 | AC007422.1 | 30423 | Upstream | 4.99313657 | 5.94E-07 | 0.00542882 |
| 7 | 106295454 | 106295454 | 1 | 7_106295454 | ENSG00000273320 | AC007032.1 | 9128 | Downstream | 4.99290208 | 5.95E-07 | 0.0054325 |
| 16 | 60627058 | 60627058 | 1 | 16_60627058 | ENSG00000259844 | GNPATP | 27176 | Downstream | 4.99270233 | 5.95E-07 | 0.00543349 |
| 16 | 60666425 | 60666425 | 1 | 16_60666425 | ENSG00000259844 | GNPATP | 9776 | Upstream | 4.99265954 | 5.96E-07 | 0.00543349 |
| 4 | 148750400 | 148750400 | 1 | 4_148750400 | ENSG00000287292 | AC002460.2 | 0 | INTRON | 4.99253459 | 5.96E-07 | 0.00543368 |
| 7 | 85433986 | 85433986 | 1 | 7_85433986 | ENSG00000225128 | LINC00972 | 0 | INTRON | 4.99244601 | 5.96E-07 | 0.00543368 |
| 1 | 189518443 | 189518443 | 1 | 1_189518443 | ENSG00000252553 | RNA5SP73 | 147705 | Downstream | 4.99224191 | 5.97E-07 | 0.00543392 |
| 13 | 53513287 | 53513287 | 1 | 13_53513287 | ENSG00000287722 | AL356295.1 | 0 | INTRON | 4.99223064 | 5.97E-07 | 0.00543392 |
| 10 | 36565458 | 36565458 | 1 | 10_36565458 | ENSG00000229644 | NAMPTP1 | 41224 | Upstream | -4.9918623 | 5.98E-07 | 0.00544138 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | 9236347 | 9236347 | 1 | 4_9236347 | ENSG00000288075 | AC108519.1 | 0 | INTRON | 4.99157352 | 5.99E-07 | 0.00544226 |
| 5 | 181441588 | 181441588 | 1 | 5_181441588 | ENSG00000213285 | RPL23AP45 | 30374 | Upstream | 4.99156539 | 5.99E-07 | 0.00544226 |
| 19 | 32012491 | 32012491 | 1 | 19_32012491 | ENSG00000267489 | LINC01837 | 0 | INTRON | 4.99152151 | 5.99E-07 | 0.00544226 |
| 11 | 14962321 | 14962321 | 1 | 11_14962321 | ENSG00000175868 | CALCB | 0 | INTRON | 4.99116851 | 6.00E-07 | 0.00544727 |
| 15 | 84477542 | 84477542 | 1 | 15_84477542 | ENSG00000278785 | Metazoa_SRP | 9395 | Downstream | -4.9911379 | 6.00E-07 | 0.00544727 |
| 4 | 157390022 | 157390022 | 1 | 4_157390022 | ENSG00000120251 | GRIA2 | 23947 | Downstream | 4.99090805 | 6.01E-07 | 0.00544934 |
| 19 | 13966677 | 13966677 | 1 | 19_13966677 | ENSG00000132005 | RFX1 | 0 | EXON | -4.9908584 | 6.01E-07 | 0.00544934 |
| 1 | 36220879 | 36220879 | 1 | 1_36220879 | ENSG00000054118 | THRAP3 | 3552 | Upstream | -4.9906041 | 6.02E-07 | 0.00545142 |
| 2 | 37138547 | 37138547 | 1 | 2_37138547 | ENSG00000055332 | EIF2AK2 | 0 | EXON | -4.9905528 | 6.02E-07 | 0.00545142 |
| 7 | 2547630 | 2547630 | 1 | 7_2547630 | ENSG00000106009 | BRAT1 | 0 | INTRON | 4.99038974 | 6.03E-07 | 0.00545142 |
| 16 | 87652196 | 87652196 | 1 | 16_87652196 | ENSG00000154118 | JPH3 | 0 | INTRON | -4.9903738 | 6.03E-07 | 0.00545142 |
| 5 | 116488167 | 116488167 | 1 | 5_116488167 | ENSG00000092421 | SEMA6A | 0 | EXON | -4.9899768 | 6.04E-07 | 0.00545741 |
| 16 | 36376165 | 36376165 | 1 | 16_36376165 | ENSG00000261084 | PPP1R1AP2 | 463649 | Downstream | -4.9899563 | 6.04E-07 | 0.00545741 |
| 3 | 139117472 | 139117472 | 1 | 3_139117472 | ENSG00000175110 | MRPS22 | 0 | INTRON | -4.9897469 | 6.05E-07 | 0.00546043 |
| 7 | 47843486 | 47843486 | 1 | 7_47843486 | ENSG00000158683 | PKD1L1 | 0 | INTRON | 4.98961611 | 6.05E-07 | 0.00546123 |
| 2 | 106526484 | 106526484 | 1 | 2_106526484 | ENSG00000232001 | AC108868.2 | 0 | INTRON | 4.98937047 | 6.06E-07 | 0.0054629 |
| 3 | 196637225 | 196637225 | 1 | 3_196637225 | ENSG00000174004 | NRROS | 2468 | Upstream | -4.9893521 | 6.06E-07 | 0.0054629 |
| 7 | 30302731 | 30302731 | 1 | 7_30302731 | ENSG00000180233 | ZNRF2 | 0 | INTRON | -4.9891919 | 6.06E-07 | 0.00546454 |
| 14 | 27213291 | 27213291 | 1 | 14_27213291 | ENSG00000258081 | AL110292.1 | 0 | INTRON | 4.98876422 | 6.08E-07 | 0.00547375 |
| 6 | 2042839 | 2042839 | 1 | 6_2042839 | ENSG00000112699 | GMDS | 0 | INTRON | 4.98851975 | 6.08E-07 | 0.00547661 |
| 14 | 54401537 | 54401537 | 1 | 14_54401537 | ENSG00000100526 | CDKN3 | 0 | EXON | 4.98837614 | 6.09E-07 | 0.00547661 |
| 1 | 2674137 | 2674137 | 1 | 1_2674137 | ENSG00000215912 | TTC34 | 0 | INTRON | -4.9883567 | 6.09E-07 | 0.00547661 |
| 17 | 63676798 | 63676798 | 1 | 17_63676798 | ENSG00000198909 | MAP3K3 | 0 | INTRON | -4.9879624 | 6.10E-07 | 0.00548334 |
| 9 | 128571989 | 128571989 | 1 | 9_128571989 | ENSG00000197694 | SPTAN1 | 0 | INTRON | -4.9878611 | 6.11E-07 | 0.00548334 |
| 6 | 11702290 | 11702290 | 1 | 6_11702290 | ENSG00000207419 | AL022724.1 | 7528 | Upstream | -4.9878131 | 6.11E-07 | 0.00548334 |
| 5 | 101854650 | 101854650 | 1 | 5_101854650 | ENSG00000251261 | OR7H2P | 37870 | Upstream | -4.9874738 | 6.12E-07 | 0.00549008 |
| 2 | 28438840 | 28438840 | 1 | 2_28438840 | ENSG00000227938 | AC104695.1 | 9326 | Downstream | 4.98724823 | 6.12E-07 | 0.00549097 |
| 5 | 83835952 | 83835952 | 1 | 5_83835952 | ENSG00000202157 | RNU4-11P | 32267 | Downstream | -4.9872138 | 6.13E-07 | 0.00549097 |
| 1 | 185623978 | 185623978 | 1 | 1_185623978 | ENSG00000228309 | LINC01350 | 0 | INTRON | 4.98704121 | 6.13E-07 | 0.00549097 |
| 14 | 98065073 | 98065073 | 1 | 14_98065073 | ENSG00000259097 | AL163932.1 | 3087 | Downstream | -4.987035 | 6.13E-07 | 0.00549097 |
| 6 | 145273679 | 145273679 | 1 | 6_145273679 | ENSG00000285598 | AL023283.1 | 22865 | Upstream | 4.98638407 | 6.15E-07 | 0.0055066 |
| 7 | 971028 | 971028 | 1 | 7_971028 | ENSG00000240230 | COX19 | 0 | INTRON | 4.98604979 | 6.16E-07 | 0.00551149 |
| 7 | 21829798 | 21829798 | 1 | 7_21829798 | ENSG00000105877 | DNAH11 | 0 | INTRON | 4.98593496 | 6.17E-07 | 0.00551149 |
| 15 | 32818876 | 32818876 | 1 | 15_32818876 | ENSG00000248905 | FMN1 | 0 | INTRON | -4.9859077 | 6.17E-07 | 0.00551149 |
| 18 | 48911602 | 48911602 | 1 | 18_48911602 | ENSG00000101665 | SMAD7 | 8250 | Downstream | -4.9854461 | 6.18E-07 | 0.00551847 |
| 5 | 75859803 | 75859803 | 1 | 5_75859803 | ENSG00000251419 | AC108120.3 | 27039 | Upstream | 4.98537507 | 6.18E-07 | 0.00551847 |
| 4 | 55322491 | 55322491 | 1 | 4_55322491 | ENSG00000250464 | LRRC34P2 | 8567 | Upstream | 4.98535845 | 6.18E-07 | 0.00551847 |
| 10 | 54260758 | 54260758 | 1 | 10_54260758 | ENSG00000150275 | PCDH15 | 0 | INTRON | 4.98516386 | 6.19E-07 | 0.00551933 |
| 6 | 48641356 | 48641356 | 1 | 6_48641356 | ENSG00000278736 | FO393412.1 | 60134 | Downstream | -4.9850578 | 6.19E-07 | 0.00551933 |
| 7 | 143737022 | 143737022 | 1 | 7_143737022 | ENSG00000170379 | TCAF2 | 6613 | Downstream | -4.9850246 | 6.20E-07 | 0.00551933 |
| 6 | 17197503 | 17197503 | 1 | 6_17197503 | ENSG00000287559 | AL136305.1 | 26739 | Downstream | 4.98445751 | 6.21E-07 | 0.00551934 |
| 4 | 84406411 | 84406411 | 1 | 4_84406411 | ENSG00000248749 | AC104063.1 | 26222 | Upstream | -4.9843434 | 6.22E-07 | 0.00551934 |
| 13 | 39819199 | 39819199 | 1 | 13_39819199 | ENSG00000224351 | CDKN2AIPNLP3 | 1150 | Upstream | 4.98432648 | 6.22E-07 | 0.00551934 |
| 5 | 169715191 | 169715191 | 1 | 5_169715191 | ENSG00000134516 | DOCK2 | 0 | INTRON | 4.98431966 | 6.22E-07 | 0.00551934 |
| 1 | 17363698 | 17363698 | 1 | 1_17363698 | ENSG00000159339 | PADI4 | 0 | EXON | 4.98424028 | 6.22E-07 | 0.00551934 |
| 12 | 108704403 | 108704403 | 1 | 12_108704403 | ENSG00000110880 | CORO1C | 0 | INTRON | -4.9841868 | 6.22E-07 | 0.00551934 |
| 6 | 88894152 | 88894152 | 1 | 6_88894152 | ENSG00000111880 | RNGTT | 0 | INTRON | 4.98409056 | 6.23E-07 | 0.00551934 |
| 15 | 75404652 | 75404652 | 1 | 15_75404652 | ENSG00000169375 | SIN3A | 0 | INTRON | 4.98403478 | 6.23E-07 | 0.00551934 |
| 5 | 115204595 | 115204595 | 1 | 5_115204595 | ENSG00000164219 | PGGT1B | 0 | 3UTR | 4.98402755 | 6.23E-07 | 0.00551934 |
| 7 | 15323959 | 15323959 | 1 | 7_15323959 | ENSG00000187546 | AGMO | 0 | INTRON | 4.98391763 | 6.23E-07 | 0.00551934 |
| 3 | 66472176 | 66472176 | 1 | 3_66472176 | ENSG00000144749 | LRIG1 | 0 | INTRON | 4.98376712 | 6.24E-07 | 0.00551934 |
| 4 | 14575815 | 14575815 | 1 | 4_14575815 | ENSG00000248360 | LINC00504 | 0 | INTRON | 4.98375304 | 6.24E-07 | 0.00551934 |
| 7 | 101990666 | 101990666 | 1 | 7_101990666 | ENSG00000257923 | CUX1 | 0 | INTRON | 4.9836131 | 6.24E-07 | 0.00551934 |
| 7 | 44485609 | 44485609 | 1 | 7_44485609 | ENSG00000015676 | NUDCD3 | 0 | EXON | 4.98353381 | 6.24E-07 | 0.00551934 |
| 5 | 167917520 | 167917520 | 1 | 5_167917520 | ENSG00000145934 | TENM2 | 0 | INTRON | 4.98337179 | 6.25E-07 | 0.00551934 |
| 18 | 64078762 | 64078762 | 1 | 18_64078762 | ENSG00000267134 | LINC01924 | 0 | INTRON | -4.9833595 | 6.25E-07 | 0.00551934 |
| 6 | 33568546 | 33568546 | 1 | 6_33568546 | ENSG00000204188 | GGNBP1 | 0 | INTRON | 4.98331074 | 6.25E-07 | 0.00551934 |
| 14 | 43319855 | 43319855 | 1 | 14_43319855 | ENSG00000286464 | AL583809.1 | 5052 | Downstream | -4.9828209 | 6.27E-07 | 0.00553046 |
| 2 | 32374629 | 32374629 | 1 | 2_32374629 | ENSG00000115760 | BIRC6 | 0 | INTRON | -4.9821634 | 6.29E-07 | 0.00554641 |
| 5 | 69979831 | 69979831 | 1 | 5_69979831 | ENSG00000249230 | CDH12P2 | 5372 | Downstream | 4.98186644 | 6.30E-07 | 0.00555206 |
| 9 | 82939308 | 82939308 | 1 | 9_82939308 | ENSG00000165105 | RASEF | 40281 | Downstream | -4.9815178 | 6.31E-07 | 0.00555919 |
| 3 | 127634349 | 127634349 | 1 | 3_127634349 | ENSG00000114631 | PODXL2 | 0 | INTRON | -4.9812579 | 6.32E-07 | 0.00556128 |
| 14 | 44937184 | 44937184 | 1 | 14_44937184 | ENSG00000179454 | KLHL28 | 0 | INTRON | 4.98124468 | 6.32E-07 | 0.00556128 |
| 2 | 43608286 | 43608286 | 1 | 2_43608286 | ENSG00000115970 | THADA | 12240 | Upstream | 4.98088173 | 6.33E-07 | 0.00556884 |
| 6 | 101317002 | 101317002 | 1 | 6_101317002 | ENSG00000164418 | GRIK2 | 0 | INTRON | 4.98055237 | 6.34E-07 | 0.00557545 |
| 8 | 45942898 | 45942898 | 1 | 8_45942898 | ENSG00000276685 | AC118650.1 | 85905 | Downstream | -4.9803204 | 6.35E-07 | 0.00557925 |
| 2 | 230745719 | 230745719 | 1 | 2_230745719 | ENSG00000135932 | CAB39 | 0 | INTRON | 4.98012721 | 6.35E-07 | 0.00558194 |
| 7 | 150130506 | 150130506 | 1 | 7_150130506 | ENSG00000241449 | AC092666.1 | 53851 | Downstream | 4.97970916 | 6.37E-07 | 0.00559077 |
| 11 | 9511272 | 9511272 | 1 | 11_9511272 | ENSG00000166478 | ZNF143 | 0 | INTRON | 4.97962162 | 6.37E-07 | 0.00559077 |
| 16 | 77138468 | 77138468 | 1 | 16_77138468 | ENSG00000279856 | AC106733.1 | 33171 | Downstream | 4.97885462 | 6.40E-07 | 0.00561007 |
| 3 | 150551353 | 150551353 | 1 | 3_150551353 | ENSG00000120742 | SERP1 | 0 | INTRON | 4.97867249 | 6.40E-07 | 0.0056108 |
| 22 | 15438693 | 15438693 | 1 | 22_15438693 | ENSG00000236831 | YME1L1P1 | 51296 | Upstream | -4.9786301 | 6.40E-07 | 0.0056108 |
| 6 | 27272739 | 27272739 | 1 | 6_27272739 | ENSG00000270935 | AL021808.1 | 3510 | Downstream | 4.97817411 | 6.42E-07 | 0.00562114 |
| X | 45860377 | 45860377 | 1 | X_45860377 | ENSG00000231566 | LINC02595 | 8836 | Upstream | -4.9778211 | 6.43E-07 | 0.0056285 |
| 2 | 34949567 | 34949567 | 1 | 2_34949567 | ENSG00000226994 | AC079352.1 | 0 | INTRON | 4.97705044 | 6.46E-07 | 0.00564071 |
| 2 | 110878195 | 110878195 | 1 | 2_110878195 | ENSG00000153093 | ACOXL | 0 | INTRON | -4.9767366 | 6.47E-07 | 0.00564071 |
| 10 | 38519136 | 38519136 | 1 | 10_38519136 | ENSG00000203496 | AL133216.1 | 52960 | Downstream | 4.97671138 | 6.47E-07 | 0.00564071 |
| 2 | 142085654 | 142085654 | 1 | 2_142085654 | ENSG00000168702 | LRP1B | 0 | INTRON | 4.97668993 | 6.47E-07 | 0.00564071 |
| 3 | 167747560 | 167747560 | 1 | 3_167747560 | ENSG00000163536 | SERPINI1 | 0 | INTRON | 4.97651888 | 6.47E-07 | 0.00564071 |
| X | 72192012 | 72192012 | 1 | X_72192012 | ENSG00000102309 | PIN4 | 0 | INTRON | -4.9765188 | 6.47E-07 | 0.00564071 |
| 2 | 28380839 | 28380839 | 1 | 2_28380839 | ENSG00000229951 | AC104695.2 | 3569 | Downstream | 4.97648758 | 6.47E-07 | 0.00564071 |
| 8 | 107739582 | 107739582 | 1 | 8_107739582 | ENSG00000248838 | PGAM1P13 | 91550 | Downstream | 4.97647377 | 6.48E-07 | 0.00564071 |
| 5 | 159251244 | 159251244 | 1 | 5_159251244 | ENSG00000253256 | AC134043.2 | 2448 | Downstream | -4.9764383 | 6.48E-07 | 0.00564071 |
| 21 | 15907867 | 15907867 | 1 | 21_15907867 | ENSG00000215386 | MIR99AHG | 20428 | Upstream | 4.97636978 | 6.48E-07 | 0.00564071 |
| 3 | 136840869 | 136840869 | 1 | 3_136840869 | ENSG00000168917 | SLC35G2 | 0 | INTRON | -4.9762827 | 6.48E-07 | 0.00564071 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
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| 10 | 127966842 | 127966842 | 1 | 10_127966842 | ENSG00000132334 | PTPRE | 0 | INTRON | 4.97621005 | 6.48E-07 | 0.00564071 |
| 12 | 53512385 | 53512385 | 1 | 12_53512385 | ENSG00000170653 | ATF7 | 0 | 3UTR | -4.9759932 | 6.49E-07 | 0.00564292 |
| 6 | 94456614 | 94456614 | 1 | 6_94456614 | ENSG00000216853 | MTCYBP36 | 9435 | Upstream | -4.9759284 | 6.49E-07 | 0.00564292 |
| 21 | 34843849 | 34843849 | 1 | 21_34843849 | ENSG00000286153 | AP000331.1 | 0 | INTRON | 4.97566745 | 6.50E-07 | 0.00564292 |
| 6 | 169632515 | 169632515 | 1 | 6_169632515 | ENSG00000285733 | AL031315.1 | 0 | INTRON | 4.97557822 | 6.51E-07 | 0.00564292 |
| 3 | 68800676 | 68800676 | 1 | 3_68800676 | ENSG00000163377 | TAFA4 | 0 | INTRON | -4.9755523 | 6.51E-07 | 0.00564292 |
| 11 | 80594562 | 80594562 | 1 | 11_80594562 | ENSG00000255014 | ARL6IP1P3 | 58866 | Downstream | 4.97554077 | 6.51E-07 | 0.00564292 |
| 1 | 9517052 | 9517052 | 1 | 1_9517052 | ENSG00000235263 | AL928921.1 | 13581 | Upstream | 4.97535771 | 6.51E-07 | 0.00564324 |
| 11 | 108923894 | 108923894 | 1 | 11_108923894 | ENSG00000178105 | DDX10 | 0 | INTRON | 4.97533234 | 6.51E-07 | 0.00564324 |
| 19 | 29847914 | 29847914 | 1 | 19_29847914 | ENSG00000286538 | AC008798.2 | 6096 | Upstream | 4.9751121 | 6.52E-07 | 0.00564679 |
| 1 | 242449798 | 242449798 | 1 | 1_242449798 | ENSG00000180287 | PLD5 | 0 | INTRON | -4.9749189 | 6.53E-07 | 0.00564955 |
| 13 | 89060678 | 89060678 | 1 | 13_89060678 | ENSG00000286422 | AL445242.1 | 81121 | Downstream | -4.9740626 | 6.56E-07 | 0.00567146 |
| 11 | 87658397 | 87658397 | 1 | 11_87658397 | ENSG00000283412 | U6 | 9848 | Upstream | -4.9739721 | 6.56E-07 | 0.00567146 |
| 19 | 55372590 | 55372590 | 1 | 19_55372590 | ENSG00000095752 | IL11 | 2127 | Upstream | 4.97376436 | 6.57E-07 | 0.00567466 |
| 2 | 114484246 | 114484246 | 1 | 2_114484246 | ENSG00000175497 | DPP10 | 0 | INTRON | 4.97364242 | 6.57E-07 | 0.0056749 |
| 15 | 57653033 | 57653033 | 1 | 15_57653033 | ENSG00000137878 | GCOM1 | 0 | INTRON | -4.9735593 | 6.57E-07 | 0.0056749 |
| 5 | 120293971 | 120293971 | 1 | 5_120293971 | ENSG00000251293 | AC008574.1 | 0 | INTRON | 4.97308986 | 6.59E-07 | 0.00568578 |
| 4 | 40990650 | 40990650 | 1 | 4_40990650 | ENSG00000163697 | APBB2 | 0 | INTRON | 4.97298603 | 6.59E-07 | 0.00568595 |
| X | 25270342 | 25270342 | 1 | X_25270342 | ENSG00000176812 | AC112778.1 | 75135 | Upstream | -4.9728054 | 6.60E-07 | 0.0056874 |
| 2 | 234212132 | 234212132 | 1 | 2_234212132 | ENSG00000261298 | AC122134.1 | 10705 | Upstream | 4.97266407 | 6.60E-07 | 0.0056874 |
| 3 | 120367183 | 120367183 | 1 | 3_120367183 | ENSG00000240661 | AC063952.1 | 0 | INTRON | -4.9726247 | 6.61E-07 | 0.0056874 |
| 8 | 3093262 | 3093262 | 1 | 8_3093262 | ENSG00000183117 | CSMD1 | 0 | INTRON | -4.9724718 | 6.61E-07 | 0.0056874 |
| X | 136954831 | 136954831 | 1 | X_136954831 | ENSG00000234062 | AL390879.1 | 0 | INTRON | 4.97244617 | 6.61E-07 | 0.0056874 |
| 16 | 12650712 | 12650712 | 1 | 16_12650712 | ENSG00000103381 | CPPED1 | 9086 | Downstream | -4.9719206 | 6.63E-07 | 0.00569996 |
| 2 | 23910271 | 23910271 | 1 | 2_23910271 | ENSG00000119778 | ATAD2B | 0 | INTRON | -4.9716918 | 6.64E-07 | 0.00570164 |
| 2 | 8401940 | 8401940 | 1 | 2_8401940 | ENSG00000236790 | LINC00299 | 0 | INTRON | 4.97165796 | 6.64E-07 | 0.00570164 |
| 11 | 104315980 | 104315980 | 1 | 11_104315980 | ENSG00000280773 | AP003304.1 | 63329 | Downstream | -4.9715369 | 6.64E-07 | 0.00570164 |
| 13 | 26477712 | 26477712 | 1 | 13_26477712 | ENSG00000285929 | AL353789.1 | 11239 | Upstream | 4.97147189 | 6.64E-07 | 0.00570164 |
| 18 | 24201279 | 24201279 | 1 | 18_24201279 | ENSG00000141447 | OSBPL1A | 0 | INTRON | 4.97105756 | 6.66E-07 | 0.00571096 |
| 1 | 60688183 | 60688183 | 1 | 1_60688183 | ENSG00000231252 | AC099792.1 | 0 | INTRON | 4.9709216 | 6.66E-07 | 0.00571209 |
| 2 | 63581777 | 63581777 | 1 | 2_63581777 | ENSG00000143951 | WDPCP | 0 | INTRON | -4.9707528 | 6.67E-07 | 0.00571419 |
| 4 | 115943246 | 115943246 | 1 | 4_115943246 | ENSG00000249259 | AC027613.1 | 0 | INTRON | -4.9704143 | 6.68E-07 | 0.00572129 |
| 4 | 40698071 | 40698071 | 1 | 4_40698071 | ENSG00000287182 | AC131953.2 | 45555 | Downstream | 4.97012197 | 6.69E-07 | 0.00572704 |
| X | 41462051 | 41462051 | 1 | X_41462051 | ENSG00000188937 | NYX | 0 | INTRON | -4.969825 | 6.70E-07 | 0.00573294 |
| 10 | 93542654 | 93542654 | 1 | 10_93542654 | ENSG00000138180 | CEP55 | 13562 | Downstream | 4.9696872 | 6.71E-07 | 0.00573413 |
| 5 | 84042533 | 84042533 | 1 | 5_84042533 | ENSG00000164176 | EDIL3 | 0 | INTRON | -4.969582 | 6.71E-07 | 0.00573436 |
| 2 | 103906343 | 103906343 | 1 | 2_103906343 | ENSG00000256637 | LINC01965 | 0 | INTRON | 4.9694235 | 6.72E-07 | 0.00573617 |
| 11 | 13359795 | 13359795 | 1 | 11_13359795 | ENSG00000133794 | ARNTL | 0 | INTRON | 4.96932197 | 6.72E-07 | 0.00573629 |
| 7 | 72430172 | 72430172 | 1 | 7_72430172 | ENSG00000183166 | CALN1 | 0 | INTRON | -4.9692168 | 6.72E-07 | 0.00573653 |
| 8 | 7588727 | 7588727 | 1 | 8_7588727 | ENSG00000233176 | OR7E157P | 3278 | Upstream | -4.9690673 | 6.73E-07 | 0.00573807 |
| 5 | 25745451 | 25745451 | 1 | 5_25745451 | ENSG00000279869 | AC022418.1 | 28736 | Downstream | 4.96889497 | 6.73E-07 | 0.0057403 |
| 1 | 69286483 | 69286483 | 1 | 1_69286483 | ENSG00000235446 | LINC02791 | 37006 | Upstream | -4.9686808 | 6.74E-07 | 0.00574376 |
| 10 | 71551846 | 71551846 | 1 | 10_71551846 | ENSG00000107736 | CDH23 | 0 | INTRON | -4.968232 | 6.76E-07 | 0.00575419 |
| 14 | 54972268 | 54972268 | 1 | 14_54972268 | ENSG00000198554 | WDHD1 | 0 | INTRON | 4.96795963 | 6.77E-07 | 0.00575639 |
| 5 | 180797160 | 180797160 | 1 | 5_180797160 | ENSG00000131446 | MGAT1 | 0 | INTRON | 4.96773985 | 6.77E-07 | 0.00575639 |
| 5 | 14260208 | 14260208 | 1 | 5_14260208 | ENSG00000038382 | TRIO | 0 | INTRON | 4.96772447 | 6.77E-07 | 0.00575639 |
| 3 | 18459623 | 18459623 | 1 | 3_18459623 | ENSG00000228956 | SATB1-AS1 | 0 | INTRON | 4.96771496 | 6.77E-07 | 0.00575639 |
| 3 | 159060903 | 159060903 | 1 | 3_159060903 | ENSG00000283154 | IQCJ-SCHIP1 | 0 | INTRON | -4.9676729 | 6.78E-07 | 0.00575639 |
| 22 | 24915183 | 24915183 | 1 | 22_24915183 | ENSG00000167037 | SGSM1 | 0 | INTRON | 4.96725561 | 6.79E-07 | 0.00576378 |
| 17 | 19860546 | 19860546 | 1 | 17_19860546 | ENSG00000083290 | ULK2 | 0 | INTRON | 4.96723049 | 6.79E-07 | 0.00576378 |
| 11 | 108812709 | 108812709 | 1 | 11_108812709 | ENSG00000178105 | DDX10 | 0 | INTRON | -4.9670467 | 6.80E-07 | 0.00576637 |
| 3 | 128981197 | 128981197 | 1 | 3_128981197 | ENSG00000114656 | KIAA1257 | 0 | INTRON | 4.9666998 | 6.81E-07 | 0.00577381 |
| 1 | 23741253 | 23741253 | 1 | 1_23741253 | ENSG00000236810 | ELOA-AS1 | 0 | INTRON | -4.9665754 | 6.81E-07 | 0.00577463 |
| 7 | 43417630 | 43417630 | 1 | 7_43417630 | ENSG00000002746 | HECW1 | 0 | INTRON | 4.96622422 | 6.83E-07 | 0.00578222 |
| 2 | 99602108 | 99602108 | 1 | 2_99602108 | ENSG00000144218 | AFF3 | 0 | INTRON | 4.96552533 | 6.85E-07 | 0.00580019 |
| 4 | 3888217 | 3888217 | 1 | 4_3888217 | ENSG00000251166 | OR7E163P | 1138 | Downstream | 4.9653751 | 6.86E-07 | 0.0058018 |
| 5 | 159977973 | 159977973 | 1 | 5_159977973 | ENSG00000170214 | ADRA1B | 4961 | Downstream | 4.96527735 | 6.86E-07 | 0.00580184 |
| 18 | 261191 | 261191 | 1 | 18_261191 | ENSG00000079134 | THOC1 | 0 | INTRON | 4.9650112 | 6.87E-07 | 0.00580691 |
| 15 | 84410236 | 84410236 | 1 | 15_84410236 | ENSG00000235370 | DNM1P51 | 0 | EXON | -4.9648323 | 6.88E-07 | 0.00580938 |
| 1 | 236118892 | 236118892 | 1 | 1_236118892 | ENSG00000286142 | AL122018.2 | 4774 | Upstream | 4.96446782 | 6.89E-07 | 0.00581741 |
| 5 | 88759095 | 88759095 | 1 | 5_88759095 | ENSG00000245864 | MEF2C-AS2 | 0 | INTRON | 4.9643572 | 6.89E-07 | 0.00581784 |
| 21 | 30817956 | 30817956 | 1 | 21_30817956 | ENSG00000183640 | KRTAP8-1 | 4682 | Upstream | -4.9639667 | 6.91E-07 | 0.00582667 |
| 10 | 90572151 | 90572151 | 1 | 10_90572151 | ENSG00000236373 | LINC02653 | 0 | INTRON | -4.963726 | 6.92E-07 | 0.00583101 |
| 6 | 51725652 | 51725652 | 1 | 6_51725652 | ENSG00000170927 | PKHD1 | 0 | INTRON | 4.96338482 | 6.93E-07 | 0.00583816 |
| 7 | 119356354 | 119356354 | 1 | 7_119356354 | ENSG00000225546 | LINC02476 | 138669 | Downstream | -4.9632958 | 6.93E-07 | 0.00583816 |
| 4 | 49309866 | 49309866 | 1 | 4_49309866 | ENSG00000248946 | MTND3P22 | 62951 | Downstream | -4.9630233 | 6.94E-07 | 0.00584076 |
| 2 | 61085596 | 61085596 | 1 | 2_61085596 | ENSG00000162929 | KIAA1841 | 0 | INTRON | 4.9630171 | 6.94E-07 | 0.00584076 |
| 16 | 24878141 | 24878141 | 1 | 16_24878141 | ENSG00000158865 | SLC5A11 | 0 | INTRON | -4.9627269 | 6.95E-07 | 0.00584661 |
| 6 | 25514780 | 25514780 | 1 | 6_25514780 | ENSG00000079691 | CARMIL1 | 0 | INTRON | 4.96116582 | 7.01E-07 | 0.00589089 |
| 13 | 27669182 | 27669182 | 1 | 13_27669182 | ENSG00000273552 | AL136439.1 | 0 | INTRON | -4.9610595 | 7.01E-07 | 0.0058912 |
| 4 | 98341748 | 98341748 | 1 | 4_98341748 | ENSG00000138698 | RAP1GDS1 | 0 | INTRON | 4.96084733 | 7.02E-07 | 0.00589473 |
| 12 | 119750178 | 119750178 | 1 | 12_119750178 | ENSG00000122966 | CIT | 0 | INTRON | -4.9607145 | 7.02E-07 | 0.00589585 |
| 10 | 97250528 | 97250528 | 1 | 10_97250528 | ENSG00000213390 | ARHGAP19 | 0 | INTRON | -4.9601288 | 7.04E-07 | 0.00590884 |
| 8 | 38956941 | 38956941 | 1 | 8_38956941 | ENSG00000169499 | PLEKHA2 | 0 | INTRON | -4.9600955 | 7.05E-07 | 0.00590884 |
| X | 112630482 | 112630482 | 1 | X_112630482 | ENSG00000182508 | LHFPL1 | 165 | Downstream | -4.9593271 | 7.07E-07 | 0.00592933 |
| 7 | 105126791 | 105126791 | 1 | 7_105126791 | ENSG00000135250 | SRPK2 | 0 | INTRON | -4.9592287 | 7.08E-07 | 0.00592942 |
| 16 | 84978642 | 84978642 | 1 | 16_84978642 | ENSG00000153786 | ZDHHC7 | 0 | INTRON | 4.9591051 | 7.08E-07 | 0.00593027 |
| 1 | 209314722 | 209314722 | 1 | 1_209314722 | ENSG00000227940 | LINC01696 | 10669 | Upstream | -4.9589582 | 7.09E-07 | 0.00593058 |
| 18 | 8584892 | 8584892 | 1 | 18_8584892 | ENSG00000206418 | RAB12 | 24544 | Upstream | 4.95890375 | 7.09E-07 | 0.00593058 |
| 1 | 83988771 | 83988771 | 1 | 1_83988771 | ENSG00000137941 | TTLL7 | 0 | INTRON | -4.9584193 | 7.11E-07 | 0.00594246 |
| 5 | 96401650 | 96401650 | 1 | 5_96401650 | ENSG00000251314 | AC104123.1 | 0 | INTRON | 4.95825334 | 7.11E-07 | 0.00594462 |
| 8 | 17339147 | 17339147 | 1 | 8_17339147 | ENSG00000003987 | MTMR7 | 0 | INTRON | -4.9572897 | 7.15E-07 | 0.00597104 |
| 6 | 108019282 | 108019282 | 1 | 6_108019282 | ENSG00000271734 | Z98200.1 | 10966 | Downstream | -4.9571818 | 7.15E-07 | 0.00597104 |
| 10 | 102429841 | 102429841 | 1 | 10_102429841 | ENSG00000107874 | CUEDC2 | 0 | INTRON | 4.95710556 | 7.16E-07 | 0.00597104 |
| 2 | 22984503 | 22984503 | 1 | 2_22984503 | ENSG00000232451 | AC018467.1 | 33621 | Downstream | 4.95684201 | 7.16E-07 | 0.00597621 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
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| 10 | 121485713 | 121485713 | 1 | 10_121485713 | ENSG00000066468 | FGFR2 | 0 | INTRON | 4.9565101 | 7.18E-07 | 0.00598126 |
| 17 | 63547938 | 63547938 | 1 | 17_63547938 | ENSG00000173826 | KCNH6 | 0 | INTRON | 4.95648738 | 7.18E-07 | 0.00598126 |
| 15 | 43909276 | 43909276 | 1 | 15_43909276 | ENSG00000171877 | FRMD5 | 0 | INTRON | -4.9559509 | 7.20E-07 | 0.00599485 |
| 1 | 199403246 | 199403246 | 1 | 1_199403246 | ENSG00000231718 | LINC02789 | 9939 | Downstream | 4.95571149 | 7.21E-07 | 0.0059993 |
| 5 | 56919314 | 56919314 | 1 | 5_56919314 | ENSG00000155542 | SETD9 | 0 | INTRON | 4.95550558 | 7.21E-07 | 0.00600272 |
| 14 | 40213349 | 40213349 | 1 | 14_40213349 | ENSG00000258526 | AL049828.1 | 0 | INTRON | -4.9550915 | 7.23E-07 | 0.00600967 |
| 15 | 25699236 | 25699236 | 1 | 15_25699236 | ENSG00000206190 | ATP10A | 0 | INTRON | -4.9550817 | 7.23E-07 | 0.00600967 |
| 17 | 4908917 | 4908917 | 1 | 17_4908917 | ENSG00000108556 | CHRNE | 0 | INTRON | -4.9549956 | 7.23E-07 | 0.00600967 |
| 3 | 177975706 | 177975706 | 1 | 3_177975706 | ENSG00000270321 | AC007953.2 | 15889 | Upstream | -4.9548668 | 7.24E-07 | 0.00601072 |
| X | 55991468 | 55991468 | 1 | X_55991468 | ENSG00000227486 | AL050309.1 | 0 | INTRON | -4.9546947 | 7.24E-07 | 0.00601269 |
| 1 | 206058802 | 206058802 | 1 | 1_206058802 | ENSG00000263961 | RHEX | 0 | INTRON | 4.95458525 | 7.25E-07 | 0.00601269 |
| 5 | 4111251 | 4111251 | 1 | 5_4111251 | ENSG00000250921 | LINC02063 | 24386 | Upstream | 4.9543938 | 7.26E-07 | 0.00601269 |
| 7 | 83186649 | 83186649 | 1 | 7_83186649 | ENSG00000186472 | PCLO | 23719 | Upstream | -4.9543033 | 7.26E-07 | 0.00601269 |
| 3 | 47317143 | 47317143 | 1 | 3_47317143 | ENSG00000114648 | KLHL18 | 0 | INTRON | 4.9542752 | 7.26E-07 | 0.00601269 |
| 2 | 137713339 | 137713339 | 1 | 2_137713339 | ENSG00000222394 | Y_RNA | 1992 | Upstream | 4.95413567 | 7.27E-07 | 0.00601269 |
| 6 | 158746122 | 158746122 | 1 | 6_158746122 | ENSG00000164674 | SYTL3 | 0 | INTRON | -4.9541118 | 7.27E-07 | 0.00601269 |
| 7 | 86617848 | 86617848 | 1 | 7_86617848 | ENSG00000198822 | GRM3 | 26065 | Upstream | 4.95404517 | 7.27E-07 | 0.00601269 |
| 8 | 72692002 | 72692002 | 1 | 8_72692002 | ENSG00000182674 | KCNB2 | 0 | INTRON | -4.9537134 | 7.28E-07 | 0.00601749 |
| 8 | 37813465 | 37813465 | 1 | 8_37813465 | ENSG00000020181 | ADGRA2 | 0 | INTRON | 4.95363159 | 7.28E-07 | 0.00601749 |
| 1 | 143380801 | 143380801 | 1 | 1_143380801 | ENSG00000277095 | AC242852.2 | 0 | INTRON | 4.95360648 | 7.29E-07 | 0.00601749 |
| 20 | 51195359 | 51195359 | 1 | 20_51195359 | ENSG00000228820 | RPSAP1 | 63692 | Upstream | 4.95322017 | 7.30E-07 | 0.00602226 |
| 12 | 101523603 | 101523603 | 1 | 12_101523603 | ENSG00000166211 | SPIC | 36606 | Downstream | -4.9532185 | 7.30E-07 | 0.00602226 |
| 15 | 78962169 | 78962169 | 1 | 15_78962169 | ENSG00000058335 | RASGRF1 | 0 | EXON | 4.9531356 | 7.30E-07 | 0.00602226 |
| 1 | 37666479 | 37666479 | 1 | 1_37666479 | ENSG00000116922 | C1orf109 | 15090 | Downstream | 4.95307528 | 7.30E-07 | 0.00602226 |
| 3 | 10299688 | 10299688 | 1 | 3_10299688 | ENSG00000157020 | SEC13 | 0 | INTRON | -4.9529669 | 7.31E-07 | 0.0060223 |
| X | 45158861 | 45158861 | 1 | X_45158861 | ENSG00000147113 | DIPK2B | 0 | INTRON | 4.95288544 | 7.31E-07 | 0.0060223 |
| 2 | 107706125 | 107706125 | 1 | 2_107706125 | ENSG00000286769 | AC064869.1 | 0 | INTRON | -4.9526368 | 7.32E-07 | 0.0060267 |
| 14 | 67930680 | 67930680 | 1 | 14_67930680 | ENSG00000182185 | RAD51B | 0 | INTRON | -4.9524739 | 7.33E-07 | 0.0060267 |
| 8 | 133243206 | 133243206 | 1 | 8_133243206 | ENSG00000104419 | NDRG1 | 0 | INTRON | 4.95244068 | 7.33E-07 | 0.0060267 |
| 1 | 100241831 | 100241831 | 1 | 1_100241831 | ENSG00000285530 | AL445928.2 | 0 | INTRON | 4.95236709 | 7.33E-07 | 0.0060267 |
| 9 | 84027579 | 84027579 | 1 | 9_84027579 | ENSG00000178966 | RMI1 | 23505 | Downstream | -4.9515561 | 7.36E-07 | 0.00604813 |
| X | 75999864 | 75999864 | 1 | X_75999864 | ENSG00000232332 | AC233982.1 | 30030 | Upstream | -4.9514888 | 7.36E-07 | 0.00604813 |
| 9 | 23770977 | 23770977 | 1 | 9_23770977 | ENSG00000107105 | ELAVL2 | 0 | INTRON | 4.95125006 | 7.37E-07 | 0.00605263 |
| 7 | 32665356 | 32665356 | 1 | 7_32665356 | ENSG00000229358 | DPY19L1P1 | 0 | INTRON | -4.9508273 | 7.39E-07 | 0.00606287 |
| 5 | 20810991 | 20810991 | 1 | 5_20810991 | ENSG00000251629 | LINC02241 | 0 | INTRON | 4.95061239 | 7.40E-07 | 0.00606522 |
| 12 | 112460734 | 112460734 | 1 | 12_112460734 | ENSG00000179295 | PTPN11 | 0 | INTRON | 4.95055831 | 7.40E-07 | 0.00606522 |
| 9 | 79315337 | 79315337 | 1 | 9_79315337 | ENSG00000186940 | CHCHD2P9 | 75966 | Upstream | 4.95038287 | 7.41E-07 | 0.00606522 |
| 16 | 17288254 | 17288254 | 1 | 16_17288254 | ENSG00000103489 | XYLT1 | 0 | INTRON | 4.95019882 | 7.41E-07 | 0.00606522 |
| 7 | 61023405 | 61023405 | 1 | 7_61023405 | ENSG00000233918 | AC128676.1 | 1251955 | Downstream | -4.9501634 | 7.42E-07 | 0.00606522 |
| 2 | 235688418 | 235688418 | 1 | 2_235688418 | ENSG00000157985 | AGAP1 | 0 | INTRON | 4.95007773 | 7.42E-07 | 0.00606522 |
| 4 | 179655287 | 179655287 | 1 | 4_179655287 | ENSG00000250993 | AC020551.1 | 189982 | Upstream | -4.9500313 | 7.42E-07 | 0.00606522 |
| 8 | 81574525 | 81574525 | 1 | 8_81574525 | ENSG00000251521 | IMPA1P1 | 31043 | Downstream | 4.95000264 | 7.42E-07 | 0.00606522 |
| 22 | 38764081 | 38764081 | 1 | 22_38764081 | ENSG00000100242 | SUN2 | 0 | INTRON | 4.94968458 | 7.43E-07 | 0.00607223 |
| 17 | 20244731 | 20244731 | 1 | 17_20244731 | ENSG00000263494 | AC004702.1 | 0 | INTRON | -4.9495533 | 7.44E-07 | 0.00607339 |
| 6 | 138251001 | 138251001 | 1 | 6_138251001 | ENSG00000112379 | ARFGEF3 | 0 | INTRON | -4.9494606 | 7.44E-07 | 0.00607339 |
| 7 | 32113985 | 32113985 | 1 | 7_32113985 | ENSG00000154678 | PDE1C | 0 | INTRON | -4.9492846 | 7.45E-07 | 0.00607597 |
| 5 | 39396137 | 39396137 | 1 | 5_39396137 | ENSG00000153071 | DAB2 | 0 | INTRON | -4.9491563 | 7.45E-07 | 0.00607706 |
| 11 | 16934509 | 16934509 | 1 | 11_16934509 | ENSG00000166689 | PLEKHA7 | 0 | INTRON | 4.94811395 | 7.49E-07 | 0.00610676 |
| 7 | 155741942 | 155741942 | 1 | 7_155741942 | ENSG00000184863 | RBM33 | 0 | 3UTR | -4.9477473 | 7.51E-07 | 0.00611534 |
| 5 | 147101679 | 147101679 | 1 | 5_147101679 | ENSG00000286468 | AC010251.1 | 4439 | Downstream | 4.94727532 | 7.53E-07 | 0.00612725 |
| 4 | 109865129 | 109865129 | 1 | 4_109865129 | ENSG00000183423 | LRIT3 | 0 | 5UTR | 4.94674954 | 7.55E-07 | 0.00613803 |
| 21 | 23505180 | 23505180 | 1 | 21_23505180 | ENSG00000227716 | AP000459.1 | 14456 | Downstream | -4.9466621 | 7.55E-07 | 0.00613803 |
| 4 | 56524970 | 56524970 | 1 | 4_56524970 | ENSG00000196503 | ARL9 | 0 | 3UTR | 4.94665379 | 7.55E-07 | 0.00613803 |
| 12 | 82245465 | 82245465 | 1 | 12_82245465 | ENSG00000133773 | CCDC59 | 0 | INTRON | 4.94649859 | 7.56E-07 | 0.00613999 |
| X | 5917212 | 5917212 | 1 | X_5917212 | ENSG00000146938 | NLGN4X | 0 | INTRON | -4.946224 | 7.57E-07 | 0.00614292 |
| 20 | 18388945 | 18388945 | 1 | 20_18388945 | ENSG00000089091 | DZANK1 | 0 | INTRON | 4.94621972 | 7.57E-07 | 0.00614292 |
| 20 | 11695164 | 11695164 | 1 | 20_11695164 | ENSG00000261411 | AL161938.1 | 7841 | Upstream | 4.94605191 | 7.57E-07 | 0.00614528 |
| 19 | 45367539 | 45367539 | 1 | 19_45367539 | ENSG00000104884 | ERCC2 | 0 | INTRON | -4.9459471 | 7.58E-07 | 0.00614566 |
| 8 | 34353888 | 34353888 | 1 | 8_34353888 | ENSG00000253108 | AC090993.1 | 7157 | Downstream | 4.94573845 | 7.59E-07 | 0.0061486 |
| 5 | 154974310 | 154974310 | 1 | 5_154974310 | ENSG00000082515 | MRPL22 | 4899 | Downstream | 4.94566343 | 7.59E-07 | 0.0061486 |
| 1 | 155025489 | 155025489 | 1 | 1_155025489 | ENSG00000163354 | DCST2 | 0 | INTRON | 4.94556423 | 7.59E-07 | 0.0061486 |
| 9 | 61221315 | 61221315 | 1 | 9_61221315 | ENSG00000275676 | BX005040.1 | 8597 | Downstream | 4.94548287 | 7.60E-07 | 0.0061486 |
| 9 | 107325935 | 107325935 | 1 | 9_107325935 | ENSG00000119318 | RAD23B | 0 | INTRON | -4.9452927 | 7.60E-07 | 0.0061496 |
| 7 | 98647128 | 98647128 | 1 | 7_98647128 | ENSG00000106236 | NPTX2 | 17259 | Downstream | 4.9452659 | 7.60E-07 | 0.0061496 |
| 11 | 125146074 | 125146074 | 1 | 11_125146074 | ENSG00000255475 | AP001007.2 | 6487 | Upstream | 4.94449448 | 7.63E-07 | 0.00616986 |
| 21 | 28224499 | 28224499 | 1 | 21_28224499 | ENSG00000236532 | LINC01695 | 0 | INTRON | -4.9441024 | 7.65E-07 | 0.00616986 |
| 4 | 139436236 | 139436236 | 1 | 4_139436236 | ENSG00000273247 | AC097376.3 | 0 | INTRON | 4.94406505 | 7.65E-07 | 0.00616986 |
| 13 | 56024045 | 56024045 | 1 | 13_56024045 | ENSG00000228611 | HNF4GP1 | 23597 | Upstream | 4.94406261 | 7.65E-07 | 0.00616986 |
| 2 | 79345468 | 79345468 | 1 | 2_79345468 | ENSG00000066032 | CTNNA2 | 0 | INTRON | 4.94392251 | 7.66E-07 | 0.00616986 |
| 1 | 195766688 | 195766688 | 1 | 1_195766688 | ENSG00000287364 | AL353709.1 | 3187 | Upstream | 4.94381899 | 7.66E-07 | 0.00616986 |
| 2 | 195072478 | 195072478 | 1 | 2_195072478 | ENSG00000235056 | AC010983.1 | 46108 | Upstream | 4.9437843 | 7.66E-07 | 0.00616986 |
| 7 | 152546771 | 152546771 | 1 | 7_152546771 | ENSG00000231139 | AC104843.2 | 43869 | Downstream | -4.9437714 | 7.66E-07 | 0.00616986 |
| 4 | 186758110 | 186758110 | 1 | 4_186758110 | ENSG00000083857 | FAT1 | 31388 | Upstream | 4.94376104 | 7.66E-07 | 0.00616986 |
| 3 | 115762725 | 115762725 | 1 | 3_115762725 | ENSG00000185565 | LSAMP | 39637 | Downstream | 4.94347421 | 7.67E-07 | 0.00616986 |
| 4 | 174511046 | 174511046 | 1 | 4_174511046 | ENSG00000164120 | HPGD | 0 | INTRON | 4.94347395 | 7.67E-07 | 0.00616986 |
| 8 | 12887111 | 12887111 | 1 | 8_12887111 | ENSG00000250305 | TRMT9B | 58530 | Upstream | -4.9434388 | 7.68E-07 | 0.00616986 |
| 9 | 81806470 | 81806470 | 1 | 9_81806470 | ENSG00000233926 | AL591368.1 | 29570 | Downstream | 4.94325402 | 7.68E-07 | 0.00616986 |
| 10 | 75470757 | 75470757 | 1 | 10_75470757 | ENSG00000148655 | LRMDA | 0 | INTRON | -4.9432416 | 7.68E-07 | 0.00616986 |
| 1 | 121593873 | 121593873 | 1 | 1_121593873 | ENSG00000224857 | LINC01691 | 13349 | Upstream | -4.9432412 | 7.68E-07 | 0.00616986 |
| 2 | 238810457 | 238810457 | 1 | 2_238810457 | ENSG00000226992 | AC145625.1 | 20741 | Upstream | -4.9430241 | 7.69E-07 | 0.00617299 |
| 2 | 215623407 | 215623407 | 1 | 2_215623407 | ENSG00000235770 | LINC00607 | 0 | INTRON | 4.94280465 | 7.70E-07 | 0.00617299 |
| 14 | 33129405 | 33129405 | 1 | 14_33129405 | ENSG00000151322 | NPAS3 | 0 | INTRON | 4.94277911 | 7.70E-07 | 0.00617299 |
| 2 | 110604974 | 110604974 | 1 | 2_110604974 | ENSG00000231536 | AC226101.1 | 5941 | Upstream | -4.9426685 | 7.71E-07 | 0.00617299 |
| 15 | 40663994 | 40663994 | 1 | 15_40663994 | ENSG00000137812 | KNL1 | 0 | 3UTR | 4.94264652 | 7.71E-07 | 0.00617299 |
| 8 | 90195573 | 90195573 | 1 | 8_90195573 | ENSG00000254180 | AC004083.1 | 2815 | Downstream | -4.942591 | 7.71E-07 | 0.00617299 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 | 3952482 | 3952482 | 1 | 7_3952482 | ENSG00000146555 | SDK1 | 0 | INTRON | 4.94234319 | 7.72E-07 | 0.00617794 |
| 8 | 90347082 | 90347082 | 1 | 8_90347082 | ENSG00000253394 | LINC00534 | 0 | INTRON | 4.9421544 | 7.73E-07 | 0.00618102 |
| 12 | 27996841 | 27996841 | 1 | 12_27996841 | ENSG00000087494 | PTHLH | 24108 | Upstream | 4.94149895 | 7.75E-07 | 0.00619393 |
| 8 | 14780552 | 14780552 | 1 | 8_14780552 | ENSG00000185053 | SGCZ | 0 | INTRON | 4.94139888 | 7.76E-07 | 0.00619393 |
| 17 | 44473227 | 44473227 | 1 | 17_44473227 | ENSG00000186566 | GPATCH8 | 0 | INTRON | -4.9413922 | 7.76E-07 | 0.00619393 |
| 18 | 30640386 | 30640386 | 1 | 18_30640386 | ENSG00000266196 | AC090506.1 | 72888 | Upstream | -4.9413816 | 7.76E-07 | 0.00619393 |
| 2 | 229144393 | 229144393 | 1 | 2_229144393 | ENSG00000153823 | PID1 | 0 | INTRON | 4.94123237 | 7.76E-07 | 0.00619576 |
| 16 | 61276982 | 61276982 | 1 | 16_61276982 | ENSG00000224631 | RPS27AP16 | 221018 | Upstream | -4.9410161 | 7.77E-07 | 0.00619973 |
| 11 | 35270584 | 35270584 | 1 | 11_35270584 | ENSG00000110436 | SLC1A2 | 0 | INTRON | 4.94089913 | 7.78E-07 | 0.00620055 |
| 5 | 4328334 | 4328334 | 1 | 5_4328334 | ENSG00000260763 | AC106799.3 | 108515 | Downstream | -4.9407156 | 7.78E-07 | 0.00620348 |
| 3 | 4149134 | 4149134 | 1 | 3_4149134 | ENSG00000144455 | SUMF1 | 0 | INTRON | 4.94058254 | 7.79E-07 | 0.00620481 |
| 3 | 65732432 | 65732432 | 1 | 3_65732432 | ENSG00000151276 | MAGI1 | 0 | INTRON | 4.94037231 | 7.80E-07 | 0.00620819 |
| 11 | 76808227 | 76808227 | 1 | 11_76808227 | ENSG00000261578 | AP003119.3 | 3672 | Downstream | -4.9401493 | 7.81E-07 | 0.00620819 |
| 3 | 117152066 | 117152066 | 1 | 3_117152066 | ENSG00000185565 | LSAMP | 12677 | Upstream | -4.9400765 | 7.81E-07 | 0.00620819 |
| 21 | 26468466 | 26468466 | 1 | 21_26468466 | ENSG00000166265 | CYYR1 | 0 | 3UTR | 4.94000036 | 7.81E-07 | 0.00620819 |
| X | 26161752 | 26161752 | 1 | X_26161752 | ENSG00000232030 | MAGEB6B | 0 | EXON | 4.93996634 | 7.81E-07 | 0.00620819 |
| 16 | 66538019 | 66538019 | 1 | 16_66538019 | ENSG00000166548 | TK2 | 0 | INTRON | 4.93992949 | 7.82E-07 | 0.00620819 |
| 17 | 7883709 | 7883709 | 1 | 17_7883709 | ENSG00000183011 | NAA38 | 0 | INTRON | 4.93976295 | 7.82E-07 | 0.00621059 |
| 7 | 81584807 | 81584807 | 1 | 7_81584807 | ENSG00000233491 | AC008163.1 | 0 | INTRON | -4.9393333 | 7.84E-07 | 0.00621904 |
| 3 | 183580180 | 183580180 | 1 | 3_183580180 | ENSG00000172578 | KLHL6 | 24474 | Upstream | -4.9392479 | 7.84E-07 | 0.00621904 |
| 16 | 29761756 | 29761756 | 1 | 16_29761756 | ENSG00000260719 | AC009133.3 | 13457 | Downstream | 4.93914033 | 7.85E-07 | 0.00621904 |
| X | 31716043 | 31716043 | 1 | X_31716043 | ENSG00000198947 | DMD | 0 | INTRON | 4.93905038 | 7.85E-07 | 0.00621904 |
| 13 | 66825624 | 66825624 | 1 | 13_66825624 | ENSG00000184226 | PCDH9 | 0 | INTRON | 4.93904334 | 7.85E-07 | 0.00621904 |
| 5 | 58411868 | 58411868 | 1 | 5_58411868 | ENSG00000145632 | PLK2 | 42113 | Downstream | 4.93886587 | 7.86E-07 | 0.00622181 |
| 2 | 58690225 | 58690225 | 1 | 2_58690225 | ENSG00000233723 | LINC01122 | 0 | INTRON | 4.9383474 | 7.88E-07 | 0.00623214 |
| 20 | 24308785 | 24308785 | 1 | 20_24308785 | ENSG00000232200 | AL158090.1 | 0 | INTRON | 4.93829711 | 7.88E-07 | 0.00623214 |
| 8 | 114744999 | 114744999 | 1 | 8_114744999 | ENSG00000253756 | CARSP2 | 46653 | Downstream | 4.93826997 | 7.88E-07 | 0.00623214 |
| 4 | 74448176 | 74448176 | 1 | 4_74448176 | ENSG00000109321 | AREG | 0 | INTRON | -4.9378388 | 7.90E-07 | 0.00624303 |
| 2 | 14295077 | 14295077 | 1 | 2_14295077 | ENSG00000230448 | LINC00276 | 0 | INTRON | 4.93774105 | 7.90E-07 | 0.00624311 |
| 15 | 39553146 | 39553146 | 1 | 15_39553146 | ENSG00000137801 | THBS1 | 27932 | Upstream | -4.9375882 | 7.91E-07 | 0.00624311 |
| 14 | 52439617 | 52439617 | 1 | 14_52439617 | ENSG00000087301 | TXNDC16 | 0 | INTRON | 4.93756468 | 7.91E-07 | 0.00624311 |
| 7 | 47864977 | 47864977 | 1 | 7_47864977 | ENSG00000158683 | PKD1L1 | 0 | INTRON | -4.9374488 | 7.92E-07 | 0.00624393 |
| 3 | 116441774 | 116441774 | 1 | 3_116441774 | ENSG00000185565 | LSAMP | 0 | INTRON | -4.9372084 | 7.92E-07 | 0.00624844 |
| 8 | 79673455 | 79673455 | 1 | 8_79673455 | ENSG00000104435 | STMN2 | 7280 | Downstream | 4.93711423 | 7.93E-07 | 0.00624844 |
| 13 | 52730649 | 52730649 | 1 | 13_52730649 | ENSG00000136110 | CNMD | 0 | INTRON | -4.9370368 | 7.93E-07 | 0.00624844 |
| 7 | 47887188 | 47887188 | 1 | 7_47887188 | ENSG00000158683 | PKD1L1 | 0 | INTRON | -4.9364689 | 7.95E-07 | 0.00626375 |
| 14 | 35309886 | 35309886 | 1 | 14_35309886 | ENSG00000100902 | PSMA6 | 0 | INTRON | -4.9362803 | 7.96E-07 | 0.00626691 |
| 3 | 114287332 | 114287332 | 1 | 3_114287332 | ENSG00000181847 | TIGIT | 0 | INTRON | -4.9360253 | 7.97E-07 | 0.0062722 |
| 5 | 27737075 | 27737075 | 1 | 5_27737075 | ENSG00000250337 | PURPL | 240081 | Downstream | -4.9357628 | 7.98E-07 | 0.00627713 |
| 5 | 65712024 | 65712024 | 1 | 5_65712024 | ENSG00000197860 | SGTB | 0 | INTRON | 4.93557783 | 7.99E-07 | 0.00627713 |
| 12 | 53607990 | 53607990 | 1 | 12_53607990 | ENSG00000170653 | ATF7 | 0 | INTRON | 4.93557054 | 7.99E-07 | 0.00627713 |
| 1 | 102585615 | 102585615 | 1 | 1_102585615 | ENSG00000230864 | AC099567.1 | 177706 | Downstream | 4.93551163 | 7.99E-07 | 0.00627713 |
| 6 | 10519507 | 10519507 | 1 | 6_10519507 | ENSG00000111846 | GCNT2 | 0 | INTRON | 4.93534781 | 8.00E-07 | 0.00627816 |
| 17 | 55365881 | 55365881 | 1 | 17_55365881 | ENSG00000108960 | MMD | 26740 | Downstream | -4.9352993 | 8.00E-07 | 0.00627816 |
| 4 | 83019624 | 83019624 | 1 | 4_83019624 | ENSG00000189308 | LIN54 | 6698 | Upstream | 4.93518897 | 8.01E-07 | 0.00627882 |
| 1 | 150948257 | 150948257 | 1 | 1_150948257 | ENSG00000143379 | SETDB1 | 0 | INTRON | 4.93486837 | 8.02E-07 | 0.00628625 |
| 17 | 26867600 | 26867600 | 1 | 17_26867600 | ENSG00000263433 | AC069061.1 | 114093 | Upstream | -4.9345018 | 8.04E-07 | 0.00629472 |
| 3 | 105979015 | 105979015 | 1 | 3_105979015 | ENSG00000114423 | CBLB | 109463 | Upstream | 4.93439931 | 8.04E-07 | 0.00629472 |
| 3 | 129946910 | 129946910 | 1 | 3_129946910 | ENSG00000250643 | AC083906.3 | 7194 | Downstream | 4.93433578 | 8.04E-07 | 0.00629472 |
| 2 | 201640923 | 201640923 | 1 | 2_201640923 | ENSG00000155755 | TMEM237 | 0 | 5UTR | 4.9340883 | 8.05E-07 | 0.00629981 |
| 17 | 43487265 | 43487265 | 1 | 17_43487265 | ENSG00000067596 | DHX8 | 0 | INTRON | 4.93398883 | 8.06E-07 | 0.00630013 |
| 8 | 108745914 | 108745914 | 1 | 8_108745914 | ENSG00000164841 | TMEM74 | 0 | INTRON | -4.9337255 | 8.07E-07 | 0.00630044 |
| 20 | 57152300 | 57152300 | 1 | 20_57152300 | ENSG00000280220 | AL157414.3 | 9521 | Upstream | 4.93371254 | 8.07E-07 | 0.00630044 |
| 5 | 65768484 | 65768484 | 1 | 5_65768484 | ENSG00000123213 | NLN | 0 | INTRON | 4.93368514 | 8.07E-07 | 0.00630044 |
| 4 | 127342640 | 127342640 | 1 | 4_127342640 | ENSG00000287101 | AC093772.2 | 0 | INTRON | 4.93362058 | 8.07E-07 | 0.00630044 |
| 12 | 94840138 | 94840138 | 1 | 12_94840138 | ENSG00000216306 | KRT19P2 | 4980 | Downstream | -4.9333659 | 8.08E-07 | 0.0063011 |
| 5 | 160390870 | 160390870 | 1 | 5_160390870 | ENSG00000221886 | ZBED8 | 2277 | Downstream | 4.93335334 | 8.08E-07 | 0.0063011 |
| 10 | 34507444 | 34507444 | 1 | 10_34507444 | ENSG00000148498 | PARD3 | 0 | INTRON | 4.93312033 | 8.09E-07 | 0.0063011 |
| 20 | 15882773 | 15882773 | 1 | 20_15882773 | ENSG00000172264 | MACROD2 | 0 | INTRON | -4.9330738 | 8.09E-07 | 0.0063011 |
| 10 | 30000685 | 30000685 | 1 | 10_30000685 | ENSG00000165757 | JCAD | 12117 | Downstream | 4.93304025 | 8.10E-07 | 0.0063011 |
| 1 | 115943840 | 115943840 | 1 | 1_115943840 | ENSG00000228127 | LINC01649 | 12224 | Downstream | -4.932993 | 8.10E-07 | 0.0063011 |
| 19 | 32571784 | 32571784 | 1 | 19_32571784 | ENSG00000105185 | PDCD5 | 9405 | Upstream | 4.93297431 | 8.10E-07 | 0.0063011 |
| 11 | 22653749 | 22653749 | 1 | 11_22653749 | ENSG00000148935 | GAS2 | 0 | INTRON | 4.93284472 | 8.10E-07 | 0.0063024 |
| 13 | 54572541 | 54572541 | 1 | 13_54572541 | ENSG00000287460 | AL442636.1 | 0 | INTRON | 4.93267109 | 8.11E-07 | 0.00630286 |
| 14 | 35977610 | 35977610 | 1 | 14_35977610 | ENSG00000258342 | AL133304.3 | 0 | INTRON | -4.9326049 | 8.11E-07 | 0.00630286 |
| 4 | 171141285 | 171141285 | 1 | 4_171141285 | ENSG00000249525 | AC034159.1 | 26704 | Downstream | 4.93256291 | 8.12E-07 | 0.00630286 |
| 6 | 160101825 | 160101825 | 1 | 6_160101825 | ENSG00000197081 | IGF2R | 0 | INTRON | 4.93235038 | 8.12E-07 | 0.00630684 |
| 1 | 1373645 | 1373645 | 1 | 1_1373645 | ENSG00000175756 | AURKAIP1 | 84 | Downstream | -4.9319124 | 8.14E-07 | 0.00631812 |
| 18 | 63667822 | 63667822 | 1 | 18_63667822 | ENSG00000206072 | SERPINB11 | 0 | INTRON | -4.9317329 | 8.15E-07 | 0.00632003 |
| 17 | 22097800 | 22097800 | 1 | 17_22097800 | ENSG00000263563 | UBBP4 | 0 | INTRON | 4.93160109 | 8.16E-07 | 0.00632003 |
| 3 | 193958326 | 193958326 | 1 | 3_193958326 | ENSG00000214146 | LINC02026 | 0 | EXON | -4.9315304 | 8.16E-07 | 0.00632003 |
| 7 | 157876365 | 157876365 | 1 | 7_157876365 | ENSG00000155093 | PTPRN2 | 0 | INTRON | -4.9314974 | 8.16E-07 | 0.00632003 |
| 12 | 60867066 | 60867066 | 1 | 12_60867066 | ENSG00000257308 | AC090017.1 | 364092 | Downstream | 4.93126074 | 8.17E-07 | 0.00632323 |
| 2 | 14823626 | 14823626 | 1 | 2_14823626 | ENSG00000287291 | AC068286.2 | 0 | INTRON | 4.93122091 | 8.17E-07 | 0.00632323 |
| 10 | 114147043 | 114147043 | 1 | 10_114147043 | ENSG00000165813 | CCDC186 | 0 | INTRON | -4.9309429 | 8.18E-07 | 0.00632936 |
| 5 | 5620829 | 5620829 | 1 | 5_5620829 | ENSG00000286986 | AC026736.1 | 67975 | Upstream | 4.93067503 | 8.19E-07 | 0.00633517 |
| 6 | 122356827 | 122356827 | 1 | 6_122356827 | ENSG00000025156 | HSF2 | 42723 | Upstream | -4.9304547 | 8.20E-07 | 0.00633865 |
| 3 | 27496556 | 27496556 | 1 | 3_27496556 | ENSG00000230807 | AC099535.1 | 9939 | Downstream | 4.93026804 | 8.21E-07 | 0.00633865 |
| 7 | 153496023 | 153496023 | 1 | 7_153496023 | ENSG00000233489 | PAXBP1P1 | 46148 | Downstream | 4.93024596 | 8.21E-07 | 0.00633865 |
| 1 | 38592329 | 38592329 | 1 | 1_38592329 | ENSG00000238063 | LINC01685 | 75809 | Downstream | 4.93021299 | 8.21E-07 | 0.00633865 |
| 13 | 96216025 | 96216025 | 1 | 13_96216025 | ENSG00000185352 | HS6ST3 | 0 | INTRON | -4.9300958 | 8.22E-07 | 0.00633956 |
| 17 | 64335075 | 64335075 | 1 | 17_64335075 | ENSG00000261371 | PECAM1 | 0 | INTRON | 4.9300077 | 8.22E-07 | 0.00633956 |
| 8 | 91762860 | 91762860 | 1 | 8_91762860 | ENSG00000253901 | AC103409.1 | 0 | INTRON | 4.92980434 | 8.23E-07 | 0.00634329 |
| 7 | 67924218 | 67924218 | 1 | 7_67924218 | ENSG00000225209 | AC092637.1 | 96016 | Upstream | 4.92939941 | 8.25E-07 | 0.00635358 |
| 1 | 111231849 | 111231849 | 1 | 1_111231849 | ENSG00000064886 | CHI3L2 | 0 | INTRON | 4.92921365 | 8.26E-07 | 0.00635551 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 | 9849989 | 9849989 | 1 | 12_9849989 | ENSG00000110852 | CLEC2B | 2994 | Downstream | -4.929163 | 8.26E-07 | 0.00635551 |
| 12 | 129077649 | 129077649 | 1 | 12_129077649 | ENSG00000151952 | TMEM132D | 0 | INTRON | 4.92895736 | 8.27E-07 | 0.00635933 |
| 9 | 815529 | 815529 | 1 | 9_815529 | ENSG00000137090 | DMRT1 | 26160 | Upstream | 4.9287277 | 8.28E-07 | 0.00636393 |
| 10 | 86732236 | 86732236 | 1 | 10_86732236 | ENSG00000122367 | LDB3 | 0 | INTRON | -4.9282566 | 8.30E-07 | 0.00637641 |
| 9 | 27288938 | 27288938 | 1 | 9_27288938 | ENSG00000120160 | EQTN | 0 | INTRON | 4.92771712 | 8.32E-07 | 0.00639115 |
| 5 | 17411867 | 17411867 | 1 | 5_17411867 | ENSG00000248455 | LINC02217 | 0 | INTRON | 4.92744692 | 8.33E-07 | 0.00639591 |
| 13 | 103450442 | 103450442 | 1 | 13_103450442 | ENSG00000230474 | ATP6V1G1P7 | 5474 | Upstream | 4.92739537 | 8.33E-07 | 0.00639591 |
| 5 | 125994500 | 125994500 | 1 | 5_125994500 | ENSG00000248752 | AC116362.1 | 0 | INTRON | 4.92729292 | 8.34E-07 | 0.00639604 |
| 5 | 171117642 | 171117642 | 1 | 5_171117642 | ENSG00000204764 | RANBP17 | 0 | INTRON | 4.92721511 | 8.34E-07 | 0.00639604 |
| 2 | 111031383 | 111031383 | 1 | 2_111031383 | ENSG00000153093 | ACOXL | 0 | INTRON | 4.92691941 | 8.35E-07 | 0.00639973 |
| 2 | 135524270 | 135524270 | 1 | 2_135524270 | ENSG00000121988 | ZRANB3 | 0 | INTRON | 4.92683317 | 8.36E-07 | 0.00639973 |
| 13 | 59649559 | 59649559 | 1 | 13_59649559 | ENSG00000139734 | DIAPH3 | 16023 | Downstream | -4.9267621 | 8.36E-07 | 0.00639973 |
| 19 | 3739786 | 3739786 | 1 | 19_3739786 | ENSG00000105289 | TJP3 | 0 | INTRON | 4.92675013 | 8.36E-07 | 0.00639973 |
| 6 | 79927963 | 79927963 | 1 | 6_79927963 | ENSG00000118402 | ELOVL4 | 0 | INTRON | 4.9265682 | 8.37E-07 | 0.00640281 |
| 22 | 45605029 | 45605029 | 1 | 22_45605029 | ENSG00000238120 | LINC01589 | 0 | INTRON | -4.9264099 | 8.38E-07 | 0.00640459 |
| 21 | 9119668 | 9119668 | 1 | 21_9119668 | ENSG00000188681 | TEKT4P2 | 0 | INTRON | -4.9263381 | 8.38E-07 | 0.00640459 |
| 2 | 130468530 | 130468530 | 1 | 2_130468530 | ENSG00000196834 | POTEI | 0 | INTRON | 4.92581276 | 8.40E-07 | 0.00641894 |
| 9 | 114776899 | 114776899 | 1 | 9_114776899 | ENSG00000274919 | AL390240.1 | 1779 | Upstream | -4.9255459 | 8.41E-07 | 0.00642483 |
| 1 | 183358655 | 183358655 | 1 | 1_183358655 | ENSG00000157064 | NMNAT2 | 0 | INTRON | 4.92527902 | 8.42E-07 | 0.00643071 |
| 10 | 4525225 | 4525225 | 1 | 10_4525225 | ENSG00000286687 | AC022535.2 | 9981 | Downstream | 4.9249805 | 8.44E-07 | 0.00643765 |
| 15 | 35434565 | 35434565 | 1 | 15_35434565 | ENSG00000134146 | DPH6 | 0 | INTRON | 4.92462979 | 8.45E-07 | 0.00644529 |
| 8 | 93497435 | 93497435 | 1 | 8_93497435 | ENSG00000246662 | LINC00535 | 0 | INTRON | 4.92452548 | 8.46E-07 | 0.00644529 |
| 15 | 53364747 | 53364747 | 1 | 15_53364747 | ENSG00000287596 | AC066614.1 | 55117 | Upstream | 4.92448566 | 8.46E-07 | 0.00644529 |
| 18 | 49413941 | 49413941 | 1 | 18_49413941 | ENSG00000141627 | DYM | 0 | INTRON | 4.92429134 | 8.47E-07 | 0.00644644 |
| 4 | 148902905 | 148902905 | 1 | 4_148902905 | ENSG00000287292 | AC002460.2 | 0 | INTRON | 4.92427576 | 8.47E-07 | 0.00644644 |
| 12 | 25180519 | 25180519 | 1 | 12_25180519 | ENSG00000118307 | CASC1 | 0 | INTRON | 4.92417027 | 8.47E-07 | 0.00644703 |
| 14 | 34654149 | 34654149 | 1 | 14_34654149 | ENSG00000275978 | Metazoa_SRP | 5414 | Downstream | 4.92354824 | 8.50E-07 | 0.00646468 |
| 14 | 93353751 | 93353751 | 1 | 14_93353751 | ENSG00000133958 | UNC79 | 0 | INTRON | -4.9230911 | 8.52E-07 | 0.00647691 |
| 14 | 89441478 | 89441478 | 1 | 14_89441478 | ENSG00000053254 | FOXN3 | 0 | INTRON | 4.92245496 | 8.55E-07 | 0.00648917 |
| 5 | 74908387 | 74908387 | 1 | 5_74908387 | ENSG00000287701 | AC116337.4 | 4737 | Upstream | 4.92239843 | 8.55E-07 | 0.00648917 |
| 20 | 57869468 | 57869468 | 1 | 20_57869468 | ENSG00000263453 | AL162291.1 | 25925 | Upstream | 4.92239449 | 8.55E-07 | 0.00648917 |
| 16 | 19429836 | 19429836 | 1 | 16_19429836 | ENSG00000103534 | TMC5 | 0 | INTRON | 4.92237185 | 8.55E-07 | 0.00648917 |
| 6 | 83882922 | 83882922 | 1 | 6_83882922 | ENSG00000065615 | CYB5R4 | 0 | INTRON | -4.9219694 | 8.57E-07 | 0.00649963 |
| 2 | 2049339 | 2049339 | 1 | 2_2049339 | ENSG00000186487 | MYT1L | 0 | EXON | 4.92180393 | 8.58E-07 | 0.00650223 |
| 8 | 56556494 | 56556494 | 1 | 8_56556494 | ENSG00000254254 | AC012349.1 | 0 | EXON | -4.9215264 | 8.59E-07 | 0.00650719 |
| 8 | 16151140 | 16151140 | 1 | 8_16151140 | ENSG00000038945 | MSR1 | 0 | INTRON | 4.92148032 | 8.59E-07 | 0.00650719 |
| 5 | 135074493 | 135074493 | 1 | 5_135074493 | ENSG00000224186 | C5orf66 | 0 | EXON | 4.92119671 | 8.60E-07 | 0.00651373 |
| 7 | 157895701 | 157895701 | 1 | 7_157895701 | ENSG00000155093 | PTPRN2 | 0 | INTRON | 4.92104797 | 8.61E-07 | 0.00651526 |
| 2 | 124705356 | 124705356 | 1 | 2_124705356 | ENSG00000155052 | CNTNAP5 | 0 | INTRON | 4.92097677 | 8.61E-07 | 0.00651526 |
| 8 | 80182661 | 80182661 | 1 | 8_80182661 | ENSG00000076554 | TPD52 | 0 | INTRON | 4.92077528 | 8.62E-07 | 0.00651907 |
| 5 | 27611139 | 27611139 | 1 | 5_27611139 | ENSG00000250337 | PURPL | 114145 | Downstream | 4.9206766 | 8.62E-07 | 0.00651946 |
| 10 | 121953103 | 121953103 | 1 | 10_121953103 | ENSG00000226864 | ATE1-AS1 | 1138 | Downstream | 4.92047559 | 8.63E-07 | 0.00652057 |
| 1 | 212854134 | 212854134 | 1 | 1_212854134 | ENSG00000198468 | FLVCR1-DT | 0 | EXON | 4.92046956 | 8.63E-07 | 0.00652057 |
| 20 | 42461322 | 42461322 | 1 | 20_42461322 | ENSG00000196090 | PTPRT | 0 | INTRON | 4.92026476 | 8.64E-07 | 0.0065226 |
| 8 | 761099 | 761099 | 1 | 8_761099 | ENSG00000198010 | DLGAP2 | 0 | INTRON | -4.9202349 | 8.64E-07 | 0.0065226 |
| 11 | 19333405 | 19333405 | 1 | 11_19333405 | ENSG00000166833 | NAV2 | 17318 | Upstream | -4.9194887 | 8.68E-07 | 0.00654388 |
| 5 | 19874324 | 19874324 | 1 | 5_19874324 | ENSG00000145526 | CDH18 | 0 | INTRON | 4.91936687 | 8.68E-07 | 0.00654388 |
| 13 | 101731302 | 101731302 | 1 | 13_101731302 | ENSG00000102466 | FGF14 | 0 | INTRON | 4.91933728 | 8.68E-07 | 0.00654388 |
| 2 | 49785668 | 49785668 | 1 | 2_49785668 | ENSG00000234253 | RPL7P13 | 92954 | Upstream | 4.91910731 | 8.69E-07 | 0.00654867 |
| 5 | 42501977 | 42501977 | 1 | 5_42501977 | ENSG00000112964 | GHR | 0 | INTRON | 4.91893241 | 8.70E-07 | 0.00655081 |
| 18 | 49527907 | 49527907 | 1 | 18_49527907 | ENSG00000264464 | LINC02837 | 26047 | Downstream | 4.91886994 | 8.70E-07 | 0.00655081 |
| 6 | 41915703 | 41915703 | 1 | 6_41915703 | ENSG00000124641 | MED20 | 0 | INTRON | -4.9184259 | 8.72E-07 | 0.00656279 |
| 21 | 37686000 | 37686000 | 1 | 21_37686000 | ENSG00000157542 | KCNJ6 | 0 | INTRON | 4.91819589 | 8.73E-07 | 0.0065676 |
| 7 | 152592435 | 152592435 | 1 | 7_152592435 | ENSG00000285912 | AC104843.3 | 537 | Downstream | 4.9180677 | 8.74E-07 | 0.006569 |
| 17 | 53474858 | 53474858 | 1 | 17_53474858 | ENSG00000285939 | AC034268.2 | 0 | INTRON | -4.9177593 | 8.75E-07 | 0.00657645 |
| 6 | 67886988 | 67886988 | 1 | 6_67886988 | ENSG00000227706 | AL713998.1 | 0 | EXON | 4.91760058 | 8.76E-07 | 0.00657887 |
| 12 | 72111001 | 72111001 | 1 | 12_72111001 | ENSG00000139287 | TPH2 | 0 | INTRON | -4.9169618 | 8.79E-07 | 0.00659746 |
| 12 | 8475073 | 8475073 | 1 | 12_8475073 | ENSG00000205846 | CLEC6A | 0 | INTRON | -4.9166599 | 8.80E-07 | 0.00660472 |
| 12 | 110735792 | 110735792 | 1 | 12_110735792 | ENSG00000186298 | PPP1CC | 0 | INTRON | -4.9164284 | 8.81E-07 | 0.00660869 |
| 18 | 12649147 | 12649147 | 1 | 18_12649147 | ENSG00000134278 | SPIRE1 | 0 | INTRON | -4.9163697 | 8.82E-07 | 0.00660869 |
| 1 | 60264707 | 60264707 | 1 | 1_60264707 | ENSG00000238242 | LINC02778 | 114923 | Downstream | -4.9160584 | 8.83E-07 | 0.00661369 |
| 11 | 86518360 | 86518360 | 1 | 11_86518360 | ENSG00000151376 | ME3 | 0 | INTRON | 4.916049 | 8.83E-07 | 0.00661369 |
| 1 | 169603055 | 169603055 | 1 | 1_169603055 | ENSG00000174175 | SELP | 0 | EXON | 4.91566081 | 8.85E-07 | 0.00662389 |
| 11 | 76081266 | 76081266 | 1 | 11_76081266 | ENSG00000198382 | UVRAG | 0 | INTRON | -4.9152838 | 8.87E-07 | 0.00663374 |
| 20 | 32002577 | 32002577 | 1 | 20_32002577 | ENSG00000260903 | XKR7 | 0 | 3UTR | 4.91478462 | 8.89E-07 | 0.00664774 |
| 7 | 108662412 | 108662412 | 1 | 7_108662412 | ENSG00000225647 | AC005487.1 | 23063 | Downstream | 4.91463114 | 8.89E-07 | 0.00665002 |
| 22 | 12810129 | 12810129 | 1 | 22_12810129 | ENSG00000283023 | FRG1GP | 183487 | Downstream | -4.9144167 | 8.90E-07 | 0.00665438 |
| 7 | 102756635 | 102756635 | 1 | 7_102756635 | ENSG00000222011 | FAM185A | 0 | INTRON | 4.91400092 | 8.92E-07 | 0.00666559 |
| 1 | 202847426 | 202847426 | 1 | 1_202847426 | ENSG00000214796 | AC098934.1 | 4401 | Downstream | -4.913907 | 8.93E-07 | 0.00666586 |
| 2 | 157356793 | 157356793 | 1 | 2_157356793 | ENSG00000230562 | FAM133DP | 22930 | Downstream | 4.91360764 | 8.94E-07 | 0.0066673 |
| 7 | 49701870 | 49701870 | 1 | 7_49701870 | ENSG00000279104 | AC093775.1 | 59026 | Downstream | 4.9136053 | 8.94E-07 | 0.0066673 |
| 14 | 79000711 | 79000711 | 1 | 14_79000711 | ENSG00000021645 | NRXN3 | 0 | INTRON | -4.9135964 | 8.94E-07 | 0.0066673 |
| 13 | 26309360 | 26309360 | 1 | 13_26309360 | ENSG00000132964 | CDK8 | 0 | INTRON | -4.913521 | 8.95E-07 | 0.0066673 |
| 20 | 49880946 | 49880946 | 1 | 20_49880946 | ENSG00000197818 | SLC9A8 | 0 | EXON | 4.91331623 | 8.95E-07 | 0.0066675 |
| 7 | 4132397 | 4132397 | 1 | 7_4132397 | ENSG00000283991 | AC017000.1 | 0 | EXON | -4.9132908 | 8.96E-07 | 0.0066675 |
| 7 | 65340402 | 65340402 | 1 | 7_65340402 | ENSG00000231556 | RSL24D1P3 | 4734 | Upstream | -4.9131666 | 8.96E-07 | 0.0066675 |
| 9 | 136734121 | 136734121 | 1 | 9_136734121 | ENSG00000187922 | LCN10 | 4045 | Downstream | 4.91303259 | 8.97E-07 | 0.0066675 |
| 12 | 129809294 | 129809294 | 1 | 12_129809294 | ENSG00000151952 | TMEM132D | 0 | INTRON | -4.9130261 | 8.97E-07 | 0.0066675 |
| 20 | 48001041 | 48001041 | 1 | 20_48001041 | ENSG00000286179 | AL139351.2 | 6833 | Downstream | 4.91300082 | 8.97E-07 | 0.0066675 |
| X | 120418866 | 120418866 | 1 | X_120418866 | ENSG00000005893 | LAMP2 | 8960 | Downstream | 4.91282171 | 8.98E-07 | 0.00667068 |
| 8 | 16249630 | 16249630 | 1 | 8_16249630 | ENSG00000038945 | MSR1 | 0 | INTRON | -4.9127078 | 8.98E-07 | 0.00667165 |
| 3 | 188471045 | 188471045 | 1 | 3_188471045 | ENSG00000145012 | LPP | 0 | INTRON | 4.91260478 | 8.99E-07 | 0.00667224 |
| 8 | 22582613 | 22582613 | 1 | 8_22582613 | ENSG00000120913 | PDLIM2 | 0 | INTRON | -4.9124193 | 9.00E-07 | 0.00667565 |
| 18 | 15467336 | 15467336 | 1 | 18_15467336 | ENSG00000215512 | AP005901.1 | 137054 | Upstream | -4.9123055 | 9.00E-07 | 0.00667661 |
| 6 | 10014753 | 10014753 | 1 | 6_10014753 | ENSG00000181355 | OFCC1 | 0 | INTRON | 4.91190247 | 9.02E-07 | 0.00668744 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 15 | 73480897 | 73480897 | 1 | 15_73480897 | ENSG00000183324 | REC114 | 0 | INTRON | 4.91098069 | 9.06E-07 | 0.00671603 |
| 13 | 34132339 | 34132339 | 1 | 13_34132339 | ENSG00000199196 | AL160394.1 | 31501 | Upstream | 4.91071653 | 9.07E-07 | 0.00671803 |
| 9 | 33930215 | 33930215 | 1 | 9_33930215 | ENSG00000137073 | UBAP2 | 0 | INTRON | 4.9107024 | 9.08E-07 | 0.00671803 |
| 6 | 127675914 | 127675914 | 1 | 6_127675914 | ENSG00000281248 | LINC02536 | 0 | INTRON | -4.9106662 | 9.08E-07 | 0.00671803 |
| 8 | 11717077 | 11717077 | 1 | 8_11717077 | ENSG00000136574 | GATA4 | 0 | INTRON | 4.91040725 | 9.09E-07 | 0.00672382 |
| 2 | 191782460 | 191782460 | 1 | 2_191782460 | ENSG00000225884 | AC098872.1 | 10336 | Upstream | 4.9103268 | 9.09E-07 | 0.00672382 |
| 18 | 2999477 | 2999477 | 1 | 18_2999477 | ENSG00000101577 | LPIN2 | 0 | INTRON | -4.9099977 | 9.11E-07 | 0.00673219 |
| 4 | 12718062 | 12718062 | 1 | 4_12718062 | ENSG00000249995 | ECM1P2 | 77053 | Downstream | 4.90967268 | 9.12E-07 | 0.00673945 |
| 3 | 61681546 | 61681546 | 1 | 3_61681546 | ENSG00000144724 | PTPRG | 0 | INTRON | -4.9095661 | 9.13E-07 | 0.00673945 |
| 21 | 39391951 | 39391951 | 1 | 21_39391951 | ENSG00000182093 | GET1 | 0 | EXON | -4.9095307 | 9.13E-07 | 0.00673945 |
| 14 | 88849123 | 88849123 | 1 | 14_88849123 | ENSG00000165533 | TTC8 | 0 | INTRON | -4.9092686 | 9.14E-07 | 0.00674456 |
| 13 | 24842857 | 24842857 | 1 | 13_24842857 | ENSG00000132972 | RNF17 | 0 | INTRON | 4.90921199 | 9.14E-07 | 0.00674456 |
| 1 | 214723588 | 214723588 | 1 | 1_214723588 | ENSG00000117724 | CENPF | 59017 | Downstream | 4.90816597 | 9.19E-07 | 0.00677656 |
| 6 | 87192154 | 87192154 | 1 | 6_87192154 | ENSG00000188994 | ZNF292 | 0 | INTRON | 4.9081137 | 9.20E-07 | 0.00677656 |
| 11 | 35984756 | 35984756 | 1 | 11_35984756 | ENSG00000179241 | LDLRAD3 | 0 | INTRON | 4.90798048 | 9.20E-07 | 0.00677818 |
| 10 | 94838756 | 94838756 | 1 | 10_94838756 | ENSG00000276490 | AL583836.1 | 0 | INTRON | -4.9078969 | 9.21E-07 | 0.00677818 |
| 4 | 165921453 | 165921453 | 1 | 4_165921453 | ENSG00000038295 | TLL1 | 0 | INTRON | 4.90751752 | 9.22E-07 | 0.0067859 |
| 6 | 112501413 | 112501413 | 1 | 6_112501413 | ENSG00000232299 | AL357514.1 | 19777 | Upstream | -4.907504 | 9.22E-07 | 0.0067859 |
| 6 | 132709081 | 132709081 | 1 | 6_132709081 | ENSG00000112299 | VNN1 | 0 | INTRON | -4.9073588 | 9.23E-07 | 0.00678753 |
| 2 | 117048646 | 117048646 | 1 | 2_117048646 | ENSG00000228898 | MTCO1P43 | 21622 | Downstream | 4.90713201 | 9.24E-07 | 0.00678753 |
| 2 | 193811969 | 193811969 | 1 | 2_193811969 | ENSG00000286868 | AC074290.2 | 55752 | Upstream | 4.90707819 | 9.24E-07 | 0.00678753 |
| 6 | 149841640 | 149841640 | 1 | 6_149841640 | ENSG00000120256 | LRP11 | 0 | 3UTR | 4.90697501 | 9.25E-07 | 0.00678753 |
| 17 | 64449293 | 64449293 | 1 | 17_64449293 | ENSG00000271605 | MILR1 | 0 | INTRON | 4.90681138 | 9.26E-07 | 0.00678753 |
| 15 | 41100143 | 41100143 | 1 | 15_41100143 | ENSG00000128908 | INO80 | 0 | INTRON | 4.90677874 | 9.26E-07 | 0.00678753 |
| 9 | 82107413 | 82107413 | 1 | 9_82107413 | ENSG00000228430 | AL162726.3 | 0 | INTRON | 4.90673157 | 9.26E-07 | 0.00678753 |
| 3 | 176664509 | 176664509 | 1 | 3_176664509 | ENSG00000223715 | LINC01208 | 0 | INTRON | -4.9066115 | 9.27E-07 | 0.00678753 |
| 4 | 21623116 | 21623116 | 1 | 4_21623116 | ENSG00000185774 | KCNIP4 | 0 | INTRON | 4.90661103 | 9.27E-07 | 0.00678753 |
| 16 | 80448119 | 80448119 | 1 | 16_80448119 | ENSG00000259867 | AC105411.1 | 0 | INTRON | -4.9065412 | 9.27E-07 | 0.00678753 |
| 14 | 57617007 | 57617007 | 1 | 14_57617007 | ENSG00000151812 | SLC35F4 | 0 | INTRON | -4.906526 | 9.27E-07 | 0.00678753 |
| X | 93854474 | 93854474 | 1 | X_93854474 | ENSG00000270826 | Z94722.1 | 77090 | Upstream | -4.9063475 | 9.28E-07 | 0.00679032 |
| 20 | 16127702 | 16127702 | 1 | 20_16127702 | ENSG00000287410 | AL161941.1 | 50230 | Downstream | 4.90627659 | 9.28E-07 | 0.00679032 |
| 6 | 137306084 | 137306084 | 1 | 6_137306084 | ENSG00000027697 | IFNGR1 | 86635 | Upstream | -4.9061683 | 9.29E-07 | 0.00679115 |
| 20 | 55547158 | 55547158 | 1 | 20_55547158 | ENSG00000235166 | LINC01440 | 0 | INTRON | 4.90601566 | 9.29E-07 | 0.00679351 |
| 5 | 108073863 | 108073863 | 1 | 5_108073863 | ENSG00000145743 | FBXL17 | 0 | INTRON | -4.9057523 | 9.31E-07 | 0.00679971 |
| 10 | 13540530 | 13540530 | 1 | 10_13540530 | ENSG00000227175 | AL590677.1 | 10268 | Downstream | 4.90543352 | 9.32E-07 | 0.00680722 |
| 20 | 10226915 | 10226915 | 1 | 20_10226915 | ENSG00000227906 | SNAP25-AS1 | 0 | INTRON | -4.9053672 | 9.33E-07 | 0.00680722 |
| 9 | 19867832 | 19867832 | 1 | 9_19867832 | ENSG00000286685 | AL158077.2 | 0 | INTRON | 4.90524289 | 9.33E-07 | 0.00680841 |
| 22 | 29514053 | 29514053 | 1 | 22_29514053 | ENSG00000234208 | AC005529.1 | 0 | INTRON | -4.9051645 | 9.33E-07 | 0.00680841 |
| 4 | 91236093 | 91236093 | 1 | 4_91236093 | ENSG00000184305 | CCSER1 | 0 | INTRON | 4.90476193 | 9.35E-07 | 0.00681947 |
| 18 | 39050181 | 39050181 | 1 | 18_39050181 | ENSG00000253038 | RNU6-706P | 16071 | Downstream | 4.90465506 | 9.36E-07 | 0.00682026 |
| 12 | 106770256 | 106770256 | 1 | 12_106770256 | ENSG00000257545 | AC079385.1 | 0 | INTRON | 4.90425845 | 9.38E-07 | 0.00683113 |
| 1 | 164246363 | 164246363 | 1 | 1_164246363 | ENSG00000225719 | NMNAT1P2 | 96641 | Upstream | 4.90408205 | 9.39E-07 | 0.00683434 |
| 8 | 54701037 | 54701037 | 1 | 8_54701037 | ENSG00000104237 | RP1 | 0 | INTRON | -4.9038452 | 9.40E-07 | 0.00683967 |
| 5 | 164287002 | 164287002 | 1 | 5_164287002 | ENSG00000241956 | AC109466.1 | 9693 | Upstream | 4.90375824 | 9.40E-07 | 0.00683977 |
| 7 | 58109890 | 58109890 | 1 | 7_58109890 | ENSG00000231484 | AC023141.7 | 272844 | Downstream | -4.9036404 | 9.41E-07 | 0.00684095 |
| 17 | 4451502 | 4451502 | 1 | 17_4451502 | ENSG00000182557 | SPNS3 | 0 | INTRON | 4.90349193 | 9.41E-07 | 0.0068432 |
| 15 | 95043744 | 95043744 | 1 | 15_95043744 | ENSG00000277654 | AC087633.2 | 0 | INTRON | -4.9033995 | 9.42E-07 | 0.00684335 |
| 15 | 75741230 | 75741230 | 1 | 15_75741230 | ENSG00000260288 | AC019294.2 | 0 | INTRON | -4.90332 | 9.42E-07 | 0.00684335 |
| 5 | 168237108 | 168237108 | 1 | 5_168237108 | ENSG00000145934 | TENM2 | 0 | INTRON | -4.9031129 | 9.43E-07 | 0.00684765 |
| 16 | 3451790 | 3451790 | 1 | 16_3451790 | ENSG00000122390 | NAA60 | 0 | INTRON | -4.9027067 | 9.45E-07 | 0.0068589 |
| 13 | 52312303 | 52312303 | 1 | 13_52312303 | ENSG00000272281 | TPTE2P2 | 0 | INTRON | 4.90222384 | 9.48E-07 | 0.0068703 |
| 18 | 75172224 | 75172224 | 1 | 18_75172224 | ENSG00000180011 | ZADH2 | 22888 | Downstream | -4.9022133 | 9.48E-07 | 0.0068703 |
| 1 | 217564182 | 217564182 | 1 | 1_217564182 | ENSG00000092978 | GPATCH2 | 0 | INTRON | 4.90152733 | 9.51E-07 | 0.0068914 |
| 1 | 27267057 | 27267057 | 1 | 1_27267057 | ENSG00000142784 | WDTC1 | 0 | INTRON | 4.90119413 | 9.53E-07 | 0.00690016 |
| 21 | 46472633 | 46472633 | 1 | 21_46472633 | ENSG00000160305 | DIP2A | 0 | INTRON | -4.9006735 | 9.55E-07 | 0.00691553 |
| 4 | 175764491 | 175764491 | 1 | 4_175764491 | ENSG00000150625 | GPM6A | 0 | INTRON | 4.90046071 | 9.56E-07 | 0.00692008 |
| 11 | 119692265 | 119692265 | 1 | 11_119692265 | ENSG00000110400 | NECTIN1 | 0 | INTRON | -4.9001159 | 9.58E-07 | 0.00692807 |
| 12 | 34643376 | 34643376 | 1 | 12_34643376 | ENSG00000256614 | AK6P1 | 393418 | Downstream | -4.9000444 | 9.58E-07 | 0.00692807 |
| 16 | 63101758 | 63101758 | 1 | 16_63101758 | ENSG00000261502 | AC040174.1 | 0 | INTRON | -4.8999834 | 9.58E-07 | 0.00692807 |
| X | 106723334 | 106723334 | 1 | X_106723334 | ENSG00000133135 | RNF128 | 0 | INTRON | 4.89976948 | 9.59E-07 | 0.00693268 |
| 13 | 82188725 | 82188725 | 1 | 13_82188725 | ENSG00000214182 | PTMAP5 | 497653 | Downstream | 4.89945406 | 9.61E-07 | 0.00693896 |
| 12 | 127398893 | 127398893 | 1 | 12_127398893 | ENSG00000280024 | AC048347.1 | 26224 | Downstream | -4.8994061 | 9.61E-07 | 0.00693896 |
| 22 | 47466903 | 47466903 | 1 | 22_47466903 | ENSG00000218357 | LINC01644 | 0 | INTRON | -4.8993412 | 9.62E-07 | 0.00693896 |
| 3 | 82310272 | 82310272 | 1 | 3_82310272 | ENSG00000239440 | LINC02008 | 0 | INTRON | 4.89906017 | 9.63E-07 | 0.00694329 |
| X | 65038642 | 65038642 | 1 | X_65038642 | ENSG00000126970 | ZC4H2 | 3929 | Upstream | 4.89902732 | 9.63E-07 | 0.00694329 |
| 15 | 98764978 | 98764978 | 1 | 15_98764978 | ENSG00000140443 | IGF1R | 0 | INTRON | -4.8989688 | 9.63E-07 | 0.00694329 |
| 11 | 81376986 | 81376986 | 1 | 11_81376986 | ENSG00000287912 | AP003464.1 | 0 | INTRON | -4.8983242 | 9.67E-07 | 0.00696315 |
| 10 | 133008154 | 133008154 | 1 | 10_133008154 | ENSG00000240707 | LINC01168 | 31800 | Downstream | 4.89803065 | 9.68E-07 | 0.00696686 |
| 5 | 85767692 | 85767692 | 1 | 5_85767692 | ENSG00000241965 | RPS2P25 | 4554 | Downstream | 4.89785246 | 9.69E-07 | 0.00696686 |
| 3 | 66533419 | 66533419 | 1 | 3_66533419 | ENSG00000144749 | LRIG1 | 32156 | Upstream | 4.89782135 | 9.69E-07 | 0.00696686 |
| 19 | 43366762 | 43366762 | 1 | 19_43366762 | ENSG00000272396 | AC005392.3 | 0 | INTRON | 4.8978126 | 9.69E-07 | 0.00696686 |
| 3 | 136449326 | 136449326 | 1 | 3_136449326 | ENSG00000118007 | STAG1 | 0 | INTRON | 4.89772572 | 9.70E-07 | 0.00696686 |
| 12 | 87472047 | 87472047 | 1 | 12_87472047 | ENSG00000258205 | AC079598.4 | 274519 | Upstream | -4.8977212 | 9.70E-07 | 0.00696686 |
| 6 | 122824567 | 122824567 | 1 | 6_122824567 | ENSG00000172594 | SMPDL3A | 14847 | Downstream | 4.89761519 | 9.70E-07 | 0.00696767 |
| 7 | 63753285 | 63753285 | 1 | 7_63753285 | ENSG00000271466 | CICP24 | 14971 | Downstream | 4.89737906 | 9.71E-07 | 0.00697096 |
| 10 | 100645846 | 100645846 | 1 | 10_100645846 | ENSG00000274660 | Metazoa_SRP | 20848 | Downstream | -4.8973565 | 9.71E-07 | 0.00697096 |
| 17 | 66269381 | 66269381 | 1 | 17_66269381 | ENSG00000252653 | RNA5SP444 | 1533 | Downstream | 4.89688091 | 9.74E-07 | 0.006981 |
| 5 | 129360152 | 129360152 | 1 | 5_129360152 | ENSG00000265691 | MIR4460 | 36909 | Downstream | 4.89679087 | 9.74E-07 | 0.006981 |
| 6 | 64742495 | 64742495 | 1 | 6_64742495 | ENSG00000188107 | EYS | 0 | INTRON | -4.8967731 | 9.74E-07 | 0.006981 |
| 1 | 31195050 | 31195050 | 1 | 1_31195050 | ENSG00000084628 | NKAIN1 | 0 | INTRON | 4.89674236 | 9.74E-07 | 0.006981 |
| 8 | 79206132 | 79206132 | 1 | 8_79206132 | ENSG00000253659 | AC138646.1 | 53269 | Upstream | 4.89657191 | 9.75E-07 | 0.00698411 |
| 9 | 37267625 | 37267625 | 1 | 9_37267625 | ENSG00000147905 | ZCCHC7 | 0 | INTRON | -4.8963981 | 9.76E-07 | 0.00698482 |
| X | 65795310 | 65795310 | 1 | X_65795310 | ENSG00000233833 | ETF1P3 | 0 | INTRON | 4.89638643 | 9.76E-07 | 0.00698482 |
| 2 | 138738933 | 138738933 | 1 | 2_138738933 | ENSG00000144227 | NXPH2 | 0 | INTRON | 4.89585556 | 9.79E-07 | 0.00699914 |
| 1 | 240793178 | 240793178 | 1 | 1_240793178 | ENSG00000182901 | RGS7 | 0 | INTRON | -4.8958185 | 9.79E-07 | 0.00699914 |

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| 15 | 28638983 | 28638983 | 1 | 15_28638983 | ENSG00000206149 | HERC2P9 | 0 | INTRON | -4.8955932 | 9.80E-07 | 0.00700128 |
| 21 | 10660069 | 10660069 | 1 | 21_10660069 | ENSG00000277282 | IGHV1OR21-1 | 10234 | Upstream | -4.8954289 | 9.81E-07 | 0.0070042 |
| 11 | 30438426 | 30438426 | 1 | 11_30438426 | ENSG00000066382 | MPPED2 | 0 | INTRON | 4.89515174 | 9.82E-07 | 0.00701056 |
| 1 | 174832241 | 174832241 | 1 | 1_174832241 | ENSG00000152061 | RABGAP1L | 0 | INTRON | 4.89508516 | 9.83E-07 | 0.00701056 |
| 7 | 80878195 | 80878195 | 1 | 7_80878195 | ENSG00000075223 | SEMA3C | 0 | INTRON | 4.89457599 | 9.85E-07 | 0.00702579 |
| 5 | 103818596 | 103818596 | 1 | 5_103818596 | ENSG00000283462 | AC008505.1 | 61532 | Downstream | 4.89421304 | 9.87E-07 | 0.00703158 |
| 19 | 1014737 | 1014737 | 1 | 19_1014737 | ENSG00000182087 | TMEM259 | 0 | INTRON | -4.8941561 | 9.87E-07 | 0.00703158 |
| 18 | 45652440 | 45652440 | 1 | 18_45652440 | ENSG00000132874 | SLC14A2 | 0 | INTRON | 4.89415134 | 9.87E-07 | 0.00703158 |
| 6 | 100886785 | 100886785 | 1 | 6_100886785 | ENSG00000270987 | AL133338.2 | 2817 | Upstream | -4.8939754 | 9.88E-07 | 0.00703158 |
| 4 | 18783495 | 18783495 | 1 | 4_18783495 | ENSG00000286046 | AC093898.1 | 0 | INTRON | -4.8939288 | 9.88E-07 | 0.00703158 |
| 16 | 28123397 | 28123397 | 1 | 16_28123397 | ENSG00000169180 | XPO6 | 0 | INTRON | -4.8939202 | 9.88E-07 | 0.00703158 |
| 19 | 55812537 | 55812537 | 1 | 19_55812537 | ENSG00000179873 | NLRP11 | 0 | INTRON | -4.8935362 | 9.90E-07 | 0.00703953 |
| 8 | 93392311 | 93392311 | 1 | 8_93392311 | ENSG00000246662 | LINC00535 | 0 | INTRON | 4.89353339 | 9.90E-07 | 0.00703953 |
| 5 | 9976909 | 9976909 | 1 | 5_9976909 | ENSG00000249781 | LINC02112 | 73057 | Upstream | -4.8932992 | 9.92E-07 | 0.00704497 |
| 10 | 110839715 | 110839715 | 1 | 10_110839715 | ENSG00000203867 | RBM20 | 247 | Downstream | 4.89297203 | 9.93E-07 | 0.00705213 |
| 1 | 111529910 | 111529910 | 1 | 1_111529910 | ENSG00000121933 | TMIGD3 | 0 | INTRON | 4.89284504 | 9.94E-07 | 0.00705213 |
| 1 | 232513971 | 232513971 | 1 | 1_232513971 | ENSG00000116991 | SIPA1L2 | 0 | EXON | 4.89282311 | 9.94E-07 | 0.00705213 |
| 16 | 85146127 | 85146127 | 1 | 16_85146127 | ENSG00000278214 | LINC02139 | 0 | INTRON | 4.89257884 | 9.95E-07 | 0.00705213 |
| 1 | 186039699 | 186039699 | 1 | 1_186039699 | ENSG00000143341 | HMCN1 | 0 | INTRON | 4.89250094 | 9.96E-07 | 0.00705213 |
| 19 | 53233463 | 53233463 | 1 | 19_53233463 | ENSG00000197928 | ZNF677 | 1917 | Downstream | 4.89249031 | 9.96E-07 | 0.00705213 |
| 14 | 56243047 | 56243047 | 1 | 14_56243047 | ENSG00000139946 | PELI2 | 0 | INTRON | 4.89247796 | 9.96E-07 | 0.00705213 |
| 1 | 48214092 | 48214092 | 1 | 1_48214092 | ENSG00000223720 | AL109659.1 | 7235 | Downstream | 4.89240879 | 9.96E-07 | 0.00705213 |
| 10 | 112312849 | 112312849 | 1 | 10_112312849 | ENSG00000243316 | GUCY2GP | 0 | INTRON | 4.89231413 | 9.97E-07 | 0.00705213 |
| 2 | 77058462 | 77058462 | 1 | 2_77058462 | ENSG00000176204 | LRRTM4 | 0 | INTRON | -4.8922147 | 9.97E-07 | 0.00705213 |
| 17 | 70633046 | 70633046 | 1 | 17_70633046 | ENSG00000267471 | AC005771.1 | 3781 | Upstream | -4.8921295 | 9.98E-07 | 0.00705213 |
| 10 | 101109801 | 101109801 | 1 | 10_101109801 | ENSG00000236311 | TLX1NB | 0 | INTRON | 4.89211606 | 9.98E-07 | 0.00705213 |
| 10 | 129523563 | 129523563 | 1 | 10_129523563 | ENSG00000170430 | MGMT | 0 | INTRON | 4.89201032 | 9.98E-07 | 0.00705299 |
| 9 | 31997002 | 31997002 | 1 | 9_31997002 | ENSG00000252313 | RNA5SP281 | 296555 | Upstream | 4.8916449 | 1.00E-06 | 0.00706224 |
| 13 | 47447093 | 47447093 | 1 | 13_47447093 | ENSG00000244521 | RN7SL700P | 11847 | Downstream | -4.8915342 | 1.00E-06 | 0.00706224 |
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| 8 | 143645689 | 143645689 | 1 | 8_143645689 | ENSG00000183309 | ZNF623 | 0 | INTRON | 4.89136564 | 1.00E-06 | 0.0070644 |
| 5 | 93381779 | 93381779 | 1 | 5_93381779 | ENSG00000237187 | NR2F1-AS1 | 0 | INTRON | 4.8910976 | 1.00E-06 | 0.00706577 |
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| 2 | 218806424 | 218806424 | 1 | 2_218806424 | ENSG00000135929 | CYP27A1 | 0 | INTRON | -4.8908807 | 1.00E-06 | 0.00706577 |
| 12 | 47034625 | 47034625 | 1 | 12_47034625 | ENSG00000139211 | AMIGO2 | 41081 | Downstream | 4.89085151 | 1.00E-06 | 0.00706577 |
| 2 | 95104582 | 95104582 | 1 | 2_95104582 | ENSG00000144029 | MRPS5 | 0 | EXON | 4.89084593 | 1.00E-06 | 0.00706577 |
| 10 | 102050035 | 102050035 | 1 | 10_102050035 | ENSG00000120029 | ARMH3 | 0 | INTRON | -4.8908386 | 1.00E-06 | 0.00706577 |
| 4 | 30738319 | 30738319 | 1 | 4_30738319 | ENSG00000169851 | PCDH7 | 0 | INTRON | 4.89006275 | 1.01E-06 | 0.00708848 |
| 7 | 146911367 | 146911367 | 1 | 7_146911367 | ENSG00000174469 | CNTNAP2 | 0 | INTRON | -4.8899138 | 1.01E-06 | 0.00708848 |
| 17 | 6583380 | 6583380 | 1 | 17_6583380 | ENSG00000198920 | KIAA0753 | 0 | INTRON | -4.8898958 | 1.01E-06 | 0.00708848 |
| 3 | 176243259 | 176243259 | 1 | 3_176243259 | ENSG00000238026 | AC117434.1 | 128722 | Upstream | -4.8898756 | 1.01E-06 | 0.00708848 |
| 15 | 36411501 | 36411501 | 1 | 15_36411501 | ENSG00000259737 | AC087516.2 | 27470 | Downstream | 4.88977051 | 1.01E-06 | 0.00708848 |
| 3 | 12659359 | 12659359 | 1 | 3_12659359 | ENSG00000132155 | RAF1 | 0 | INTRON | -4.8896111 | 1.01E-06 | 0.00708848 |
| 7 | 101285333 | 101285333 | 1 | 7_101285333 | ENSG00000214252 | AZGP1P2 | 2148 | Downstream | 4.8895636 | 1.01E-06 | 0.00708848 |
| 5 | 38466424 | 38466424 | 1 | 5_38466424 | ENSG00000251257 | AC010457.1 | 0 | INTRON | -4.8894532 | 1.01E-06 | 0.00708848 |
| 13 | 76460086 | 76460086 | 1 | 13_76460086 | ENSG00000285572 | AL136441.1 | 92720 | Downstream | 4.88943066 | 1.01E-06 | 0.00708848 |
| 6 | 97274494 | 97274494 | 1 | 6_97274494 | ENSG00000146263 | MMS22L | 0 | INTRON | 4.88934284 | 1.01E-06 | 0.00708848 |
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| 5 | 147232655 | 147232655 | 1 | 5_147232655 | ENSG00000250343 | STK32A-AS1 | 0 | INTRON | -4.8892176 | 1.01E-06 | 0.00708902 |
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| 13 | 55054223 | 55054223 | 1 | 13_55054223 | ENSG00000278630 | LINC02335 | 8721 | Upstream | 4.88899962 | 1.01E-06 | 0.00709103 |
| 1 | 95863957 | 95863957 | 1 | 1_95863957 | ENSG00000237435 | LINC02790 | 73943 | Upstream | -4.8889132 | 1.01E-06 | 0.00709123 |
| 17 | 68286724 | 68286724 | 1 | 17_68286724 | ENSG00000108932 | SLC16A6 | 0 | INTRON | 4.88876582 | 1.01E-06 | 0.00709362 |
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| 10 | 109547406 | 109547406 | 1 | 10_109547406 | ENSG00000237242 | BTF3P15 | 12416 | Downstream | -4.8885736 | 1.02E-06 | 0.00709454 |
| 7 | 126912812 | 126912812 | 1 | 7_126912812 | ENSG00000179603 | GRM8 | 0 | INTRON | 4.88849783 | 1.02E-06 | 0.00709454 |
| 2 | 139641710 | 139641710 | 1 | 2_139641710 | ENSG00000235232 | MRPS18BP2 | 26836 | Upstream | -4.8882836 | 1.02E-06 | 0.00709855 |
| 8 | 54173042 | 54173042 | 1 | 8_54173042 | ENSG00000270980 | AC060764.1 | 18539 | Downstream | 4.88822503 | 1.02E-06 | 0.00709855 |
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| 1 | 77724910 | 77724910 | 1 | 1_77724910 | ENSG00000077254 | USP33 | 0 | INTRON | 4.8875489 | 1.02E-06 | 0.0071113 |
| 16 | 58963067 | 58963067 | 1 | 16_58963067 | ENSG00000245768 | AC106793.1 | 0 | INTRON | 4.88648729 | 1.03E-06 | 0.00714681 |
| 3 | 64427306 | 64427306 | 1 | 3_64427306 | ENSG00000163637 | PRICKLE2 | 0 | INTRON | -4.8862203 | 1.03E-06 | 0.00715358 |
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| 20 | 22897808 | 22897808 | 1 | 20_22897808 | ENSG00000213882 | CYB5AP4 | 11740 | Upstream | 4.8858127 | 1.03E-06 | 0.00716145 |
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| 11 | 107255377 | 107255377 | 1 | 11_107255377 | ENSG00000261098 | AP000766.1 | 56754 | Downstream | 4.8856374 | 1.03E-06 | 0.00716145 |
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| 6 | 97592061 | 97592061 | 1 | 6_97592061 | ENSG00000271860 | AL589740.1 | 0 | INTRON | 4.88538683 | 1.03E-06 | 0.00716343 |
| 18 | 4837095 | 4837095 | 1 | 18_4837095 | ENSG00000266268 | AP005203.1 | 0 | INTRON | 4.88531141 | 1.03E-06 | 0.00716343 |
| 7 | 20061349 | 20061349 | 1 | 7_20061349 | ENSG00000243004 | AC005062.1 | 0 | INTRON | 4.88505202 | 1.03E-06 | 0.00716343 |
| 22 | 21289182 | 21289182 | 1 | 22_21289182 | ENSG00000169662 | BCRP6 | 1577 | Downstream | 4.88492294 | 1.03E-06 | 0.00716343 |
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| 4 | 36879723 | 36879723 | 1 | 4_36879723 | ENSG00000287416 | AC093746.1 | 22518 | Downstream | 4.88468606 | 1.04E-06 | 0.00716343 |
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| 2 | 176313764 | 176313764 | 1 | 2_176313764 | ENSG00000128654 | MTX2 | 0 | INTRON | 4.88460281 | 1.04E-06 | 0.00716343 |
| 19 | 37285494 | 37285494 | 1 | 19_37285494 | ENSG00000267605 | AC016590.1 | 0 | INTRON | -4.8845623 | 1.04E-06 | 0.00716343 |
| 7 | 114294803 | 114294803 | 1 | 7_114294803 | ENSG00000128573 | FOXP2 | 0 | INTRON | -4.8843806 | 1.04E-06 | 0.00716343 |
| 12 | 106411461 | 106411461 | 1 | 12_106411461 | ENSG00000013503 | POLR3B | 0 | INTRON | -4.88434 | 1.04E-06 | 0.00716343 |
| X | 49003617 | 49003617 | 1 | X_49003617 | ENSG00000068400 | GRIPAP1 | 1353 | Upstream | 4.88422725 | 1.04E-06 | 0.00716343 |
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| 11 | 115725832 | 115725832 | 1 | 11_115725832 | ENSG00000256717 | LINC02698 | 0 | INTRON | -4.8841044 | 1.04E-06 | 0.00716343 |
| 12 | 67800086 | 67800086 | 1 | 12_67800086 | ENSG00000279505 | AC022513.1 | 46269 | Downstream | -4.8839782 | 1.04E-06 | 0.00716512 |
| 1 | 229274309 | 229274309 | 1 | 1_229274309 | ENSG00000168118 | RAB4A | 0 | INTRON | 4.88382364 | 1.04E-06 | 0.00716576 |
| 19 | 30492656 | 30492656 | 1 | 19_30492656 | ENSG00000198597 | ZNF536 | 0 | INTRON | 4.88379981 | 1.04E-06 | 0.00716576 |
| 16 | 76789284 | 76789284 | 1 | 16_76789284 | ENSG00000287694 | AC106741.1 | 0 | INTRON | -4.8837109 | 1.04E-06 | 0.00716576 |
| 9 | 106180494 | 106180494 | 1 | 9_106180494 | ENSG00000234323 | LINC01505 | 0 | INTRON | 4.88364149 | 1.04E-06 | 0.00716576 |
| 2 | 152672504 | 152672504 | 1 | 2_152672504 | ENSG00000196504 | PRPF40A | 0 | EXON | 4.88353775 | 1.04E-06 | 0.00716617 |
| 5 | 223202 | 223202 | 1 | 5_223202 | ENSG00000286001 | AC021087.5 | 0 | INTRON | 4.88347099 | 1.04E-06 | 0.00716617 |
| 12 | 119216023 | 119216023 | 1 | 12_119216023 | ENSG00000152137 | HSPB8 | 0 | INTRON | -4.8828346 | 1.05E-06 | 0.00718498 |
| 4 | 139375548 | 139375548 | 1 | 4_139375548 | ENSG00000164134 | NAA15 | 0 | INTRON | 4.88279487 | 1.05E-06 | 0.00718498 |
| 2 | 112677349 | 112677349 | 1 | 2_112677349 | ENSG00000144136 | SLC20A1 | 13524 | Downstream | -4.8824389 | 1.05E-06 | 0.00719507 |
| 12 | 41610232 | 41610232 | 1 | 12_41610232 | ENSG00000165966 | PDZRN4 | 35487 | Downstream | -4.8823286 | 1.05E-06 | 0.00719619 |
| 1 | 153706342 | 153706342 | 1 | 1_153706342 | ENSG00000242565 | RN7SL372P | 1957 | Downstream | -4.8820357 | 1.05E-06 | 0.00720398 |
| 11 | 82110336 | 82110336 | 1 | 11_82110336 | ENSG00000245832 | MIR4300HG | 0 | INTRON | 4.88181843 | 1.05E-06 | 0.00720902 |
| 1 | 101270939 | 101270939 | 1 | 1_101270939 | ENSG00000173810 | PPIAP7 | 0 | EXON | -4.8817254 | 1.05E-06 | 0.00720952 |
| 13 | 76847204 | 76847204 | 1 | 13_76847204 | ENSG00000284809 | AL365394.1 | 610 | Downstream | 4.88148005 | 1.05E-06 | 0.007214 |
| 10 | 9148839 | 9148839 | 1 | 10_9148839 | ENSG00000230014 | LINC00709 | 126993 | Upstream | 4.88144391 | 1.05E-06 | 0.007214 |
| 1 | 81300994 | 81300994 | 1 | 1_81300994 | ENSG00000117114 | ADGRL2 | 5165 | Upstream | -4.8812918 | 1.05E-06 | 0.00721471 |
| 20 | 48904698 | 48904698 | 1 | 20_48904698 | ENSG00000124198 | ARFGEF2 | 17012 | Upstream | 4.88126588 | 1.05E-06 | 0.00721471 |
| 20 | 22686693 | 22686693 | 1 | 20_22686693 | ENSG00000283072 | AL158175.1 | 0 | INTRON | 4.88093935 | 1.06E-06 | 0.00722092 |
| 9 | 34566394 | 34566394 | 1 | 9_34566394 | ENSG00000122756 | CNTFR | 0 | INTRON | 4.88087947 | 1.06E-06 | 0.00722092 |
| 2 | 184415096 | 184415096 | 1 | 2_184415096 | ENSG00000286980 | AC020584.1 | 32227 | Downstream | 4.88085851 | 1.06E-06 | 0.00722092 |
| 18 | 77809688 | 77809688 | 1 | 18_77809688 | ENSG00000252260 | RNA5SP461 | 53775 | Downstream | -4.8805114 | 1.06E-06 | 0.00722651 |
| 5 | 175367665 | 175367665 | 1 | 5_175367665 | ENSG00000184845 | DRD1 | 72370 | Downstream | 4.88047051 | 1.06E-06 | 0.00722651 |
| 5 | 97866301 | 97866301 | 1 | 5_97866301 | ENSG00000248202 | LINC02234 | 0 | INTRON | 4.88046831 | 1.06E-06 | 0.00722651 |
| 16 | 16208195 | 16208195 | 1 | 16_16208195 | ENSG00000091262 | ABCC6 | 0 | INTRON | -4.8803233 | 1.06E-06 | 0.00722893 |
| 1 | 86859509 | 86859509 | 1 | 1_86859509 | ENSG00000183291 | SELENOF | 2935 | Downstream | -4.8798655 | 1.06E-06 | 0.00724193 |
| 20 | 58775601 | 58775601 | 1 | 20_58775601 | ENSG00000237121 | PIEZO1P2 | 0 | INTRON | 4.87981069 | 1.06E-06 | 0.00724193 |
| 16 | 70103388 | 70103388 | 1 | 16_70103388 | ENSG00000090857 | PDPR | 10237 | Upstream | -4.8796095 | 1.06E-06 | 0.00724642 |
| 2 | 112611567 | 112611567 | 1 | 2_112611567 | ENSG00000243389 | AC012442.2 | 0 | INTRON | 4.87935986 | 1.06E-06 | 0.00725195 |
| 17 | 15585617 | 15585617 | 1 | 17_15585617 | ENSG00000251537 | AC005324.3 | 0 | INTRON | -4.8792365 | 1.06E-06 | 0.00725195 |
| 7 | 1864041 | 1864041 | 1 | 7_1864041 | ENSG00000002822 | MAD1L1 | 0 | INTRON | 4.87922205 | 1.07E-06 | 0.00725195 |
| 2 | 25387613 | 25387613 | 1 | 2_25387613 | ENSG00000138101 | DTNB | 0 | INTRON | 4.87909439 | 1.07E-06 | 0.00725374 |
| 2 | 195544091 | 195544091 | 1 | 2_195544091 | ENSG00000223466 | LINC01825 | 3804 | Downstream | -4.8788873 | 1.07E-06 | 0.00725846 |
| 3 | 67885655 | 67885655 | 1 | 3_67885655 | ENSG00000241316 | SUCLG2-AS1 | 0 | INTRON | 4.87878313 | 1.07E-06 | 0.00725939 |
| 3 | 67330401 | 67330401 | 1 | 3_67330401 | ENSG00000241884 | AC114401.1 | 24042 | Downstream | 4.87866839 | 1.07E-06 | 0.00725976 |
| 5 | 41694818 | 41694818 | 1 | 5_41694818 | ENSG00000083720 | OXCT1 | 35246 | Downstream | 4.87857209 | 1.07E-06 | 0.00725976 |
| 5 | 1352116 | 1352116 | 1 | 5_1352116 | ENSG00000286388 | AC026748.3 | 1330 | Downstream | 4.87853655 | 1.07E-06 | 0.00725976 |
| 1 | 164116896 | 164116896 | 1 | 1_164116896 | ENSG00000212538 | U3 | 193023 | Downstream | -4.8783615 | 1.07E-06 | 0.00726331 |
| 1 | 154011513 | 154011513 | 1 | 1_154011513 | ENSG00000143552 | NUP210L | 0 | INTRON | -4.8779315 | 1.07E-06 | 0.00727379 |
| 7 | 125325097 | 125325097 | 1 | 7_125325097 | ENSG00000224897 | POT1-AS1 | 0 | INTRON | 4.87791974 | 1.07E-06 | 0.00727379 |
| 5 | 16507396 | 16507396 | 1 | 5_16507396 | ENSG00000154153 | RETREG1 | 0 | INTRON | 4.8777293 | 1.07E-06 | 0.00727706 |
| 15 | 28560051 | 28560051 | 1 | 15_28560051 | ENSG00000227717 | AC138749.1 | 0 | EXON | -4.8774075 | 1.07E-06 | 0.00727706 |
| 9 | 61861565 | 61861565 | 1 | 9_61861565 | ENSG00000231527 | FAM27C | 0 | INTRON | -4.877263 | 1.08E-06 | 0.00727706 |
| 1 | 13314915 | 13314915 | 1 | 1_13314915 | ENSG00000204501 | PRAMEF15 | 665 | Upstream | -4.8771683 | 1.08E-06 | 0.00727706 |
| 15 | 89918568 | 89918568 | 1 | 15_89918568 | ENSG00000242498 | ARPIN | 5616 | Upstream | -4.877157 | 1.08E-06 | 0.00727706 |
| 8 | 55604892 | 55604892 | 1 | 8_55604892 | ENSG00000206579 | XKR4 | 62838 | Downstream | 4.8771104 | 1.08E-06 | 0.00727706 |
| 1 | 9483704 | 9483704 | 1 | 1_9483704 | ENSG00000235263 | AL928921.1 | 17387 | Downstream | 4.87710878 | 1.08E-06 | 0.00727706 |
| 2 | 97031227 | 97031227 | 1 | 2_97031227 | ENSG00000144188 | TRIM43CP | 0 | INTRON | -4.8770927 | 1.08E-06 | 0.00727706 |
| 1 | 28298861 | 28298861 | 1 | 1_28298861 | ENSG00000130766 | SESN2 | 16370 | Downstream | 4.87706119 | 1.08E-06 | 0.00727706 |
| 9 | 108422524 | 108422524 | 1 | 9_108422524 | ENSG00000230030 | AL353742.1 | 167704 | Upstream | -4.8769911 | 1.08E-06 | 0.00727706 |
| 6 | 127416574 | 127416574 | 1 | 6_127416574 | ENSG00000220522 | AL590002.1 | 0 | EXON | 4.87696753 | 1.08E-06 | 0.00727706 |
| 10 | 92263049 | 92263049 | 1 | 10_92263049 | ENSG00000107864 | CPEB3 | 0 | INTRON | 4.87680877 | 1.08E-06 | 0.00728002 |
| 4 | 39956068 | 39956068 | 1 | 4_39956068 | ENSG00000121892 | PDS5A | 0 | INTRON | -4.8764853 | 1.08E-06 | 0.0072847 |
| 14 | 77653426 | 77653426 | 1 | 14_77653426 | ENSG00000258668 | COX6CP11 | 371 | Upstream | 4.8764595 | 1.08E-06 | 0.0072847 |
| 15 | 50313952 | 50313952 | 1 | 15_50313952 | ENSG00000104064 | GABPB1 | 0 | INTRON | 4.87644728 | 1.08E-06 | 0.0072847 |
| 1 | 93497213 | 93497213 | 1 | 1_93497213 | ENSG00000137942 | FNBP1L | 0 | INTRON | 4.87611836 | 1.08E-06 | 0.00729396 |
| 8 | 143916342 | 143916342 | 1 | 8_143916342 | ENSG00000178209 | PLEC | 0 | EXON | 4.87593819 | 1.08E-06 | 0.00729693 |
| 8 | 116866720 | 116866720 | 1 | 8_116866720 | ENSG00000164754 | RAD21 | 0 | EXON | 4.8758598 | 1.08E-06 | 0.00729693 |
| 7 | 70365429 | 70365429 | 1 | 7_70365429 | ENSG00000158321 | AUTS2 | 0 | INTRON | 4.87580364 | 1.08E-06 | 0.00729693 |
| 16 | 34699204 | 34699204 | 1 | 16_34699204 | ENSG00000279165 | AC135776.4 | 242772 | Upstream | -4.8753788 | 1.09E-06 | 0.00730903 |
| 9 | 105302603 | 105302603 | 1 | 9_105302603 | ENSG00000070214 | SLC44A1 | 0 | INTRON | -4.8752288 | 1.09E-06 | 0.00730903 |
| 7 | 43447997 | 43447997 | 1 | 7_43447997 | ENSG00000002746 | HECW1 | 0 | INTRON | -4.8752252 | 1.09E-06 | 0.00730903 |
| 1 | 42248390 | 42248390 | 1 | 1_42248390 | ENSG00000198815 | FOXJ3 | 0 | INTRON | 4.87516432 | 1.09E-06 | 0.00730903 |
| 20 | 60489686 | 60489686 | 1 | 20_60489686 | ENSG00000228340 | MIR646HG | 0 | INTRON | 4.8750529 | 1.09E-06 | 0.00731027 |
| 2 | 140377138 | 140377138 | 1 | 2_140377138 | ENSG00000168702 | LRP1B | 0 | INTRON | 4.87476811 | 1.09E-06 | 0.00731793 |
| 20 | 10993224 | 10993224 | 1 | 20_10993224 | ENSG00000270792 | AL050403.2 | 0 | INTRON | 4.87463038 | 1.09E-06 | 0.00732015 |
| X | 1546712 | 1546712 | 1 | X_1546712 | ENSG00000182162 | P2RY8 | 9527 | Upstream | 4.87436803 | 1.09E-06 | 0.00732699 |
| 6 | 15942639 | 15942639 | 1 | 6_15942639 | ENSG00000214027 | ARPC3P5 | 7324 | Downstream | -4.8742427 | 1.09E-06 | 0.00732875 |
| 16 | 50278964 | 50278964 | 1 | 16_50278964 | ENSG00000121281 | ADCY7 | 0 | INTRON | -4.8741158 | 1.09E-06 | 0.00733057 |
| 10 | 45061413 | 45061413 | 1 | 10_45061413 | ENSG00000277757 | AL358394.3 | 0 | INTRON | 4.874033 | 1.09E-06 | 0.00733076 |
| 1 | 220290393 | 220290393 | 1 | 1_220290393 | ENSG00000118873 | RAB3GAP2 | 17940 | Upstream | 4.87377611 | 1.09E-06 | 0.00733741 |
| 3 | 145578885 | 145578885 | 1 | 3_145578885 | ENSG00000244024 | LARP7P4 | 54470 | Downstream | 4.87327528 | 1.10E-06 | 0.00734459 |
| 6 | 25336615 | 25336615 | 1 | 6_25336615 | ENSG00000168405 | CMAHP | 0 | INTRON | 4.87325549 | 1.10E-06 | 0.00734459 |
| 13 | 26336346 | 26336346 | 1 | 13_26336346 | ENSG00000132964 | CDK8 | 0 | INTRON | 4.87315076 | 1.10E-06 | 0.00734459 |
| 17 | 6015079 | 6015079 | 1 | 17_6015079 | ENSG00000285471 | AC007846.2 | 0 | INTRON | -4.8730624 | 1.10E-06 | 0.00734459 |
| 15 | 74087429 | 74087429 | 1 | 15_74087429 | ENSG00000159289 | GOLGA6A | 4879 | Upstream | 4.87304967 | 1.10E-06 | 0.00734459 |
| 2 | 51888240 | 51888240 | 1 | 2_51888240 | ENSG00000231918 | AC007402.1 | 0 | INTRON | -4.8730056 | 1.10E-06 | 0.00734459 |
| 10 | 33904618 | 33904618 | 1 | 10_33904618 | ENSG00000223470 | LINC02629 | 4619 | Upstream | 4.87297062 | 1.10E-06 | 0.00734459 |
| 22 | 18494485 | 18494485 | 1 | 22_18494485 | ENSG00000277870 | FAM230A | 0 | INTRON | -4.872959 | 1.10E-06 | 0.00734459 |
| 18 | 16889930 | 16889930 | 1 | 18_16889930 | ENSG00000215512 | AP005901.1 | 1559648 | Upstream | -4.8728844 | 1.10E-06 | 0.00734459 |
| 3 | 78823647 | 78823647 | 1 | 3_78823647 | ENSG00000169855 | ROBO1 | 0 | INTRON | 4.8726558 | 1.10E-06 | 0.00734682 |
| 22 | 16263705 | 16263705 | 1 | 22_16263705 | ENSG00000278188 | U6 | 121833 | Downstream | -4.8725616 | 1.10E-06 | 0.00734682 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 13 | 74719149 | 74719149 | 1 | 13_74719149 | ENSG00000225944 | RIOK3P1 | 109403 | Upstream | 4.87255065 | 1.10E-06 | 0.00734682 |
| 2 | 101026499 | 101026499 | 1 | 2_101026499 | ENSG00000204634 | TBC1D8 | 0 | INTRON | 4.87251448 | 1.10E-06 | 0.00734682 |
| 1 | 200348162 | 200348162 | 1 | 1_200348162 | ENSG00000203721 | LINC00862 | 0 | INTRON | 4.87227415 | 1.10E-06 | 0.00734957 |
| 10 | 55887660 | 55887660 | 1 | 10_55887660 | ENSG00000270541 | AC069545.1 | 140752 | Downstream | 4.87214237 | 1.10E-06 | 0.00734957 |
| 13 | 39075298 | 39075298 | 1 | 13_39075298 | ENSG00000273507 | AL354809.1 | 0 | INTRON | 4.87210599 | 1.10E-06 | 0.00734957 |
| 16 | 29018933 | 29018933 | 1 | 16_29018933 | ENSG00000196796 | NPIPB10P | 19721 | Upstream | 4.87200996 | 1.10E-06 | 0.00734957 |
| 1 | 70363951 | 70363951 | 1 | 1_70363951 | ENSG00000197568 | HHLA3 | 0 | INTRON | 4.87193501 | 1.11E-06 | 0.00734957 |
| 13 | 105744516 | 105744516 | 1 | 13_105744516 | ENSG00000226620 | LINC00343 | 0 | INTRON | -4.8719337 | 1.11E-06 | 0.00734957 |
| 11 | 27674475 | 27674475 | 1 | 11_27674475 | ENSG00000176697 | BDNF | 0 | INTRON | -4.8716753 | 1.11E-06 | 0.00734957 |
| X | 48885711 | 48885711 | 1 | X_48885711 | ENSG00000102103 | PQBP1 | 4485 | Upstream | -4.8716433 | 1.11E-06 | 0.00734957 |
| 4 | 110824537 | 110824537 | 1 | 4_110824537 | ENSG00000249519 | LINC01438 | 27193 | Downstream | -4.8716311 | 1.11E-06 | 0.00734957 |
| 8 | 133492839 | 133492839 | 1 | 8_133492839 | ENSG00000008513 | ST3GAL1 | 0 | INTRON | -4.8716072 | 1.11E-06 | 0.00734957 |
| 12 | 39577849 | 39577849 | 1 | 12_39577849 | ENSG00000173208 | ABCD2 | 0 | INTRON | 4.87154399 | 1.11E-06 | 0.00734957 |
| 6 | 117862445 | 117862445 | 1 | 6_117862445 | ENSG00000196376 | SLC35F1 | 44818 | Upstream | 4.87151394 | 1.11E-06 | 0.00734957 |
| 3 | 166604141 | 166604141 | 1 | 3_166604141 | ENSG00000274149 | AC072046.2 | 1046 | Upstream | 4.87123812 | 1.11E-06 | 0.0073566 |
| 3 | 106851561 | 106851561 | 1 | 3_106851561 | ENSG00000242759 | LINC00882 | 0 | INTRON | -4.8711712 | 1.11E-06 | 0.0073566 |
| 12 | 29435511 | 29435511 | 1 | 12_29435511 | ENSG00000257599 | OVCH1-AS1 | 0 | INTRON | 4.86989281 | 1.12E-06 | 0.00740147 |
| 18 | 2000283 | 2000283 | 1 | 18_2000283 | ENSG00000263745 | AP005230.1 | 0 | INTRON | 4.8697842 | 1.12E-06 | 0.00740265 |
| X | 14376988 | 14376988 | 1 | X_14376988 | ENSG00000233247 | AC002524.1 | 132060 | Downstream | 4.86946349 | 1.12E-06 | 0.00741179 |
| 10 | 113530673 | 113530673 | 1 | 10_113530673 | ENSG00000148702 | HABP2 | 20163 | Upstream | 4.86936977 | 1.12E-06 | 0.00741242 |
| 17 | 18343240 | 18343240 | 1 | 17_18343240 | ENSG00000176974 | SHMT1 | 0 | INTRON | 4.86910701 | 1.12E-06 | 0.00741939 |
| 1 | 163350280 | 163350280 | 1 | 1_163350280 | ENSG00000143228 | NUF2 | 0 | INTRON | 4.86898063 | 1.12E-06 | 0.00742125 |
| 7 | 106164633 | 106164633 | 1 | 7_106164633 | ENSG00000242562 | DCAF13P1 | 37933 | Downstream | -4.8687315 | 1.12E-06 | 0.00742512 |
| 5 | 89396711 | 89396711 | 1 | 5_89396711 | ENSG00000248309 | MEF2C-AS1 | 0 | INTRON | 4.86872407 | 1.12E-06 | 0.00742512 |
| 15 | 62847331 | 62847331 | 1 | 15_62847331 | ENSG00000259370 | AC103740.1 | 0 | INTRON | -4.8682541 | 1.13E-06 | 0.0074347 |
| 4 | 3093337 | 3093337 | 1 | 4_3093337 | ENSG00000197386 | HTT | 0 | INTRON | 4.8682496 | 1.13E-06 | 0.0074347 |
| 5 | 22098496 | 22098496 | 1 | 5_22098496 | ENSG00000154162 | CDH12 | 0 | INTRON | 4.86819594 | 1.13E-06 | 0.0074347 |
| 14 | 36085413 | 36085413 | 1 | 14_36085413 | ENSG00000257585 | LINC00609 | 0 | INTRON | 4.86816241 | 1.13E-06 | 0.0074347 |
| 10 | 107046223 | 107046223 | 1 | 10_107046223 | ENSG00000108018 | SORCS1 | 0 | INTRON | -4.8679538 | 1.13E-06 | 0.00743852 |
| 10 | 61168335 | 61168335 | 1 | 10_61168335 | ENSG00000227244 | LINC00845 | 141915 | Downstream | -4.8679075 | 1.13E-06 | 0.00743852 |
| 12 | 100374168 | 100374168 | 1 | 12_100374168 | ENSG00000179520 | SLC17A8 | 0 | INTRON | -4.867584 | 1.13E-06 | 0.00744782 |
| 21 | 30905944 | 30905944 | 1 | 21_30905944 | ENSG00000182591 | KRTAP11-1 | 24364 | Upstream | 4.86729001 | 1.13E-06 | 0.00745418 |
| 6 | 95892199 | 95892199 | 1 | 6_95892199 | ENSG00000287578 | AL034348.1 | 24943 | Downstream | 4.867262 | 1.13E-06 | 0.00745418 |
| 15 | 86270005 | 86270005 | 1 | 15_86270005 | ENSG00000273540 | AGBL1 | 0 | EXON | 4.86711213 | 1.13E-06 | 0.00745624 |
| 22 | 17656547 | 17656547 | 1 | 22_17656547 | ENSG00000099968 | BCL2L13 | 0 | INTRON | 4.86705448 | 1.13E-06 | 0.00745624 |
| 20 | 526874 | 526874 | 1 | 20_526874 | ENSG00000101266 | CSNK2A1 | 0 | 5UTR | 4.86670393 | 1.13E-06 | 0.00746658 |
| 9 | 78515962 | 78515962 | 1 | 9_78515962 | ENSG00000270627 | AL592221.1 | 73195 | Upstream | 4.86655195 | 1.14E-06 | 0.00746881 |
| 14 | 96815440 | 96815440 | 1 | 14_96815440 | ENSG00000100749 | VRK1 | 0 | INTRON | -4.866492 | 1.14E-06 | 0.00746881 |
| 15 | 66068407 | 66068407 | 1 | 15_66068407 | ENSG00000157890 | MEGF11 | 0 | INTRON | 4.86584003 | 1.14E-06 | 0.00748947 |
| 5 | 146133274 | 146133274 | 1 | 5_146133274 | ENSG00000133706 | LARS | 0 | INTRON | 4.86579307 | 1.14E-06 | 0.00748947 |
| 17 | 55224215 | 55224215 | 1 | 17_55224215 | ENSG00000108924 | HLF | 40744 | Upstream | 4.86560409 | 1.14E-06 | 0.00749151 |
| 13 | 84378567 | 84378567 | 1 | 13_84378567 | ENSG00000288016 | AL162493.1 | 0 | INTRON | -4.8655416 | 1.14E-06 | 0.00749151 |
| 8 | 49170007 | 49170007 | 1 | 8_49170007 | ENSG00000253474 | AC044893.1 | 0 | INTRON | 4.86547401 | 1.14E-06 | 0.00749151 |
| 22 | 29913912 | 29913912 | 1 | 22_29913912 | ENSG00000100330 | MTMR3 | 0 | INTRON | 4.86543386 | 1.14E-06 | 0.00749151 |
| 18 | 69647884 | 69647884 | 1 | 18_69647884 | ENSG00000206052 | DOK6 | 0 | INTRON | 4.86522974 | 1.14E-06 | 0.00749636 |
| 3 | 170954869 | 170954869 | 1 | 3_170954869 | ENSG00000286856 | AC061708.1 | 0 | INTRON | -4.8647421 | 1.15E-06 | 0.00751197 |
| 14 | 50839907 | 50839907 | 1 | 14_50839907 | ENSG00000285747 | AL133485.3 | 1807 | Downstream | 4.86445075 | 1.15E-06 | 0.00751747 |
| 7 | 68516254 | 68516254 | 1 | 7_68516254 | ENSG00000228429 | AC004910.1 | 124543 | Upstream | 4.86444497 | 1.15E-06 | 0.00751747 |
| 9 | 136757072 | 136757072 | 1 | 9_136757072 | ENSG00000204001 | LCN8 | 0 | EXON | 4.86393279 | 1.15E-06 | 0.00752988 |
| 11 | 125862548 | 125862548 | 1 | 11_125862548 | ENSG00000260209 | AP000842.3 | 10482 | Downstream | 4.86391356 | 1.15E-06 | 0.00752988 |
| 1 | 37904108 | 37904108 | 1 | 1_37904108 | ENSG00000204084 | INPP5B | 0 | INTRON | 4.86389047 | 1.15E-06 | 0.00752988 |
| 1 | 72997487 | 72997487 | 1 | 1_72997487 | ENSG00000280317 | AL732618.1 | 18173 | Upstream | -4.8636286 | 1.15E-06 | 0.00753695 |
| X | 99818190 | 99818190 | 1 | X_99818190 | ENSG00000229946 | B3GNT2P1 | 68549 | Downstream | 4.86337563 | 1.15E-06 | 0.00754234 |
| 16 | 73655529 | 73655529 | 1 | 16_73655529 | ENSG00000140836 | ZFHX3 | 0 | INTRON | 4.86333537 | 1.15E-06 | 0.00754234 |
| 15 | 49972691 | 49972691 | 1 | 15_49972691 | ENSG00000104043 | ATP8B4 | 0 | 3UTR | -4.8629285 | 1.16E-06 | 0.00755079 |
| 18 | 10583959 | 10583959 | 1 | 18_10583959 | ENSG00000265728 | AP001099.1 | 10630 | Upstream | -4.8629107 | 1.16E-06 | 0.00755079 |
| 6 | 112463943 | 112463943 | 1 | 6_112463943 | ENSG00000232299 | AL357514.1 | 12594 | Downstream | 4.86288449 | 1.16E-06 | 0.00755079 |
| 11 | 43228226 | 43228226 | 1 | 11_43228226 | ENSG00000251557 | HNRNPKP3 | 0 | INTRON | 4.86281013 | 1.16E-06 | 0.00755079 |
| 13 | 41657291 | 41657291 | 1 | 13_41657291 | ENSG00000102763 | VWA8 | 0 | INTRON | -4.8623986 | 1.16E-06 | 0.00755846 |
| 13 | 59180590 | 59180590 | 1 | 13_59180590 | ENSG00000288015 | AL159156.1 | 0 | INTRON | 4.86232734 | 1.16E-06 | 0.00755846 |
| 5 | 107377451 | 107377451 | 1 | 5_107377451 | ENSG00000184349 | EFNA5 | 0 | 3UTR | -4.862318 | 1.16E-06 | 0.00755846 |
| 8 | 55025456 | 55025456 | 1 | 8_55025456 | ENSG00000286348 | AC084834.1 | 42128 | Downstream | 4.86230598 | 1.16E-06 | 0.00755846 |
| 3 | 148969550 | 148969550 | 1 | 3_148969550 | ENSG00000240521 | AC092979.1 | 9438 | Upstream | -4.862084 | 1.16E-06 | 0.0075626 |
| 1 | 232430932 | 232430932 | 1 | 1_232430932 | ENSG00000116991 | SIPA1L2 | 0 | INTRON | 4.86203191 | 1.16E-06 | 0.0075626 |
| 8 | 114242072 | 114242072 | 1 | 8_114242072 | ENSG00000254339 | AC064802.1 | 39994 | Upstream | -4.8619703 | 1.16E-06 | 0.0075626 |
| 10 | 11818119 | 11818119 | 1 | 10_11818119 | ENSG00000148426 | PROSER2 | 5219 | Upstream | -4.8618605 | 1.16E-06 | 0.00756391 |
| 4 | 132064993 | 132064993 | 1 | 4_132064993 | ENSG00000251598 | AC093916.1 | 0 | INTRON | -4.8612704 | 1.17E-06 | 0.0075836 |
| 8 | 16040134 | 16040134 | 1 | 8_16040134 | ENSG00000253648 | AC018437.2 | 39810 | Downstream | 4.86115414 | 1.17E-06 | 0.00758466 |
| 7 | 6828858 | 6828858 | 1 | 7_6828858 | ENSG00000146574 | CCZ1B | 2088 | Upstream | 4.86109138 | 1.17E-06 | 0.00758466 |
| 5 | 144656436 | 144656436 | 1 | 5_144656436 | ENSG00000201423 | RN7SKP246 | 120766 | Upstream | 4.86097637 | 1.17E-06 | 0.00758617 |
| 16 | 6644218 | 6644218 | 1 | 16_6644218 | ENSG00000078328 | RBFOX1 | 0 | INTRON | 4.86086985 | 1.17E-06 | 0.00758668 |
| 16 | 34083592 | 34083592 | 1 | 16_34083592 | ENSG00000261197 | AC133561.3 | 32229 | Downstream | -4.860812 | 1.17E-06 | 0.00758668 |
| 13 | 82918237 | 82918237 | 1 | 13_82918237 | ENSG00000286385 | AL445255.1 | 0 | INTRON | 4.86070391 | 1.17E-06 | 0.0075877 |
| 9 | 84657099 | 84657099 | 1 | 9_84657099 | ENSG00000285987 | AL157886.1 | 22 | Downstream | 4.86063442 | 1.17E-06 | 0.0075877 |
| 12 | 54339152 | 54339152 | 1 | 12_54339152 | ENSG00000111481 | COPZ1 | 0 | INTRON | 4.86019669 | 1.17E-06 | 0.0076016 |
| 11 | 71340861 | 71340861 | 1 | 11_71340861 | ENSG00000172900 | AP002387.1 | 41739 | Downstream | -4.860114 | 1.17E-06 | 0.00760188 |
| 6 | 33900661 | 33900661 | 1 | 6_33900661 | ENSG00000233183 | AL138889.1 | 0 | EXON | 4.85967143 | 1.18E-06 | 0.00761573 |
| 14 | 24253623 | 24253623 | 1 | 14_24253623 | ENSG00000092295 | TGM1 | 0 | INTRON | 4.85960297 | 1.18E-06 | 0.00761573 |
| 1 | 236206437 | 236206437 | 1 | 1_236206437 | ENSG00000077585 | GPR137B | 0 | INTRON | 4.85941729 | 1.18E-06 | 0.00761905 |
| 4 | 182495865 | 182495865 | 1 | 4_182495865 | ENSG00000218336 | TENM3 | 0 | INTRON | -4.8593012 | 1.18E-06 | 0.00761905 |
| 5 | 69152246 | 69152246 | 1 | 5_69152246 | ENSG00000220986 | AC010273.1 | 8559 | Upstream | -4.8592908 | 1.18E-06 | 0.00761905 |
| 13 | 39998194 | 39998194 | 1 | 13_39998194 | ENSG00000215483 | LINC00598 | 80911 | Downstream | -4.8591754 | 1.18E-06 | 0.00761958 |
| 17 | 53423617 | 53423617 | 1 | 17_53423617 | ENSG00000285939 | AC034268.2 | 0 | INTRON | -4.8589467 | 1.18E-06 | 0.00761958 |
| 14 | 90535569 | 90535569 | 1 | 14_90535569 | ENSG00000165914 | TTC7B | 0 | 3UTR | 4.85889407 | 1.18E-06 | 0.00761958 |
| 21 | 18494570 | 18494570 | 1 | 21_18494570 | ENSG00000228708 | AL109763.1 | 7971 | Upstream | 4.85888835 | 1.18E-06 | 0.00761958 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 50305870 | 50305870 | 1 | 2_50305870 | ENSG00000179915 | NRXN1 | 0 | INTRON | -4.8588859 | 1.18E-06 | 0.00761958 |
| 9 | 126780872 | 126780872 | 1 | 9_126780872 | ENSG00000169155 | ZBTB43 | 24133 | Upstream | 4.85882602 | 1.18E-06 | 0.00761958 |
| 5 | 158956559 | 158956559 | 1 | 5_158956559 | ENSG00000164330 | EBF1 | 0 | INTRON | 4.85849299 | 1.18E-06 | 0.00762733 |
| 17 | 18428377 | 18428377 | 1 | 17_18428377 | ENSG00000186831 | KRT17P2 | 0 | EXON | -4.8583602 | 1.18E-06 | 0.00762733 |
| 11 | 112655898 | 112655898 | 1 | 11_112655898 | ENSG00000285769 | AP003100.2 | 0 | INTRON | -4.8583523 | 1.18E-06 | 0.00762733 |
| 3 | 170430096 | 170430096 | 1 | 3_170430096 | ENSG00000285218 | AC026316.4 | 0 | INTRON | -4.8583246 | 1.18E-06 | 0.00762733 |
| 14 | 53752482 | 53752482 | 1 | 14_53752482 | ENSG00000237356 | AL365295.1 | 0 | INTRON | -4.8582336 | 1.18E-06 | 0.00762794 |
| 7 | 84023998 | 84023998 | 1 | 7_84023998 | ENSG00000075213 | SEMA3A | 0 | INTRON | -4.8581137 | 1.19E-06 | 0.00762967 |
| 1 | 187475380 | 187475380 | 1 | 1_187475380 | ENSG00000230426 | ERVMER61-1 | 0 | INTRON | -4.8578693 | 1.19E-06 | 0.00763185 |
| 5 | 164399359 | 164399359 | 1 | 5_164399359 | ENSG00000241956 | AC109466.1 | 0 | INTRON | 4.85784434 | 1.19E-06 | 0.00763185 |
| 12 | 14474678 | 14474678 | 1 | 12_14474678 | ENSG00000171681 | ATF7IP | 0 | INTRON | 4.85764362 | 1.19E-06 | 0.00763185 |
| 11 | 1971261 | 1971261 | 1 | 11_1971261 | ENSG00000214026 | MRPL23 | 0 | INTRON | -4.857623 | 1.19E-06 | 0.00763185 |
| 7 | 127658183 | 127658183 | 1 | 7_127658183 | ENSG00000197157 | SND1 | 0 | INTRON | 4.85747896 | 1.19E-06 | 0.00763185 |
| 10 | 87612829 | 87612829 | 1 | 10_87612829 | ENSG00000225913 | AL138767.3 | 0 | INTRON | 4.85746758 | 1.19E-06 | 0.00763185 |
| 1 | 16695372 | 16695372 | 1 | 1_16695372 | ENSG00000268869 | ESPNP | 0 | INTRON | 4.85745446 | 1.19E-06 | 0.00763185 |
| 16 | 14218338 | 14218338 | 1 | 16_14218338 | ENSG00000186260 | MRTFB | 0 | INTRON | -4.8573609 | 1.19E-06 | 0.00763185 |
| X | 54500004 | 54500004 | 1 | X_54500004 | ENSG00000102302 | FGD1 | 3770 | Upstream | 4.85734567 | 1.19E-06 | 0.00763185 |
| 3 | 133803584 | 133803584 | 1 | 3_133803584 | ENSG00000285908 | AC080128.2 | 0 | INTRON | -4.8573093 | 1.19E-06 | 0.00763185 |
| 17 | 76472028 | 76472028 | 1 | 17_76472028 | ENSG00000129667 | RHBDF2 | 0 | 3UTR | 4.85719928 | 1.19E-06 | 0.00763321 |
| 8 | 139324703 | 139324703 | 1 | 8_139324703 | ENSG00000254258 | AC087354.1 | 135358 | Downstream | 4.85685422 | 1.19E-06 | 0.00763674 |
| 3 | 129912439 | 129912439 | 1 | 3_129912439 | ENSG00000271270 | TMCC1-AS1 | 0 | INTRON | 4.85678483 | 1.19E-06 | 0.00763674 |
| 16 | 48861792 | 48861792 | 1 | 16_48861792 | ENSG00000260184 | AC023827.1 | 11777 | Upstream | 4.85677012 | 1.19E-06 | 0.00763674 |
| 18 | 922959 | 922959 | 1 | 18_922959 | ENSG00000259837 | LINC01904 | 3123 | Downstream | 4.85674089 | 1.19E-06 | 0.00763674 |
| 1 | 14933069 | 14933069 | 1 | 1_14933069 | ENSG00000189337 | KAZN | 0 | INTRON | 4.85673493 | 1.19E-06 | 0.00763674 |
| 20 | 21478147 | 21478147 | 1 | 20_21478147 | ENSG00000226405 | AL133325.1 | 10096 | Downstream | 4.856499 | 1.19E-06 | 0.00764297 |
| 11 | 11043814 | 11043814 | 1 | 11_11043814 | ENSG00000254401 | LINC02752 | 0 | INTRON | 4.85639756 | 1.20E-06 | 0.00764401 |
| 6 | 116512086 | 116512086 | 1 | 6_116512086 | ENSG00000178033 | CALHM5 | 0 | EXON | 4.85625956 | 1.20E-06 | 0.00764646 |
| 3 | 43200078 | 43200078 | 1 | 3_43200078 | ENSG00000163788 | SNRK | 86433 | Upstream | -4.856109 | 1.20E-06 | 0.0076466 |
| 12 | 101551743 | 101551743 | 1 | 12_101551743 | ENSG00000196091 | MYBPC1 | 16609 | Upstream | -4.8561072 | 1.20E-06 | 0.0076466 |
| 7 | 124356664 | 124356664 | 1 | 7_124356664 | ENSG00000242593 | AC006148.1 | 0 | INTRON | -4.8559684 | 1.20E-06 | 0.00764909 |
| 7 | 990719 | 990719 | 1 | 7_990719 | ENSG00000073067 | CYP2W1 | 1079 | Downstream | 4.85567589 | 1.20E-06 | 0.00765434 |
| 6 | 93204005 | 93204005 | 1 | 6_93204005 | ENSG00000135333 | EPHA7 | 36014 | Downstream | -4.8556129 | 1.20E-06 | 0.00765434 |
| 4 | 140771312 | 140771312 | 1 | 4_140771312 | ENSG00000222613 | Y_RNA | 7726 | Downstream | -4.8556094 | 1.20E-06 | 0.00765434 |
| 4 | 181648203 | 181648203 | 1 | 4_181648203 | ENSG00000287948 | AC084741.1 | 37978 | Downstream | 4.85548342 | 1.20E-06 | 0.00765634 |
| 18 | 64980964 | 64980964 | 1 | 18_64980964 | ENSG00000286800 | AC090348.1 | 0 | INTRON | 4.85493888 | 1.20E-06 | 0.00767453 |
| 8 | 142022680 | 142022680 | 1 | 8_142022680 | ENSG00000254183 | AC104417.1 | 53839 | Upstream | -4.8546679 | 1.21E-06 | 0.00768216 |
| 7 | 93945693 | 93945693 | 1 | 7_93945693 | ENSG00000278959 | AC006378.2 | 8350 | Downstream | 4.8543018 | 1.21E-06 | 0.0076927 |
| 17 | 59012800 | 59012800 | 1 | 17_59012800 | ENSG00000108395 | TRIM37 | 0 | INTRON | 4.85424788 | 1.21E-06 | 0.0076927 |
| 9 | 170446 | 170446 | 1 | 9_170446 | ENSG00000172785 | CBWD1 | 0 | INTRON | -4.8540664 | 1.21E-06 | 0.00769331 |
| 1 | 211848460 | 211848460 | 1 | 1_211848460 | ENSG00000229258 | LPGAT1-AS1 | 0 | INTRON | -4.8539826 | 1.21E-06 | 0.00769331 |
| 8 | 65529238 | 65529238 | 1 | 8_65529238 | ENSG00000254081 | LINC01299 | 0 | INTRON | -4.8538929 | 1.21E-06 | 0.00769331 |
| 22 | 18511090 | 18511090 | 1 | 22_18511090 | ENSG00000278044 | AC023490.4 | 0 | INTRON | -4.8537951 | 1.21E-06 | 0.00769331 |
| 6 | 126388374 | 126388374 | 1 | 6_126388374 | ENSG00000286215 | AL356534.1 | 0 | INTRON | 4.8537649 | 1.21E-06 | 0.00769331 |
| 15 | 57207394 | 57207394 | 1 | 15_57207394 | ENSG00000140262 | TCF12 | 0 | INTRON | -4.8537411 | 1.21E-06 | 0.00769331 |
| 12 | 120252826 | 120252826 | 1 | 12_120252826 | ENSG00000089159 | PXN | 0 | INTRON | 4.85371378 | 1.21E-06 | 0.00769331 |
| 4 | 94820405 | 94820405 | 1 | 4_94820405 | ENSG00000138696 | BMPR1B | 0 | INTRON | 4.85311973 | 1.22E-06 | 0.0077109 |
| 2 | 231450431 | 231450431 | 1 | 2_231450431 | ENSG00000233538 | AC017104.3 | 1763 | Upstream | -4.8531131 | 1.22E-06 | 0.0077109 |
| 12 | 69242269 | 69242269 | 1 | 12_69242269 | ENSG00000111605 | CPSF6 | 0 | INTRON | 4.85301504 | 1.22E-06 | 0.00771184 |
| 2 | 147245718 | 147245718 | 1 | 2_147245718 | ENSG00000287847 | AC018678.1 | 93671 | Downstream | 4.85280097 | 1.22E-06 | 0.0077173 |
| 2 | 99865961 | 99865961 | 1 | 2_99865961 | ENSG00000144218 | AFF3 | 0 | INTRON | 4.85261055 | 1.22E-06 | 0.0077193 |
| 4 | 55023095 | 55023095 | 1 | 4_55023095 | ENSG00000252815 | RNU6-410P | 8869 | Downstream | -4.8526019 | 1.22E-06 | 0.0077193 |
| 14 | 105392961 | 105392961 | 1 | 14_105392961 | ENSG00000179364 | PACS2 | 0 | INTRON | 4.85237853 | 1.22E-06 | 0.00772162 |
| 8 | 19493346 | 19493346 | 1 | 8_19493346 | ENSG00000147408 | CSGALNACT1 | 0 | INTRON | 4.85237589 | 1.22E-06 | 0.00772162 |
| 7 | 7760176 | 7760176 | 1 | 7_7760176 | ENSG00000219545 | UMAD1 | 0 | INTRON | -4.8523209 | 1.22E-06 | 0.00772162 |
| 4 | 61978716 | 61978716 | 1 | 4_61978716 | ENSG00000150471 | ADGRL3 | 0 | INTRON | -4.8516393 | 1.22E-06 | 0.0077441 |
| 13 | 44382166 | 44382166 | 1 | 13_44382166 | ENSG00000151778 | SERP2 | 0 | INTRON | -4.8515972 | 1.22E-06 | 0.0077441 |
| 16 | 7284550 | 7284550 | 1 | 16_7284550 | ENSG00000078328 | RBFOX1 | 0 | INTRON | -4.8513703 | 1.23E-06 | 0.00774913 |
| 9 | 72250945 | 72250945 | 1 | 9_72250945 | ENSG00000119125 | GDA | 0 | 3UTR | 4.85128669 | 1.23E-06 | 0.00774913 |
| 5 | 160693585 | 160693585 | 1 | 5_160693585 | ENSG00000118322 | ATP10B | 0 | INTRON | 4.85124754 | 1.23E-06 | 0.00774913 |
| 6 | 131597247 | 131597247 | 1 | 6_131597247 | ENSG00000112282 | MED23 | 0 | INTRON | -4.8509352 | 1.23E-06 | 0.0077583 |
| 1 | 110345593 | 110345593 | 1 | 1_110345593 | ENSG00000162775 | RBM15 | 0 | EXON | 4.85086578 | 1.23E-06 | 0.0077583 |
| 5 | 112560384 | 112560384 | 1 | 5_112560384 | ENSG00000251014 | AC137549.1 | 12879 | Downstream | 4.85032285 | 1.23E-06 | 0.00777668 |
| 13 | 51506582 | 51506582 | 1 | 13_51506582 | ENSG00000236778 | INTS6-AS1 | 0 | EXON | -4.8502483 | 1.23E-06 | 0.00777672 |
| 13 | 113502090 | 113502090 | 1 | 13_113502090 | ENSG00000150403 | TMCO3 | 0 | INTRON | 4.85014724 | 1.23E-06 | 0.0077778 |
| 15 | 75434862 | 75434862 | 1 | 15_75434862 | ENSG00000169375 | SIN3A | 0 | INTRON | 4.84998787 | 1.23E-06 | 0.00778117 |
| 13 | 40375873 | 40375873 | 1 | 13_40375873 | ENSG00000215483 | LINC00598 | 0 | INTRON | 4.84989854 | 1.24E-06 | 0.00778179 |
| 2 | 34936010 | 34936010 | 1 | 2_34936010 | ENSG00000226994 | AC079352.1 | 0 | INTRON | 4.84944506 | 1.24E-06 | 0.00779672 |
| 17 | 66683940 | 66683940 | 1 | 17_66683940 | ENSG00000154229 | PRKCA | 0 | INTRON | -4.8492674 | 1.24E-06 | 0.00780081 |
| 18 | 10221670 | 10221670 | 1 | 18_10221670 | ENSG00000287065 | AP005209.2 | 75628 | Upstream | 4.84907309 | 1.24E-06 | 0.00780557 |
| 11 | 58409910 | 58409910 | 1 | 11_58409910 | ENSG00000172769 | OR5B3 | 3036 | Upstream | -4.84886 | 1.24E-06 | 0.00781107 |
| 1 | 114802363 | 114802363 | 1 | 1_114802363 | ENSG00000052723 | SIKE1 | 21678 | Upstream | 4.84876343 | 1.24E-06 | 0.00781199 |
| 4 | 141461370 | 141461370 | 1 | 4_141461370 | ENSG00000272632 | AC097504.2 | 30086 | Downstream | -4.8486046 | 1.24E-06 | 0.00781341 |
| 11 | 80304433 | 80304433 | 1 | 11_80304433 | ENSG00000254434 | AP006295.1 | 17186 | Downstream | 4.84858063 | 1.24E-06 | 0.00781341 |
| 18 | 62862372 | 62862372 | 1 | 18_62862372 | ENSG00000081913 | PHLPP1 | 0 | INTRON | -4.8481403 | 1.25E-06 | 0.00782788 |
| 19 | 786693 | 786693 | 1 | 19_786693 | ENSG00000267530 | LINC01836 | 601 | Downstream | 4.84801417 | 1.25E-06 | 0.00782997 |
| 5 | 133635749 | 133635749 | 1 | 5_133635749 | ENSG00000053108 | FSTL4 | 23208 | Upstream | 4.8479096 | 1.25E-06 | 0.00783121 |
| 11 | 27854370 | 27854370 | 1 | 11_27854370 | ENSG00000255496 | AC103796.1 | 0 | INTRON | 4.84782349 | 1.25E-06 | 0.00783172 |
| 14 | 99440400 | 99440400 | 1 | 14_99440400 | ENSG00000183576 | SETD3 | 0 | INTRON | 4.84757595 | 1.25E-06 | 0.0078386 |
| 4 | 110445217 | 110445217 | 1 | 4_110445217 | ENSG00000138792 | ENPEP | 0 | INTRON | -4.8474622 | 1.25E-06 | 0.0078402 |
| 5 | 64289640 | 64289640 | 1 | 5_64289640 | ENSG00000164197 | RNF180 | 0 | INTRON | -4.8473092 | 1.25E-06 | 0.00784112 |
| 8 | 118832607 | 118832607 | 1 | 8_118832607 | ENSG00000281641 | SAMD12-AS1 | 0 | INTRON | 4.84724516 | 1.25E-06 | 0.00784112 |
| 12 | 104505765 | 104505765 | 1 | 12_104505765 | ENSG00000171310 | CHST11 | 0 | INTRON | -4.8472198 | 1.25E-06 | 0.00784112 |
| 16 | 73106023 | 73106023 | 1 | 16_73106023 | ENSG00000140836 | ZFHX3 | 0 | INTRON | 4.84687733 | 1.25E-06 | 0.00785063 |
| 2 | 85290276 | 85290276 | 1 | 2_85290276 | ENSG00000152284 | TCF7L1 | 0 | INTRON | 4.84683315 | 1.25E-06 | 0.00785063 |
| 19 | 34506751 | 34506751 | 1 | 19_34506751 | ENSG00000142279 | WTIP | 0 | 3UTR | 4.8466861 | 1.26E-06 | 0.00785226 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
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| 1 | 165159341 | 165159341 | 1 | 1_165159341 | ENSG00000162761 | LMX1A | 42525 | Downstream | 4.84664604 | 1.26E-06 | 0.00785226 |
| 14 | 79111036 | 79111036 | 1 | 14_79111036 | ENSG00000021645 | NRXN3 | 0 | INTRON | -4.8463081 | 1.26E-06 | 0.00786275 |
| 2 | 71038653 | 71038653 | 1 | 2_71038653 | ENSG00000234485 | OR7E46P | 0 | EXON | -4.8459753 | 1.26E-06 | 0.00787305 |
| 3 | 187565414 | 187565414 | 1 | 3_187565414 | ENSG00000157005 | SST | 103497 | Downstream | -4.8458867 | 1.26E-06 | 0.00787368 |
| 4 | 26574002 | 26574002 | 1 | 4_26574002 | ENSG00000109680 | TBC1D19 | 2434 | Upstream | -4.8456472 | 1.26E-06 | 0.00788029 |
| 1 | 66139540 | 66139540 | 1 | 1_66139540 | ENSG00000184588 | PDE4B | 0 | INTRON | 4.84547642 | 1.26E-06 | 0.00788099 |
| X | 39306014 | 39306014 | 1 | X_39306014 | ENSG00000235304 | LINC01281 | 0 | EXON | -4.8454528 | 1.26E-06 | 0.00788099 |
| 7 | 11201020 | 11201020 | 1 | 7_11201020 | ENSG00000230333 | AC004160.1 | 0 | INTRON | -4.8453165 | 1.26E-06 | 0.00788099 |
| 1 | 226283001 | 226283001 | 1 | 1_226283001 | ENSG00000183814 | LIN9 | 0 | INTRON | 4.84510139 | 1.27E-06 | 0.00788099 |
| 17 | 42044564 | 42044564 | 1 | 17_42044564 | ENSG00000187595 | ZNF385C | 0 | INTRON | -4.8450758 | 1.27E-06 | 0.00788099 |
| 8 | 2983746 | 2983746 | 1 | 8_2983746 | ENSG00000183117 | CSMD1 | 0 | INTRON | -4.845063 | 1.27E-06 | 0.00788099 |
| 11 | 89401661 | 89401661 | 1 | 11_89401661 | ENSG00000086991 | NOX4 | 0 | INTRON | 4.84506243 | 1.27E-06 | 0.00788099 |
| 2 | 162559987 | 162559987 | 1 | 2_162559987 | ENSG00000184611 | KCNH7 | 0 | INTRON | -4.8449931 | 1.27E-06 | 0.00788099 |
| 15 | 88451724 | 88451724 | 1 | 15_88451724 | ENSG00000259494 | MRPL46 | 7752 | Downstream | 4.844975 | 1.27E-06 | 0.00788099 |
| 16 | 74361050 | 74361050 | 1 | 16_74361050 | ENSG00000214331 | AC009053.1 | 0 | INTRON | 4.84488323 | 1.27E-06 | 0.00788175 |
| 12 | 53488521 | 53488521 | 1 | 12_53488521 | ENSG00000139625 | MAP3K12 | 0 | INTRON | -4.8448008 | 1.27E-06 | 0.00788214 |
| 2 | 134167547 | 134167547 | 1 | 2_134167547 | ENSG00000152127 | MGAT5 | 0 | INTRON | -4.8444363 | 1.27E-06 | 0.00789196 |
| X | 18914836 | 18914836 | 1 | X_18914836 | ENSG00000044446 | PHKA2 | 0 | INTRON | 4.84427959 | 1.27E-06 | 0.00789196 |
| 13 | 99851650 | 99851650 | 1 | 13_99851650 | ENSG00000286757 | AL137139.2 | 0 | INTRON | 4.84421592 | 1.27E-06 | 0.00789196 |
| 5 | 178043964 | 178043964 | 1 | 5_178043964 | ENSG00000204677 | FAM153CP | 0 | INTRON | 4.84417302 | 1.27E-06 | 0.00789196 |
| 9 | 118583437 | 118583437 | 1 | 9_118583437 | ENSG00000225050 | AL355592.1 | 104314 | Downstream | -4.8440709 | 1.27E-06 | 0.00789196 |
| 1 | 81137338 | 81137338 | 1 | 1_81137338 | ENSG00000229752 | RPL7P10 | 38333 | Upstream | 4.84406099 | 1.27E-06 | 0.00789196 |
| 2 | 231792352 | 231792352 | 1 | 2_231792352 | ENSG00000144524 | COPS7B | 0 | INTRON | 4.843981 | 1.27E-06 | 0.00789196 |
| 16 | 25887887 | 25887887 | 1 | 16_25887887 | ENSG00000285882 | AC093516.1 | 0 | INTRON | 4.84392326 | 1.27E-06 | 0.00789196 |
| X | 133963088 | 133963088 | 1 | X_133963088 | ENSG00000147257 | GPC3 | 0 | INTRON | -4.8439015 | 1.27E-06 | 0.00789196 |
| 5 | 178949648 | 178949648 | 1 | 5_178949648 | ENSG00000178187 | ZNF454 | 0 | INTRON | 4.84377674 | 1.27E-06 | 0.00789396 |
| 9 | 5573528 | 5573528 | 1 | 9_5573528 | ENSG00000286162 | AL162253.2 | 0 | INTRON | -4.8437064 | 1.27E-06 | 0.00789396 |
| 15 | 85955659 | 85955659 | 1 | 15_85955659 | ENSG00000259608 | AC104229.1 | 3057 | Downstream | 4.84357053 | 1.28E-06 | 0.00789649 |
| 2 | 29739482 | 29739482 | 1 | 2_29739482 | ENSG00000171094 | ALK | 0 | INTRON | -4.8433349 | 1.28E-06 | 0.0079014 |
| 5 | 18345285 | 18345285 | 1 | 5_18345285 | ENSG00000212278 | SNORD81 | 109089 | Downstream | -4.8433025 | 1.28E-06 | 0.0079014 |
| 21 | 30145997 | 30145997 | 1 | 21_30145997 | ENSG00000156282 | CLDN17 | 19567 | Downstream | 4.8432019 | 1.28E-06 | 0.00790253 |
| 1 | 82983116 | 82983116 | 1 | 1_82983116 | ENSG00000230817 | LINC01362 | 0 | INTRON | 4.84275953 | 1.28E-06 | 0.00791531 |
| X | 154508735 | 154508735 | 1 | X_154508735 | ENSG00000071889 | FAM3A | 0 | EXON | 4.84269824 | 1.28E-06 | 0.00791531 |
| 8 | 77962836 | 77962836 | 1 | 8_77962836 | ENSG00000254001 | AC084706.1 | 185264 | Upstream | -4.8426645 | 1.28E-06 | 0.00791531 |
| 1 | 162910527 | 162910527 | 1 | 1_162910527 | ENSG00000185860 | CCDC190 | 41712 | Upstream | -4.8425635 | 1.28E-06 | 0.00791646 |
| 9 | 122240013 | 122240013 | 1 | 9_122240013 | ENSG00000119446 | RBM18 | 0 | 3UTR | -4.8423244 | 1.28E-06 | 0.00792293 |
| 7 | 21536623 | 21536623 | 1 | 7_21536623 | ENSG00000105877 | DNAH11 | 6415 | Upstream | 4.84224898 | 1.28E-06 | 0.00792293 |
| 8 | 25390960 | 25390960 | 1 | 8_25390960 | ENSG00000147459 | DOCK5 | 0 | INTRON | 4.84218514 | 1.28E-06 | 0.00792293 |
| 20 | 59236948 | 59236948 | 1 | 20_59236948 | ENSG00000124203 | ZNF831 | 0 | INTRON | -4.8420283 | 1.29E-06 | 0.00792631 |
| 1 | 220079100 | 220079100 | 1 | 1_220079100 | ENSG00000162813 | BPNT1 | 0 | INTRON | -4.8418326 | 1.29E-06 | 0.00793125 |
| 18 | 75622152 | 75622152 | 1 | 18_75622152 | ENSG00000287993 | AC090338.1 | 20341 | Upstream | 4.84145774 | 1.29E-06 | 0.00793971 |
| 15 | 34478253 | 34478253 | 1 | 15_34478253 | ENSG00000259917 | HNRNPLP2 | 10748 | Downstream | -4.8414435 | 1.29E-06 | 0.00793971 |
| 20 | 8225585 | 8225585 | 1 | 20_8225585 | ENSG00000182621 | PLCB1 | 0 | INTRON | -4.841405 | 1.29E-06 | 0.00793971 |
| 11 | 10299781 | 10299781 | 1 | 11_10299781 | ENSG00000254554 | AC080023.1 | 2875 | Downstream | 4.84123238 | 1.29E-06 | 0.00793971 |
| 6 | 17686420 | 17686420 | 1 | 6_17686420 | ENSG00000124789 | NUP153 | 0 | INTRON | -4.8411953 | 1.29E-06 | 0.00793971 |
| 1 | 38540602 | 38540602 | 1 | 1_38540602 | ENSG00000238063 | LINC01685 | 24082 | Downstream | 4.8410945 | 1.29E-06 | 0.00793971 |
| 5 | 144803728 | 144803728 | 1 | 5_144803728 | ENSG00000251031 | AC132803.1 | 53161 | Downstream | 4.84109372 | 1.29E-06 | 0.00793971 |
| 10 | 30038411 | 30038411 | 1 | 10_30038411 | ENSG00000165757 | JCAD | 0 | INTRON | 4.84104579 | 1.29E-06 | 0.00793971 |
| 5 | 18282562 | 18282562 | 1 | 5_18282562 | ENSG00000212278 | SNORD81 | 46366 | Downstream | 4.84085681 | 1.29E-06 | 0.00794067 |
| 2 | 166734466 | 166734466 | 1 | 2_166734466 | ENSG00000136546 | SCN7A | 122984 | Upstream | -4.8408544 | 1.29E-06 | 0.00794067 |
| 18 | 12849356 | 12849356 | 1 | 18_12849356 | ENSG00000175354 | PTPN2 | 0 | INTRON | -4.8407763 | 1.29E-06 | 0.00794067 |
| 3 | 22059489 | 22059489 | 1 | 3_22059489 | ENSG00000151789 | ZNF385D | 0 | INTRON | -4.8407349 | 1.29E-06 | 0.00794067 |
| 20 | 60440689 | 60440689 | 1 | 20_60440689 | ENSG00000228340 | MIR646HG | 0 | INTRON | -4.8404461 | 1.30E-06 | 0.00794702 |
| 5 | 1483699 | 1483699 | 1 | 5_1483699 | ENSG00000153395 | LPCAT1 | 0 | INTRON | 4.84043257 | 1.30E-06 | 0.00794702 |
| 1 | 92127686 | 92127686 | 1 | 1_92127686 | ENSG00000189195 | BTBD8 | 0 | INTRON | 4.84032459 | 1.30E-06 | 0.00794848 |
| 11 | 91644740 | 91644740 | 1 | 11_91644740 | ENSG00000255332 | LINC02756 | 149578 | Upstream | -4.8399687 | 1.30E-06 | 0.00795946 |
| 22 | 39960397 | 39960397 | 1 | 22_39960397 | ENSG00000225528 | Z82206.1 | 0 | TSS | -4.8398381 | 1.30E-06 | 0.00795946 |
| 6 | 83593514 | 83593514 | 1 | 6_83593514 | ENSG00000065609 | SNAP91 | 0 | 3UTR | 4.83977054 | 1.30E-06 | 0.00795946 |
| 4 | 2699322 | 2699322 | 1 | 4_2699322 | ENSG00000125386 | FAM193A | 0 | INTRON | -4.8397639 | 1.30E-06 | 0.00795946 |
| 14 | 103477478 | 103477478 | 1 | 14_103477478 | ENSG00000075413 | MARK3 | 0 | INTRON | -4.839551 | 1.30E-06 | 0.00796512 |
| 14 | 105838220 | 105838220 | 1 | 14_105838220 | ENSG00000211898 | IGHD | 0 | INTRON | 4.83946225 | 1.30E-06 | 0.00796582 |
| 5 | 74305084 | 74305084 | 1 | 5_74305084 | ENSG00000248942 | LINC01335 | 0 | INTRON | -4.839375 | 1.30E-06 | 0.00796645 |
| 11 | 30930637 | 30930637 | 1 | 11_30930637 | ENSG00000170959 | DCDC1 | 0 | INTRON | 4.8391317 | 1.30E-06 | 0.00796955 |
| 2 | 167801230 | 167801230 | 1 | 2_167801230 | ENSG00000235335 | AC016723.1 | 13526 | Downstream | 4.83910087 | 1.30E-06 | 0.00796955 |
| 12 | 48325780 | 48325780 | 1 | 12_48325780 | ENSG00000275228 | AC024257.5 | 2161 | Downstream | 4.83907404 | 1.30E-06 | 0.00796955 |
| 12 | 78975127 | 78975127 | 1 | 12_78975127 | ENSG00000257191 | AC090709.1 | 0 | INTRON | 4.83901213 | 1.30E-06 | 0.00796955 |
| X | 114951748 | 114951748 | 1 | X_114951748 | ENSG00000147246 | HTR2C | 41687 | Downstream | -4.8384639 | 1.31E-06 | 0.00798869 |
| 20 | 10644179 | 10644179 | 1 | 20_10644179 | ENSG00000101384 | JAG1 | 0 | INTRON | -4.8383144 | 1.31E-06 | 0.00799183 |
| 6 | 89862868 | 89862868 | 1 | 6_89862868 | ENSG00000118412 | CASP8AP2 | 0 | EXON | 4.83717113 | 1.32E-06 | 0.00802842 |
| X | 55129638 | 55129638 | 1 | X_55129638 | ENSG00000276929 | AL590240.3 | 8291 | Upstream | -4.8371609 | 1.32E-06 | 0.00802842 |
| 2 | 233996894 | 233996894 | 1 | 2_233996894 | ENSG00000144481 | TRPM8 | 0 | INTRON | 4.83706428 | 1.32E-06 | 0.00802842 |
| 11 | 106337374 | 106337374 | 1 | 11_106337374 | ENSG00000255065 | AP002001.2 | 25583 | Downstream | 4.83705374 | 1.32E-06 | 0.00802842 |
| 8 | 5148094 | 5148094 | 1 | 8_5148094 | ENSG00000242079 | RN7SL318P | 5387 | Upstream | -4.83705 | 1.32E-06 | 0.00802842 |
| 3 | 62263963 | 62263963 | 1 | 3_62263963 | ENSG00000241472 | PTPRG-AS1 | 0 | EXON | 4.83694767 | 1.32E-06 | 0.00802924 |
| 7 | 6017752 | 6017752 | 1 | 7_6017752 | ENSG00000106305 | AIMP2 | 0 | INTRON | 4.83683999 | 1.32E-06 | 0.00802924 |
| 8 | 25323902 | 25323902 | 1 | 8_25323902 | ENSG00000147459 | DOCK5 | 0 | EXON | -4.8368162 | 1.32E-06 | 0.00802924 |
| 7 | 130338716 | 130338716 | 1 | 7_130338716 | ENSG00000158525 | CPA5 | 6099 | Upstream | 4.83672916 | 1.32E-06 | 0.00802989 |
| 22 | 42779096 | 42779096 | 1 | 22_42779096 | ENSG00000234009 | RPL5P34 | 1800 | Upstream | -4.8366512 | 1.32E-06 | 0.00803016 |
| 15 | 96840900 | 96840900 | 1 | 15_96840900 | ENSG00000223120 | RN7SKP181 | 1168 | Upstream | -4.836572 | 1.32E-06 | 0.00803049 |
| 2 | 135207927 | 135207927 | 1 | 2_135207927 | ENSG00000121988 | ZRANB3 | 0 | INTRON | -4.8364361 | 1.32E-06 | 0.00803311 |
| 9 | 18741197 | 18741197 | 1 | 9_18741197 | ENSG00000178031 | ADAMTSL1 | 0 | INTRON | 4.83607725 | 1.32E-06 | 0.00804475 |
| 7 | 138498557 | 138498557 | 1 | 7_138498557 | ENSG00000122779 | TRIM24 | 0 | INTRON | 4.83583422 | 1.33E-06 | 0.00805171 |
| 2 | 82120713 | 82120713 | 1 | 2_82120713 | ENSG00000231781 | AC079896.1 | 115013 | Upstream | -4.8356051 | 1.33E-06 | 0.00805536 |
| 2 | 146216270 | 146216270 | 1 | 2_146216270 | ENSG00000230559 | RPL17P12 | 21449 | Downstream | 4.83560212 | 1.33E-06 | 0.00805536 |
| 11 | 62932779 | 62932779 | 1 | 11_62932779 | ENSG00000241082 | RN7SL259P | 3202 | Downstream | 4.83549821 | 1.33E-06 | 0.0080567 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 16 | 26549375 | 26549375 | 1 | 16_26549375 | ENSG00000286712 | AC002331.1 | 0 | INTRON | -4.8353417 | 1.33E-06 | 0.00806016 |
| 7 | 20116498 | 20116498 | 1 | 7_20116498 | ENSG00000243004 | AC005062.1 | 0 | INTRON | 4.83526494 | 1.33E-06 | 0.0080604 |
| 10 | 69815393 | 69815393 | 1 | 10_69815393 | ENSG00000197467 | COL13A1 | 0 | INTRON | 4.83491904 | 1.33E-06 | 0.00807156 |
| 18 | 23613668 | 23613668 | 1 | 18_23613668 | ENSG00000154065 | ANKRD29 | 0 | INTRON | 4.83446061 | 1.34E-06 | 0.00808653 |
| 2 | 30171915 | 30171915 | 1 | 2_30171915 | ENSG00000119801 | YPEL5 | 11382 | Downstream | 4.83440869 | 1.34E-06 | 0.00808653 |
| 2 | 235499368 | 235499368 | 1 | 2_235499368 | ENSG00000157985 | AGAP1 | 0 | INTRON | 4.8341659 | 1.34E-06 | 0.00809352 |
| 10 | 6629033 | 6629033 | 1 | 10_6629033 | ENSG00000225948 | LINC02648 | 3687 | Downstream | 4.83405561 | 1.34E-06 | 0.00809513 |
| 1 | 231678877 | 231678877 | 1 | 1_231678877 | ENSG00000162946 | DISC1 | 0 | INTRON | -4.8338165 | 1.34E-06 | 0.00810198 |
| 7 | 43637540 | 43637540 | 1 | 7_43637540 | ENSG00000106603 | COA1 | 0 | INTRON | 4.83364285 | 1.34E-06 | 0.00810573 |
| 18 | 23517252 | 23517252 | 1 | 18_23517252 | ENSG00000141458 | NPC1 | 0 | INTRON | 4.83358306 | 1.34E-06 | 0.00810573 |
| 8 | 141049788 | 141049788 | 1 | 8_141049788 | ENSG00000253266 | AC100860.1 | 5501 | Upstream | 4.83318369 | 1.34E-06 | 0.00811833 |
| 6 | 15211383 | 15211383 | 1 | 6_15211383 | ENSG00000271888 | AL136162.1 | 32539 | Downstream | -4.8331326 | 1.34E-06 | 0.00811833 |
| 18 | 15876224 | 15876224 | 1 | 18_15876224 | ENSG00000215512 | AP005901.1 | 545942 | Upstream | -4.8329536 | 1.35E-06 | 0.00812276 |
| 9 | 118413914 | 118413914 | 1 | 9_118413914 | ENSG00000225050 | AL355592.1 | 273837 | Downstream | -4.8327478 | 1.35E-06 | 0.00812828 |
| 1 | 198840624 | 198840624 | 1 | 1_198840624 | ENSG00000229989 | MIR181A1HG | 0 | INTRON | -4.8325321 | 1.35E-06 | 0.0081342 |
| 4 | 74912919 | 74912919 | 1 | 4_74912919 | ENSG00000250356 | HSPE1P23 | 4902 | Upstream | 4.83237001 | 1.35E-06 | 0.00813795 |
| 11 | 118735086 | 118735086 | 1 | 11_118735086 | ENSG00000255422 | AP002954.1 | 0 | INTRON | -4.8317967 | 1.35E-06 | 0.00815336 |
| 10 | 21456433 | 21456433 | 1 | 10_21456433 | ENSG00000273566 | Metazoa_SRP | 918 | Upstream | 4.83177719 | 1.35E-06 | 0.00815336 |
| 1 | 230871749 | 230871749 | 1 | 1_230871749 | ENSG00000223393 | AL118511.1 | 0 | INTRON | 4.83171699 | 1.35E-06 | 0.00815336 |
| 16 | 50524807 | 50524807 | 1 | 16_50524807 | ENSG00000260573 | AC007493.1 | 0 | INTRON | -4.8317114 | 1.35E-06 | 0.00815336 |
| 13 | 104465286 | 104465286 | 1 | 13_104465286 | ENSG00000287734 | AL136524.1 | 331029 | Downstream | -4.8316106 | 1.35E-06 | 0.0081546 |
| 6 | 70590035 | 70590035 | 1 | 6_70590035 | ENSG00000154079 | SDHAF4 | 466 | Downstream | 4.83138917 | 1.36E-06 | 0.00815727 |
| 19 | 42447262 | 42447262 | 1 | 19_42447262 | ENSG00000213904 | LIPE-AS1 | 0 | INTRON | 4.83127265 | 1.36E-06 | 0.00815727 |
| 13 | 74491560 | 74491560 | 1 | 13_74491560 | ENSG00000281167 | AL355390.2 | 0 | INTRON | -4.8311819 | 1.36E-06 | 0.00815727 |
| 11 | 85759177 | 85759177 | 1 | 11_85759177 | ENSG00000137501 | SYTL2 | 0 | INTRON | -4.8311392 | 1.36E-06 | 0.00815727 |
| 15 | 48991649 | 48991649 | 1 | 15_48991649 | ENSG00000138593 | SECISBP2L | 0 | 3UTR | 4.83101682 | 1.36E-06 | 0.00815727 |
| 16 | 16150687 | 16150687 | 1 | 16_16150687 | ENSG00000091262 | ABCC6 | 0 | 3UTR | 4.83099236 | 1.36E-06 | 0.00815727 |
| 17 | 62884816 | 62884816 | 1 | 17_62884816 | ENSG00000283538 | AC005972.3 | 25204 | Downstream | 4.83098787 | 1.36E-06 | 0.00815727 |
| X | 20721925 | 20721925 | 1 | X_20721925 | ENSG00000283380 | AL807742.1 | 47792 | Downstream | 4.83098279 | 1.36E-06 | 0.00815727 |
| 22 | 28935386 | 28935386 | 1 | 22_28935386 | ENSG00000183579 | ZNRF3 | 0 | INTRON | 4.83090812 | 1.36E-06 | 0.00815745 |
| 4 | 1748506 | 1748506 | 1 | 4_1748506 | ENSG00000013810 | TACC3 | 3330 | Downstream | -4.8305373 | 1.36E-06 | 0.00816978 |
| 18 | 42228896 | 42228896 | 1 | 18_42228896 | ENSG00000267586 | LINC00907 | 0 | INTRON | -4.8302825 | 1.36E-06 | 0.00817735 |
| 13 | 34007649 | 34007649 | 1 | 13_34007649 | ENSG00000133119 | RFC3 | 41091 | Downstream | -4.8301719 | 1.36E-06 | 0.00817772 |
| 13 | 57424983 | 57424983 | 1 | 13_57424983 | ENSG00000225352 | RPL31P53 | 33465 | Upstream | 4.83007662 | 1.36E-06 | 0.00817772 |
| 2 | 100778183 | 100778183 | 1 | 2_100778183 | ENSG00000286737 | AC092168.3 | 30792 | Downstream | 4.83000787 | 1.37E-06 | 0.00817772 |
| 1 | 95992706 | 95992706 | 1 | 1_95992706 | ENSG00000237435 | LINC02790 | 0 | INTRON | 4.82999303 | 1.37E-06 | 0.00817772 |
| 13 | 87748501 | 87748501 | 1 | 13_87748501 | ENSG00000277640 | AL445647.2 | 17250 | Downstream | 4.82988674 | 1.37E-06 | 0.00817921 |
| 5 | 11664422 | 11664422 | 1 | 5_11664422 | ENSG00000169862 | CTNND2 | 0 | INTRON | 4.82980913 | 1.37E-06 | 0.00817952 |
| 15 | 25283261 | 25283261 | 1 | 15_25283261 | ENSG00000224078 | SNHG14 | 0 | INTRON | 4.82969382 | 1.37E-06 | 0.00818028 |
| 9 | 16431444 | 16431444 | 1 | 9_16431444 | ENSG00000173068 | BNC2 | 0 | EXON | -4.8296507 | 1.37E-06 | 0.00818028 |
| 1 | 43211467 | 43211467 | 1 | 1_43211467 | ENSG00000117395 | EBNA1BP2 | 0 | EXON | -4.8295301 | 1.37E-06 | 0.00818236 |
| 1 | 72987812 | 72987812 | 1 | 1_72987812 | ENSG00000280317 | AL732618.1 | 8498 | Upstream | 4.82936399 | 1.37E-06 | 0.00818629 |
| 15 | 90340738 | 90340738 | 1 | 15_90340738 | ENSG00000279980 | AC018946.2 | 6848 | Upstream | -4.8292547 | 1.37E-06 | 0.00818629 |
| 9 | 120124367 | 120124367 | 1 | 9_120124367 | ENSG00000207814 | MIR147A | 120611 | Downstream | -4.8292247 | 1.37E-06 | 0.00818629 |
| 1 | 46899143 | 46899143 | 1 | 1_46899143 | ENSG00000154198 | CYP4Z2P | 0 | INTRON | 4.82903287 | 1.37E-06 | 0.0081893 |
| 8 | 60776394 | 60776394 | 1 | 8_60776394 | ENSG00000171316 | CHD7 | 0 | INTRON | 4.82901174 | 1.37E-06 | 0.0081893 |
| 18 | 51900700 | 51900700 | 1 | 18_51900700 | ENSG00000215457 | RPS8P3 | 55072 | Upstream | -4.8288184 | 1.37E-06 | 0.00819099 |
| 3 | 195619179 | 195619179 | 1 | 3_195619179 | ENSG00000224769 | MUC20P1 | 0 | EXON | 4.82877235 | 1.37E-06 | 0.00819099 |
| 9 | 81989331 | 81989331 | 1 | 9_81989331 | ENSG00000214929 | SPATA31D1 | 0 | INTRON | -4.828761 | 1.37E-06 | 0.00819099 |
| 5 | 150718416 | 150718416 | 1 | 5_150718416 | ENSG00000132912 | DCTN4 | 0 | INTRON | 4.82859216 | 1.38E-06 | 0.00819507 |
| 6 | 79742796 | 79742796 | 1 | 6_79742796 | ENSG00000198478 | SH3BGRL2 | 39141 | Downstream | -4.8284302 | 1.38E-06 | 0.00819718 |
| 16 | 63905171 | 63905171 | 1 | 16_63905171 | ENSG00000261653 | AC092337.1 | 30606 | Upstream | 4.82837619 | 1.38E-06 | 0.00819718 |
| 3 | 189350734 | 189350734 | 1 | 3_189350734 | ENSG00000188001 | TPRG1 | 25430 | Downstream | 4.82833176 | 1.38E-06 | 0.00819718 |
| 15 | 41715212 | 41715212 | 1 | 15_41715212 | ENSG00000174197 | MGA | 0 | INTRON | -4.8281193 | 1.38E-06 | 0.0082024 |
| 16 | 36143409 | 36143409 | 1 | 16_36143409 | ENSG00000261084 | PPP1R1AP2 | 230893 | Downstream | -4.8280468 | 1.38E-06 | 0.0082024 |
| 2 | 61324217 | 61324217 | 1 | 2_61324217 | ENSG00000115464 | USP34 | 0 | INTRON | 4.82799593 | 1.38E-06 | 0.0082024 |
| 6 | 47667159 | 47667159 | 1 | 6_47667159 | ENSG00000164393 | ADGRF2 | 0 | INTRON | 4.82787831 | 1.38E-06 | 0.00820438 |
| 1 | 79202322 | 79202322 | 1 | 1_79202322 | ENSG00000162618 | ADGRL4 | 0 | INTRON | -4.8277361 | 1.38E-06 | 0.00820737 |
| 6 | 142028885 | 142028885 | 1 | 6_142028885 | ENSG00000135577 | NMBR | 29444 | Downstream | -4.827606 | 1.38E-06 | 0.00820767 |
| 15 | 49963354 | 49963354 | 1 | 15_49963354 | ENSG00000104043 | ATP8B4 | 0 | INTRON | -4.8275897 | 1.38E-06 | 0.00820767 |
| 2 | 46338479 | 46338479 | 1 | 2_46338479 | ENSG00000116016 | EPAS1 | 0 | INTRON | -4.8275185 | 1.38E-06 | 0.00820774 |
| 17 | 72384542 | 72384542 | 1 | 17_72384542 | ENSG00000227036 | LINC00511 | 0 | EXON | -4.8273599 | 1.38E-06 | 0.00821039 |
| 15 | 44422371 | 44422371 | 1 | 15_44422371 | ENSG00000259595 | AC025043.1 | 0 | INTRON | -4.8273004 | 1.38E-06 | 0.00821039 |
| 20 | 2514989 | 2514989 | 1 | 20_2514989 | ENSG00000088876 | ZNF343 | 0 | INTRON | -4.8272457 | 1.38E-06 | 0.00821039 |
| 3 | 49189783 | 49189783 | 1 | 3_49189783 | ENSG00000236980 | C3orf84 | 0 | INTRON | -4.8271263 | 1.39E-06 | 0.00821245 |
| 5 | 176946828 | 176946828 | 1 | 5_176946828 | ENSG00000087206 | UIMC1 | 0 | INTRON | 4.82703143 | 1.39E-06 | 0.0082135 |
| 12 | 26621269 | 26621269 | 1 | 12_26621269 | ENSG00000123104 | ITPR2 | 0 | EXON | 4.82666719 | 1.39E-06 | 0.00822391 |
| 12 | 55387084 | 55387084 | 1 | 12_55387084 | ENSG00000233606 | OR6C66P | 0 | INTRON | -4.8266402 | 1.39E-06 | 0.00822391 |
| 4 | 2319789 | 2319789 | 1 | 4_2319789 | ENSG00000159733 | ZFYVE28 | 0 | INTRON | -4.8263775 | 1.39E-06 | 0.00823066 |
| 17 | 18424564 | 18424564 | 1 | 17_18424564 | ENSG00000205266 | KRT17P5 | 0 | EXON | -4.8263382 | 1.39E-06 | 0.00823066 |
| 14 | 101744201 | 101744201 | 1 | 14_101744201 | ENSG00000258512 | LINC00239 | 11679 | Downstream | -4.8259254 | 1.39E-06 | 0.00824486 |
| 7 | 15881707 | 15881707 | 1 | 7_15881707 | ENSG00000229379 | AC006041.1 | 39347 | Upstream | -4.8256308 | 1.40E-06 | 0.00825419 |
| 17 | 66269376 | 66269376 | 1 | 17_66269376 | ENSG00000252653 | RNA5SP444 | 1528 | Downstream | 4.82551957 | 1.40E-06 | 0.00825593 |
| 9 | 23086569 | 23086569 | 1 | 9_23086569 | ENSG00000284418 | AL391117.1 | 0 | INTRON | -4.8253485 | 1.40E-06 | 0.00826015 |
| 9 | 86256917 | 86256917 | 1 | 9_86256917 | ENSG00000187753 | C9orf153 | 0 | INTRON | 4.82516999 | 1.40E-06 | 0.00826468 |
| 8 | 92375694 | 92375694 | 1 | 8_92375694 | ENSG00000253118 | AC022695.1 | 23546 | Upstream | 4.8250297 | 1.40E-06 | 0.00826512 |
| 22 | 39612107 | 39612107 | 1 | 22_39612107 | ENSG00000100346 | CACNA1I | 0 | INTRON | -4.8250209 | 1.40E-06 | 0.00826512 |
| 2 | 112118831 | 112118831 | 1 | 2_112118831 | ENSG00000153214 | TMEM87B | 0 | 3UTR | 4.8249077 | 1.40E-06 | 0.00826695 |
| 15 | 72408467 | 72408467 | 1 | 15_72408467 | ENSG00000261423 | TMEM202-AS1 | 0 | INTRON | -4.8247277 | 1.40E-06 | 0.00827141 |
| 12 | 21835230 | 21835230 | 1 | 12_21835230 | ENSG00000257022 | AC008250.1 | 0 | INTRON | 4.82464834 | 1.40E-06 | 0.00827141 |
| 3 | 188654227 | 188654227 | 1 | 3_188654227 | ENSG00000145012 | LPP | 0 | INTRON | 4.824593 | 1.40E-06 | 0.00827141 |
| 15 | 88981617 | 88981617 | 1 | 15_88981617 | ENSG00000261549 | AC107954.1 | 7901 | Downstream | -4.8244037 | 1.40E-06 | 0.0082764 |
| 4 | 25508619 | 25508619 | 1 | 4_25508619 | ENSG00000248608 | AC133963.1 | 1944 | Downstream | -4.8241938 | 1.41E-06 | 0.00828225 |
| 4 | 131315964 | 131315964 | 1 | 4_131315964 | ENSG00000206782 | RNU6-224P | 42616 | Downstream | -4.8240345 | 1.41E-06 | 0.00828327 |
| 10 | 25966252 | 25966252 | 1 | 10_25966252 | ENSG00000095777 | MYO3A | 0 | INTRON | -4.8240311 | 1.41E-06 | 0.00828327 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 | 7692352 | 7692352 | 1 | 7_7692352 | ENSG00000219545 | UMAD1 | 0 | EXON | -4.8239089 | 1.41E-06 | 0.00828437 |
| 20 | 36277884 | 36277884 | 1 | 20_36277884 | ENSG00000131043 | AAR2 | 6966 | Downstream | 4.82383101 | 1.41E-06 | 0.00828437 |
| 12 | 43430993 | 43430993 | 1 | 12_43430993 | ENSG00000173157 | ADAMTS20 | 0 | INTRON | 4.8237309 | 1.41E-06 | 0.00828437 |
| 12 | 46964906 | 46964906 | 1 | 12_46964906 | ENSG00000274723 | AC079906.1 | 5597 | Upstream | -4.8237291 | 1.41E-06 | 0.00828437 |
| 3 | 182864987 | 182864987 | 1 | 3_182864987 | ENSG00000058063 | ATP11B | 0 | INTRON | -4.8236408 | 1.41E-06 | 0.00828517 |
| 12 | 112208653 | 112208653 | 1 | 12_112208653 | ENSG00000173064 | HECTD4 | 0 | INTRON | 4.82318279 | 1.41E-06 | 0.00830091 |
| 7 | 138988416 | 138988416 | 1 | 7_138988416 | ENSG00000122778 | KIAA1549 | 7098 | Upstream | 4.82312489 | 1.41E-06 | 0.00830091 |
| 18 | 32143472 | 32143472 | 1 | 18_32143472 | ENSG00000141441 | GAREM1 | 0 | INTRON | 4.82295132 | 1.41E-06 | 0.00830527 |
| 9 | 99430976 | 99430976 | 1 | 9_99430976 | ENSG00000255145 | STX17-AS1 | 0 | INTRON | 4.82283144 | 1.42E-06 | 0.0083074 |
| 12 | 19871565 | 19871565 | 1 | 12_19871565 | ENSG00000255910 | AC024901.1 | 0 | INTRON | -4.8224884 | 1.42E-06 | 0.00831883 |
| 9 | 12193331 | 12193331 | 1 | 9_12193331 | ENSG00000224935 | AL589678.1 | 34183 | Upstream | -4.8219072 | 1.42E-06 | 0.00834024 |
| 11 | 20497295 | 20497295 | 1 | 11_20497295 | ENSG00000185238 | PRMT3 | 0 | INTRON | 4.82161102 | 1.42E-06 | 0.00834237 |
| 5 | 87321403 | 87321403 | 1 | 5_87321403 | ENSG00000134480 | CCNH | 0 | INTRON | 4.82160894 | 1.42E-06 | 0.00834237 |
| 16 | 12290360 | 12290360 | 1 | 16_12290360 | ENSG00000048471 | SNX29 | 0 | INTRON | 4.82159643 | 1.42E-06 | 0.00834237 |
| 18 | 48862295 | 48862295 | 1 | 18_48862295 | ENSG00000134030 | CTIF | 0 | 3UTR | 4.82155133 | 1.42E-06 | 0.00834237 |
| 2 | 135913479 | 135913479 | 1 | 2_135913479 | ENSG00000115866 | DARS | 0 | INTRON | 4.82149408 | 1.42E-06 | 0.00834237 |
| 10 | 118822421 | 118822421 | 1 | 10_118822421 | ENSG00000229272 | AL157388.1 | 0 | INTRON | 4.82144408 | 1.43E-06 | 0.00834237 |
| 21 | 34700409 | 34700409 | 1 | 21_34700409 | ENSG00000159212 | CLIC6 | 0 | INTRON | 4.82120094 | 1.43E-06 | 0.00834968 |
| 8 | 89023725 | 89023725 | 1 | 8_89023725 | ENSG00000253553 | AC090578.1 | 136152 | Downstream | 4.82110097 | 1.43E-06 | 0.00835099 |
| 6 | 777275 | 777275 | 1 | 6_777275 | ENSG00000271911 | AL357054.3 | 0 | INTRON | -4.820773 | 1.43E-06 | 0.00835688 |
| 7 | 152010175 | 152010175 | 1 | 7_152010175 | ENSG00000106648 | GALNTL5 | 0 | INTRON | -4.8207554 | 1.43E-06 | 0.00835688 |
| 16 | 80750936 | 80750936 | 1 | 16_80750936 | ENSG00000166446 | CDYL2 | 0 | INTRON | -4.8207548 | 1.43E-06 | 0.00835688 |
| 1 | 16776778 | 16776778 | 1 | 1_16776778 | ENSG00000058453 | CROCC | 0 | INTRON | 4.8206129 | 1.43E-06 | 0.00835995 |
| 22 | 39051523 | 39051523 | 1 | 22_39051523 | ENSG00000128394 | APOBEC3F | 0 | INTRON | -4.8205309 | 1.43E-06 | 0.00836052 |
| 4 | 88165805 | 88165805 | 1 | 4_88165805 | ENSG00000118777 | ABCG2 | 0 | INTRON | 4.82029276 | 1.43E-06 | 0.00836273 |
| X | 120418774 | 120418774 | 1 | X_120418774 | ENSG00000005893 | LAMP2 | 9052 | Downstream | 4.82023747 | 1.43E-06 | 0.00836273 |
| X | 14247748 | 14247748 | 1 | X_14247748 | ENSG00000233247 | AC002524.1 | 2820 | Downstream | 4.82023725 | 1.43E-06 | 0.00836273 |
| 10 | 16388342 | 16388342 | 1 | 10_16388342 | ENSG00000165983 | PTER | 48600 | Upstream | 4.82008863 | 1.43E-06 | 0.00836273 |
| 5 | 164449497 | 164449497 | 1 | 5_164449497 | ENSG00000241956 | AC109466.1 | 0 | INTRON | -4.8200566 | 1.44E-06 | 0.00836273 |
| 2 | 149877096 | 149877096 | 1 | 2_149877096 | ENSG00000231969 | AC007364.1 | 0 | INTRON | -4.8200186 | 1.44E-06 | 0.00836273 |
| 6 | 18318762 | 18318762 | 1 | 6_18318762 | ENSG00000200681 | RNU6-263P | 11683 | Upstream | 4.81999225 | 1.44E-06 | 0.00836273 |
| 8 | 123793912 | 123793912 | 1 | 8_123793912 | ENSG00000176853 | FAM91A1 | 0 | INTRON | 4.81990708 | 1.44E-06 | 0.00836273 |
| 10 | 96965039 | 96965039 | 1 | 10_96965039 | ENSG00000196233 | LCOR | 0 | INTRON | 4.81986301 | 1.44E-06 | 0.00836273 |
| 4 | 150428840 | 150428840 | 1 | 4_150428840 | ENSG00000198589 | LRBA | 0 | INTRON | 4.81967604 | 1.44E-06 | 0.00836532 |
| 5 | 34793180 | 34793180 | 1 | 5_34793180 | ENSG00000039560 | RAI14 | 0 | INTRON | -4.8196649 | 1.44E-06 | 0.00836532 |
| 2 | 227239399 | 227239399 | 1 | 2_227239399 | ENSG00000236432 | AC097662.1 | 0 | INTRON | 4.81956024 | 1.44E-06 | 0.00836684 |
| 10 | 100573945 | 100573945 | 1 | 10_100573945 | ENSG00000166135 | HIF1AN | 13947 | Downstream | 4.81907874 | 1.44E-06 | 0.00838197 |
| 12 | 65609047 | 65609047 | 1 | 12_65609047 | ENSG00000250748 | AC025419.1 | 0 | EXON | 4.81906356 | 1.44E-06 | 0.00838197 |
| 14 | 77711980 | 77711980 | 1 | 14_77711980 | ENSG00000119705 | SLIRP | 0 | EXON | 4.81895409 | 1.44E-06 | 0.0083837 |
| 1 | 84518278 | 84518278 | 1 | 1_84518278 | ENSG00000122432 | SPATA1 | 0 | INTRON | -4.8187558 | 1.44E-06 | 0.00838915 |
| 10 | 93120923 | 93120923 | 1 | 10_93120923 | ENSG00000232805 | NIP7P1 | 13540 | Upstream | 4.81868842 | 1.45E-06 | 0.00838915 |
| 5 | 76266354 | 76266354 | 1 | 5_76266354 | ENSG00000122012 | SV2C | 0 | INTRON | 4.8184563 | 1.45E-06 | 0.00839605 |
| 12 | 67968373 | 67968373 | 1 | 12_67968373 | ENSG00000255772 | LINC01479 | 0 | INTRON | 4.81838303 | 1.45E-06 | 0.00839626 |
| 4 | 68099276 | 68099276 | 1 | 4_68099276 | ENSG00000198092 | TMPRSS11F | 0 | INTRON | 4.81823161 | 1.45E-06 | 0.00839977 |
| 7 | 158314649 | 158314649 | 1 | 7_158314649 | ENSG00000155093 | PTPRN2 | 0 | INTRON | 4.81813869 | 1.45E-06 | 0.00840082 |
| 7 | 101933958 | 101933958 | 1 | 7_101933958 | ENSG00000257923 | CUX1 | 0 | INTRON | -4.8180347 | 1.45E-06 | 0.00840234 |
| 5 | 51455698 | 51455698 | 1 | 5_51455698 | ENSG00000288035 | AC022433.1 | 0 | INTRON | 4.81782751 | 1.45E-06 | 0.00840608 |
| 17 | 1922155 | 1922155 | 1 | 17_1922155 | ENSG00000185924 | RTN4RL1 | 12521 | Downstream | -4.81781 | 1.45E-06 | 0.00840608 |
| 21 | 28850373 | 28850373 | 1 | 21_28850373 | ENSG00000156239 | N6AMT1 | 21817 | Downstream | 4.817485 | 1.45E-06 | 0.00841691 |
| X | 52656028 | 52656028 | 1 | X_52656028 | ENSG00000228354 | AL450023.1 | 0 | INTRON | -4.8172611 | 1.46E-06 | 0.00841715 |
| 15 | 94790826 | 94790826 | 1 | 15_94790826 | ENSG00000277654 | AC087633.2 | 50232 | Upstream | -4.8172278 | 1.46E-06 | 0.00841715 |
| 19 | 20655476 | 20655476 | 1 | 19_20655476 | ENSG00000188171 | ZNF626 | 0 | INTRON | -4.8171743 | 1.46E-06 | 0.00841715 |
| 7 | 118394710 | 118394710 | 1 | 7_118394710 | ENSG00000106013 | ANKRD7 | 0 | INTRON | 4.81717273 | 1.46E-06 | 0.00841715 |
| 6 | 50073937 | 50073937 | 1 | 6_50073937 | ENSG00000226733 | AL138826.1 | 19451 | Upstream | 4.81713998 | 1.46E-06 | 0.00841715 |
| 14 | 79362804 | 79362804 | 1 | 14_79362804 | ENSG00000021645 | NRXN3 | 0 | INTRON | -4.8169963 | 1.46E-06 | 0.00841795 |
| 8 | 662596 | 662596 | 1 | 8_662596 | ENSG00000104714 | ERICH1 | 0 | INTRON | -4.8169855 | 1.46E-06 | 0.00841795 |
| 12 | 47020071 | 47020071 | 1 | 12_47020071 | ENSG00000274723 | AC079906.1 | 47916 | Downstream | 4.81651065 | 1.46E-06 | 0.00843514 |
| 7 | 73260542 | 73260542 | 1 | 7_73260542 | ENSG00000214544 | GTF2IRD2P1 | 0 | INTRON | 4.81632525 | 1.46E-06 | 0.00843962 |
| 16 | 8496942 | 8496942 | 1 | 16_8496942 | ENSG00000260379 | AC074052.1 | 11126 | Upstream | -4.8162607 | 1.46E-06 | 0.00843962 |
| 8 | 111474330 | 111474330 | 1 | 8_111474330 | ENSG00000253434 | LINC02237 | 0 | INTRON | -4.8161661 | 1.46E-06 | 0.00843962 |
| 8 | 43812045 | 43812045 | 1 | 8_43812045 | ENSG00000253198 | AC139365.1 | 137454 | Upstream | -4.8161338 | 1.46E-06 | 0.00843962 |
| 12 | 58367310 | 58367310 | 1 | 12_58367310 | ENSG00000258133 | AC025578.1 | 27285 | Upstream | -4.8160145 | 1.46E-06 | 0.0084418 |
| 18 | 52773344 | 52773344 | 1 | 18_52773344 | ENSG00000187323 | DCC | 0 | INTRON | 4.81578367 | 1.47E-06 | 0.00844871 |
| 14 | 101245083 | 101245083 | 1 | 14_101245083 | ENSG00000258497 | AL359682.1 | 12248 | Upstream | -4.8154352 | 1.47E-06 | 0.0084606 |
| 11 | 31443688 | 31443688 | 1 | 11_31443688 | ENSG00000148950 | IMMP1L | 0 | INTRON | 4.81522858 | 1.47E-06 | 0.00846649 |
| 4 | 12953308 | 12953308 | 1 | 4_12953308 | ENSG00000250098 | AC007370.1 | 4638 | Upstream | 4.81507151 | 1.47E-06 | 0.00847029 |
| 8 | 9021992 | 9021992 | 1 | 8_9021992 | ENSG00000104626 | ERI1 | 0 | INTRON | 4.8148297 | 1.47E-06 | 0.00847646 |
| 15 | 76625758 | 76625758 | 1 | 15_76625758 | ENSG00000140386 | SCAPER | 0 | INTRON | -4.8147909 | 1.47E-06 | 0.00847646 |
| 2 | 32911722 | 32911722 | 1 | 2_32911722 | ENSG00000230876 | LINC00486 | 0 | INTRON | 4.81444619 | 1.48E-06 | 0.00848824 |
| 8 | 86617417 | 86617417 | 1 | 8_86617417 | ENSG00000170289 | CNGB3 | 0 | INTRON | 4.81423566 | 1.48E-06 | 0.00849432 |
| 20 | 12584466 | 12584466 | 1 | 20_12584466 | ENSG00000235698 | PA2G4P2 | 203211 | Downstream | -4.8139925 | 1.48E-06 | 0.0085018 |
| 5 | 169908570 | 169908570 | 1 | 5_169908570 | ENSG00000204767 | INSYN2B | 0 | INTRON | 4.81391803 | 1.48E-06 | 0.00850209 |
| 6 | 89386441 | 89386441 | 1 | 6_89386441 | ENSG00000025039 | RRAGD | 0 | INTRON | 4.81373474 | 1.48E-06 | 0.00850703 |
| 6 | 164069216 | 164069216 | 1 | 6_164069216 | ENSG00000260422 | Z97205.2 | 14806 | Downstream | 4.81345674 | 1.48E-06 | 0.008516 |
| 17 | 29934146 | 29934146 | 1 | 17_29934146 | ENSG00000176927 | EFCAB5 | 0 | INTRON | -4.81337 | 1.48E-06 | 0.00851683 |
| X | 151042112 | 151042112 | 1 | X_151042112 | ENSG00000212595 | RNA5SP525 | 15706 | Upstream | 4.81324369 | 1.49E-06 | 0.00851934 |
| 16 | 73315325 | 73315325 | 1 | 16_73315325 | ENSG00000140836 | ZFHX3 | 0 | INTRON | 4.81237855 | 1.49E-06 | 0.00855343 |
| 12 | 99127784 | 99127784 | 1 | 12_99127784 | ENSG00000185046 | ANKS1B | 0 | INTRON | 4.81228628 | 1.49E-06 | 0.0085545 |
| 20 | 21732983 | 21732983 | 1 | 20_21732983 | ENSG00000233015 | SLC25A6P1 | 9319 | Downstream | 4.81196848 | 1.49E-06 | 0.00856362 |
| 2 | 68674285 | 68674285 | 1 | 2_68674285 | ENSG00000163219 | ARHGAP25 | 5315 | Upstream | 4.81193875 | 1.49E-06 | 0.00856362 |
| 1 | 68395951 | 68395951 | 1 | 1_68395951 | ENSG00000229440 | AL139413.1 | 14294 | Upstream | 4.81164564 | 1.50E-06 | 0.00856498 |
| 6 | 9063044 | 9063044 | 1 | 6_9063044 | ENSG00000285219 | HULC | 0 | INTRON | -4.8116427 | 1.50E-06 | 0.00856498 |
| 1 | 114621938 | 114621938 | 1 | 1_114621938 | ENSG00000175984 | DENND2C | 0 | EXON | 4.81149092 | 1.50E-06 | 0.00856498 |
| 6 | 145943150 | 145943150 | 1 | 6_145943150 | ENSG00000146414 | SHPRH | 0 | 3UTR | 4.81147569 | 1.50E-06 | 0.00856498 |
| 7 | 51136213 | 51136213 | 1 | 7_51136213 | ENSG00000106078 | COBL | 0 | EXON | 4.81140684 | 1.50E-06 | 0.00856498 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
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| 16 | 9150491 | 9150491 | 1 | 16_9150491 | ENSG00000220793 | RPL21P119 | 5910 | Downstream | 4.81123746 | 1.50E-06 | 0.00856498 |
| 20 | 8041834 | 8041834 | 1 | 20_8041834 | ENSG00000229766 | AL021396.1 | 0 | INTRON | -4.8112219 | 1.50E-06 | 0.00856498 |
| 2 | 37872809 | 37872809 | 1 | 2_37872809 | ENSG00000237803 | LINC00211 | 0 | INTRON | 4.81120634 | 1.50E-06 | 0.00856498 |
| 5 | 27052727 | 27052727 | 1 | 5_27052727 | ENSG00000113100 | CDH9 | 0 | INTRON | -4.8112038 | 1.50E-06 | 0.00856498 |
| 7 | 98669146 | 98669146 | 1 | 7_98669146 | ENSG00000106236 | NPTX2 | 39277 | Downstream | -4.811006 | 1.50E-06 | 0.00856498 |
| 2 | 81329759 | 81329759 | 1 | 2_81329759 | ENSG00000231722 | AC012075.1 | 88963 | Downstream | 4.810976 | 1.50E-06 | 0.00856498 |
| 2 | 119210629 | 119210629 | 1 | 2_119210629 | ENSG00000115107 | STEAP3 | 13201 | Upstream | -4.8109177 | 1.50E-06 | 0.00856498 |
| 9 | 25037289 | 25037289 | 1 | 9_25037289 | ENSG00000222693 | RN7SKP120 | 51521 | Downstream | -4.8109143 | 1.50E-06 | 0.00856498 |
| 2 | 154601565 | 154601565 | 1 | 2_154601565 | ENSG00000223290 | RNA5SP107 | 11037 | Downstream | 4.81088095 | 1.50E-06 | 0.00856498 |
| 22 | 21667996 | 21667996 | 1 | 22_21667996 | ENSG00000100023 | PPIL2 | 0 | INTRON | 4.81077497 | 1.50E-06 | 0.00856498 |
| 6 | 15403996 | 15403996 | 1 | 6_15403996 | ENSG00000008083 | JARID2 | 0 | INTRON | 4.81075181 | 1.50E-06 | 0.00856498 |
| Y | 56759867 | 56759867 | 1 | Y_56759867 | ENSG00000235857 | CTBP2P1 | 95376 | Upstream | -4.8107333 | 1.50E-06 | 0.00856498 |
| 6 | 134029834 | 134029834 | 1 | 6_134029834 | ENSG00000146411 | SLC2A12 | 0 | INTRON | -4.8106424 | 1.50E-06 | 0.00856498 |
| 1 | 202664762 | 202664762 | 1 | 1_202664762 | ENSG00000143858 | SYT2 | 0 | INTRON | 4.81063266 | 1.50E-06 | 0.00856498 |
| 6 | 111969044 | 111969044 | 1 | 6_111969044 | ENSG00000227012 | LINC02527 | 59624 | Upstream | -4.8105251 | 1.51E-06 | 0.00856673 |
| 16 | 34853980 | 34853980 | 1 | 16_34853980 | ENSG00000279165 | AC135776.4 | 87996 | Upstream | -4.810249 | 1.51E-06 | 0.0085757 |
| 18 | 52522456 | 52522456 | 1 | 18_52522456 | ENSG00000187323 | DCC | 0 | INTRON | -4.8099509 | 1.51E-06 | 0.00857864 |
| 13 | 29828085 | 29828085 | 1 | 13_29828085 | ENSG00000122042 | UBL3 | 0 | INTRON | 4.80993616 | 1.51E-06 | 0.00857864 |
| 8 | 62244473 | 62244473 | 1 | 8_62244473 | ENSG00000285971 | AC023095.1 | 0 | INTRON | -4.809719 | 1.51E-06 | 0.00857864 |
| 5 | 170372599 | 170372599 | 1 | 5_170372599 | ENSG00000182132 | KCNIP1 | 0 | INTRON | 4.80967065 | 1.51E-06 | 0.00857864 |
| 4 | 114141905 | 114141905 | 1 | 4_114141905 | ENSG00000248716 | AC093815.1 | 37680 | Downstream | -4.809605 | 1.51E-06 | 0.00857864 |
| 3 | 48107931 | 48107931 | 1 | 3_48107931 | ENSG00000236768 | AC124916.1 | 12737 | Downstream | -4.809581 | 1.51E-06 | 0.00857864 |
| 19 | 34204960 | 34204960 | 1 | 19_34204960 | ENSG00000257103 | LSM14A | 0 | INTRON | 4.80954206 | 1.51E-06 | 0.00857864 |
| 2 | 35136746 | 35136746 | 1 | 2_35136746 | ENSG00000226994 | AC079352.1 | 0 | INTRON | 4.80947312 | 1.51E-06 | 0.00857864 |
| 1 | 239788995 | 239788995 | 1 | 1_239788995 | ENSG00000133019 | CHRM3 | 0 | INTRON | 4.80946183 | 1.51E-06 | 0.00857864 |
| 10 | 21426221 | 21426221 | 1 | 10_21426221 | ENSG00000278650 | AL158209.1 | 25975 | Upstream | -4.8094471 | 1.51E-06 | 0.00857864 |
| 5 | 100429913 | 100429913 | 1 | 5_100429913 | ENSG00000247877 | AC021086.1 | 0 | EXON | -4.8094467 | 1.51E-06 | 0.00857864 |
| 6 | 43398422 | 43398422 | 1 | 6_43398422 | ENSG00000287055 | AL359813.1 | 0 | INTRON | -4.8091023 | 1.52E-06 | 0.00859057 |
| 15 | 60833372 | 60833372 | 1 | 15_60833372 | ENSG00000069667 | RORA | 0 | INTRON | 4.80889412 | 1.52E-06 | 0.00859434 |
| 2 | 43184445 | 43184445 | 1 | 2_43184445 | ENSG00000287387 | AC010883.3 | 35403 | Upstream | -4.8088743 | 1.52E-06 | 0.00859434 |
| 6 | 6885527 | 6885527 | 1 | 6_6885527 | ENSG00000223342 | AL158817.1 | 15494 | Downstream | 4.80881487 | 1.52E-06 | 0.00859434 |
| 6 | 42811493 | 42811493 | 1 | 6_42811493 | ENSG00000112624 | BICRAL | 0 | INTRON | -4.8086146 | 1.52E-06 | 0.0086001 |
| 12 | 55979056 | 55979056 | 1 | 12_55979056 | ENSG00000111540 | RAB5B | 0 | INTRON | 4.8083758 | 1.52E-06 | 0.00860637 |
| 2 | 202732723 | 202732723 | 1 | 2_202732723 | ENSG00000138439 | FAM117B | 0 | INTRON | 4.80824223 | 1.52E-06 | 0.00860637 |
| 2 | 105565757 | 105565757 | 1 | 2_105565757 | ENSG00000287036 | AC018802.1 | 34945 | Downstream | 4.80815211 | 1.52E-06 | 0.00860637 |
| 17 | 45201185 | 45201185 | 1 | 17_45201185 | ENSG00000267121 | AC008105.3 | 0 | INTRON | -4.8081382 | 1.52E-06 | 0.00860637 |
| 19 | 28848026 | 28848026 | 1 | 19_28848026 | ENSG00000267617 | AC007795.1 | 21480 | Upstream | 4.80813662 | 1.52E-06 | 0.00860637 |
| 4 | 159573788 | 159573788 | 1 | 4_159573788 | ENSG00000250488 | LINC02233 | 92044 | Downstream | 4.80799261 | 1.52E-06 | 0.00860971 |
| 12 | 60660645 | 60660645 | 1 | 12_60660645 | ENSG00000257865 | AC090022.2 | 241352 | Downstream | -4.8078275 | 1.53E-06 | 0.00861337 |
| 17 | 38409680 | 38409680 | 1 | 17_38409680 | ENSG00000274211 | SOCS7 | 4087 | Downstream | 4.80777493 | 1.53E-06 | 0.00861337 |
| 1 | 216806689 | 216806689 | 1 | 1_216806689 | ENSG00000196482 | ESRRG | 0 | INTRON | 4.80753336 | 1.53E-06 | 0.00862092 |
| 6 | 52360229 | 52360229 | 1 | 6_52360229 | ENSG00000170915 | PAQR8 | 1191 | Upstream | 4.80739242 | 1.53E-06 | 0.00862223 |
| 22 | 43917723 | 43917723 | 1 | 22_43917723 | ENSG00000100344 | PNPLA3 | 6068 | Upstream | 4.80736169 | 1.53E-06 | 0.00862223 |
| 4 | 139768793 | 139768793 | 1 | 4_139768793 | ENSG00000286320 | AC108053.1 | 0 | INTRON | 4.80720345 | 1.53E-06 | 0.00862223 |
| 22 | 19496260 | 19496260 | 1 | 22_19496260 | ENSG00000093009 | CDC45 | 0 | INTRON | 4.80718014 | 1.53E-06 | 0.00862223 |
| 8 | 125479405 | 125479405 | 1 | 8_125479405 | ENSG00000253111 | AC091114.1 | 0 | INTRON | 4.80717171 | 1.53E-06 | 0.00862223 |
| 2 | 120953983 | 120953983 | 1 | 2_120953983 | ENSG00000074047 | GLI2 | 0 | INTRON | 4.80692414 | 1.53E-06 | 0.00862808 |
| 22 | 49078331 | 49078331 | 1 | 22_49078331 | ENSG00000286381 | AL078622.1 | 25782 | Upstream | -4.8069038 | 1.53E-06 | 0.00862808 |
| 7 | 738600 | 738600 | 1 | 7_738600 | ENSG00000164818 | DNAAF5 | 0 | INTRON | 4.80664296 | 1.53E-06 | 0.00863648 |
| 1 | 12029297 | 12029297 | 1 | 1_12029297 | ENSG00000116691 | MIIP | 0 | EXON | 4.80643506 | 1.54E-06 | 0.00864202 |
| 8 | 73429754 | 73429754 | 1 | 8_73429754 | ENSG00000040341 | STAU2 | 0 | INTRON | 4.8063824 | 1.54E-06 | 0.00864202 |
| 9 | 118403653 | 118403653 | 1 | 9_118403653 | ENSG00000225050 | AL355592.1 | 284098 | Downstream | -4.8062437 | 1.54E-06 | 0.00864362 |
| 6 | 35476598 | 35476598 | 1 | 6_35476598 | ENSG00000007866 | TEAD3 | 0 | INTRON | -4.8062134 | 1.54E-06 | 0.00864362 |
| 16 | 18931203 | 18931203 | 1 | 16_18931203 | ENSG00000260352 | AC092287.1 | 0 | INTRON | -4.805515 | 1.54E-06 | 0.00867098 |
| 10 | 4594326 | 4594326 | 1 | 10_4594326 | ENSG00000231298 | MANCR | 55831 | Downstream | -4.8051321 | 1.55E-06 | 0.00868157 |
| 16 | 6885372 | 6885372 | 1 | 16_6885372 | ENSG00000078328 | RBFOX1 | 0 | INTRON | -4.8050754 | 1.55E-06 | 0.00868157 |
| 8 | 102705436 | 102705436 | 1 | 8_102705436 | ENSG00000250684 | ADI1P2 | 16530 | Upstream | 4.8050727 | 1.55E-06 | 0.00868157 |
| 6 | 37214896 | 37214896 | 1 | 6_37214896 | ENSG00000172738 | TMEM217 | 0 | INTRON | 4.80485891 | 1.55E-06 | 0.00868799 |
| 2 | 118306578 | 118306578 | 1 | 2_118306578 | ENSG00000226856 | THORLNC | 84328 | Upstream | 4.80477771 | 1.55E-06 | 0.00868861 |
| 12 | 67691519 | 67691519 | 1 | 12_67691519 | ENSG00000255970 | LINC02421 | 17527 | Downstream | 4.80471266 | 1.55E-06 | 0.00868861 |
| 18 | 29865638 | 29865638 | 1 | 18_29865638 | ENSG00000287803 | AC117569.2 | 215198 | Downstream | 4.80463703 | 1.55E-06 | 0.00868904 |
| 4 | 162727001 | 162727001 | 1 | 4_162727001 | ENSG00000248431 | AC021134.1 | 0 | INTRON | -4.8045628 | 1.55E-06 | 0.0086894 |
| 8 | 34980940 | 34980940 | 1 | 8_34980940 | ENSG00000287152 | AC099685.1 | 99651 | Upstream | -4.8044443 | 1.55E-06 | 0.00869168 |
| 1 | 25420586 | 25420586 | 1 | 1_25420586 | ENSG00000188672 | RHCE | 0 | INTRON | 4.80424299 | 1.55E-06 | 0.00869738 |
| 2 | 69138415 | 69138415 | 1 | 2_69138415 | ENSG00000169604 | ANTXR1 | 0 | INTRON | 4.80418156 | 1.55E-06 | 0.00869738 |
| 3 | 56758141 | 56758141 | 1 | 3_56758141 | ENSG00000163947 | ARHGEF3 | 0 | INTRON | 4.80410347 | 1.55E-06 | 0.00869791 |
| 1 | 167266655 | 167266655 | 1 | 1_167266655 | ENSG00000143190 | POU2F1 | 0 | INTRON | -4.8039464 | 1.56E-06 | 0.00870188 |
| 10 | 100539709 | 100539709 | 1 | 10_100539709 | ENSG00000166135 | HIF1AN | 0 | INTRON | 4.80376187 | 1.56E-06 | 0.00870704 |
| 20 | 35657235 | 35657235 | 1 | 20_35657235 | ENSG00000214078 | CPNE1 | 0 | INTRON | -4.8036383 | 1.56E-06 | 0.00870817 |
| 12 | 49594799 | 49594799 | 1 | 12_49594799 | ENSG00000135436 | FAM186B | 0 | INTRON | 4.80360462 | 1.56E-06 | 0.00870817 |
| 16 | 27914177 | 27914177 | 1 | 16_27914177 | ENSG00000169181 | GSG1L | 0 | INTRON | 4.80353561 | 1.56E-06 | 0.00870831 |
| 5 | 132537580 | 132537580 | 1 | 5_132537580 | ENSG00000283782 | AC116366.3 | 0 | INTRON | 4.80337027 | 1.56E-06 | 0.00871265 |
| 4 | 130122692 | 130122692 | 1 | 4_130122692 | ENSG00000249618 | LINC02465 | 147363 | Downstream | 4.80316314 | 1.56E-06 | 0.00871881 |
| 1 | 72248382 | 72248382 | 1 | 1_72248382 | ENSG00000172260 | NEGR1 | 0 | INTRON | 4.80283404 | 1.56E-06 | 0.00873029 |
| 17 | 69385215 | 69385215 | 1 | 17_69385215 | ENSG00000108984 | MAP2K6 | 29481 | Upstream | -4.8026588 | 1.57E-06 | 0.00873507 |
| 16 | 34709451 | 34709451 | 1 | 16_34709451 | ENSG00000279165 | AC135776.4 | 232525 | Upstream | -4.8024606 | 1.57E-06 | 0.00874086 |
| 22 | 38474557 | 38474557 | 1 | 22_38474557 | ENSG00000100196 | KDELR3 | 0 | EXON | 4.80237644 | 1.57E-06 | 0.00874167 |
| 5 | 90820910 | 90820910 | 1 | 5_90820910 | ENSG00000164199 | ADGRV1 | 0 | INTRON | -4.8022086 | 1.57E-06 | 0.00874366 |
| 20 | 57466445 | 57466445 | 1 | 20_57466445 | ENSG00000286052 | AL109955.2 | 8147 | Downstream | -4.8021998 | 1.57E-06 | 0.00874366 |
| 4 | 179873286 | 179873286 | 1 | 4_179873286 | ENSG00000248921 | AC021193.1 | 15705 | Downstream | -4.8017709 | 1.57E-06 | 0.00875954 |
| 13 | 91790959 | 91790959 | 1 | 13_91790959 | ENSG00000179399 | GPC5 | 0 | INTRON | 4.80166754 | 1.57E-06 | 0.0087612 |
| 2 | 160303949 | 160303949 | 1 | 2_160303949 | ENSG00000153250 | RBMS1 | 0 | INTRON | 4.8014265 | 1.58E-06 | 0.00876888 |
| 20 | 47111895 | 47111895 | 1 | 20_47111895 | ENSG00000064655 | EYA2 | 0 | INTRON | -4.8013387 | 1.58E-06 | 0.00876986 |
| 8 | 36382939 | 36382939 | 1 | 8_36382939 | ENSG00000253363 | AC090809.1 | 0 | INTRON | 4.80058911 | 1.58E-06 | 0.00879913 |
| X | 142194595 | 142194595 | 1 | X_142194595 | ENSG00000250625 | AL031073.1 | 0 | EXON | 4.80054059 | 1.58E-06 | 0.00879913 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 | 146540036 | 146540036 | 1 | 7_146540036 | ENSG00000174469 | CNTNAP2 | 0 | INTRON | 4.80018177 | 1.59E-06 | 0.00881203 |
| 3 | 175662252 | 175662252 | 1 | 3_175662252 | ENSG00000177694 | NAALADL2 | 0 | INTRON | 4.79993179 | 1.59E-06 | 0.00881977 |
| 17 | 15837638 | 15837638 | 1 | 17_15837638 | ENSG00000227790 | SPECC1P1 | 0 | INTRON | 4.79985768 | 1.59E-06 | 0.00881977 |
| 11 | 101574868 | 101574868 | 1 | 11_101574868 | ENSG00000137672 | TRPC6 | 0 | INTRON | -4.7997428 | 1.59E-06 | 0.00881977 |
| 13 | 85922271 | 85922271 | 1 | 13_85922271 | ENSG00000228241 | MOB1AP1 | 46727 | Upstream | 4.79966076 | 1.59E-06 | 0.00881977 |
| 18 | 35861352 | 35861352 | 1 | 18_35861352 | ENSG00000267797 | NRBF2P1 | 18735 | Downstream | 4.79959051 | 1.59E-06 | 0.00881977 |
| 6 | 101078036 | 101078036 | 1 | 6_101078036 | ENSG00000164418 | GRIK2 | 103220 | Upstream | -4.7995407 | 1.59E-06 | 0.00881977 |
| 8 | 102275775 | 102275775 | 1 | 8_102275775 | ENSG00000104517 | UBR5 | 0 | EXON | -4.7994495 | 1.59E-06 | 0.00881977 |
| 2 | 235724531 | 235724531 | 1 | 2_235724531 | ENSG00000157985 | AGAP1 | 0 | INTRON | -4.7993563 | 1.59E-06 | 0.00881977 |
| 19 | 28867524 | 28867524 | 1 | 19_28867524 | ENSG00000267617 | AC007795.1 | 1982 | Upstream | -4.7993368 | 1.59E-06 | 0.00881977 |
| 2 | 164756661 | 164756661 | 1 | 2_164756661 | ENSG00000082438 | COBLL1 | 0 | INTRON | 4.79932217 | 1.59E-06 | 0.00881977 |
| 10 | 58454076 | 58454076 | 1 | 10_58454076 | ENSG00000108064 | TFAM | 54856 | Downstream | -4.7992876 | 1.59E-06 | 0.00881977 |
| 2 | 203671757 | 203671757 | 1 | 2_203671757 | ENSG00000233031 | AC125238.1 | 417 | Downstream | 4.79909885 | 1.59E-06 | 0.00882521 |
| 20 | 58793067 | 58793067 | 1 | 20_58793067 | ENSG00000237121 | PIEZO1P2 | 9246 | Upstream | -4.7989999 | 1.59E-06 | 0.00882609 |
| 13 | 48959910 | 48959910 | 1 | 13_48959910 | ENSG00000275202 | AL161421.1 | 15056 | Downstream | 4.79894859 | 1.60E-06 | 0.00882609 |
| 1 | 88999041 | 88999041 | 1 | 1_88999041 | ENSG00000213516 | RBMXL1 | 6081 | Upstream | 4.79870887 | 1.60E-06 | 0.00883136 |
| 7 | 99426196 | 99426196 | 1 | 7_99426196 | ENSG00000106246 | PTCD1 | 0 | INTRON | 4.79866051 | 1.60E-06 | 0.00883136 |
| 6 | 44486021 | 44486021 | 1 | 6_44486021 | ENSG00000237530 | AL136140.1 | 27240 | Upstream | -4.7986337 | 1.60E-06 | 0.00883136 |
| 7 | 101476578 | 101476578 | 1 | 7_101476578 | ENSG00000160963 | COL26A1 | 0 | INTRON | 4.79838163 | 1.60E-06 | 0.0088381 |
| 17 | 72684634 | 72684634 | 1 | 17_72684634 | ENSG00000133195 | SLC39A11 | 0 | INTRON | 4.79831283 | 1.60E-06 | 0.0088381 |
| 7 | 99160087 | 99160087 | 1 | 7_99160087 | ENSG00000185467 | KPNA7 | 13486 | Downstream | 4.79828558 | 1.60E-06 | 0.0088381 |
| 8 | 123026739 | 123026739 | 1 | 8_123026739 | ENSG00000136986 | DERL1 | 0 | INTRON | 4.79819264 | 1.60E-06 | 0.00883933 |
| 2 | 4286191 | 4286191 | 1 | 2_4286191 | ENSG00000229550 | AC012445.1 | 145460 | Upstream | 4.7979829 | 1.60E-06 | 0.00884419 |
| 5 | 40761995 | 40761995 | 1 | 5_40761995 | ENSG00000132356 | PRKAA1 | 0 | 3UTR | 4.79792894 | 1.60E-06 | 0.00884419 |
| 3 | 4660788 | 4660788 | 1 | 3_4660788 | ENSG00000150995 | ITPR1 | 0 | INTRON | -4.7978877 | 1.60E-06 | 0.00884419 |
| 5 | 69278434 | 69278434 | 1 | 5_69278434 | ENSG00000134058 | CDK7 | 1004 | Downstream | 4.79780472 | 1.60E-06 | 0.00884499 |
| 22 | 21717091 | 21717091 | 1 | 22_21717091 | ENSG00000100027 | YPEL1 | 0 | INTRON | -4.7975797 | 1.61E-06 | 0.0088509 |
| 9 | 69890948 | 69890948 | 1 | 9_69890948 | ENSG00000204711 | C9orf135 | 0 | INTRON | -4.7974858 | 1.61E-06 | 0.0088509 |
| 4 | 56072044 | 56072044 | 1 | 4_56072044 | ENSG00000109265 | KIAA1211 | 0 | INTRON | 4.79747622 | 1.61E-06 | 0.0088509 |
| 22 | 35479800 | 35479800 | 1 | 22_35479800 | ENSG00000233388 | AL022334.1 | 22060 | Downstream | 4.79691787 | 1.61E-06 | 0.00887272 |
| 8 | 113006204 | 113006204 | 1 | 8_113006204 | ENSG00000164796 | CSMD3 | 0 | INTRON | 4.79656352 | 1.61E-06 | 0.00888381 |
| 2 | 94793229 | 94793229 | 1 | 2_94793229 | ENSG00000229089 | ANKRD20A8P | 0 | INTRON | -4.7964577 | 1.61E-06 | 0.00888381 |
| 15 | 28847299 | 28847299 | 1 | 15_28847299 | ENSG00000261377 | PDCD6IPP2 | 0 | INTRON | -4.7964383 | 1.62E-06 | 0.00888381 |
| 12 | 119703009 | 119703009 | 1 | 12_119703009 | ENSG00000122966 | CIT | 0 | INTRON | 4.79640828 | 1.62E-06 | 0.00888381 |
| 17 | 5460758 | 5460758 | 1 | 17_5460758 | ENSG00000005100 | DHX33 | 0 | INTRON | -4.7962495 | 1.62E-06 | 0.00888798 |
| 18 | 67759772 | 67759772 | 1 | 18_67759772 | ENSG00000265533 | AC114689.3 | 0 | INTRON | 4.7960817 | 1.62E-06 | 0.00889097 |
| 6 | 79597770 | 79597770 | 1 | 6_79597770 | ENSG00000279659 | AL451064.2 | 22240 | Downstream | 4.79600091 | 1.62E-06 | 0.00889097 |
| 7 | 152987224 | 152987224 | 1 | 7_152987224 | ENSG00000286565 | AC006348.1 | 50243 | Downstream | 4.79598491 | 1.62E-06 | 0.00889097 |
| 7 | 88007771 | 88007771 | 1 | 7_88007771 | ENSG00000008277 | ADAM22 | 0 | INTRON | 4.79592323 | 1.62E-06 | 0.00889097 |
| 6 | 104018413 | 104018413 | 1 | 6_104018413 | ENSG00000216817 | R3HDM2P2 | 0 | EXON | 4.7954863 | 1.62E-06 | 0.0089075 |
| 13 | 96495977 | 96495977 | 1 | 13_96495977 | ENSG00000185352 | HS6ST3 | 0 | INTRON | -4.7951829 | 1.63E-06 | 0.00891266 |
| 2 | 18698723 | 18698723 | 1 | 2_18698723 | ENSG00000224626 | AC106053.1 | 86083 | Upstream | 4.79517126 | 1.63E-06 | 0.00891266 |
| 17 | 55862835 | 55862835 | 1 | 17_55862835 | ENSG00000262052 | AC090618.1 | 0 | INTRON | -4.7951659 | 1.63E-06 | 0.00891266 |
| 15 | 45488393 | 45488393 | 1 | 15_45488393 | ENSG00000104154 | SLC30A4 | 0 | INTRON | -4.7951118 | 1.63E-06 | 0.00891266 |
| 2 | 6002463 | 6002463 | 1 | 2_6002463 | ENSG00000232044 | SILC1 | 0 | EXON | 4.79504527 | 1.63E-06 | 0.00891274 |
| 10 | 94676741 | 94676741 | 1 | 10_94676741 | ENSG00000108242 | CYP2C18 | 6987 | Upstream | 4.79494643 | 1.63E-06 | 0.00891427 |
| 4 | 80565967 | 80565967 | 1 | 4_80565967 | ENSG00000197826 | CFAP299 | 0 | INTRON | 4.79473116 | 1.63E-06 | 0.00892056 |
| 9 | 75168005 | 75168005 | 1 | 9_75168005 | ENSG00000200041 | Y_RNA | 13514 | Downstream | 4.79466843 | 1.63E-06 | 0.00892056 |
| 14 | 54912150 | 54912150 | 1 | 14_54912150 | ENSG00000131979 | GCH1 | 9324 | Upstream | -4.7946114 | 1.63E-06 | 0.00892056 |
| 11 | 134747057 | 134747057 | 1 | 11_134747057 | ENSG00000251226 | LINC02714 | 0 | INTRON | -4.7945021 | 1.63E-06 | 0.00892255 |
| 9 | 92056315 | 92056315 | 1 | 9_92056315 | ENSG00000090054 | SPTLC1 | 0 | INTRON | -4.793994 | 1.63E-06 | 0.00894232 |
| 4 | 134521427 | 134521427 | 1 | 4_134521427 | ENSG00000251291 | LINC02462 | 0 | INTRON | -4.7938598 | 1.64E-06 | 0.00894543 |
| 17 | 71575731 | 71575731 | 1 | 17_71575731 | ENSG00000225818 | AC118653.1 | 20606 | Upstream | -4.7936595 | 1.64E-06 | 0.00894988 |
| 18 | 26378063 | 26378063 | 1 | 18_26378063 | ENSG00000141384 | TAF4B | 0 | INTRON | -4.7934753 | 1.64E-06 | 0.00894988 |
| 9 | 76493066 | 76493066 | 1 | 9_76493066 | ENSG00000187210 | GCNT1 | 0 | INTRON | -4.7933959 | 1.64E-06 | 0.00894988 |
| 10 | 43625053 | 43625053 | 1 | 10_43625053 | ENSG00000223910 | ZNF32-AS3 | 3763 | Upstream | 4.79336455 | 1.64E-06 | 0.00894988 |
| 5 | 115930125 | 115930125 | 1 | 5_115930125 | ENSG00000177879 | AP3S1 | 16044 | Downstream | 4.79332086 | 1.64E-06 | 0.00894988 |
| 17 | 61846408 | 61846408 | 1 | 17_61846408 | ENSG00000136492 | BRIP1 | 0 | INTRON | -4.7932186 | 1.64E-06 | 0.00894988 |
| 3 | 81680246 | 81680246 | 1 | 3_81680246 | ENSG00000114480 | GBE1 | 0 | INTRON | 4.79314058 | 1.64E-06 | 0.00894988 |
| 10 | 19229418 | 19229418 | 1 | 10_19229418 | ENSG00000204740 | MALRD1 | 0 | INTRON | -4.7931112 | 1.64E-06 | 0.00894988 |
| 15 | 83998397 | 83998397 | 1 | 15_83998397 | ENSG00000156218 | ADAMTSL3 | 0 | INTRON | 4.79308914 | 1.64E-06 | 0.00894988 |
| 16 | 74176624 | 74176624 | 1 | 16_74176624 | ENSG00000261404 | AC138627.1 | 0 | INTRON | -4.7930243 | 1.64E-06 | 0.00894988 |
| 5 | 167807409 | 167807409 | 1 | 5_167807409 | ENSG00000145934 | TENM2 | 0 | INTRON | -4.7930023 | 1.64E-06 | 0.00894988 |
| 5 | 100996675 | 100996675 | 1 | 5_100996675 | ENSG00000113532 | ST8SIA4 | 93393 | Upstream | 4.79298847 | 1.64E-06 | 0.00894988 |
| 4 | 136097612 | 136097612 | 1 | 4_136097612 | ENSG00000261166 | AC073429.2 | 184 | Downstream | 4.79272304 | 1.65E-06 | 0.00895722 |
| 16 | 8339791 | 8339791 | 1 | 16_8339791 | ENSG00000260058 | AC018767.3 | 0 | INTRON | -4.7926956 | 1.65E-06 | 0.00895722 |
| 14 | 92035314 | 92035314 | 1 | 14_92035314 | ENSG00000100815 | TRIP11 | 0 | INTRON | -4.7925515 | 1.65E-06 | 0.00895926 |
| 17 | 42498622 | 42498622 | 1 | 17_42498622 | ENSG00000033627 | ATP6V0A1 | 0 | INTRON | -4.7924781 | 1.65E-06 | 0.00895926 |
| 10 | 113121254 | 113121254 | 1 | 10_113121254 | ENSG00000148737 | TCF7L2 | 0 | INTRON | 4.7924563 | 1.65E-06 | 0.00895926 |
| 18 | 32728194 | 32728194 | 1 | 18_32728194 | ENSG00000197705 | KLHL14 | 0 | INTRON | 4.79239342 | 1.65E-06 | 0.00895926 |
| 15 | 81282198 | 81282198 | 1 | 15_81282198 | ENSG00000172349 | IL16 | 0 | INTRON | 4.79228518 | 1.65E-06 | 0.00896124 |
| 18 | 53648312 | 53648312 | 1 | 18_53648312 | ENSG00000263438 | LINC01919 | 18322 | Downstream | -4.7920475 | 1.65E-06 | 0.008969 |
| 19 | 30410599 | 30410599 | 1 | 19_30410599 | ENSG00000198597 | ZNF536 | 0 | INTRON | 4.7917542 | 1.65E-06 | 0.00897873 |
| 3 | 185732283 | 185732283 | 1 | 3_185732283 | ENSG00000073792 | IGF2BP2 | 0 | INTRON | 4.79170193 | 1.65E-06 | 0.00897873 |
| 13 | 34620044 | 34620044 | 1 | 13_34620044 | ENSG00000271901 | AL161716.1 | 0 | INTRON | 4.79163464 | 1.65E-06 | 0.00897888 |
| 5 | 88572155 | 88572155 | 1 | 5_88572155 | ENSG00000245526 | LINC00461 | 0 | INTRON | -4.7915656 | 1.65E-06 | 0.0089791 |
| 2 | 118309298 | 118309298 | 1 | 2_118309298 | ENSG00000226856 | THORLNC | 87048 | Upstream | -4.7910976 | 1.66E-06 | 0.00899721 |
| 3 | 109278188 | 109278188 | 1 | 3_109278188 | ENSG00000163530 | DPPA2 | 15599 | Downstream | 4.79094934 | 1.66E-06 | 0.00900099 |
| 5 | 151208506 | 151208506 | 1 | 5_151208506 | ENSG00000198624 | CCDC69 | 0 | INTRON | 4.7908366 | 1.66E-06 | 0.00900318 |
| 7 | 48616966 | 48616966 | 1 | 7_48616966 | ENSG00000179869 | ABCA13 | 0 | INTRON | -4.7907389 | 1.66E-06 | 0.00900469 |
| 16 | 73970794 | 73970794 | 1 | 16_73970794 | ENSG00000261404 | AC138627.1 | 0 | INTRON | -4.7902398 | 1.67E-06 | 0.00902156 |
| 11 | 85167480 | 85167480 | 1 | 11_85167480 | ENSG00000150672 | DLG2 | 0 | INTRON | -4.7902356 | 1.67E-06 | 0.00902156 |
| 7 | 140166451 | 140166451 | 1 | 7_140166451 | ENSG00000006459 | KDM7A | 0 | INTRON | 4.79008709 | 1.67E-06 | 0.00902537 |
| 7 | 95896970 | 95896970 | 1 | 7_95896970 | ENSG00000158560 | DYNC1I1 | 0 | INTRON | -4.7899342 | 1.67E-06 | 0.00902938 |
| 2 | 234379530 | 234379530 | 1 | 2_234379530 | ENSG00000288040 | AC097713.3 | 23492 | Upstream | 4.78974072 | 1.67E-06 | 0.00903354 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
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| 21 | 22646115 | 22646115 | 1 | 21_22646115 | ENSG00000234034 | AP000959.1 | 126057 | Upstream | -4.7896309 | 1.67E-06 | 0.00903442 |
| 19 | 46940990 | 46940990 | 1 | 19_46940990 | ENSG00000160007 | ARHGAP35 | 0 | INTRON | -4.7892718 | 1.67E-06 | 0.00904772 |
| 22 | 29397064 | 29397064 | 1 | 22_29397064 | ENSG00000100280 | AP1B1 | 0 | INTRON | 4.78917142 | 1.67E-06 | 0.00904937 |
| 12 | 39097675 | 39097675 | 1 | 12_39097675 | ENSG00000258144 | LINC02406 | 0 | INTRON | -4.7890601 | 1.68E-06 | 0.00905152 |
| 7 | 41285260 | 41285260 | 1 | 7_41285260 | ENSG00000224017 | LINC01449 | 151753 | Downstream | 4.78895357 | 1.68E-06 | 0.00905345 |
| 9 | 81731500 | 81731500 | 1 | 9_81731500 | ENSG00000233926 | AL591368.1 | 0 | INTRON | 4.78887431 | 1.68E-06 | 0.00905416 |
| 3 | 154186573 | 154186573 | 1 | 3_154186573 | ENSG00000114790 | ARHGEF26 | 0 | INTRON | 4.78874239 | 1.68E-06 | 0.00905724 |
| 17 | 42114835 | 42114835 | 1 | 17_42114835 | ENSG00000108773 | KAT2A | 0 | INTRON | 4.78857908 | 1.68E-06 | 0.00906099 |
| 15 | 95275717 | 95275717 | 1 | 15_95275717 | ENSG00000248441 | LINC01197 | 0 | EXON | 4.78849279 | 1.68E-06 | 0.00906099 |
| 7 | 5040065 | 5040065 | 1 | 7_5040065 | ENSG00000272968 | RBAK-RBAKDN | 0 | INTRON | 4.78846836 | 1.68E-06 | 0.00906099 |
| 19 | 50474624 | 50474624 | 1 | 19_50474624 | ENSG00000142530 | FAM71E1 | 0 | INTRON | 4.78820084 | 1.68E-06 | 0.0090702 |
| 2 | 225646333 | 225646333 | 1 | 2_225646333 | ENSG00000144460 | NYAP2 | 0 | INTRON | -4.7878936 | 1.69E-06 | 0.00908121 |
| 6 | 115123042 | 115123042 | 1 | 6_115123042 | ENSG00000287097 | AL590550.1 | 120762 | Downstream | -4.7878037 | 1.69E-06 | 0.00908241 |
| 2 | 141486617 | 141486617 | 1 | 2_141486617 | ENSG00000168702 | LRP1B | 0 | INTRON | -4.7876672 | 1.69E-06 | 0.00908418 |
| 4 | 143365156 | 143365156 | 1 | 4_143365156 | ENSG00000109458 | GAB1 | 0 | INTRON | 4.78763752 | 1.69E-06 | 0.00908418 |
| 13 | 94194596 | 94194596 | 1 | 13_94194596 | ENSG00000183098 | GPC6 | 0 | INTRON | 4.78756639 | 1.69E-06 | 0.00908452 |
| 4 | 168659465 | 168659465 | 1 | 4_168659465 | ENSG00000129116 | PALLD | 0 | INTRON | -4.7874373 | 1.69E-06 | 0.00908749 |
| 11 | 115336219 | 115336219 | 1 | 11_115336219 | ENSG00000182985 | CADM1 | 0 | INTRON | 4.78729976 | 1.69E-06 | 0.00909085 |
| 2 | 5647025 | 5647025 | 1 | 2_5647025 | ENSG00000224128 | LINC01248 | 0 | INTRON | 4.78715801 | 1.69E-06 | 0.00909136 |
| 8 | 22681122 | 22681122 | 1 | 8_22681122 | ENSG00000261026 | AC105046.1 | 0 | EXON | 4.78713059 | 1.69E-06 | 0.00909136 |
| 1 | 245157981 | 245157981 | 1 | 1_245157981 | ENSG00000162849 | KIF26B | 0 | INTRON | 4.78709825 | 1.69E-06 | 0.00909136 |
| 3 | 102005106 | 102005106 | 1 | 3_102005106 | ENSG00000241280 | AC106712.1 | 7180 | Downstream | 4.78698699 | 1.69E-06 | 0.00909154 |
| 20 | 51757990 | 51757990 | 1 | 20_51757990 | ENSG00000054793 | ATP9A | 0 | INTRON | 4.78696734 | 1.69E-06 | 0.00909154 |
| 1 | 229167328 | 229167328 | 1 | 1_229167328 | ENSG00000236975 | LINC02814 | 0 | INTRON | 4.78682299 | 1.69E-06 | 0.00909521 |
| 8 | 126515936 | 126515936 | 1 | 8_126515936 | ENSG00000253530 | AC084116.3 | 0 | INTRON | -4.786755 | 1.69E-06 | 0.00909542 |
| 1 | 242738670 | 242738670 | 1 | 1_242738670 | ENSG00000215800 | RSL24D1P4 | 33949 | Upstream | -4.7866316 | 1.70E-06 | 0.00909815 |
| 1 | 59425990 | 59425990 | 1 | 1_59425990 | ENSG00000172456 | FGGY | 0 | INTRON | -4.7862291 | 1.70E-06 | 0.00911353 |
| 17 | 22395653 | 22395653 | 1 | 17_22395653 | ENSG00000276399 | AC209154.1 | 10365 | Upstream | 4.78582112 | 1.70E-06 | 0.00912919 |
| 6 | 132945700 | 132945700 | 1 | 6_132945700 | ENSG00000231023 | LINC00326 | 8556 | Upstream | -4.7855542 | 1.71E-06 | 0.00913827 |
| Y | 19106246 | 19106246 | 1 | Y_19106246 | ENSG00000176728 | TTTY14 | 28683 | Upstream | -4.785495 | 1.71E-06 | 0.00913827 |
| X | 33572271 | 33572271 | 1 | X_33572271 | ENSG00000287700 | AL591378.1 | 146686 | Downstream | -4.78514 | 1.71E-06 | 0.0091492 |
| 4 | 165249374 | 165249374 | 1 | 4_165249374 | ENSG00000109466 | KLHL2 | 0 | INTRON | 4.78512841 | 1.71E-06 | 0.0091492 |
| 15 | 61919395 | 61919395 | 1 | 15_61919395 | ENSG00000129003 | VPS13C | 0 | 3UTR | -4.7849046 | 1.71E-06 | 0.00915652 |
| 21 | 38525924 | 38525924 | 1 | 21_38525924 | ENSG00000157554 | ERG | 0 | INTRON | 4.78475864 | 1.71E-06 | 0.00915909 |
| 22 | 29794448 | 29794448 | 1 | 22_29794448 | ENSG00000100325 | ASCC2 | 0 | INTRON | -4.7847183 | 1.71E-06 | 0.00915909 |
| 17 | 61942770 | 61942770 | 1 | 17_61942770 | ENSG00000108510 | MED13 | 0 | 3UTR | -4.7846586 | 1.71E-06 | 0.00915909 |
| 4 | 101136899 | 101136899 | 1 | 4_101136899 | ENSG00000138814 | PPP3CA | 0 | INTRON | 4.78441446 | 1.71E-06 | 0.00916735 |
| X | 55235750 | 55235750 | 1 | X_55235750 | ENSG00000158639 | PAGE5 | 11642 | Downstream | -4.784212 | 1.72E-06 | 0.00917372 |
| 6 | 154151137 | 154151137 | 1 | 6_154151137 | ENSG00000112038 | OPRM1 | 0 | INTRON | 4.78408351 | 1.72E-06 | 0.0091767 |
| 7 | 120764524 | 120764524 | 1 | 7_120764524 | ENSG00000231295 | AC004888.1 | 12010 | Upstream | 4.78400541 | 1.72E-06 | 0.00917739 |
| 10 | 25665171 | 25665171 | 1 | 10_25665171 | ENSG00000280809 | LINC00836 | 0 | INTRON | 4.78384741 | 1.72E-06 | 0.00918152 |
| 12 | 3520356 | 3520356 | 1 | 12_3520356 | ENSG00000111218 | PRMT8 | 0 | INTRON | 4.78378887 | 1.72E-06 | 0.00918152 |
| 22 | 46292218 | 46292218 | 1 | 22_46292218 | ENSG00000075234 | TTC38 | 0 | EXON | 4.78368631 | 1.72E-06 | 0.00918333 |
| Y | 10806586 | 10806586 | 1 | Y_10806586 | ENSG00000273858 | AC140113.4 | 236135 | Downstream | -4.7835523 | 1.72E-06 | 0.00918538 |
| 4 | 127425721 | 127425721 | 1 | 4_127425721 | ENSG00000248491 | AC093772.1 | 0 | INTRON | -4.7835156 | 1.72E-06 | 0.00918538 |
| 12 | 1031316 | 1031316 | 1 | 12_1031316 | ENSG00000082805 | ERC1 | 0 | INTRON | -4.7833679 | 1.72E-06 | 0.00918692 |
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| 6 | 4339638 | 4339638 | 1 | 6_4339638 | ENSG00000285424 | AL162718.1 | 0 | INTRON | -4.783293 | 1.72E-06 | 0.00918692 |
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| 10 | 105063927 | 105063927 | 1 | 10_105063927 | ENSG00000156395 | SORCS3 | 0 | INTRON | -4.7828404 | 1.73E-06 | 0.00919998 |
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| 5 | 52977641 | 52977641 | 1 | 5_52977641 | ENSG00000249899 | AC025180.1 | 0 | INTRON | 4.78264408 | 1.73E-06 | 0.00920223 |
| 19 | 51480066 | 51480066 | 1 | 19_51480066 | ENSG00000213822 | CEACAM18 | 0 | INTRON | -4.782489 | 1.73E-06 | 0.00920646 |
| 7 | 154166633 | 154166633 | 1 | 7_154166633 | ENSG00000130226 | DPP6 | 0 | INTRON | 4.78226444 | 1.73E-06 | 0.00921299 |
| 3 | 120431593 | 120431593 | 1 | 3_120431593 | ENSG00000163430 | FSTL1 | 0 | INTRON | -4.7821546 | 1.73E-06 | 0.00921299 |
| 7 | 2580142 | 2580142 | 1 | 7_2580142 | ENSG00000106012 | IQCE | 0 | EXON | 4.7820142 | 1.74E-06 | 0.00921299 |
| 13 | 107749968 | 107749968 | 1 | 13_107749968 | ENSG00000204442 | FAM155A | 0 | INTRON | 4.78200031 | 1.74E-06 | 0.00921299 |
| 20 | 11863828 | 11863828 | 1 | 20_11863828 | ENSG00000228422 | LINC00687 | 0 | INTRON | -4.7819814 | 1.74E-06 | 0.00921299 |
| 1 | 216014232 | 216014232 | 1 | 1_216014232 | ENSG00000042781 | USH2A | 0 | INTRON | 4.78197 | 1.74E-06 | 0.00921299 |
| 22 | 41903077 | 41903077 | 1 | 22_41903077 | ENSG00000198911 | SREBF2 | 0 | 3UTR | -4.7817694 | 1.74E-06 | 0.00921441 |
| 21 | 42498218 | 42498218 | 1 | 21_42498218 | ENSG00000160190 | SLC37A1 | 0 | INTRON | 4.7817688 | 1.74E-06 | 0.00921441 |
| 15 | 85431935 | 85431935 | 1 | 15_85431935 | ENSG00000170776 | AKAP13 | 0 | INTRON | 4.78158923 | 1.74E-06 | 0.00921441 |
| 15 | 31108556 | 31108556 | 1 | 15_31108556 | ENSG00000134160 | TRPM1 | 0 | INTRON | 4.78155181 | 1.74E-06 | 0.00921441 |
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| 6 | 108202655 | 108202655 | 1 | 6_108202655 | ENSG00000112335 | SNX3 | 8566 | Downstream | -4.7814925 | 1.74E-06 | 0.00921441 |
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| 3 | 72955688 | 72955688 | 1 | 3_72955688 | ENSG00000172986 | GXYLT2 | 0 | INTRON | -4.781383 | 1.74E-06 | 0.00921441 |
| 10 | 93781307 | 93781307 | 1 | 10_93781307 | ENSG00000108231 | LGI1 | 0 | INTRON | 4.78137579 | 1.74E-06 | 0.00921441 |
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| 19 | 44088202 | 44088202 | 1 | 19_44088202 | ENSG00000186026 | ZNF284 | 0 | 3UTR | 4.7812358 | 1.74E-06 | 0.00921509 |
| 7 | 109871260 | 109871260 | 1 | 7_109871260 | ENSG00000237064 | EIF3IP1 | 87957 | Downstream | -4.781027 | 1.74E-06 | 0.00921883 |
| 17 | 82970582 | 82970582 | 1 | 17_82970582 | ENSG00000175711 | B3GNTL1 | 0 | INTRON | 4.78097404 | 1.74E-06 | 0.00921883 |
| 1 | 106103564 | 106103564 | 1 | 1_106103564 | ENSG00000237480 | AL355306.2 | 0 | INTRON | 4.78096687 | 1.74E-06 | 0.00921883 |
| 21 | 41936722 | 41936722 | 1 | 21_41936722 | ENSG00000157617 | C2CD2 | 0 | INTRON | -4.78071 | 1.75E-06 | 0.0092275 |
| 4 | 173038744 | 173038744 | 1 | 4_173038744 | ENSG00000174473 | GALNTL6 | 0 | INTRON | 4.78065325 | 1.75E-06 | 0.0092275 |
| 4 | 30352782 | 30352782 | 1 | 4_30352782 | ENSG00000248281 | AC106868.1 | 344466 | Upstream | 4.78021956 | 1.75E-06 | 0.00924414 |
| 14 | 90586192 | 90586192 | 1 | 14_90586192 | ENSG00000165914 | TTC7B | 0 | INTRON | -4.7801662 | 1.75E-06 | 0.00924414 |
| 8 | 116090537 | 116090537 | 1 | 8_116090537 | ENSG00000249917 | LINC00536 | 0 | INTRON | 4.78009535 | 1.75E-06 | 0.00924453 |
| 5 | 80505998 | 80505998 | 1 | 5_80505998 | ENSG00000152380 | FAM151B | 0 | 3UTR | 4.77998814 | 1.75E-06 | 0.00924509 |
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| 10 | 128785975 | 128785975 | 1 | 10_128785975 | ENSG00000224190 | LINC02667 | 126834 | Upstream | 4.77984533 | 1.75E-06 | 0.00924732 |
| 16 | 25136279 | 25136279 | 1 | 16_25136279 | ENSG00000205629 | LCMT1 | 0 | INTRON | -4.7797046 | 1.76E-06 | 0.00924732 |
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| 15 | 28116306 | 28116306 | 1 | 15_28116306 | ENSG00000128731 | HERC2 | 0 | INTRON | 4.77956613 | 1.76E-06 | 0.00924761 |
| 3 | 126647188 | 126647188 | 1 | 3_126647188 | ENSG00000197763 | TXNRD3 | 0 | INTRON | 4.77953024 | 1.76E-06 | 0.00924761 |
| 1 | 246616903 | 246616903 | 1 | 1_246616903 | ENSG00000162852 | CNST | 0 | INTRON | 4.77939898 | 1.76E-06 | 0.00924955 |
| 19 | 35473965 | 35473965 | 1 | 19_35473965 | ENSG00000188508 | KRTDAP | 13358 | Downstream | 4.77936381 | 1.76E-06 | 0.00924955 |
| 8 | 58810630 | 58810630 | 1 | 8_58810630 | ENSG00000198846 | TOX | 0 | INTRON | 4.7790627 | 1.76E-06 | 0.00926055 |
| 3 | 178342000 | 178342000 | 1 | 3_178342000 | ENSG00000223930 | AC117453.1 | 0 | INTRON | 4.77879878 | 1.76E-06 | 0.00926805 |
| 11 | 82103004 | 82103004 | 1 | 11_82103004 | ENSG00000245832 | MIR4300HG | 0 | INTRON | 4.77877572 | 1.76E-06 | 0.00926805 |
| 10 | 54168764 | 54168764 | 1 | 10_54168764 | ENSG00000150275 | PCDH15 | 0 | INTRON | 4.77865355 | 1.76E-06 | 0.00927081 |
| 9 | 61983043 | 61983043 | 1 | 9_61983043 | ENSG00000284471 | CR769775.2 | 0 | EXON | 4.77846042 | 1.77E-06 | 0.00927501 |
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| 5 | 17715409 | 17715409 | 1 | 5_17715409 | ENSG00000249937 | LINC02223 | 0 | INTRON | 4.7782521 | 1.77E-06 | 0.00928074 |
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| Y | 12177708 | 12177708 | 1 | Y_12177708 | ENSG00000206159 | GYG2P1 | 0 | INTRON | -4.7777635 | 1.77E-06 | 0.00929113 |
| 1 | 181116478 | 181116478 | 1 | 1_181116478 | ENSG00000162783 | IER5 | 23578 | Downstream | -4.7777573 | 1.77E-06 | 0.00929113 |
| 4 | 23815796 | 23815796 | 1 | 4_23815796 | ENSG00000109819 | PPARGC1A | 0 | INTRON | -4.777724 | 1.77E-06 | 0.00929113 |
| 20 | 24485071 | 24485071 | 1 | 20_24485071 | ENSG00000101463 | SYNDIG1 | 0 | INTRON | 4.77771204 | 1.77E-06 | 0.00929113 |
| 12 | 67297017 | 67297017 | 1 | 12_67297017 | ENSG00000111530 | CAND1 | 0 | INTRON | 4.77765527 | 1.77E-06 | 0.00929113 |
| 12 | 118706156 | 118706156 | 1 | 12_118706156 | ENSG00000241590 | RPL17P37 | 31807 | Downstream | 4.77756627 | 1.77E-06 | 0.00929213 |
| 20 | 61562125 | 61562125 | 1 | 20_61562125 | ENSG00000179242 | CDH4 | 0 | INTRON | -4.7775097 | 1.77E-06 | 0.00929213 |
| 3 | 12070518 | 12070518 | 1 | 3_12070518 | ENSG00000226642 | ACTG1P12 | 0 | EXON | 4.77723876 | 1.78E-06 | 0.0093018 |
| 15 | 49033280 | 49033280 | 1 | 15_49033280 | ENSG00000138593 | SECISBP2L | 0 | INTRON | 4.77714571 | 1.78E-06 | 0.00930324 |
| 8 | 66654213 | 66654213 | 1 | 8_66654213 | ENSG00000175073 | VCPIP1 | 0 | INTRON | 4.77704452 | 1.78E-06 | 0.00930336 |
| 14 | 62240702 | 62240702 | 1 | 14_62240702 | ENSG00000270852 | AL390816.3 | 88444 | Upstream | -4.7770195 | 1.78E-06 | 0.00930336 |
| 4 | 47697493 | 47697493 | 1 | 4_47697493 | ENSG00000145244 | CORIN | 0 | INTRON | -4.7769374 | 1.78E-06 | 0.0093043 |
| 6 | 22140894 | 22140894 | 1 | 6_22140894 | ENSG00000272168 | CASC15 | 0 | INTRON | 4.77677557 | 1.78E-06 | 0.00930892 |
| 7 | 90382454 | 90382454 | 1 | 7_90382454 | ENSG00000105793 | GTPBP10 | 0 | INTRON | -4.7763458 | 1.79E-06 | 0.00932563 |
| 9 | 12937816 | 12937816 | 1 | 9_12937816 | ENSG00000285637 | AL161449.2 | 20686 | Downstream | -4.7761265 | 1.79E-06 | 0.00932563 |
| 13 | 32011589 | 32011589 | 1 | 13_32011589 | ENSG00000073910 | FRY | 0 | INTRON | -4.7761083 | 1.79E-06 | 0.00932563 |
| 15 | 40799093 | 40799093 | 1 | 15_40799093 | ENSG00000104129 | DNAJC17 | 0 | INTRON | -4.7761048 | 1.79E-06 | 0.00932563 |
| 8 | 14242807 | 14242807 | 1 | 8_14242807 | ENSG00000185053 | SGCZ | 0 | INTRON | -4.7760594 | 1.79E-06 | 0.00932563 |
| 6 | 112409033 | 112409033 | 1 | 6_112409033 | ENSG00000286914 | AL365214.4 | 12669 | Upstream | 4.77604432 | 1.79E-06 | 0.00932563 |
| 1 | 243686160 | 243686160 | 1 | 1_243686160 | ENSG00000117020 | AKT3 | 0 | INTRON | -4.7758773 | 1.79E-06 | 0.00933052 |
| 22 | 50160173 | 50160173 | 1 | 22_50160173 | ENSG00000073146 | MOV10L1 | 0 | INTRON | -4.7757015 | 1.79E-06 | 0.00933147 |
| 17 | 3493337 | 3493337 | 1 | 17_3493337 | ENSG00000141255 | SPATA22 | 0 | INTRON | 4.775687 | 1.79E-06 | 0.00933147 |
| 8 | 27057188 | 27057188 | 1 | 8_27057188 | ENSG00000253899 | AC067904.2 | 6807 | Downstream | 4.77567182 | 1.79E-06 | 0.00933147 |
| 10 | 45412227 | 45412227 | 1 | 10_45412227 | ENSG00000012779 | ALOX5 | 0 | EXON | 4.7753662 | 1.79E-06 | 0.00934009 |
| 1 | 88586885 | 88586885 | 1 | 1_88586885 | ENSG00000237505 | PKN2-AS1 | 0 | INTRON | -4.7752737 | 1.79E-06 | 0.00934009 |
| 7 | 103202642 | 103202642 | 1 | 7_103202642 | ENSG00000170629 | DPY19L2P2 | 0 | INTRON | 4.77525655 | 1.79E-06 | 0.00934009 |
| 1 | 151163514 | 151163514 | 1 | 1_151163514 | ENSG00000163155 | LYSMD1 | 0 | INTRON | -4.7752397 | 1.79E-06 | 0.00934009 |
| 5 | 138046088 | 138046088 | 1 | 5_138046088 | ENSG00000031003 | FAM13B | 0 | INTRON | -4.7750443 | 1.80E-06 | 0.00934631 |
| 8 | 12876342 | 12876342 | 1 | 8_12876342 | ENSG00000255494 | LINC00681 | 58051 | Downstream | 4.77490951 | 1.80E-06 | 0.00934716 |
| 7 | 38338651 | 38338651 | 1 | 7_38338651 | ENSG00000226212 | TRGV6 | 2048 | Downstream | 4.77484884 | 1.80E-06 | 0.00934716 |
| 19 | 11424475 | 11424475 | 1 | 19_11424475 | ENSG00000198003 | CCDC151 | 0 | INTRON | 4.77484153 | 1.80E-06 | 0.00934716 |
| X | 151729064 | 151729064 | 1 | X_151729064 | ENSG00000147378 | FATE1 | 5870 | Downstream | 4.77466171 | 1.80E-06 | 0.00934999 |
| 14 | 67502223 | 67502223 | 1 | 14_67502223 | ENSG00000198133 | TMEM229B | 0 | INTRON | 4.77465775 | 1.80E-06 | 0.00934999 |
| 9 | 89200002 | 89200002 | 1 | 9_89200002 | ENSG00000148082 | SHC3 | 21184 | Upstream | -4.7744791 | 1.80E-06 | 0.00935543 |
| 10 | 7873327 | 7873327 | 1 | 10_7873327 | ENSG00000165632 | TAF3 | 0 | INTRON | 4.77395977 | 1.81E-06 | 0.00937674 |
| 3 | 4631951 | 4631951 | 1 | 3_4631951 | ENSG00000150995 | ITPR1 | 0 | INTRON | 4.77385042 | 1.81E-06 | 0.00937898 |
| 2 | 8108655 | 8108655 | 1 | 2_8108655 | ENSG00000236790 | LINC00299 | 0 | INTRON | -4.7736843 | 1.81E-06 | 0.00938386 |
| 17 | 6801702 | 6801702 | 1 | 17_6801702 | ENSG00000167858 | TEKT1 | 0 | INTRON | -4.7735859 | 1.81E-06 | 0.00938517 |
| X | 149514407 | 149514407 | 1 | X_149514407 | ENSG00000238039 | AC244197.2 | 0 | INTRON | 4.77342714 | 1.81E-06 | 0.00938517 |
| 9 | 1897559 | 1897559 | 1 | 9_1897559 | ENSG00000224092 | AL591644.1 | 80224 | Downstream | -4.7734066 | 1.81E-06 | 0.00938517 |
| 2 | 164600177 | 164600177 | 1 | 2_164600177 | ENSG00000115290 | GRB14 | 0 | INTRON | 4.77330752 | 1.81E-06 | 0.00938517 |
| 7 | 58055383 | 58055383 | 1 | 7_58055383 | ENSG00000231484 | AC023141.7 | 218337 | Downstream | -4.7732918 | 1.81E-06 | 0.00938517 |
| 20 | 50718566 | 50718566 | 1 | 20_50718566 | ENSG00000124171 | PARD6B | 13013 | Upstream | 4.77328823 | 1.81E-06 | 0.00938517 |
| 12 | 110711530 | 110711530 | 1 | 12_110711530 | ENSG00000122986 | HVCN1 | 6580 | Upstream | -4.77279 | 1.82E-06 | 0.00940206 |
| 3 | 60868707 | 60868707 | 1 | 3_60868707 | ENSG00000189283 | FHIT | 0 | INTRON | 4.7726751 | 1.82E-06 | 0.00940206 |
| 1 | 113384401 | 113384401 | 1 | 1_113384401 | ENSG00000081026 | MAGI3 | 6113 | Upstream | 4.7726709 | 1.82E-06 | 0.00940206 |
| 10 | 18593694 | 18593694 | 1 | 10_18593694 | ENSG00000241058 | NSUN6 | 0 | INTRON | 4.77263678 | 1.82E-06 | 0.00940206 |
| 6 | 37810882 | 37810882 | 1 | 6_37810882 | ENSG00000225945 | AL121574.1 | 4894 | Downstream | 4.77262017 | 1.82E-06 | 0.00940206 |
| 17 | 48503401 | 48503401 | 1 | 17_48503401 | ENSG00000206805 | Y_RNA | 24203 | Downstream | -4.772479 | 1.82E-06 | 0.00940325 |
| 16 | 21584397 | 21584397 | 1 | 16_21584397 | ENSG00000252798 | AC005632.1 | 3229 | Upstream | -4.7724494 | 1.82E-06 | 0.00940325 |
| 2 | 3416989 | 3416989 | 1 | 2_3416989 | ENSG00000171853 | TRAPPC12 | 0 | INTRON | 4.77241131 | 1.82E-06 | 0.00940325 |
| 7 | 70090386 | 70090386 | 1 | 7_70090386 | ENSG00000158321 | AUTS2 | 0 | INTRON | -4.7721674 | 1.82E-06 | 0.00941044 |
| 2 | 70038601 | 70038601 | 1 | 2_70038601 | ENSG00000179818 | PCBP1-AS1 | 0 | INTRON | 4.77213506 | 1.82E-06 | 0.00941044 |
| 3 | 151867297 | 151867297 | 1 | 3_151867297 | ENSG00000242908 | AADACL2-AS1 | 0 | INTRON | -4.7717141 | 1.83E-06 | 0.00942224 |
| 1 | 157470299 | 157470299 | 1 | 1_157470299 | ENSG00000286005 | AL353899.1 | 32545 | Downstream | 4.771664 | 1.83E-06 | 0.00942224 |
| 12 | 111532254 | 111532254 | 1 | 12_111532254 | ENSG00000204842 | ATXN2 | 0 | INTRON | -4.7716028 | 1.83E-06 | 0.00942224 |
| 13 | 59191449 | 59191449 | 1 | 13_59191449 | ENSG00000288015 | AL159156.1 | 0 | INTRON | 4.77157948 | 1.83E-06 | 0.00942224 |
| 7 | 34019136 | 34019136 | 1 | 7_34019136 | ENSG00000164619 | BMPER | 0 | INTRON | -4.7715774 | 1.83E-06 | 0.00942224 |
| 5 | 157281588 | 157281588 | 1 | 5_157281588 | ENSG00000055163 | CYFIP2 | 0 | INTRON | -4.7713048 | 1.83E-06 | 0.00942395 |
| 13 | 68132138 | 68132138 | 1 | 13_68132138 | ENSG00000286820 | AL590027.1 | 95007 | Downstream | -4.7712602 | 1.83E-06 | 0.00942395 |
| 8 | 84842374 | 84842374 | 1 | 8_84842374 | ENSG00000184672 | RALYL | 0 | INTRON | 4.77125572 | 1.83E-06 | 0.00942395 |
| 12 | 57511229 | 57511229 | 1 | 12_57511229 | ENSG00000166986 | MARS | 0 | INTRON | 4.77123019 | 1.83E-06 | 0.00942395 |
| 6 | 149736169 | 149736169 | 1 | 6_149736169 | ENSG00000120253 | NUP43 | 0 | INTRON | -4.7712063 | 1.83E-06 | 0.00942395 |
| 2 | 44171778 | 44171778 | 1 | 2_44171778 | ENSG00000285542 | AC013717.1 | 0 | INTRON | 4.77116227 | 1.83E-06 | 0.00942395 |
| 3 | 128512048 | 128512048 | 1 | 3_128512048 | ENSG00000244300 | GATA2-AS1 | 9078 | Downstream | 4.77111435 | 1.83E-06 | 0.00942395 |
| 12 | 20723816 | 20723816 | 1 | 12_20723816 | ENSG00000139155 | SLCO1C1 | 0 | INTRON | 4.77090499 | 1.83E-06 | 0.00942941 |
| 16 | 60646789 | 60646789 | 1 | 16_60646789 | ENSG00000259844 | GNPATP | 7445 | Downstream | -4.7708596 | 1.83E-06 | 0.00942941 |
| 20 | 3978968 | 3978968 | 1 | 20_3978968 | ENSG00000101236 | RNF24 | 0 | INTRON | 4.7708152 | 1.83E-06 | 0.00942941 |
| 3 | 14098717 | 14098717 | 1 | 3_14098717 | ENSG00000224752 | VN1R21P | 8846 | Upstream | -4.7707491 | 1.84E-06 | 0.00942965 |
| 13 | 105082204 | 105082204 | 1 | 13_105082204 | ENSG00000225823 | RPL7P45 | 267135 | Downstream | -4.7706216 | 1.84E-06 | 0.00943204 |
| 4 | 106171143 | 106171143 | 1 | 4_106171143 | ENSG00000145348 | TBCK | 0 | 3UTR | -4.7705463 | 1.84E-06 | 0.00943204 |
| 8 | 7557140 | 7557140 | 1 | 8_7557140 | ENSG00000285975 | AC134684.11 | 0 | EXON | 4.77051583 | 1.84E-06 | 0.00943204 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | 87677050 | 87677050 | 1 | 10_87677050 | ENSG00000198682 | PAPSS2 | 0 | INTRON | 4.77034745 | 1.84E-06 | 0.00943535 |
| 1 | 25289178 | 25289178 | 1 | 1_25289178 | ENSG00000117616 | RSRP1 | 0 | INTRON | 4.77032379 | 1.84E-06 | 0.00943535 |
| 5 | 173837856 | 173837856 | 1 | 5_173837856 | ENSG00000254211 | LINC01485 | 28817 | Upstream | -4.7700729 | 1.84E-06 | 0.00944033 |
| 21 | 32282787 | 32282787 | 1 | 21_32282787 | ENSG00000227256 | MIS18A-AS1 | 1799 | Downstream | 4.77001375 | 1.84E-06 | 0.00944033 |
| 3 | 28471173 | 28471173 | 1 | 3_28471173 | ENSG00000206559 | ZCWPW2 | 0 | INTRON | 4.76993233 | 1.84E-06 | 0.00944033 |
| 14 | 65247306 | 65247306 | 1 | 14_65247306 | ENSG00000258760 | AL355076.2 | 0 | INTRON | 4.76979576 | 1.84E-06 | 0.00944033 |
| 5 | 68229715 | 68229715 | 1 | 5_68229715 | ENSG00000145675 | PIK3R1 | 0 | INTRON | 4.76969502 | 1.85E-06 | 0.00944033 |
| 2 | 177169655 | 177169655 | 1 | 2_177169655 | ENSG00000229337 | AC079305.3 | 0 | INTRON | -4.7695791 | 1.85E-06 | 0.00944033 |
| 8 | 30660808 | 30660808 | 1 | 8_30660808 | ENSG00000197265 | GTF2E2 | 2572 | Upstream | 4.76955853 | 1.85E-06 | 0.00944033 |
| 12 | 95190314 | 95190314 | 1 | 12_95190314 | ENSG00000180263 | FGD6 | 0 | INTRON | -4.7695197 | 1.85E-06 | 0.00944033 |
| 6 | 98153814 | 98153814 | 1 | 6_98153814 | ENSG00000271860 | AL589740.1 | 0 | INTRON | 4.76947918 | 1.85E-06 | 0.00944033 |
| 6 | 87578010 | 87578010 | 1 | 6_87578010 | ENSG00000146282 | RARS2 | 0 | INTRON | -4.7694577 | 1.85E-06 | 0.00944033 |
| 6 | 28745913 | 28745913 | 1 | 6_28745913 | ENSG00000237425 | RPSAP2 | 13009 | Downstream | 4.76936798 | 1.85E-06 | 0.00944033 |
| 3 | 158823547 | 158823547 | 1 | 3_158823547 | ENSG00000118855 | MFSD1 | 0 | INTRON | -4.7693528 | 1.85E-06 | 0.00944033 |
| 15 | 79410071 | 79410071 | 1 | 15_79410071 | ENSG00000166557 | TMED3 | 0 | INTRON | 4.76932587 | 1.85E-06 | 0.00944033 |
| 16 | 16322569 | 16322569 | 1 | 16_16322569 | ENSG00000183889 | AC138969.1 | 0 | INTRON | -4.7691652 | 1.85E-06 | 0.00944033 |
| 4 | 23579844 | 23579844 | 1 | 4_23579844 | ENSG00000250137 | AC093607.1 | 0 | INTRON | -4.769151 | 1.85E-06 | 0.00944033 |
| 4 | 152754821 | 152754821 | 1 | 4_152754821 | ENSG00000169989 | TIGD4 | 14532 | Downstream | 4.76913436 | 1.85E-06 | 0.00944033 |
| 12 | 49749082 | 49749082 | 1 | 12_49749082 | ENSG00000139644 | TMBIM6 | 0 | INTRON | 4.76911792 | 1.85E-06 | 0.00944033 |
| 19 | 52978075 | 52978075 | 1 | 19_52978075 | ENSG00000242779 | ZNF702P | 0 | INTRON | -4.7690934 | 1.85E-06 | 0.00944033 |
| 8 | 20366828 | 20366828 | 1 | 8_20366828 | ENSG00000253164 | AC023403.1 | 0 | INTRON | 4.76902705 | 1.85E-06 | 0.00944033 |
| 5 | 127930893 | 127930893 | 1 | 5_127930893 | ENSG00000230561 | CCDC192 | 0 | INTRON | 4.76900633 | 1.85E-06 | 0.00944033 |
| 14 | 26941995 | 26941995 | 1 | 14_26941995 | ENSG00000258081 | AL110292.1 | 0 | INTRON | 4.76877435 | 1.85E-06 | 0.00944838 |
| 18 | 9204891 | 9204891 | 1 | 18_9204891 | ENSG00000101745 | ANKRD12 | 0 | INTRON | 4.76869047 | 1.85E-06 | 0.00944948 |
| 14 | 39086166 | 39086166 | 1 | 14_39086166 | ENSG00000100934 | SEC23A | 0 | INTRON | 4.76839276 | 1.86E-06 | 0.00945823 |
| 18 | 63328383 | 63328383 | 1 | 18_63328383 | ENSG00000119537 | KDSR | 0 | 3UTR | 4.7683833 | 1.86E-06 | 0.00945823 |
| 10 | 9493724 | 9493724 | 1 | 10_9493724 | ENSG00000287120 | AL138773.1 | 183952 | Upstream | -4.7682819 | 1.86E-06 | 0.0094593 |
| 2 | 105881032 | 105881032 | 1 | 2_105881032 | ENSG00000071051 | NCK2 | 0 | INTRON | 4.76821482 | 1.86E-06 | 0.0094593 |
| 5 | 172077778 | 172077778 | 1 | 5_172077778 | ENSG00000072786 | STK10 | 0 | INTRON | 4.76817975 | 1.86E-06 | 0.0094593 |
| 11 | 130098398 | 130098398 | 1 | 11_130098398 | ENSG00000084234 | APLP2 | 0 | INTRON | 4.76772908 | 1.86E-06 | 0.00947529 |
| 7 | 87765358 | 87765358 | 1 | 7_87765358 | ENSG00000105784 | RUNDC3B | 0 | INTRON | 4.76768273 | 1.86E-06 | 0.00947529 |
| 14 | 83059921 | 83059921 | 1 | 14_83059921 | ENSG00000252369 | RNU7-51P | 11281 | Downstream | 4.76761855 | 1.86E-06 | 0.00947529 |
| 8 | 143898947 | 143898947 | 1 | 8_143898947 | ENSG00000288096 | AC109322.2 | 0 | INTRON | 4.76759832 | 1.86E-06 | 0.00947529 |
| X | 368778 | 368778 | 1 | X_368778 | ENSG00000167393 | PPP2R3B | 0 | INTRON | -4.7675312 | 1.86E-06 | 0.00947562 |
| 20 | 50749291 | 50749291 | 1 | 20_50749291 | ENSG00000124171 | PARD6B | 0 | INTRON | 4.76744576 | 1.87E-06 | 0.00947681 |
| 10 | 2223474 | 2223474 | 1 | 10_2223474 | ENSG00000212156 | RNU6-576P | 23986 | Downstream | -4.767189 | 1.87E-06 | 0.00948285 |
| 3 | 138905354 | 138905354 | 1 | 3_138905354 | ENSG00000242244 | ATP5MC1P3 | 15397 | Upstream | -4.7671628 | 1.87E-06 | 0.00948285 |
| 12 | 120379976 | 120379976 | 1 | 12_120379976 | ENSG00000239881 | RPS27P25 | 8288 | Downstream | -4.7670818 | 1.87E-06 | 0.00948285 |
| 7 | 72500559 | 72500559 | 1 | 7_72500559 | ENSG00000183166 | CALN1 | 53408 | Upstream | 4.76698855 | 1.87E-06 | 0.00948285 |
| Y | 10941411 | 10941411 | 1 | Y_10941411 | ENSG00000273858 | AC140113.4 | 101310 | Downstream | 4.7668827 | 1.87E-06 | 0.00948285 |
| 8 | 66351690 | 66351690 | 1 | 8_66351690 | ENSG00000287127 | AC009879.4 | 12083 | Downstream | -4.7668458 | 1.87E-06 | 0.00948285 |
| 6 | 57519005 | 57519005 | 1 | 6_57519005 | ENSG00000146143 | PRIM2 | 0 | INTRON | -4.7668303 | 1.87E-06 | 0.00948285 |
| 11 | 41424644 | 41424644 | 1 | 11_41424644 | ENSG00000255132 | AC090138.1 | 0 | INTRON | -4.7667516 | 1.87E-06 | 0.00948285 |
| 15 | 36744720 | 36744720 | 1 | 15_36744720 | ENSG00000186073 | C15orf41 | 0 | INTRON | -4.7667065 | 1.87E-06 | 0.00948285 |
| 12 | 85055196 | 85055196 | 1 | 12_85055196 | ENSG00000133640 | LRRIQ1 | 0 | INTRON | 4.76666267 | 1.87E-06 | 0.00948285 |
| 13 | 93383462 | 93383462 | 1 | 13_93383462 | ENSG00000183098 | GPC6 | 0 | INTRON | -4.7665822 | 1.87E-06 | 0.00948285 |
| 3 | 68047924 | 68047924 | 1 | 3_68047924 | ENSG00000183662 | TAFA1 | 0 | INTRON | 4.76646245 | 1.87E-06 | 0.00948285 |
| 14 | 19099132 | 19099132 | 1 | 14_19099132 | ENSG00000225210 | DUXAP9 | 0 | INTRON | 4.76641652 | 1.88E-06 | 0.00948285 |
| 17 | 10362606 | 10362606 | 1 | 17_10362606 | ENSG00000006788 | MYH13 | 0 | INTRON | -4.7664148 | 1.88E-06 | 0.00948285 |
| 13 | 95421553 | 95421553 | 1 | 13_95421553 | ENSG00000134873 | CLDN10 | 12050 | Upstream | -4.7664138 | 1.88E-06 | 0.00948285 |
| 3 | 157521522 | 157521522 | 1 | 3_157521522 | ENSG00000197415 | VEPH1 | 0 | INTRON | -4.7662977 | 1.88E-06 | 0.00948285 |
| 13 | 95217560 | 95217560 | 1 | 13_95217560 | ENSG00000125257 | ABCC4 | 0 | INTRON | 4.76629694 | 1.88E-06 | 0.00948285 |
| 10 | 45682984 | 45682984 | 1 | 10_45682984 | ENSG00000230869 | AGAP10P | 0 | INTRON | 4.76571717 | 1.88E-06 | 0.00950734 |
| 11 | 8629733 | 8629733 | 1 | 11_8629733 | ENSG00000166436 | TRIM66 | 0 | INTRON | -4.7656486 | 1.88E-06 | 0.00950775 |
| 15 | 73675566 | 73675566 | 1 | 15_73675566 | ENSG00000103855 | CD276 | 8399 | Upstream | 4.76549486 | 1.88E-06 | 0.00951218 |
| 10 | 54258008 | 54258008 | 1 | 10_54258008 | ENSG00000150275 | PCDH15 | 0 | INTRON | -4.7653587 | 1.89E-06 | 0.00951579 |
| 9 | 136969491 | 136969491 | 1 | 9_136969491 | ENSG00000198454 | LINC02692 | 0 | INTRON | 4.76496096 | 1.89E-06 | 0.00953087 |
| 1 | 74656150 | 74656150 | 1 | 1_74656150 | ENSG00000178965 | ERICH3 | 0 | INTRON | -4.7649197 | 1.89E-06 | 0.00953087 |
| 2 | 13179986 | 13179986 | 1 | 2_13179986 | ENSG00000285876 | AC093912.1 | 0 | INTRON | -4.7648246 | 1.89E-06 | 0.00953254 |
| 11 | 79499111 | 79499111 | 1 | 11_79499111 | ENSG00000149256 | TENM4 | 58081 | Upstream | 4.76474326 | 1.89E-06 | 0.00953356 |
| 14 | 48328900 | 48328900 | 1 | 14_48328900 | ENSG00000270359 | AL358335.3 | 9506 | Upstream | -4.7646822 | 1.89E-06 | 0.00953363 |
| 1 | 177347404 | 177347404 | 1 | 1_177347404 | ENSG00000224968 | LINC01645 | 4157 | Upstream | -4.7645441 | 1.89E-06 | 0.00953668 |
| 2 | 122178168 | 122178168 | 1 | 2_122178168 | ENSG00000286481 | AC011246.1 | 0 | INTRON | 4.76445347 | 1.89E-06 | 0.00953668 |
| 7 | 127195586 | 127195586 | 1 | 7_127195586 | ENSG00000179603 | GRM8 | 0 | INTRON | 4.76434511 | 1.89E-06 | 0.00953668 |
| 4 | 104558167 | 104558167 | 1 | 4_104558167 | ENSG00000245384 | CXXC4-AS1 | 0 | INTRON | -4.7643329 | 1.89E-06 | 0.00953668 |
| 2 | 111009044 | 111009044 | 1 | 2_111009044 | ENSG00000153093 | ACOXL | 0 | INTRON | -4.7642681 | 1.90E-06 | 0.00953668 |
| 2 | 39297620 | 39297620 | 1 | 2_39297620 | ENSG00000011566 | MAP4K3 | 0 | INTRON | 4.76425956 | 1.90E-06 | 0.00953668 |
| 10 | 106627673 | 106627673 | 1 | 10_106627673 | ENSG00000108018 | SORCS1 | 0 | INTRON | 4.76372012 | 1.90E-06 | 0.00955939 |
| 16 | 90121873 | 90121873 | 1 | 16_90121873 | ENSG00000261172 | AC133919.2 | 0 | INTRON | 4.76364856 | 1.90E-06 | 0.00955983 |
| X | 109348174 | 109348174 | 1 | X_109348174 | ENSG00000215000 | AL034403.1 | 5477 | Downstream | 4.76359164 | 1.90E-06 | 0.00955983 |
| 8 | 94116736 | 94116736 | 1 | 8_94116736 | ENSG00000079112 | CDH17 | 10425 | Downstream | 4.76335839 | 1.90E-06 | 0.00956807 |
| 7 | 7411292 | 7411292 | 1 | 7_7411292 | ENSG00000215018 | COL28A1 | 0 | INTRON | 4.76319613 | 1.91E-06 | 0.00957294 |
| 6 | 118095015 | 118095015 | 1 | 6_118095015 | ENSG00000196376 | SLC35F1 | 0 | INTRON | 4.76282178 | 1.91E-06 | 0.00958789 |
| 7 | 89166323 | 89166323 | 1 | 7_89166323 | ENSG00000182348 | ZNF804B | 0 | INTRON | -4.7627177 | 1.91E-06 | 0.00959001 |
| 2 | 40836004 | 40836004 | 1 | 2_40836004 | ENSG00000233128 | LINC01794 | 68552 | Downstream | 4.76265663 | 1.91E-06 | 0.00959009 |
| 18 | 31450061 | 31450061 | 1 | 18_31450061 | ENSG00000134757 | DSG3 | 0 | INTRON | 4.76256499 | 1.91E-06 | 0.00959161 |
| 18 | 3376188 | 3376188 | 1 | 18_3376188 | ENSG00000259256 | LINC01895 | 0 | INTRON | -4.7624672 | 1.91E-06 | 0.00959211 |
| 9 | 85922769 | 85922769 | 1 | 9_85922769 | ENSG00000231741 | AL353743.3 | 11818 | Upstream | -4.7624356 | 1.91E-06 | 0.00959211 |
| 13 | 22012116 | 22012116 | 1 | 13_22012116 | ENSG00000276476 | AL136962.1 | 28855 | Upstream | 4.76221908 | 1.91E-06 | 0.00959769 |
| 17 | 26849912 | 26849912 | 1 | 17_26849912 | ENSG00000263433 | AC069061.1 | 131781 | Upstream | -4.7621994 | 1.91E-06 | 0.00959769 |
| 14 | 73660355 | 73660355 | 1 | 14_73660355 | ENSG00000119661 | DNAL1 | 0 | INTRON | 4.7617546 | 1.92E-06 | 0.00961604 |
| 16 | 27611490 | 27611490 | 1 | 16_27611490 | ENSG00000047578 | KIAA0556 | 0 | INTRON | 4.76147699 | 1.92E-06 | 0.00962645 |
| 11 | 105050310 | 105050310 | 1 | 11_105050310 | ENSG00000204397 | CARD16 | 0 | INTRON | 4.76134561 | 1.92E-06 | 0.00962988 |
| 18 | 62726041 | 62726041 | 1 | 18_62726041 | ENSG00000081913 | PHLPP1 | 0 | INTRON | -4.7610848 | 1.93E-06 | 0.0096395 |
| 1 | 248019047 | 248019047 | 1 | 1_248019047 | ENSG00000197454 | OR2L5 | 0 | INTRON | 4.76078745 | 1.93E-06 | 0.00965088 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
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| 3 | 27925411 | 27925411 | 1 | 3_27925411 | ENSG00000225548 | LINC01980 | 0 | INTRON | -4.7606548 | 1.93E-06 | 0.00965345 |
| 13 | 97692588 | 97692588 | 1 | 13_97692588 | ENSG00000226134 | AL359502.1 | 14625 | Upstream | -4.7606149 | 1.93E-06 | 0.00965345 |
| 3 | 69947408 | 69947408 | 1 | 3_69947408 | ENSG00000187098 | MITF | 0 | INTRON | 4.7604675 | 1.93E-06 | 0.00965717 |
| 10 | 56891815 | 56891815 | 1 | 10_56891815 | ENSG00000238707 | AC025039.1 | 295784 | Upstream | 4.76033036 | 1.93E-06 | 0.00965717 |
| 8 | 36634078 | 36634078 | 1 | 8_36634078 | ENSG00000253363 | AC090809.1 | 0 | INTRON | -4.7602763 | 1.93E-06 | 0.00965717 |
| 2 | 121451193 | 121451193 | 1 | 2_121451193 | ENSG00000074054 | CLASP1 | 0 | INTRON | 4.76026766 | 1.93E-06 | 0.00965717 |
| 10 | 44253930 | 44253930 | 1 | 10_44253930 | ENSG00000237590 | AL137026.2 | 5671 | Downstream | 4.76009772 | 1.93E-06 | 0.00965717 |
| 7 | 100018685 | 100018685 | 1 | 7_100018685 | ENSG00000106261 | ZKSCAN1 | 0 | INTRON | -4.7600768 | 1.94E-06 | 0.00965717 |
| 1 | 117315906 | 117315906 | 1 | 1_117315906 | ENSG00000235202 | LINC01525 | 0 | INTRON | 4.76006806 | 1.94E-06 | 0.00965717 |
| X | 136210624 | 136210624 | 1 | X_136210624 | ENSG00000022267 | FHL1 | 0 | 3UTR | -4.7600631 | 1.94E-06 | 0.00965717 |
| 17 | 75499764 | 75499764 | 1 | 17_75499764 | ENSG00000177728 | TMEM94 | 0 | 3UTR | 4.75992901 | 1.94E-06 | 0.00966076 |
| 11 | 62013738 | 62013738 | 1 | 11_62013738 | ENSG00000244176 | AP003733.1 | 1136 | Upstream | 4.75981881 | 1.94E-06 | 0.00966298 |
| 20 | 31067381 | 31067381 | 1 | 20_31067381 | ENSG00000215547 | DEFB115 | 190282 | Upstream | -4.7597642 | 1.94E-06 | 0.00966298 |
| 2 | 179268172 | 179268172 | 1 | 2_179268172 | ENSG00000187231 | SESTD1 | 3340 | Upstream | -4.7596818 | 1.94E-06 | 0.0096641 |
| 21 | 23424818 | 23424818 | 1 | 21_23424818 | ENSG00000228592 | AP000459.2 | 1040 | Upstream | 4.75960562 | 1.94E-06 | 0.00966492 |
| 8 | 110690795 | 110690795 | 1 | 8_110690795 | ENSG00000253122 | AC025366.1 | 58401 | Downstream | 4.75953952 | 1.94E-06 | 0.00966525 |
| 10 | 118520189 | 118520189 | 1 | 10_118520189 | ENSG00000234309 | SLC25A18P1 | 52681 | Upstream | -4.7594388 | 1.94E-06 | 0.00966724 |
| 20 | 29389773 | 29389773 | 1 | 20_29389773 | ENSG00000282935 | DUX4L34 | 20574 | Downstream | -4.7592817 | 1.94E-06 | 0.00967194 |
| 5 | 119780778 | 119780778 | 1 | 5_119780778 | ENSG00000234259 | AC008550.1 | 99698 | Downstream | 4.75893391 | 1.95E-06 | 0.00968579 |
| 1 | 113021114 | 113021114 | 1 | 1_113021114 | ENSG00000238198 | LRIG2-DT | 0 | INTRON | -4.758867 | 1.95E-06 | 0.00968616 |
| 6 | 125803228 | 125803228 | 1 | 6_125803228 | ENSG00000111912 | NCOA7 | 0 | INTRON | 4.75879065 | 1.95E-06 | 0.00968699 |
| 8 | 133854546 | 133854546 | 1 | 8_133854546 | ENSG00000253593 | AC110741.1 | 31949 | Upstream | 4.75850525 | 1.95E-06 | 0.00969786 |
| 8 | 122333060 | 122333060 | 1 | 8_122333060 | ENSG00000255364 | SMILR | 81271 | Downstream | -4.7582393 | 1.95E-06 | 0.00970101 |
| 12 | 100180202 | 100180202 | 1 | 12_100180202 | ENSG00000257489 | AC010203.1 | 0 | INTRON | 4.75819437 | 1.95E-06 | 0.00970101 |
| 4 | 33089555 | 33089555 | 1 | 4_33089555 | ENSG00000287968 | AC093606.1 | 60770 | Upstream | 4.75819127 | 1.95E-06 | 0.00970101 |
| 17 | 40338661 | 40338661 | 1 | 17_40338661 | ENSG00000131759 | RARA | 0 | INTRON | 4.75813957 | 1.95E-06 | 0.00970101 |
| 3 | 27968868 | 27968868 | 1 | 3_27968868 | ENSG00000235493 | LINC01967 | 0 | INTRON | 4.75809597 | 1.95E-06 | 0.00970101 |
| 2 | 175162949 | 175162949 | 1 | 2_175162949 | ENSG00000115966 | ATF2 | 0 | INTRON | 4.75807839 | 1.95E-06 | 0.00970101 |
| 4 | 48236146 | 48236146 | 1 | 4_48236146 | ENSG00000135605 | TEC | 0 | INTRON | 4.75798618 | 1.96E-06 | 0.00970101 |
| 7 | 35900718 | 35900718 | 1 | 7_35900718 | ENSG00000122545 | SEPTIN7 | 0 | EXON | 4.75788061 | 1.96E-06 | 0.00970101 |
| 13 | 56420759 | 56420759 | 1 | 13_56420759 | ENSG00000228319 | SPATA2P1 | 203817 | Downstream | -4.757858 | 1.96E-06 | 0.00970101 |
| 7 | 122157341 | 122157341 | 1 | 7_122157341 | ENSG00000234418 | AC015983.2 | 0 | INTRON | -4.7578389 | 1.96E-06 | 0.00970101 |
| 6 | 9597627 | 9597627 | 1 | 6_9597627 | ENSG00000181355 | OFCC1 | 0 | INTRON | 4.75778547 | 1.96E-06 | 0.00970101 |
| 18 | 23158810 | 23158810 | 1 | 18_23158810 | ENSG00000134508 | CABLES1 | 0 | INTRON | -4.7575943 | 1.96E-06 | 0.00970101 |
| 5 | 21481753 | 21481753 | 1 | 5_21481753 | ENSG00000233974 | AC138951.1 | 0 | EXON | -4.7575633 | 1.96E-06 | 0.00970101 |
| 12 | 49885916 | 49885916 | 1 | 12_49885916 | ENSG00000135472 | FAIM2 | 0 | INTRON | -4.7575346 | 1.96E-06 | 0.00970101 |
| 2 | 138521509 | 138521509 | 1 | 2_138521509 | ENSG00000144228 | SPOPL | 0 | INTRON | -4.7575007 | 1.96E-06 | 0.00970101 |
| 5 | 54793497 | 54793497 | 1 | 5_54793497 | ENSG00000232517 | AC112198.2 | 14712 | Downstream | -4.7574978 | 1.96E-06 | 0.00970101 |
| 13 | 113030580 | 113030580 | 1 | 13_113030580 | ENSG00000126217 | MCF2L | 0 | INTRON | 4.7573856 | 1.96E-06 | 0.00970127 |
| 5 | 39556798 | 39556798 | 1 | 5_39556798 | ENSG00000251515 | CCDC11P1 | 14679 | Downstream | 4.75737499 | 1.96E-06 | 0.00970127 |
| 9 | 136942971 | 136942971 | 1 | 9_136942971 | ENSG00000159069 | FBXW5 | 0 | 3UTR | -4.7572179 | 1.96E-06 | 0.00970342 |
| 2 | 163695825 | 163695825 | 1 | 2_163695825 | ENSG00000182263 | FIGN | 0 | INTRON | 4.75715632 | 1.96E-06 | 0.00970342 |
| 16 | 34278067 | 34278067 | 1 | 16_34278067 | ENSG00000279800 | BCLAF1P2 | 9418 | Upstream | -4.7571139 | 1.96E-06 | 0.00970342 |
| 6 | 18473714 | 18473714 | 1 | 6_18473714 | ENSG00000137393 | RNF144B | 4840 | Downstream | 4.75708971 | 1.96E-06 | 0.00970342 |
| 4 | 177587419 | 177587419 | 1 | 4_177587419 | ENSG00000250131 | AC078881.1 | 0 | INTRON | -4.7569948 | 1.96E-06 | 0.00970342 |
| 5 | 130578170 | 130578170 | 1 | 5_130578170 | ENSG00000249418 | AC005741.1 | 20177 | Upstream | -4.7569783 | 1.97E-06 | 0.00970342 |
| 12 | 122760163 | 122760163 | 1 | 12_122760163 | ENSG00000139726 | DENR | 0 | INTRON | 4.7567105 | 1.97E-06 | 0.00970871 |
| 2 | 237624141 | 237624141 | 1 | 2_237624141 | ENSG00000227107 | AC104667.1 | 0 | INTRON | 4.75668846 | 1.97E-06 | 0.00970871 |
| 10 | 72635750 | 72635750 | 1 | 10_72635750 | ENSG00000231471 | HMGN2P34 | 746 | Downstream | 4.75666164 | 1.97E-06 | 0.00970871 |
| 19 | 51256766 | 51256766 | 1 | 19_51256766 | ENSG00000179213 | SIGLECL1 | 0 | INTRON | 4.75663407 | 1.97E-06 | 0.00970871 |
| 7 | 78692905 | 78692905 | 1 | 7_78692905 | ENSG00000187391 | MAGI2 | 0 | INTRON | 4.75625701 | 1.97E-06 | 0.00971905 |
| 13 | 51785272 | 51785272 | 1 | 13_51785272 | ENSG00000102796 | DHRS12 | 0 | INTRON | -4.7562504 | 1.97E-06 | 0.00971905 |
| 16 | 79073340 | 79073340 | 1 | 16_79073340 | ENSG00000186153 | WWOX | 0 | INTRON | -4.7562419 | 1.97E-06 | 0.00971905 |
| 5 | 149217219 | 149217219 | 1 | 5_149217219 | ENSG00000253406 | AC012613.2 | 0 | EXON | 4.75616012 | 1.97E-06 | 0.00971905 |
| 4 | 56072052 | 56072052 | 1 | 4_56072052 | ENSG00000109265 | KIAA1211 | 0 | INTRON | 4.75612652 | 1.97E-06 | 0.00971905 |
| 19 | 41262810 | 41262810 | 1 | 19_41262810 | ENSG00000105323 | HNRNPUL1 | 0 | 5UTR | 4.75599183 | 1.97E-06 | 0.00972272 |
| 16 | 88846739 | 88846739 | 1 | 16_88846739 | ENSG00000141012 | GALNS | 0 | INTRON | 4.7558988 | 1.98E-06 | 0.00972439 |
| 15 | 54712978 | 54712978 | 1 | 15_54712978 | ENSG00000137766 | UNC13C | 79564 | Downstream | -4.7557397 | 1.98E-06 | 0.00972846 |
| 1 | 119249593 | 119249593 | 1 | 1_119249593 | ENSG00000227712 | AL359915.1 | 0 | INTRON | -4.7556973 | 1.98E-06 | 0.00972846 |
| 11 | 90981176 | 90981176 | 1 | 11_90981176 | ENSG00000280085 | AP001002.3 | 8655 | Upstream | -4.7552728 | 1.98E-06 | 0.00974611 |
| 3 | 123893647 | 123893647 | 1 | 3_123893647 | ENSG00000175455 | CCDC14 | 3657 | Downstream | 4.75512674 | 1.98E-06 | 0.00974996 |
| 3 | 38361272 | 38361272 | 1 | 3_38361272 | ENSG00000093217 | XYLB | 0 | INTRON | 4.75507623 | 1.98E-06 | 0.00974996 |
| 17 | 33376913 | 33376913 | 1 | 17_33376913 | ENSG00000108684 | ASIC2 | 0 | INTRON | 4.75493996 | 1.99E-06 | 0.00975372 |
| 6 | 45535024 | 45535024 | 1 | 6_45535024 | ENSG00000124813 | RUNX2 | 0 | INTRON | -4.7547932 | 1.99E-06 | 0.00975593 |
| 2 | 4949499 | 4949499 | 1 | 2_4949499 | ENSG00000207192 | RNU6-649P | 4116 | Downstream | -4.7547175 | 1.99E-06 | 0.00975593 |
| 4 | 117726073 | 117726073 | 1 | 4_117726073 | ENSG00000236922 | LINC01378 | 34885 | Downstream | -4.7546871 | 1.99E-06 | 0.00975593 |
| 7 | 75988377 | 75988377 | 1 | 7_75988377 | ENSG00000189077 | TMEM120A | 0 | INTRON | -4.7546423 | 1.99E-06 | 0.00975593 |
| X | 16260805 | 16260805 | 1 | X_16260805 | ENSG00000215313 | RPL6P30 | 61516 | Upstream | 4.75460269 | 1.99E-06 | 0.00975593 |
| 9 | 109043097 | 109043097 | 1 | 9_109043097 | ENSG00000106771 | TMEM245 | 0 | INTRON | 4.75438538 | 1.99E-06 | 0.00975653 |
| 7 | 149803939 | 149803939 | 1 | 7_149803939 | ENSG00000197558 | SSPO | 0 | INTRON | 4.75435842 | 1.99E-06 | 0.00975653 |
| 5 | 72841560 | 72841560 | 1 | 5_72841560 | ENSG00000083312 | TNPO1 | 0 | INTRON | 4.75431658 | 1.99E-06 | 0.00975653 |
| 2 | 47672231 | 47672231 | 1 | 2_47672231 | ENSG00000095002 | MSH2 | 9085 | Downstream | 4.75429823 | 1.99E-06 | 0.00975653 |
| 1 | 144322755 | 144322755 | 1 | 1_144322755 | ENSG00000276756 | AC245595.1 | 17575 | Upstream | 4.75426206 | 1.99E-06 | 0.00975653 |
| 5 | 4490242 | 4490242 | 1 | 5_4490242 | ENSG00000248973 | AC106799.2 | 0 | INTRON | 4.75424103 | 1.99E-06 | 0.00975653 |
| 18 | 48691159 | 48691159 | 1 | 18_48691159 | ENSG00000134030 | CTIF | 0 | INTRON | -4.7541461 | 1.99E-06 | 0.00975831 |
| 20 | 29325932 | 29325932 | 1 | 20_29325932 | ENSG00000282894 | DUX4L33 | 883 | Downstream | 4.75392495 | 2.00E-06 | 0.00976204 |
| 10 | 16368923 | 16368923 | 1 | 10_16368923 | ENSG00000165983 | PTER | 68019 | Upstream | -4.7539137 | 2.00E-06 | 0.00976204 |
| 2 | 159380206 | 159380206 | 1 | 2_159380206 | ENSG00000123636 | BAZ2B | 0 | INTRON | -4.7538265 | 2.00E-06 | 0.00976204 |
| 12 | 10475105 | 10475105 | 1 | 12_10475105 | ENSG00000134545 | KLRC1 | 20420 | Upstream | 4.75377937 | 2.00E-06 | 0.00976204 |
| 13 | 87616908 | 87616908 | 1 | 13_87616908 | ENSG00000228824 | MIR4500HG | 0 | INTRON | 4.75376918 | 2.00E-06 | 0.00976204 |
| 16 | 6614097 | 6614097 | 1 | 16_6614097 | ENSG00000078328 | RBFOX1 | 0 | INTRON | -4.7537203 | 2.00E-06 | 0.00976204 |
| 4 | 163951955 | 163951955 | 1 | 4_163951955 | ENSG00000145416 | MARCH1 | 0 | INTRON | -4.7535179 | 2.00E-06 | 0.00976394 |
| 16 | 2120410 | 2120410 | 1 | 16_2120410 | ENSG00000008710 | PKD1 | 0 | INTRON | 4.75351709 | 2.00E-06 | 0.00976394 |
| 12 | 63819058 | 63819058 | 1 | 12_63819058 | ENSG00000255850 | RXYLT1-AS1 | 0 | INTRON | -4.7534715 | 2.00E-06 | 0.00976394 |
| 12 | 64201168 | 64201168 | 1 | 12_64201168 | ENSG00000174206 | C12orf66 | 0 | INTRON | 4.75344878 | 2.00E-06 | 0.00976394 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
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| 14 | 97283819 | 97283819 | 1 | 14_97283819 | ENSG00000285584 | AL158800.1 | 66041 | Downstream | 4.75316827 | 2.00E-06 | 0.0097747 |
| 2 | 178127233 | 178127233 | 1 | 2_178127233 | ENSG00000155636 | RBM45 | 0 | INTRON | 4.7528015 | 2.01E-06 | 0.00978965 |
| 14 | 22024349 | 22024349 | 1 | 14_22024349 | ENSG00000258705 | AC245505.2 | 9385 | Downstream | 4.75265928 | 2.01E-06 | 0.00979373 |
| 2 | 192384739 | 192384739 | 1 | 2_192384739 | ENSG00000144339 | TMEFF2 | 189806 | Upstream | -4.7525317 | 2.01E-06 | 0.00979711 |
| 3 | 161409696 | 161409696 | 1 | 3_161409696 | ENSG00000240567 | LINC02067 | 16730 | Upstream | -4.7524379 | 2.01E-06 | 0.00979884 |
| 9 | 81966975 | 81966975 | 1 | 9_81966975 | ENSG00000267559 | AL158154.3 | 0 | INTRON | 4.75210359 | 2.01E-06 | 0.00981225 |
| 17 | 37979433 | 37979433 | 1 | 17_37979433 | ENSG00000274512 | TBC1D3L | 0 | INTRON | -4.7520316 | 2.01E-06 | 0.0098126 |
| 3 | 193877684 | 193877684 | 1 | 3_193877684 | ENSG00000229155 | LINC02038 | 33660 | Upstream | -4.7519806 | 2.01E-06 | 0.0098126 |
| 4 | 23624260 | 23624260 | 1 | 4_23624260 | ENSG00000250137 | AC093607.1 | 0 | INTRON | 4.75158402 | 2.02E-06 | 0.00982906 |
| 17 | 22380005 | 22380005 | 1 | 17_22380005 | ENSG00000276399 | AC209154.1 | 26013 | Upstream | 4.75119563 | 2.02E-06 | 0.00984514 |
| 2 | 51383593 | 51383593 | 1 | 2_51383593 | ENSG00000231918 | AC007402.1 | 0 | INTRON | 4.75110385 | 2.02E-06 | 0.00984679 |
| 16 | 26794114 | 26794114 | 1 | 16_26794114 | ENSG00000260580 | AC009035.1 | 64988 | Downstream | -4.7503527 | 2.03E-06 | 0.00987848 |
| 2 | 167697855 | 167697855 | 1 | 2_167697855 | ENSG00000214211 | CTAGE14P | 15807 | Downstream | -4.7502859 | 2.03E-06 | 0.00987848 |
| 1 | 259023 | 259023 | 1 | 1_259023 | ENSG00000228463 | AP006222.1 | 0 | TSS | 4.7502808 | 2.03E-06 | 0.00987848 |
| 10 | 104706310 | 104706310 | 1 | 10_104706310 | ENSG00000156395 | SORCS3 | 0 | INTRON | 4.75021244 | 2.03E-06 | 0.009879 |
| 4 | 46867752 | 46867752 | 1 | 4_46867752 | ENSG00000170516 | COX7B2 | 0 | INTRON | 4.75008283 | 2.03E-06 | 0.00988078 |
| 2 | 178767264 | 178767264 | 1 | 2_178767264 | ENSG00000155657 | TTN | 0 | INTRON | -4.7500604 | 2.03E-06 | 0.00988078 |
| 13 | 25081569 | 25081569 | 1 | 13_25081569 | ENSG00000151846 | PABPC3 | 14298 | Upstream | 4.74977104 | 2.04E-06 | 0.0098907 |
| 17 | 80034303 | 80034303 | 1 | 17_80034303 | ENSG00000167291 | TBC1D16 | 0 | INTRON | -4.7497419 | 2.04E-06 | 0.0098907 |
| 7 | 104255945 | 104255945 | 1 | 7_104255945 | ENSG00000164815 | ORC5 | 47898 | Upstream | 4.74967991 | 2.04E-06 | 0.00989092 |
| 8 | 97733449 | 97733449 | 1 | 8_97733449 | ENSG00000147649 | MTDH | 3189 | Downstream | -4.7496162 | 2.04E-06 | 0.00989121 |
| 10 | 2670683 | 2670683 | 1 | 10_2670683 | ENSG00000235281 | AL713851.1 | 51944 | Downstream | -4.7491334 | 2.04E-06 | 0.00991202 |
| 14 | 53795755 | 53795755 | 1 | 14_53795755 | ENSG00000237356 | AL365295.1 | 0 | INTRON | 4.74890741 | 2.05E-06 | 0.00992028 |
| 20 | 10893651 | 10893651 | 1 | 20_10893651 | ENSG00000232900 | AL050403.1 | 0 | INTRON | -4.7488004 | 2.05E-06 | 0.0099227 |
| 1 | 72759919 | 72759919 | 1 | 1_72759919 | ENSG00000225087 | AL583808.1 | 0 | INTRON | 4.74831196 | 2.05E-06 | 0.00994278 |
| 12 | 109058729 | 109058729 | 1 | 12_109058729 | ENSG00000135093 | USP30 | 0 | INTRON | -4.748151 | 2.05E-06 | 0.00994278 |
| 16 | 31103973 | 31103973 | 1 | 16_31103973 | ENSG00000103507 | BCKDK | 2133 | Upstream | 4.74809726 | 2.05E-06 | 0.00994278 |
| 2 | 240934120 | 240934120 | 1 | 2_240934120 | ENSG00000226321 | CROCC2 | 0 | INTRON | 4.74806647 | 2.05E-06 | 0.00994278 |
| 7 | 58062039 | 58062039 | 1 | 7_58062039 | ENSG00000231484 | AC023141.7 | 224993 | Downstream | -4.7480599 | 2.05E-06 | 0.00994278 |
| 2 | 198075257 | 198075257 | 1 | 2_198075257 | ENSG00000115896 | PLCL1 | 0 | INTRON | 4.74804573 | 2.05E-06 | 0.00994278 |
| 6 | 268510 | 268510 | 1 | 6_268510 | ENSG00000287265 | AL365272.1 | 16932 | Downstream | 4.74780763 | 2.06E-06 | 0.00995156 |
| 5 | 120385813 | 120385813 | 1 | 5_120385813 | ENSG00000261036 | AC113418.1 | 0 | INTRON | 4.74775224 | 2.06E-06 | 0.00995156 |
| 2 | 171186926 | 171186926 | 1 | 2_171186926 | ENSG00000198586 | TLK1 | 0 | INTRON | 4.74759513 | 2.06E-06 | 0.00995646 |
| 5 | 26609408 | 26609408 | 1 | 5_26609408 | ENSG00000230571 | AC113347.1 | 59937 | Upstream | -4.7475006 | 2.06E-06 | 0.00995828 |
| 15 | 76287449 | 76287449 | 1 | 15_76287449 | ENSG00000140374 | ETFA | 0 | INTRON | 4.74726541 | 2.06E-06 | 0.00996703 |
| 5 | 99818228 | 99818228 | 1 | 5_99818228 | ENSG00000250391 | AC092284.1 | 130066 | Downstream | 4.74700605 | 2.06E-06 | 0.00997675 |
| 7 | 117648388 | 117648388 | 1 | 7_117648388 | ENSG00000001626 | CFTR | 0 | INTRON | 4.74695277 | 2.07E-06 | 0.00997675 |
| 3 | 52498194 | 52498194 | 1 | 3_52498194 | ENSG00000010327 | STAB1 | 0 | INTRON | -4.7468725 | 2.07E-06 | 0.00997675 |
| 3 | 185983331 | 185983331 | 1 | 3_185983331 | ENSG00000171658 | NMRAL2P | 2459 | Downstream | -4.7468179 | 2.07E-06 | 0.00997675 |
| 2 | 212483476 | 212483476 | 1 | 2_212483476 | ENSG00000178568 | ERBB4 | 0 | INTRON | 4.74678087 | 2.07E-06 | 0.00997675 |
| 6 | 91903577 | 91903577 | 1 | 6_91903577 | ENSG00000219867 | AL590635.1 | 87149 | Upstream | -4.7467219 | 2.07E-06 | 0.00997683 |
| 6 | 5740448 | 5740448 | 1 | 6_5740448 | ENSG00000145982 | FARS2 | 0 | INTRON | 4.74625922 | 2.07E-06 | 0.00999683 |
| 3 | 180956159 | 180956159 | 1 | 3_180956159 | ENSG00000114416 | FXR1 | 0 | INTRON | 4.74610334 | 2.07E-06 | 0.00999891 |
| 16 | 57318453 | 57318453 | 1 | 16_57318453 | ENSG00000260965 | RPL23AP91 | 2898 | Upstream | 4.74604844 | 2.07E-06 | 0.00999891 |
| 7 | 74955862 | 74955862 | 1 | 7_74955862 | ENSG00000274070 | CASTOR2 | 8842 | Upstream | 4.7460451 | 2.07E-06 | 0.00999891 |
| 4 | 27103242 | 27103242 | 1 | 4_27103242 | ENSG00000251080 | AC024132.2 | 30753 | Downstream | 4.74580893 | 2.08E-06 | 0.01000775 |
| 5 | 102059716 | 102059716 | 1 | 5_102059716 | ENSG00000199786 | RNA5SP188 | 71290 | Downstream | 4.74560615 | 2.08E-06 | 0.01001246 |
| 4 | 122360945 | 122360945 | 1 | 4_122360945 | ENSG00000138688 | KIAA1109 | 0 | INTRON | 4.74550173 | 2.08E-06 | 0.01001246 |
| 12 | 54605389 | 54605389 | 1 | 12_54605389 | ENSG00000257780 | GLYCAM1 | 2797 | Downstream | 4.74549053 | 2.08E-06 | 0.01001246 |
| 1 | 97735394 | 97735394 | 1 | 1_97735394 | ENSG00000188641 | DPYD | 0 | INTRON | 4.74548464 | 2.08E-06 | 0.01001246 |
| 8 | 73328017 | 73328017 | 1 | 8_73328017 | ENSG00000250295 | RDH10-AS1 | 0 | INTRON | 4.74529986 | 2.08E-06 | 0.01001721 |
| 2 | 84398599 | 84398599 | 1 | 2_84398599 | ENSG00000163541 | SUCLG1 | 24928 | Downstream | 4.74527413 | 2.08E-06 | 0.01001721 |
| 1 | 102434366 | 102434366 | 1 | 1_102434366 | ENSG00000233359 | AC114485.1 | 44736 | Upstream | -4.744943 | 2.09E-06 | 0.01002817 |
| 5 | 22124315 | 22124315 | 1 | 5_22124315 | ENSG00000154162 | CDH12 | 0 | INTRON | -4.744922 | 2.09E-06 | 0.01002817 |
| 9 | 18873336 | 18873336 | 1 | 9_18873336 | ENSG00000178031 | ADAMTSL1 | 0 | INTRON | 4.74486581 | 2.09E-06 | 0.01002817 |
| 2 | 3474968 | 3474968 | 1 | 2_3474968 | ENSG00000171853 | TRAPPC12 | 0 | INTRON | 4.74479991 | 2.09E-06 | 0.01002817 |
| 7 | 81909466 | 81909466 | 1 | 7_81909466 | ENSG00000153956 | CACNA2D1 | 36977 | Downstream | 4.74476681 | 2.09E-06 | 0.01002817 |
| 14 | 70419045 | 70419045 | 1 | 14_70419045 | ENSG00000213463 | SYNJ2BP | 1955 | Upstream | -4.7444239 | 2.09E-06 | 0.01003572 |
| 3 | 88198626 | 88198626 | 1 | 3_88198626 | ENSG00000179021 | C3orf38 | 29897 | Downstream | 4.74441196 | 2.09E-06 | 0.01003572 |
| 2 | 79257112 | 79257112 | 1 | 2_79257112 | ENSG00000066032 | CTNNA2 | 0 | INTRON | 4.74433302 | 2.09E-06 | 0.01003572 |
| 9 | 91860518 | 91860518 | 1 | 9_91860518 | ENSG00000169071 | ROR2 | 0 | INTRON | 4.74432836 | 2.09E-06 | 0.01003572 |
| 21 | 33899531 | 33899531 | 1 | 21_33899531 | ENSG00000205726 | ITSN1 | 0 | 3UTR | 4.7443169 | 2.09E-06 | 0.01003572 |
| 14 | 52495897 | 52495897 | 1 | 14_52495897 | ENSG00000087301 | TXNDC16 | 0 | INTRON | 4.74427185 | 2.09E-06 | 0.01003572 |
| 18 | 26663145 | 26663145 | 1 | 18_26663145 | ENSG00000260372 | AQP4-AS1 | 0 | INTRON | 4.74417187 | 2.09E-06 | 0.01003785 |
| 5 | 56758446 | 56758446 | 1 | 5_56758446 | ENSG00000228650 | AC008940.1 | 12352 | Upstream | 4.74386021 | 2.10E-06 | 0.01004669 |
| 13 | 35942143 | 35942143 | 1 | 13_35942143 | ENSG00000133083 | DCLK1 | 0 | INTRON | 4.74379614 | 2.10E-06 | 0.01004669 |
| 5 | 152481989 | 152481989 | 1 | 5_152481989 | ENSG00000286749 | AC008571.2 | 0 | INTRON | 4.74377295 | 2.10E-06 | 0.01004669 |
| 2 | 36815893 | 36815893 | 1 | 2_36815893 | ENSG00000205221 | VIT | 1101 | Downstream | 4.74376367 | 2.10E-06 | 0.01004669 |
| 4 | 115121866 | 115121866 | 1 | 4_115121866 | ENSG00000138653 | NDST4 | 7990 | Upstream | 4.74366461 | 2.10E-06 | 0.01004669 |
| 7 | 114940408 | 114940408 | 1 | 7_114940408 | ENSG00000135272 | MDFIC | 0 | INTRON | 4.74365155 | 2.10E-06 | 0.01004669 |
| 10 | 16551661 | 16551661 | 1 | 10_16551661 | ENSG00000287925 | AL353576.1 | 11924 | Downstream | 4.74356718 | 2.10E-06 | 0.01004805 |
| 3 | 197955966 | 197955966 | 1 | 3_197955966 | ENSG00000182899 | RPL35A | 0 | 3UTR | 4.74344532 | 2.10E-06 | 0.01005034 |
| 5 | 44760747 | 44760747 | 1 | 5_44760747 | ENSG00000251141 | MRPS30-DT | 0 | INTRON | 4.74340084 | 2.10E-06 | 0.01005034 |
| 16 | 9149626 | 9149626 | 1 | 16_9149626 | ENSG00000220793 | RPL21P119 | 6775 | Downstream | -4.7433504 | 2.10E-06 | 0.01005034 |
| 11 | 48990785 | 48990785 | 1 | 11_48990785 | ENSG00000254764 | TRIM53CP | 0 | INTRON | 4.74318736 | 2.10E-06 | 0.01005561 |
| 10 | 110465098 | 110465098 | 1 | 10_110465098 | ENSG00000273143 | AL355512.1 | 0 | INTRON | 4.74308928 | 2.10E-06 | 0.01005765 |
| 2 | 73851935 | 73851935 | 1 | 2_73851935 | ENSG00000124356 | STAMBP | 0 | INTRON | 4.74282309 | 2.11E-06 | 0.01006662 |
| 6 | 55540657 | 55540657 | 1 | 6_55540657 | ENSG00000146151 | HMGCLL1 | 0 | INTRON | -4.742795 | 2.11E-06 | 0.01006662 |
| 18 | 30815754 | 30815754 | 1 | 18_30815754 | ENSG00000279734 | AC090506.2 | 35330 | Downstream | -4.742593 | 2.11E-06 | 0.01006684 |
| 20 | 5125998 | 5125998 | 1 | 20_5125998 | ENSG00000132646 | PCNA | 0 | INTRON | -4.7425553 | 2.11E-06 | 0.01006684 |
| 3 | 178081586 | 178081586 | 1 | 3_178081586 | ENSG00000286003 | AC110992.1 | 0 | INTRON | 4.74250116 | 2.11E-06 | 0.01006684 |
| 2 | 15105246 | 15105246 | 1 | 2_15105246 | ENSG00000151779 | NBAS | 61667 | Downstream | 4.74248962 | 2.11E-06 | 0.01006684 |
| 2 | 17220490 | 17220490 | 1 | 2_17220490 | ENSG00000214843 | ZFYVE9P2 | 63801 | Upstream | 4.74245686 | 2.11E-06 | 0.01006684 |
| 10 | 20224269 | 20224269 | 1 | 10_20224269 | ENSG00000120594 | PLXDC2 | 0 | INTRON | 4.74241213 | 2.11E-06 | 0.01006684 |
| 14 | 57627305 | 57627305 | 1 | 14_57627305 | ENSG00000151812 | SLC35F4 | 0 | INTRON | 4.74239315 | 2.11E-06 | 0.01006684 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | 13594075 | 13594075 | 1 | 8_13594075 | ENSG00000164741 | DLC1 | 0 | INTRON | -4.7422685 | 2.11E-06 | 0.01007022 |
| 15 | 59496377 | 59496377 | 1 | 15_59496377 | ENSG00000157470 | FAM81A | 0 | INTRON | -4.7421284 | 2.11E-06 | 0.01007437 |
| 10 | 92806206 | 92806206 | 1 | 10_92806206 | ENSG00000138190 | EXOC6 | 20624 | Upstream | -4.7419342 | 2.12E-06 | 0.01008089 |
| 11 | 56480266 | 56480266 | 1 | 11_56480266 | ENSG00000254752 | OR5M2P | 0 | EXON | 4.74188383 | 2.12E-06 | 0.01008089 |
| 1 | 164052753 | 164052753 | 1 | 1_164052753 | ENSG00000212538 | U3 | 128880 | Downstream | 4.74172409 | 2.12E-06 | 0.01008603 |
| 18 | 6995605 | 6995605 | 1 | 18_6995605 | ENSG00000101680 | LAMA1 | 0 | INTRON | -4.74156 | 2.12E-06 | 0.01008905 |
| 4 | 55022648 | 55022648 | 1 | 4_55022648 | ENSG00000252815 | RNU6-410P | 9316 | Downstream | 4.74155006 | 2.12E-06 | 0.01008905 |
| 15 | 27366297 | 27366297 | 1 | 15_27366297 | ENSG00000261426 | AC144833.1 | 0 | EXON | 4.74143671 | 2.12E-06 | 0.01009109 |
| 10 | 67250784 | 67250784 | 1 | 10_67250784 | ENSG00000183230 | CTNNA3 | 0 | INTRON | -4.7413739 | 2.12E-06 | 0.01009109 |
| 21 | 25334340 | 25334340 | 1 | 21_25334340 | ENSG00000222042 | AP001341.1 | 0 | INTRON | 4.74133923 | 2.12E-06 | 0.01009109 |
| 13 | 72932424 | 72932424 | 1 | 13_72932424 | ENSG00000083535 | PIBF1 | 0 | INTRON | 4.74116988 | 2.12E-06 | 0.01009573 |
| 19 | 12209778 | 12209778 | 1 | 19_12209778 | ENSG00000234773 | AC012618.3 | 0 | EXON | 4.74113308 | 2.13E-06 | 0.01009573 |
| 14 | 102219980 | 102219980 | 1 | 14_102219980 | ENSG00000140153 | WDR20 | 0 | INTRON | 4.74106796 | 2.13E-06 | 0.01009616 |
| 15 | 27836202 | 27836202 | 1 | 15_27836202 | ENSG00000104044 | OCA2 | 0 | INTRON | -4.7403274 | 2.13E-06 | 0.01013008 |
| 11 | 60806415 | 60806415 | 1 | 11_60806415 | ENSG00000172689 | MS4A10 | 5110 | Downstream | 4.74023468 | 2.13E-06 | 0.01013008 |
| 4 | 78360023 | 78360023 | 1 | 4_78360023 | ENSG00000138759 | FRAS1 | 0 | INTRON | -4.7402189 | 2.13E-06 | 0.01013008 |
| 3 | 193668605 | 193668605 | 1 | 3_193668605 | ENSG00000198836 | OPA1 | 0 | 3UTR | -4.7401145 | 2.14E-06 | 0.0101311 |
| 4 | 172940861 | 172940861 | 1 | 4_172940861 | ENSG00000174473 | GALNTL6 | 0 | INTRON | 4.74008536 | 2.14E-06 | 0.0101311 |
| 20 | 58750118 | 58750118 | 1 | 20_58750118 | ENSG00000237121 | PIEZO1P2 | 0 | INTRON | -4.7396707 | 2.14E-06 | 0.0101451 |
| 5 | 55134899 | 55134899 | 1 | 5_55134899 | ENSG00000164287 | CDC20B | 0 | INTRON | -4.7395512 | 2.14E-06 | 0.0101451 |
| 14 | 22265101 | 22265101 | 1 | 14_22265101 | ENSG00000251002 | AC244502.1 | 0 | INTRON | 4.7395418 | 2.14E-06 | 0.0101451 |
| 2 | 9244074 | 9244074 | 1 | 2_9244074 | ENSG00000151693 | ASAP2 | 0 | INTRON | 4.73952982 | 2.14E-06 | 0.0101451 |
| 4 | 131252184 | 131252184 | 1 | 4_131252184 | ENSG00000206782 | RNU6-224P | 21057 | Upstream | -4.7395235 | 2.14E-06 | 0.0101451 |
| 1 | 188664945 | 188664945 | 1 | 1_188664945 | ENSG00000235083 | AL929288.2 | 6407 | Upstream | -4.7391805 | 2.15E-06 | 0.01015946 |
| 18 | 26336524 | 26336524 | 1 | 18_26336524 | ENSG00000141384 | TAF4B | 0 | INTRON | 4.73907055 | 2.15E-06 | 0.01016214 |
| 21 | 14708947 | 14708947 | 1 | 21_14708947 | ENSG00000232884 | AF127936.2 | 19448 | Downstream | -4.7388571 | 2.15E-06 | 0.01016901 |
| 12 | 65960453 | 65960453 | 1 | 12_65960453 | ENSG00000149948 | HMGA2 | 0 | INTRON | -4.7388153 | 2.15E-06 | 0.01016901 |
| 17 | 47750554 | 47750554 | 1 | 17_47750554 | ENSG00000073861 | TBX21 | 4432 | Downstream | 4.73876459 | 2.15E-06 | 0.01016901 |
| 21 | 32555835 | 32555835 | 1 | 21_32555835 | ENSG00000252950 | RNA5SP490 | 7239 | Upstream | 4.73858659 | 2.15E-06 | 0.01017059 |
| 19 | 16576885 | 16576885 | 1 | 19_16576885 | ENSG00000105085 | MED26 | 0 | 3UTR | 4.73851184 | 2.15E-06 | 0.01017059 |
| 12 | 45039738 | 45039738 | 1 | 12_45039738 | ENSG00000185610 | DBX2 | 0 | INTRON | 4.73846263 | 2.15E-06 | 0.01017059 |
| 1 | 146408677 | 146408677 | 1 | 1_146408677 | ENSG00000274428 | U1 | 1225 | Upstream | 4.73840863 | 2.15E-06 | 0.01017059 |
| 4 | 42326016 | 42326016 | 1 | 4_42326016 | ENSG00000250781 | AC024022.1 | 0 | INTRON | 4.73840704 | 2.15E-06 | 0.01017059 |
| 2 | 71493502 | 71493502 | 1 | 2_71493502 | ENSG00000135636 | DYSF | 0 | INTRON | -4.7383954 | 2.15E-06 | 0.01017059 |
| 11 | 65308535 | 65308535 | 1 | 11_65308535 | ENSG00000285816 | AP000944.5 | 0 | INTRON | 4.73821094 | 2.16E-06 | 0.01017462 |
| 10 | 112885835 | 112885835 | 1 | 10_112885835 | ENSG00000225292 | AL158212.1 | 2899 | Upstream | 4.7382027 | 2.16E-06 | 0.01017462 |
| X | 18300125 | 18300125 | 1 | X_18300125 | ENSG00000102098 | SCML2 | 0 | INTRON | -4.7381041 | 2.16E-06 | 0.01017675 |
| 6 | 158783808 | 158783808 | 1 | 6_158783808 | ENSG00000092820 | EZR | 0 | INTRON | 4.73778864 | 2.16E-06 | 0.0101895 |
| 2 | 6479889 | 6479889 | 1 | 2_6479889 | ENSG00000226488 | LINC01824 | 15761 | Upstream | 4.73770425 | 2.16E-06 | 0.0101895 |
| 2 | 190209858 | 190209858 | 1 | 2_190209858 | ENSG00000198130 | HIBCH | 0 | INTRON | -4.7376758 | 2.16E-06 | 0.0101895 |
| 14 | 66811273 | 66811273 | 1 | 14_66811273 | ENSG00000171723 | GPHN | 0 | INTRON | -4.7376246 | 2.16E-06 | 0.0101895 |
| 8 | 109065877 | 109065877 | 1 | 8_109065877 | ENSG00000253796 | AC104248.1 | 2460 | Upstream | -4.7375694 | 2.16E-06 | 0.0101895 |
| 3 | 180157435 | 180157435 | 1 | 3_180157435 | ENSG00000201822 | RNA5SP149 | 4450 | Downstream | -4.7374757 | 2.16E-06 | 0.01019139 |
| 5 | 134734415 | 134734415 | 1 | 5_134734415 | ENSG00000164615 | CAMLG | 4132 | Upstream | 4.73729483 | 2.17E-06 | 0.01019767 |
| 11 | 56415051 | 56415051 | 1 | 11_56415051 | ENSG00000272987 | OR5AL1 | 1371 | Downstream | -4.7366654 | 2.17E-06 | 0.01022655 |
| 5 | 64954480 | 64954480 | 1 | 5_64954480 | ENSG00000153015 | CWC27 | 0 | INTRON | 4.7365672 | 2.17E-06 | 0.01022867 |
| 6 | 40616874 | 40616874 | 1 | 6_40616874 | ENSG00000156564 | LRFN2 | 29510 | Upstream | -4.7364998 | 2.17E-06 | 0.01022924 |
| 5 | 107196011 | 107196011 | 1 | 5_107196011 | ENSG00000250273 | PSMC1P5 | 679 | Downstream | 4.73617767 | 2.18E-06 | 0.01023824 |
| 16 | 7463578 | 7463578 | 1 | 16_7463578 | ENSG00000078328 | RBFOX1 | 0 | INTRON | -4.736172 | 2.18E-06 | 0.01023824 |
| 9 | 84504102 | 84504102 | 1 | 9_84504102 | ENSG00000285987 | AL157886.1 | 0 | INTRON | -4.7361298 | 2.18E-06 | 0.01023824 |
| 18 | 2818978 | 2818978 | 1 | 18_2818978 | ENSG00000266049 | AP001011.1 | 0 | INTRON | -4.7360974 | 2.18E-06 | 0.01023824 |
| 14 | 51362895 | 51362895 | 1 | 14_51362895 | ENSG00000258479 | LINC00640 | 0 | INTRON | -4.7357295 | 2.18E-06 | 0.010254 |
| 12 | 124084269 | 124084269 | 1 | 12_124084269 | ENSG00000274874 | AC068790.8 | 0 | INTRON | -4.7356212 | 2.18E-06 | 0.01025597 |
| 22 | 17968782 | 17968782 | 1 | 22_17968782 | ENSG00000243156 | MICAL3 | 0 | INTRON | 4.73546107 | 2.19E-06 | 0.01025597 |
| 1 | 148975583 | 148975583 | 1 | 1_148975583 | ENSG00000178104 | PDE4DIP | 0 | INTRON | 4.73543362 | 2.19E-06 | 0.01025597 |
| 3 | 143905502 | 143905502 | 1 | 3_143905502 | ENSG00000235110 | AC107421.1 | 49360 | Upstream | 4.73542706 | 2.19E-06 | 0.01025597 |
| 19 | 54753246 | 54753246 | 1 | 19_54753246 | ENSG00000215765 | AC245128.1 | 0 | INTRON | -4.7354109 | 2.19E-06 | 0.01025597 |
| 7 | 74077164 | 74077164 | 1 | 7_74077164 | ENSG00000106683 | LIMK1 | 5768 | Upstream | 4.73522831 | 2.19E-06 | 0.01026101 |
| 1 | 151235860 | 151235860 | 1 | 1_151235860 | ENSG00000143398 | PIP5K1A | 0 | INTRON | 4.7351993 | 2.19E-06 | 0.01026101 |
| 10 | 11811587 | 11811587 | 1 | 10_11811587 | ENSG00000148426 | PROSER2 | 11751 | Upstream | -4.7350346 | 2.19E-06 | 0.01026272 |
| 17 | 50775068 | 50775068 | 1 | 17_50775068 | ENSG00000285829 | AC005921.4 | 6237 | Upstream | 4.73501473 | 2.19E-06 | 0.01026272 |
| 11 | 133976282 | 133976282 | 1 | 11_133976282 | ENSG00000080854 | IGSF9B | 19297 | Upstream | 4.73499807 | 2.19E-06 | 0.01026272 |
| X | 65416509 | 65416509 | 1 | X_65416509 | ENSG00000102053 | ZC3H12B | 0 | INTRON | 4.73490788 | 2.19E-06 | 0.01026445 |
| 8 | 21532186 | 21532186 | 1 | 8_21532186 | ENSG00000168546 | GFRA2 | 158211 | Downstream | 4.7348027 | 2.19E-06 | 0.01026695 |
| 10 | 95270811 | 95270811 | 1 | 10_95270811 | ENSG00000107438 | PDLIM1 | 0 | INTRON | -4.7347151 | 2.19E-06 | 0.01026856 |
| 1 | 231968324 | 231968324 | 1 | 1_231968324 | ENSG00000162946 | DISC1 | 0 | INTRON | 4.73445956 | 2.20E-06 | 0.0102743 |
| 1 | 203259480 | 203259480 | 1 | 1_203259480 | ENSG00000133063 | CHIT1 | 0 | INTRON | 4.73443721 | 2.20E-06 | 0.0102743 |
| 5 | 62458125 | 62458125 | 1 | 5_62458125 | ENSG00000068796 | KIF2A | 0 | INTRON | -4.7344345 | 2.20E-06 | 0.0102743 |
| 20 | 48858867 | 48858867 | 1 | 20_48858867 | ENSG00000278231 | AL133342.1 | 9409 | Upstream | 4.73434839 | 2.20E-06 | 0.01027584 |
| 20 | 41186707 | 41186707 | 1 | 20_41186707 | ENSG00000174306 | ZHX3 | 0 | INTRON | -4.7341663 | 2.20E-06 | 0.01028224 |
| 10 | 12598532 | 12598532 | 1 | 10_12598532 | ENSG00000183049 | CAMK1D | 0 | INTRON | 4.73401605 | 2.20E-06 | 0.01028595 |
| 7 | 157191209 | 157191209 | 1 | 7_157191209 | ENSG00000009335 | UBE3C | 0 | INTRON | 4.73398169 | 2.20E-06 | 0.01028595 |
| 4 | 64080313 | 64080313 | 1 | 4_64080313 | ENSG00000205678 | TECRL | 194943 | Downstream | 4.73385397 | 2.20E-06 | 0.01028762 |
| 6 | 28753559 | 28753559 | 1 | 6_28753559 | ENSG00000237425 | RPSAP2 | 20655 | Downstream | 4.73383741 | 2.20E-06 | 0.01028762 |
| 4 | 46458985 | 46458985 | 1 | 4_46458985 | ENSG00000249330 | AC095060.1 | 0 | INTRON | 4.73360557 | 2.21E-06 | 0.01029422 |
| 1 | 198171673 | 198171673 | 1 | 1_198171673 | ENSG00000151414 | NEK7 | 0 | INTRON | 4.73355028 | 2.21E-06 | 0.01029422 |
| 20 | 22420077 | 22420077 | 1 | 20_22420077 | ENSG00000204684 | AL133464.1 | 0 | EXON | 4.73351249 | 2.21E-06 | 0.01029422 |
| 12 | 53418628 | 53418628 | 1 | 12_53418628 | ENSG00000185591 | SP1 | 2182 | Downstream | -4.7334534 | 2.21E-06 | 0.01029422 |
| 9 | 22363678 | 22363678 | 1 | 9_22363678 | ENSG00000176399 | DMRTA1 | 83145 | Upstream | 4.73342899 | 2.21E-06 | 0.01029422 |
| 17 | 48358188 | 48358188 | 1 | 17_48358188 | ENSG00000141293 | SKAP1 | 0 | INTRON | 4.733334 | 2.21E-06 | 0.01029622 |
| 2 | 67892462 | 67892462 | 1 | 2_67892462 | ENSG00000237013 | LINC01812 | 66900 | Upstream | 4.73270052 | 2.22E-06 | 0.01032224 |
| 10 | 22662964 | 22662964 | 1 | 10_22662964 | ENSG00000150867 | PIP4K2A | 0 | INTRON | -4.7326647 | 2.22E-06 | 0.01032224 |
| 18 | 60135845 | 60135845 | 1 | 18_60135845 | ENSG00000267686 | AC090771.2 | 0 | INTRON | 4.73265522 | 2.22E-06 | 0.01032224 |
| 9 | 8701432 | 8701432 | 1 | 9_8701432 | ENSG00000235389 | AL583805.2 | 0 | EXON | 4.7324502 | 2.22E-06 | 0.0103264 |
| 11 | 4691700 | 4691700 | 1 | 11_4691700 | ENSG00000197674 | OR51C1P | 0 | INTRON | 4.73241176 | 2.22E-06 | 0.0103264 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 124072395 | 124072395 | 1 | 5_124072395 | ENSG00000253807 | LINC01170 | 0 | INTRON | -4.7323764 | 2.22E-06 | 0.0103264 |
| 22 | 37181453 | 37181453 | 1 | 22_37181453 | ENSG00000133466 | C1QTNF6 | 0 | 3UTR | 4.73235142 | 2.22E-06 | 0.0103264 |
| 3 | 55050472 | 55050472 | 1 | 3_55050472 | ENSG00000157445 | CACNA2D3 | 0 | INTRON | -4.732179 | 2.22E-06 | 0.01033235 |
| 10 | 15999742 | 15999742 | 1 | 10_15999742 | ENSG00000252537 | AL358033.1 | 6065 | Upstream | -4.7321107 | 2.22E-06 | 0.01033301 |
| 3 | 2357992 | 2357992 | 1 | 3_2357992 | ENSG00000144619 | CNTN4 | 0 | INTRON | -4.7319344 | 2.22E-06 | 0.01033916 |
| 7 | 64652536 | 64652536 | 1 | 7_64652536 | ENSG00000287317 | AC016769.6 | 0 | INTRON | -4.731741 | 2.23E-06 | 0.01034619 |
| 19 | 36711318 | 36711318 | 1 | 19_36711318 | ENSG00000189042 | ZNF567 | 0 | 5UTR | -4.7312964 | 2.23E-06 | 0.01036605 |
| 7 | 11366864 | 11366864 | 1 | 7_11366864 | ENSG00000230333 | AC004160.1 | 0 | INTRON | -4.7307877 | 2.24E-06 | 0.01038923 |
| 7 | 157835668 | 157835668 | 1 | 7_157835668 | ENSG00000155093 | PTPRN2 | 0 | INTRON | 4.7306277 | 2.24E-06 | 0.01039204 |
| 10 | 91508716 | 91508716 | 1 | 10_91508716 | ENSG00000165338 | HECTD2 | 0 | INTRON | -4.7305648 | 2.24E-06 | 0.01039204 |
| 8 | 143866049 | 143866049 | 1 | 8_143866049 | ENSG00000261150 | EPPK1 | 0 | EXON | -4.7305636 | 2.24E-06 | 0.01039204 |
| 14 | 75757868 | 75757868 | 1 | 14_75757868 | ENSG00000119685 | TTLL5 | 0 | EXON | -4.7304707 | 2.24E-06 | 0.01039204 |
| 3 | 129061130 | 129061130 | 1 | 3_129061130 | ENSG00000169704 | GP9 | 0 | INTRON | -4.7304559 | 2.24E-06 | 0.01039204 |
| 11 | 41788587 | 41788587 | 1 | 11_41788587 | ENSG00000255171 | LINC01499 | 0 | INTRON | 4.73025836 | 2.24E-06 | 0.01039932 |
| 8 | 101181426 | 101181426 | 1 | 8_101181426 | ENSG00000120963 | ZNF706 | 0 | INTRON | -4.7301489 | 2.24E-06 | 0.0104021 |
| 7 | 76382498 | 76382498 | 1 | 7_76382498 | ENSG00000146700 | SSC4D | 6835 | Downstream | 4.72979805 | 2.25E-06 | 0.01041215 |
| 12 | 112411918 | 112411918 | 1 | 12_112411918 | ENSG00000089009 | RPL6 | 0 | INTRON | 4.7297752 | 2.25E-06 | 0.01041215 |
| 19 | 52975907 | 52975907 | 1 | 19_52975907 | ENSG00000242779 | ZNF702P | 0 | INTRON | 4.72976293 | 2.25E-06 | 0.01041215 |
| 7 | 526875 | 526875 | 1 | 7_526875 | ENSG00000223855 | AC147651.1 | 1637 | Downstream | -4.7297316 | 2.25E-06 | 0.01041215 |
| 17 | 45356231 | 45356231 | 1 | 17_45356231 | ENSG00000267446 | AC003070.2 | 15170 | Downstream | 4.72961497 | 2.25E-06 | 0.01041319 |
| 6 | 159749951 | 159749951 | 1 | 6_159749951 | ENSG00000146457 | WTAP | 0 | 3UTR | 4.72960073 | 2.25E-06 | 0.01041319 |
| 9 | 121928153 | 121928153 | 1 | 9_121928153 | ENSG00000175764 | TTLL11 | 0 | INTRON | 4.72953869 | 2.25E-06 | 0.01041354 |
| 17 | 41006918 | 41006918 | 1 | 17_41006918 | ENSG00000212901 | KRTAP3-1 | 1602 | Downstream | -4.7294679 | 2.25E-06 | 0.01041434 |
| 11 | 99959667 | 99959667 | 1 | 11_99959667 | ENSG00000149972 | CNTN5 | 0 | INTRON | 4.72937104 | 2.25E-06 | 0.01041648 |
| 14 | 31888135 | 31888135 | 1 | 14_31888135 | ENSG00000151413 | NUBPL | 26911 | Downstream | 4.72926254 | 2.25E-06 | 0.01041865 |
| 6 | 159165216 | 159165216 | 1 | 6_159165216 | ENSG00000233682 | AL356417.2 | 682 | Downstream | 4.72921838 | 2.25E-06 | 0.01041865 |
| 5 | 77535037 | 77535037 | 1 | 5_77535037 | ENSG00000164253 | WDR41 | 0 | INTRON | 4.72915232 | 2.25E-06 | 0.01041921 |
| 2 | 211938374 | 211938374 | 1 | 2_211938374 | ENSG00000178568 | ERBB4 | 0 | INTRON | 4.72873987 | 2.26E-06 | 0.01043756 |
| 19 | 16036080 | 16036080 | 1 | 19_16036080 | ENSG00000167459 | LINC00905 | 0 | EXON | 4.72860286 | 2.26E-06 | 0.01043909 |
| 17 | 12586747 | 12586747 | 1 | 17_12586747 | ENSG00000179136 | LINC00670 | 0 | INTRON | 4.72859987 | 2.26E-06 | 0.01043909 |
| 1 | 7224552 | 7224552 | 1 | 1_7224552 | ENSG00000171735 | CAMTA1 | 0 | INTRON | -4.7285232 | 2.26E-06 | 0.0104402 |
| 1 | 245549778 | 245549778 | 1 | 1_245549778 | ENSG00000162849 | KIF26B | 0 | INTRON | 4.72846772 | 2.26E-06 | 0.01044022 |
| 20 | 56150974 | 56150974 | 1 | 20_56150974 | ENSG00000222118 | RNA5SP487 | 54077 | Downstream | 4.72814935 | 2.27E-06 | 0.01045276 |
| 18 | 44651350 | 44651350 | 1 | 18_44651350 | ENSG00000267414 | AC120049.1 | 25576 | Downstream | -4.7281138 | 2.27E-06 | 0.01045276 |
| 19 | 18977922 | 18977922 | 1 | 19_18977922 | ENSG00000064607 | SUGP2 | 12965 | Downstream | 4.72795767 | 2.27E-06 | 0.01045563 |
| 2 | 154477711 | 154477711 | 1 | 2_154477711 | ENSG00000238004 | AC009227.2 | 16891 | Downstream | -4.7278958 | 2.27E-06 | 0.01045563 |
| X | 96925463 | 96925463 | 1 | X_96925463 | ENSG00000147202 | DIAPH2 | 0 | INTRON | -4.727893 | 2.27E-06 | 0.01045563 |
| 1 | 72911900 | 72911900 | 1 | 1_72911900 | ENSG00000225087 | AL583808.1 | 12660 | Upstream | -4.7276509 | 2.27E-06 | 0.01046526 |
| 2 | 21818100 | 21818100 | 1 | 2_21818100 | ENSG00000233005 | AC018742.1 | 0 | INTRON | 4.7272819 | 2.28E-06 | 0.01048052 |
| 1 | 36435822 | 36435822 | 1 | 1_36435822 | ENSG00000116885 | OSCP1 | 0 | INTRON | -4.727245 | 2.28E-06 | 0.01048052 |
| X | 12148463 | 12148463 | 1 | X_12148463 | ENSG00000169933 | FRMPD4 | 0 | INTRON | -4.7269807 | 2.28E-06 | 0.01048981 |
| 15 | 59083571 | 59083571 | 1 | 15_59083571 | ENSG00000157450 | RNF111 | 0 | INTRON | 4.72694119 | 2.28E-06 | 0.01048981 |
| 17 | 14623197 | 14623197 | 1 | 17_14623197 | ENSG00000230897 | RPS18P12 | 81878 | Downstream | 4.72682165 | 2.28E-06 | 0.01048981 |
| 1 | 248482223 | 248482223 | 1 | 1_248482223 | ENSG00000229255 | AC138089.1 | 2021 | Downstream | 4.72679309 | 2.28E-06 | 0.01048981 |
| 8 | 41930304 | 41930304 | 1 | 8_41930304 | ENSG00000083168 | KAT6A | 0 | 3UTR | 4.72679029 | 2.28E-06 | 0.01048981 |
| X | 153980850 | 153980850 | 1 | X_153980850 | ENSG00000177854 | TMEM187 | 0 | INTRON | -4.7264966 | 2.28E-06 | 0.01050215 |
| 6 | 664017 | 664017 | 1 | 6_664017 | ENSG00000112685 | EXOC2 | 0 | INTRON | -4.7262781 | 2.29E-06 | 0.01051018 |
| 16 | 6991463 | 6991463 | 1 | 16_6991463 | ENSG00000078328 | RBFOX1 | 0 | INTRON | -4.7262316 | 2.29E-06 | 0.01051018 |
| 18 | 33020811 | 33020811 | 1 | 18_33020811 | ENSG00000166960 | CCDC178 | 0 | INTRON | 4.72613766 | 2.29E-06 | 0.0105122 |
| 9 | 72671265 | 72671265 | 1 | 9_72671265 | ENSG00000165091 | TMC1 | 0 | INTRON | 4.72590682 | 2.29E-06 | 0.01052131 |
| 4 | 9233513 | 9233513 | 1 | 4_9233513 | ENSG00000288075 | AC108519.1 | 0 | INTRON | 4.72582741 | 2.29E-06 | 0.01052258 |
| 12 | 25453618 | 25453618 | 1 | 12_25453618 | ENSG00000152936 | LMNTD1 | 0 | INTRON | -4.7255922 | 2.29E-06 | 0.01052936 |
| 9 | 13408978 | 13408978 | 1 | 9_13408978 | ENSG00000270547 | LINC01235 | 0 | INTRON | 4.72558699 | 2.29E-06 | 0.01052936 |
| 1 | 241615008 | 241615008 | 1 | 1_241615008 | ENSG00000054277 | OPN3 | 0 | INTRON | 4.72541702 | 2.30E-06 | 0.01053323 |
| 2 | 123177820 | 123177820 | 1 | 2_123177820 | ENSG00000232740 | LINC01826 | 104339 | Upstream | 4.72537794 | 2.30E-06 | 0.01053323 |
| X | 1836701 | 1836701 | 1 | X_1836701 | ENSG00000234622 | AL683807.2 | 67925 | Downstream | 4.72534803 | 2.30E-06 | 0.01053323 |
| 17 | 31207136 | 31207136 | 1 | 17_31207136 | ENSG00000196712 | NF1 | 0 | INTRON | 4.72516616 | 2.30E-06 | 0.01053982 |
| 4 | 175290759 | 175290759 | 1 | 4_175290759 | ENSG00000249284 | AC095050.2 | 0 | EXON | 4.72497271 | 2.30E-06 | 0.01054466 |
| 3 | 70141269 | 70141269 | 1 | 3_70141269 | ENSG00000240405 | SAMMSON | 0 | INTRON | 4.72496341 | 2.30E-06 | 0.01054466 |
| 18 | 26010016 | 26010016 | 1 | 18_26010016 | ENSG00000141380 | SS18 | 6236 | Downstream | 4.72484438 | 2.30E-06 | 0.010548 |
| 9 | 71257567 | 71257567 | 1 | 9_71257567 | ENSG00000083067 | TRPM3 | 0 | INTRON | 4.72453159 | 2.31E-06 | 0.0105614 |
| 11 | 131087644 | 131087644 | 1 | 11_131087644 | ENSG00000242673 | RN7SL167P | 83215 | Upstream | -4.724377 | 2.31E-06 | 0.01056207 |
| 8 | 22462633 | 22462633 | 1 | 8_22462633 | ENSG00000120910 | PPP3CC | 0 | INTRON | 4.72435751 | 2.31E-06 | 0.01056207 |
| 2 | 8613330 | 8613330 | 1 | 2_8613330 | ENSG00000231083 | AC011747.1 | 0 | INTRON | 4.72432191 | 2.31E-06 | 0.01056207 |
| 2 | 190074519 | 190074519 | 1 | 2_190074519 | ENSG00000187699 | C2orf88 | 0 | INTRON | 4.72430011 | 2.31E-06 | 0.01056207 |
| 9 | 125615845 | 125615845 | 1 | 9_125615845 | ENSG00000119487 | MAPKAP1 | 0 | INTRON | -4.7239437 | 2.31E-06 | 0.01056994 |
| 2 | 189483068 | 189483068 | 1 | 2_189483068 | ENSG00000233996 | AC013439.1 | 3411 | Downstream | -4.723903 | 2.31E-06 | 0.01056994 |
| 5 | 17794051 | 17794051 | 1 | 5_17794051 | ENSG00000249937 | LINC02223 | 0 | INTRON | 4.72386893 | 2.31E-06 | 0.01056994 |
| 7 | 102216274 | 102216274 | 1 | 7_102216274 | ENSG00000257923 | CUX1 | 0 | INTRON | 4.7238156 | 2.31E-06 | 0.01056994 |
| 10 | 6603875 | 6603875 | 1 | 10_6603875 | ENSG00000237943 | PRKCQ-AS1 | 0 | INTRON | 4.72369132 | 2.32E-06 | 0.01056994 |
| 17 | 64590389 | 64590389 | 1 | 17_64590389 | ENSG00000108854 | SMURF2 | 0 | INTRON | 4.72368491 | 2.32E-06 | 0.01056994 |
| 18 | 21860995 | 21860995 | 1 | 18_21860995 | ENSG00000101752 | MIB1 | 0 | INTRON | 4.72365913 | 2.32E-06 | 0.01056994 |
| 4 | 108224936 | 108224936 | 1 | 4_108224936 | ENSG00000232021 | LEF1-AS1 | 0 | INTRON | -4.7236027 | 2.32E-06 | 0.01056994 |
| 12 | 19648324 | 19648324 | 1 | 12_19648324 | ENSG00000139154 | AEBP2 | 0 | INTRON | 4.72356971 | 2.32E-06 | 0.01056994 |
| 20 | 44727858 | 44727858 | 1 | 20_44727858 | ENSG00000064205 | CCN5 | 0 | EXON | 4.72352694 | 2.32E-06 | 0.01056994 |
| 20 | 11240830 | 11240830 | 1 | 20_11240830 | ENSG00000230990 | AL049649.1 | 0 | INTRON | -4.7234532 | 2.32E-06 | 0.01056994 |
| 19 | 33007435 | 33007435 | 1 | 19_33007435 | ENSG00000131941 | RHPN2 | 0 | INTRON | -4.7234212 | 2.32E-06 | 0.01056994 |
| X | 54174881 | 54174881 | 1 | X_54174881 | ENSG00000184083 | FAM120C | 0 | INTRON | 4.72340949 | 2.32E-06 | 0.01056994 |
| 21 | 25715038 | 25715038 | 1 | 21_25715038 | ENSG00000154721 | JAM2 | 0 | 3UTR | 4.72338521 | 2.32E-06 | 0.01056994 |
| 1 | 158095036 | 158095036 | 1 | 1_158095036 | ENSG00000183853 | KIRREL1 | 0 | EXON | 4.72325227 | 2.32E-06 | 0.01057121 |
| X | 12711319 | 12711319 | 1 | X_12711319 | ENSG00000169933 | FRMPD4 | 0 | INTRON | 4.72324277 | 2.32E-06 | 0.01057121 |
| 1 | 143451182 | 143451182 | 1 | 1_143451182 | ENSG00000264145 | AC239859.3 | 937 | Upstream | 4.7231975 | 2.32E-06 | 0.01057121 |
| 2 | 200794007 | 200794007 | 1 | 2_200794007 | ENSG00000230408 | AC007163.1 | 0 | INTRON | -4.7229855 | 2.32E-06 | 0.01057941 |
| 12 | 80703794 | 80703794 | 1 | 12_80703794 | ENSG00000111046 | MYF6 | 3839 | Upstream | 4.72249847 | 2.33E-06 | 0.01060195 |
| 7 | 78078966 | 78078966 | 1 | 7_78078966 | ENSG00000187391 | MAGI2 | 0 | 3UTR | 4.72236212 | 2.33E-06 | 0.01060235 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
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| 11 | 93624295 | 93624295 | 1 | 11_93624295 | ENSG00000255515 | AP003499.1 | 13962 | Upstream | 4.72232932 | 2.33E-06 | 0.01060235 |
| 11 | 90677817 | 90677817 | 1 | 11_90677817 | ENSG00000261645 | DISC1FP1 | 0 | INTRON | 4.7222961 | 2.33E-06 | 0.01060235 |
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| 10 | 68820274 | 68820274 | 1 | 10_68820274 | ENSG00000165730 | STOX1 | 7256 | Upstream | 4.72220521 | 2.33E-06 | 0.01060307 |
| 12 | 51050665 | 51050665 | 1 | 12_51050665 | ENSG00000050426 | LETMD1 | 0 | INTRON | 4.72206569 | 2.33E-06 | 0.01060445 |
| 14 | 59477810 | 59477810 | 1 | 14_59477810 | ENSG00000126790 | L3HYPDH | 0 | INTRON | 4.72205667 | 2.33E-06 | 0.01060445 |
| 19 | 18783836 | 18783836 | 1 | 19_18783836 | ENSG00000105664 | COMP | 0 | INTRON | -4.7220158 | 2.34E-06 | 0.01060445 |
| 20 | 31905893 | 31905893 | 1 | 20_31905893 | ENSG00000131044 | TTLL9 | 0 | INTRON | 4.7218033 | 2.34E-06 | 0.01061271 |
| 7 | 77231549 | 77231549 | 1 | 7_77231549 | ENSG00000135205 | CCDC146 | 0 | INTRON | -4.7216062 | 2.34E-06 | 0.01062017 |
| Y | 13104391 | 13104391 | 1 | Y_13104391 | ENSG00000224035 | SFPQP1 | 8586 | Downstream | -4.7215487 | 2.34E-06 | 0.01062034 |
| 1 | 57305116 | 57305116 | 1 | 1_57305116 | ENSG00000173406 | DAB1 | 0 | INTRON | 4.72135089 | 2.34E-06 | 0.01062784 |
| 1 | 177995821 | 177995821 | 1 | 1_177995821 | ENSG00000254154 | CRYZL2P-SEC16B | 0 | INTRON | -4.7211566 | 2.35E-06 | 0.01063212 |
| 11 | 47533547 | 47533547 | 1 | 11_47533547 | ENSG00000149187 | CELF1 | 0 | INTRON | -4.7211313 | 2.35E-06 | 0.01063212 |
| 18 | 5774599 | 5774599 | 1 | 18_5774599 | ENSG00000261738 | MIR3976HG | 0 | INTRON | 4.72110618 | 2.35E-06 | 0.01063212 |
| 3 | 173593396 | 173593396 | 1 | 3_173593396 | ENSG00000169760 | NLGN1 | 0 | INTRON | -4.7210379 | 2.35E-06 | 0.01063212 |
| 11 | 128840088 | 128840088 | 1 | 11_128840088 | ENSG00000151704 | KCNJ1 | 0 | EXON | -4.7209981 | 2.35E-06 | 0.01063212 |
| 3 | 19007820 | 19007820 | 1 | 3_19007820 | ENSG00000251761 | RNU6-138P | 52771 | Upstream | 4.72085217 | 2.35E-06 | 0.01063692 |
| 1 | 236152416 | 236152416 | 1 | 1_236152416 | ENSG00000077585 | GPR137B | 0 | INTRON | 4.72074145 | 2.35E-06 | 0.01063988 |
| 18 | 141447 | 141447 | 1 | 18_141447 | ENSG00000101557 | USP14 | 16935 | Upstream | 4.72058383 | 2.35E-06 | 0.01064453 |
| 12 | 101793535 | 101793535 | 1 | 12_101793535 | ENSG00000111670 | GNPTAB | 0 | INTRON | 4.72054447 | 2.35E-06 | 0.01064453 |
| 6 | 127521347 | 127521347 | 1 | 6_127521347 | ENSG00000184530 | C6orf58 | 0 | INTRON | 4.72021028 | 2.36E-06 | 0.01065919 |
| 18 | 66581003 | 66581003 | 1 | 18_66581003 | ENSG00000071991 | CDH19 | 0 | INTRON | -4.720104 | 2.36E-06 | 0.01066087 |
| 7 | 26668982 | 26668982 | 1 | 7_26668982 | ENSG00000005020 | SKAP2 | 0 | 3UTR | 4.72006617 | 2.36E-06 | 0.01066087 |
| 5 | 91036355 | 91036355 | 1 | 5_91036355 | ENSG00000164199 | ADGRV1 | 0 | INTRON | 4.72001604 | 2.36E-06 | 0.01066087 |
| 9 | 73045622 | 73045622 | 1 | 9_73045622 | ENSG00000165092 | ALDH1A1 | 0 | INTRON | 4.71988908 | 2.36E-06 | 0.01066239 |
| 2 | 127739332 | 127739332 | 1 | 2_127739332 | ENSG00000136709 | WDR33 | 0 | INTRON | 4.71987915 | 2.36E-06 | 0.01066239 |
| 1 | 73392725 | 73392725 | 1 | 1_73392725 | ENSG00000233973 | LINC01360 | 37472 | Downstream | -4.7197346 | 2.36E-06 | 0.01066575 |
| 5 | 54346599 | 54346599 | 1 | 5_54346599 | ENSG00000249069 | LINC01033 | 0 | INTRON | -4.7197069 | 2.36E-06 | 0.01066575 |
| 12 | 128777566 | 128777566 | 1 | 12_128777566 | ENSG00000139370 | SLC15A4 | 15627 | Downstream | 4.71940327 | 2.37E-06 | 0.01067885 |
| 9 | 4560944 | 4560944 | 1 | 9_4560944 | ENSG00000106688 | SLC1A1 | 0 | INTRON | -4.7193265 | 2.37E-06 | 0.01068004 |
| 16 | 67044347 | 67044347 | 1 | 16_67044347 | ENSG00000067955 | CBFB | 0 | INTRON | 4.71917248 | 2.37E-06 | 0.0106853 |
| 7 | 56153255 | 56153255 | 1 | 7_56153255 | ENSG00000230191 | AC006970.1 | 9889 | Upstream | 4.71866444 | 2.37E-06 | 0.01070918 |
| 2 | 206718513 | 206718513 | 1 | 2_206718513 | ENSG00000232125 | DYTN | 117 | Upstream | 4.71848703 | 2.38E-06 | 0.01071568 |
| 8 | 58915066 | 58915066 | 1 | 8_58915066 | ENSG00000198846 | TOX | 0 | INTRON | -4.7184159 | 2.38E-06 | 0.01071658 |
| 11 | 131892821 | 131892821 | 1 | 11_131892821 | ENSG00000182667 | NTM | 0 | INTRON | -4.718307 | 2.38E-06 | 0.01071825 |
| 5 | 177211490 | 177211490 | 1 | 5_177211490 | ENSG00000165671 | NSD1 | 0 | EXON | 4.71826655 | 2.38E-06 | 0.01071825 |
| 8 | 101585721 | 101585721 | 1 | 8_101585721 | ENSG00000083307 | GRHL2 | 0 | INTRON | -4.7182226 | 2.38E-06 | 0.01071825 |
| 6 | 7223390 | 7223390 | 1 | 6_7223390 | ENSG00000124782 | RREB1 | 0 | INTRON | 4.71798784 | 2.38E-06 | 0.01072455 |
| 8 | 133756959 | 133756959 | 1 | 8_133756959 | ENSG00000253916 | MTCO1P49 | 313 | Downstream | 4.71785925 | 2.38E-06 | 0.01072455 |
| 3 | 171452162 | 171452162 | 1 | 3_171452162 | ENSG00000154310 | TNIK | 0 | INTRON | -4.7178573 | 2.38E-06 | 0.01072455 |
| 2 | 126625212 | 126625212 | 1 | 2_126625212 | ENSG00000136732 | GYPC | 30920 | Upstream | -4.7178181 | 2.38E-06 | 0.01072455 |
| 20 | 41564260 | 41564260 | 1 | 20_41564260 | ENSG00000124177 | CHD6 | 0 | INTRON | -4.7177811 | 2.38E-06 | 0.01072455 |
| 3 | 181187704 | 181187704 | 1 | 3_181187704 | ENSG00000242808 | SOX2-OT | 0 | INTRON | -4.7177268 | 2.38E-06 | 0.01072455 |
| 16 | 10774679 | 10774679 | 1 | 16_10774679 | ENSG00000166676 | TVP23A | 0 | INTRON | 4.71772624 | 2.38E-06 | 0.01072455 |
| 2 | 26873774 | 26873774 | 1 | 2_26873774 | ENSG00000157851 | DPYSL5 | 0 | INTRON | 4.71763346 | 2.39E-06 | 0.0107266 |
| 16 | 59340198 | 59340198 | 1 | 16_59340198 | ENSG00000245768 | AC106793.1 | 140803 | Downstream | 4.71747915 | 2.39E-06 | 0.0107319 |
| 11 | 108176455 | 108176455 | 1 | 11_108176455 | ENSG00000149308 | NPAT | 0 | INTRON | -4.717398 | 2.39E-06 | 0.01073335 |
| X | 145233314 | 145233314 | 1 | X_145233314 | ENSG00000234712 | AL713923.1 | 0 | INTRON | 4.71725774 | 2.39E-06 | 0.01073791 |
| 6 | 104556654 | 104556654 | 1 | 6_104556654 | ENSG00000287616 | AL357522.1 | 28496 | Upstream | -4.7171666 | 2.39E-06 | 0.01073989 |
| 15 | 27278830 | 27278830 | 1 | 15_27278830 | ENSG00000182256 | GABRG3 | 0 | INTRON | 4.71686267 | 2.40E-06 | 0.0107531 |
| 6 | 128877965 | 128877965 | 1 | 6_128877965 | ENSG00000196569 | LAMA2 | 5175 | Upstream | -4.7167876 | 2.40E-06 | 0.01075423 |
| 5 | 126830101 | 126830101 | 1 | 5_126830101 | ENSG00000113368 | LMNB1 | 0 | INTRON | 4.71662365 | 2.40E-06 | 0.01075534 |
| 3 | 106556496 | 106556496 | 1 | 3_106556496 | ENSG00000242759 | LINC00882 | 0 | INTRON | 4.71659002 | 2.40E-06 | 0.01075534 |
| 14 | 100174620 | 100174620 | 1 | 14_100174620 | ENSG00000168350 | DEGS2 | 14975 | Upstream | 4.71653999 | 2.40E-06 | 0.01075534 |
| 10 | 108704092 | 108704092 | 1 | 10_108704092 | ENSG00000223381 | LINC02661 | 4446 | Upstream | 4.71652164 | 2.40E-06 | 0.01075534 |
| 19 | 5107451 | 5107451 | 1 | 19_5107451 | ENSG00000127663 | KDM4B | 0 | INTRON | 4.71649835 | 2.40E-06 | 0.01075534 |
| 15 | 93975976 | 93975976 | 1 | 15_93975976 | ENSG00000258754 | LINC01579 | 0 | INTRON | -4.7161473 | 2.40E-06 | 0.01077106 |
| 1 | 7459111 | 7459111 | 1 | 1_7459111 | ENSG00000171735 | CAMTA1 | 0 | INTRON | -4.7160475 | 2.40E-06 | 0.01077351 |
| 2 | 215979879 | 215979879 | 1 | 2_215979879 | ENSG00000118242 | MREG | 0 | INTRON | -4.7159819 | 2.41E-06 | 0.01077414 |
| 22 | 46440389 | 46440389 | 1 | 22_46440389 | ENSG00000075275 | CELSR1 | 0 | INTRON | -4.7155008 | 2.41E-06 | 0.01079679 |
| 4 | 124331774 | 124331774 | 1 | 4_124331774 | ENSG00000286734 | AC133530.1 | 0 | INTRON | 4.71530228 | 2.41E-06 | 0.01080448 |
| 8 | 37570882 | 37570882 | 1 | 8_37570882 | ENSG00000254111 | AC124067.3 | 3405 | Downstream | 4.71523933 | 2.41E-06 | 0.01080498 |
| 9 | 101331982 | 101331982 | 1 | 9_101331982 | ENSG00000227411 | ACNATP | 2101 | Downstream | -4.7151349 | 2.42E-06 | 0.01080542 |
| 3 | 30986707 | 30986707 | 1 | 3_30986707 | ENSG00000144644 | GADL1 | 91942 | Upstream | 4.71504564 | 2.42E-06 | 0.01080542 |
| 6 | 117510916 | 117510916 | 1 | 6_117510916 | ENSG00000282218 | AL132671.2 | 0 | INTRON | -4.7150108 | 2.42E-06 | 0.01080542 |
| 2 | 50167301 | 50167301 | 1 | 2_50167301 | ENSG00000179915 | NRXN1 | 0 | INTRON | -4.714947 | 2.42E-06 | 0.01080542 |
| 10 | 83367174 | 83367174 | 1 | 10_83367174 | ENSG00000234931 | MARK2P15 | 52699 | Upstream | 4.71491585 | 2.42E-06 | 0.01080542 |
| 2 | 126615613 | 126615613 | 1 | 2_126615613 | ENSG00000136732 | GYPC | 40519 | Upstream | 4.71489554 | 2.42E-06 | 0.01080542 |
| 15 | 75333426 | 75333426 | 1 | 15_75333426 | ENSG00000140365 | COMMD4 | 2593 | Upstream | 4.7148283 | 2.42E-06 | 0.01080542 |
| X | 118706992 | 118706992 | 1 | X_118706992 | ENSG00000131724 | IL13RA1 | 20140 | Upstream | 4.71480302 | 2.42E-06 | 0.01080542 |
| 9 | 130501121 | 130501121 | 1 | 9_130501121 | ENSG00000130707 | ASS1 | 0 | 3UTR | 4.7145517 | 2.42E-06 | 0.01081378 |
| 2 | 164539660 | 164539660 | 1 | 2_164539660 | ENSG00000115290 | GRB14 | 0 | INTRON | -4.7144215 | 2.42E-06 | 0.01081378 |
| 19 | 7253069 | 7253069 | 1 | 19_7253069 | ENSG00000171105 | INSR | 0 | INTRON | 4.71441761 | 2.42E-06 | 0.01081378 |
| 10 | 56973124 | 56973124 | 1 | 10_56973124 | ENSG00000264747 | MIR3924 | 331354 | Downstream | -4.7143363 | 2.42E-06 | 0.01081378 |
| 11 | 110911317 | 110911317 | 1 | 11_110911317 | ENSG00000255149 | AP002963.1 | 34140 | Upstream | -4.7143114 | 2.43E-06 | 0.01081378 |
| 1 | 85023327 | 85023327 | 1 | 1_85023327 | ENSG00000055732 | MCOLN3 | 0 | EXON | -4.7142843 | 2.43E-06 | 0.01081378 |
| 12 | 32094477 | 32094477 | 1 | 12_32094477 | ENSG00000271357 | AC048344.3 | 6007 | Downstream | 4.71427173 | 2.43E-06 | 0.01081378 |
| 12 | 55804985 | 55804985 | 1 | 12_55804985 | ENSG00000257390 | AC023055.1 | 0 | INTRON | -4.7141098 | 2.43E-06 | 0.01081955 |
| 22 | 20948701 | 20948701 | 1 | 22_20948701 | ENSG00000099942 | CRKL | 0 | INTRON | -4.7139959 | 2.43E-06 | 0.01082068 |
| 22 | 31424339 | 31424339 | 1 | 22_31424339 | ENSG00000185721 | DRG1 | 0 | INTRON | -4.7139091 | 2.43E-06 | 0.01082068 |
| 2 | 158479384 | 158479384 | 1 | 2_158479384 | ENSG00000144283 | PKP4 | 0 | INTRON | 4.71385962 | 2.43E-06 | 0.01082068 |
| 17 | 57093889 | 57093889 | 1 | 17_57093889 | ENSG00000263089 | AC007114.2 | 0 | EXON | 4.71384872 | 2.43E-06 | 0.01082068 |
| 12 | 41857211 | 41857211 | 1 | 12_41857211 | ENSG00000257239 | AC090630.1 | 0 | INTRON | 4.71380871 | 2.43E-06 | 0.01082068 |
| 9 | 108122810 | 108122810 | 1 | 9_108122810 | ENSG00000237360 | CHCHD4P2 | 24959 | Upstream | 4.71376868 | 2.43E-06 | 0.01082068 |
| 8 | 74412776 | 74412776 | 1 | 8_74412776 | ENSG00000104381 | GDAP1 | 0 | INTRON | 4.71360878 | 2.43E-06 | 0.01082399 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | 119274137 | 119274137 | 1 | 8_119274137 | ENSG00000253972 | MAL2-AS1 | 27289 | Upstream | -4.7136 | 2.43E-06 | 0.01082399 |
| 17 | 43353187 | 43353187 | 1 | 17_43353187 | ENSG00000188825 | LINC00910 | 0 | INTRON | -4.713444 | 2.44E-06 | 0.01082945 |
| 2 | 189984589 | 189984589 | 1 | 2_189984589 | ENSG00000187699 | C2orf88 | 0 | INTRON | 4.71338682 | 2.44E-06 | 0.01082966 |
| 1 | 204288509 | 204288509 | 1 | 1_204288509 | ENSG00000143850 | PLEKHA6 | 0 | INTRON | -4.7130757 | 2.44E-06 | 0.01084261 |
| 1 | 152891519 | 152891519 | 1 | 1_152891519 | ENSG00000163206 | SMCP | 6472 | Downstream | -4.7130371 | 2.44E-06 | 0.01084261 |
| 17 | 28666620 | 28666620 | 1 | 17_28666620 | ENSG00000109111 | SUPT6H | 0 | INTRON | 4.71288574 | 2.44E-06 | 0.01084784 |
| 21 | 37771091 | 37771091 | 1 | 21_37771091 | ENSG00000157542 | KCNJ6 | 0 | INTRON | 4.71275885 | 2.44E-06 | 0.01085176 |
| 2 | 19709095 | 19709095 | 1 | 2_19709095 | ENSG00000235911 | AC019055.1 | 2619 | Upstream | -4.7126124 | 2.45E-06 | 0.01085673 |
| 4 | 116023294 | 116023294 | 1 | 4_116023294 | ENSG00000249259 | AC027613.1 | 0 | INTRON | -4.71244 | 2.45E-06 | 0.01086309 |
| 4 | 179023483 | 179023483 | 1 | 4_179023483 | ENSG00000250839 | AC018710.1 | 45953 | Upstream | 4.71233185 | 2.45E-06 | 0.0108658 |
| 15 | 47404107 | 47404107 | 1 | 15_47404107 | ENSG00000137872 | SEMA6D | 0 | INTRON | -4.7122067 | 2.45E-06 | 0.0108658 |
| 4 | 165078858 | 165078858 | 1 | 4_165078858 | ENSG00000170088 | TMEM192 | 0 | 3UTR | -4.7122022 | 2.45E-06 | 0.0108658 |
| 20 | 63086642 | 63086642 | 1 | 20_63086642 | ENSG00000272259 | LINC01749 | 1571 | Downstream | 4.7121768 | 2.45E-06 | 0.0108658 |
| 11 | 25513429 | 25513429 | 1 | 11_25513429 | ENSG00000240298 | RPL36AP40 | 75045 | Downstream | 4.71201311 | 2.45E-06 | 0.0108717 |
| 1 | 106132459 | 106132459 | 1 | 1_106132459 | ENSG00000237480 | AL355306.2 | 7895 | Downstream | -4.711815 | 2.46E-06 | 0.01087289 |
| 4 | 110926055 | 110926055 | 1 | 4_110926055 | ENSG00000251483 | LYPLA1P2 | 19053 | Downstream | 4.71180274 | 2.46E-06 | 0.01087289 |
| 11 | 22835379 | 22835379 | 1 | 11_22835379 | ENSG00000246225 | AC006299.1 | 0 | EXON | 4.71178758 | 2.46E-06 | 0.01087289 |
| 2 | 117502505 | 117502505 | 1 | 2_117502505 | ENSG00000286370 | AC064856.1 | 33881 | Upstream | -4.7117626 | 2.46E-06 | 0.01087289 |
| 12 | 50301786 | 50301786 | 1 | 12_50301786 | ENSG00000278842 | AC008147.4 | 12555 | Downstream | 4.71171992 | 2.46E-06 | 0.01087289 |
| 2 | 152668195 | 152668195 | 1 | 2_152668195 | ENSG00000196504 | PRPF40A | 0 | INTRON | -4.7116339 | 2.46E-06 | 0.01087289 |
| 10 | 127652361 | 127652361 | 1 | 10_127652361 | ENSG00000279725 | AL391005.1 | 82200 | Downstream | 4.71156817 | 2.46E-06 | 0.01087289 |
| 9 | 26386377 | 26386377 | 1 | 9_26386377 | ENSG00000279256 | AL442639.1 | 256319 | Downstream | 4.71156672 | 2.46E-06 | 0.01087289 |
| 2 | 146392513 | 146392513 | 1 | 2_146392513 | ENSG00000227134 | AC093084.1 | 84913 | Upstream | 4.71142153 | 2.46E-06 | 0.01087378 |
| 11 | 60231059 | 60231059 | 1 | 11_60231059 | ENSG00000214787 | MS4A4E | 0 | INTRON | 4.71140425 | 2.46E-06 | 0.01087378 |
| 9 | 125967274 | 125967274 | 1 | 9_125967274 | ENSG00000167081 | PBX3 | 0 | 3UTR | 4.71139111 | 2.46E-06 | 0.01087378 |
| 5 | 22160992 | 22160992 | 1 | 5_22160992 | ENSG00000154162 | CDH12 | 0 | INTRON | -4.7112395 | 2.46E-06 | 0.01087597 |
| 4 | 87353691 | 87353691 | 1 | 4_87353691 | ENSG00000198189 | HSD17B11 | 0 | INTRON | 4.71122094 | 2.46E-06 | 0.01087597 |
| 8 | 32158890 | 32158890 | 1 | 8_32158890 | ENSG00000157168 | NRG1 | 0 | INTRON | 4.71119137 | 2.46E-06 | 0.01087597 |
| 22 | 49386072 | 49386072 | 1 | 22_49386072 | ENSG00000285722 | AC207130.1 | 8953 | Downstream | -4.7111267 | 2.46E-06 | 0.0108766 |
| 6 | 49727230 | 49727230 | 1 | 6_49727230 | ENSG00000235122 | AL121974.1 | 0 | INTRON | 4.71092169 | 2.47E-06 | 0.01088473 |
| 1 | 215415337 | 215415337 | 1 | 1_215415337 | ENSG00000282265 | AL450990.1 | 20919 | Upstream | 4.71070552 | 2.47E-06 | 0.01089345 |
| 9 | 65822419 | 65822419 | 1 | 9_65822419 | ENSG00000235893 | BX284632.1 | 4947 | Upstream | 4.71064546 | 2.47E-06 | 0.01089384 |
| 9 | 28183406 | 28183406 | 1 | 9_28183406 | ENSG00000174482 | LINGO2 | 0 | INTRON | -4.7104519 | 2.47E-06 | 0.01089891 |
| X | 77624088 | 77624088 | 1 | X_77624088 | ENSG00000085224 | ATRX | 0 | INTRON | 4.71040011 | 2.47E-06 | 0.01089891 |
| 2 | 74909714 | 74909714 | 1 | 2_74909714 | ENSG00000204792 | LINC01291 | 8433 | Upstream | -4.7103402 | 2.47E-06 | 0.01089891 |
| 6 | 144363280 | 144363280 | 1 | 6_144363280 | ENSG00000152818 | UTRN | 0 | INTRON | -4.7103395 | 2.47E-06 | 0.01089891 |
| 10 | 76973697 | 76973697 | 1 | 10_76973697 | ENSG00000156113 | KCNMA1 | 0 | INTRON | 4.71015341 | 2.48E-06 | 0.01090453 |
| 19 | 695337 | 695337 | 1 | 19_695337 | ENSG00000185198 | PRSS57 | 0 | INTRON | 4.71010548 | 2.48E-06 | 0.01090453 |
| 11 | 20356001 | 20356001 | 1 | 11_20356001 | ENSG00000109854 | HTATIP2 | 7683 | Upstream | 4.71007596 | 2.48E-06 | 0.01090453 |
| 15 | 83394700 | 83394700 | 1 | 15_83394700 | ENSG00000259986 | AC103876.1 | 0 | INTRON | -4.7099569 | 2.48E-06 | 0.01090808 |
| 2 | 237897373 | 237897373 | 1 | 2_237897373 | ENSG00000132329 | RAMP1 | 0 | INTRON | -4.7098856 | 2.48E-06 | 0.01090908 |
| 10 | 25228927 | 25228927 | 1 | 10_25228927 | ENSG00000151025 | GPR158 | 0 | INTRON | -4.7095947 | 2.48E-06 | 0.01092063 |
| 3 | 136684329 | 136684329 | 1 | 3_136684329 | ENSG00000118007 | STAG1 | 0 | INTRON | -4.7095644 | 2.48E-06 | 0.01092063 |
| 7 | 110980418 | 110980418 | 1 | 7_110980418 | ENSG00000184903 | IMMP2L | 0 | INTRON | 4.70950488 | 2.48E-06 | 0.010921 |
| 4 | 11161960 | 11161960 | 1 | 4_11161960 | ENSG00000207716 | MIR572 | 206866 | Upstream | 4.70941098 | 2.48E-06 | 0.01092147 |
| 2 | 223680833 | 223680833 | 1 | 2_223680833 | ENSG00000226539 | AC012512.1 | 23787 | Upstream | -4.7093907 | 2.48E-06 | 0.01092147 |
| 1 | 4762363 | 4762363 | 1 | 1_4762363 | ENSG00000196581 | AJAP1 | 0 | INTRON | -4.7092763 | 2.49E-06 | 0.01092326 |
| 3 | 68741264 | 68741264 | 1 | 3_68741264 | ENSG00000163377 | TAFA4 | 0 | INTRON | -4.7092521 | 2.49E-06 | 0.01092326 |
| 3 | 135730592 | 135730592 | 1 | 3_135730592 | ENSG00000242222 | AC092989.1 | 195298 | Upstream | -4.7089631 | 2.49E-06 | 0.0109326 |
| 5 | 29401198 | 29401198 | 1 | 5_29401198 | ENSG00000248391 | LINC02064 | 5103 | Upstream | 4.7089209 | 2.49E-06 | 0.0109326 |
| 15 | 33939642 | 33939642 | 1 | 15_33939642 | ENSG00000169857 | AVEN | 0 | INTRON | 4.70892004 | 2.49E-06 | 0.0109326 |
| 12 | 12319445 | 12319445 | 1 | 12_12319445 | ENSG00000111261 | MANSC1 | 6610 | Downstream | 4.70886697 | 2.49E-06 | 0.01093262 |
| 6 | 142093806 | 142093806 | 1 | 6_142093806 | ENSG00000236822 | NMBR-AS1 | 4587 | Downstream | 4.70820437 | 2.50E-06 | 0.0109603 |
| 11 | 2675429 | 2675429 | 1 | 11_2675429 | ENSG00000269821 | KCNQ1OT1 | 0 | EXON | 4.70816824 | 2.50E-06 | 0.0109603 |
| 5 | 173538151 | 173538151 | 1 | 5_173538151 | ENSG00000253768 | AC008663.1 | 24326 | Upstream | 4.70810124 | 2.50E-06 | 0.0109603 |
| 8 | 110267140 | 110267140 | 1 | 8_110267140 | ENSG00000253956 | AC073023.1 | 67602 | Downstream | -4.7080651 | 2.50E-06 | 0.0109603 |
| 12 | 42091929 | 42091929 | 1 | 12_42091929 | ENSG00000151233 | GXYLT1 | 0 | INTRON | 4.70803654 | 2.50E-06 | 0.0109603 |
| 8 | 95130443 | 95130443 | 1 | 8_95130443 | ENSG00000175895 | PLEKHF2 | 3341 | Upstream | 4.70797495 | 2.50E-06 | 0.0109603 |
| 1 | 44320530 | 44320530 | 1 | 1_44320530 | ENSG00000117419 | ERI3 | 0 | INTRON | -4.7079671 | 2.50E-06 | 0.0109603 |
| 7 | 144853964 | 144853964 | 1 | 7_144853964 | ENSG00000200673 | RN7SKP174 | 3880 | Upstream | -4.7079029 | 2.50E-06 | 0.0109603 |
| 13 | 77139156 | 77139156 | 1 | 13_77139156 | ENSG00000005810 | MYCBP2 | 0 | INTRON | 4.70784627 | 2.50E-06 | 0.0109603 |
| 5 | 160323221 | 160323221 | 1 | 5_160323221 | ENSG00000135083 | CCNJL | 0 | INTRON | 4.70782631 | 2.50E-06 | 0.0109603 |
| 7 | 31617117 | 31617117 | 1 | 7_31617117 | ENSG00000180347 | ITPRID1 | 0 | INTRON | -4.7077097 | 2.51E-06 | 0.01096068 |
| 4 | 189072604 | 189072604 | 1 | 4_189072604 | ENSG00000250024 | AC122138.1 | 70529 | Upstream | -4.7076756 | 2.51E-06 | 0.01096068 |
| 10 | 127246358 | 127246358 | 1 | 10_127246358 | ENSG00000150760 | DOCK1 | 0 | INTRON | 4.70766186 | 2.51E-06 | 0.01096068 |
| 21 | 25194487 | 25194487 | 1 | 21_25194487 | ENSG00000222042 | AP001341.1 | 0 | INTRON | -4.7073625 | 2.51E-06 | 0.01097284 |
| 1 | 34917330 | 34917330 | 1 | 1_34917330 | ENSG00000116544 | DLGAP3 | 0 | INTRON | 4.70727409 | 2.51E-06 | 0.01097284 |
| 6 | 162211564 | 162211564 | 1 | 6_162211564 | ENSG00000185345 | PRKN | 0 | INTRON | -4.7072019 | 2.51E-06 | 0.01097284 |
| 13 | 39135494 | 39135494 | 1 | 13_39135494 | ENSG00000273507 | AL354809.1 | 0 | INTRON | -4.7071272 | 2.51E-06 | 0.01097284 |
| 10 | 18832560 | 18832560 | 1 | 10_18832560 | ENSG00000234244 | AL512641.1 | 84218 | Downstream | -4.7071261 | 2.51E-06 | 0.01097284 |
| 8 | 92158834 | 92158834 | 1 | 8_92158834 | ENSG00000233778 | AC104339.1 | 14399 | Upstream | -4.7071001 | 2.51E-06 | 0.01097284 |
| 1 | 118930518 | 118930518 | 1 | 1_118930518 | ENSG00000092607 | TBX15 | 0 | INTRON | -4.7070691 | 2.51E-06 | 0.01097284 |
| 5 | 171063232 | 171063232 | 1 | 5_171063232 | ENSG00000204764 | RANBP17 | 0 | INTRON | 4.70690525 | 2.52E-06 | 0.01097885 |
| 13 | 96429768 | 96429768 | 1 | 13_96429768 | ENSG00000185352 | HS6ST3 | 0 | INTRON | -4.7067561 | 2.52E-06 | 0.01098406 |
| 3 | 35745547 | 35745547 | 1 | 3_35745547 | ENSG00000172995 | ARPP21 | 0 | INTRON | -4.7065669 | 2.52E-06 | 0.01099144 |
| 13 | 62072591 | 62072591 | 1 | 13_62072591 | ENSG00000229578 | LINC00358 | 43019 | Upstream | -4.7064167 | 2.52E-06 | 0.01099672 |
| 9 | 16262615 | 16262615 | 1 | 9_16262615 | ENSG00000205549 | C9orf92 | 0 | INTRON | -4.7060778 | 2.53E-06 | 0.01101218 |
| 19 | 41321135 | 41321135 | 1 | 19_41321135 | ENSG00000105329 | TGFB1 | 0 | INTRON | 4.70589424 | 2.53E-06 | 0.01101416 |
| X | 53708744 | 53708744 | 1 | X_53708744 | ENSG00000086758 | HUWE1 | 22016 | Upstream | 4.70588484 | 2.53E-06 | 0.01101416 |
| 6 | 133976924 | 133976924 | 1 | 6_133976924 | ENSG00000028839 | TBPL1 | 0 | INTRON | 4.70588429 | 2.53E-06 | 0.01101416 |
| 1 | 243195521 | 243195521 | 1 | 1_243195521 | ENSG00000143702 | CEP170 | 0 | INTRON | 4.70559899 | 2.53E-06 | 0.01102492 |
| 9 | 123199223 | 123199223 | 1 | 9_123199223 | ENSG00000165209 | STRBP | 0 | INTRON | -4.7055806 | 2.53E-06 | 0.01102492 |
| 3 | 6069550 | 6069550 | 1 | 3_6069550 | ENSG00000229642 | AC087857.1 | 0 | INTRON | -4.7054391 | 2.53E-06 | 0.01102701 |
| 7 | 95586383 | 95586383 | 1 | 7_95586383 | ENSG00000231170 | AC002451.1 | 0 | INTRON | 4.705346 | 2.53E-06 | 0.01102701 |
| 6 | 7170325 | 7170325 | 1 | 6_7170325 | ENSG00000124782 | RREB1 | 0 | INTRON | -4.7052839 | 2.54E-06 | 0.01102701 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 100898881 | 100898881 | 1 | 2_100898881 | ENSG00000170485 | NPAS2 | 0 | INTRON | -4.7052068 | 2.54E-06 | 0.01102701 |
| 2 | 185044394 | 185044394 | 1 | 2_185044394 | ENSG00000170396 | ZNF804A | 104902 | Downstream | -4.7051731 | 2.54E-06 | 0.01102701 |
| 2 | 35273575 | 35273575 | 1 | 2_35273575 | ENSG00000226994 | AC079352.1 | 0 | INTRON | 4.7051594 | 2.54E-06 | 0.01102701 |
| 12 | 12131252 | 12131252 | 1 | 12_12131252 | ENSG00000121380 | BCL2L14 | 0 | INTRON | -4.7051414 | 2.54E-06 | 0.01102701 |
| 17 | 31960500 | 31960500 | 1 | 17_31960500 | ENSG00000178691 | SUZ12 | 0 | INTRON | 4.70508245 | 2.54E-06 | 0.01102701 |
| 5 | 21123453 | 21123453 | 1 | 5_21123453 | ENSG00000248286 | AC140172.1 | 73266 | Upstream | 4.70507264 | 2.54E-06 | 0.01102701 |
| 14 | 29171738 | 29171738 | 1 | 14_29171738 | ENSG00000258028 | AL135878.1 | 0 | INTRON | 4.70475627 | 2.54E-06 | 0.0110413 |
| 14 | 34967886 | 34967886 | 1 | 14_34967886 | ENSG00000258704 | SRP54-AS1 | 0 | INTRON | -4.7046421 | 2.54E-06 | 0.01104467 |
| 8 | 64855217 | 64855217 | 1 | 8_64855217 | ENSG00000287998 | AC104232.3 | 0 | INTRON | -4.7043878 | 2.55E-06 | 0.01105561 |
| 10 | 8731957 | 8731957 | 1 | 10_8731957 | ENSG00000270234 | AL355333.1 | 7669 | Downstream | -4.7043243 | 2.55E-06 | 0.01105624 |
| 2 | 134905576 | 134905576 | 1 | 2_134905576 | ENSG00000224043 | CCNT2-AS1 | 0 | INTRON | 4.70420958 | 2.55E-06 | 0.01105963 |
| 9 | 105316881 | 105316881 | 1 | 9_105316881 | ENSG00000070214 | SLC44A1 | 0 | INTRON | 4.704104 | 2.55E-06 | 0.01106254 |
| 8 | 130288107 | 130288107 | 1 | 8_130288107 | ENSG00000153317 | ASAP1 | 0 | INTRON | 4.70392434 | 2.55E-06 | 0.01106709 |
| 10 | 76147583 | 76147583 | 1 | 10_76147583 | ENSG00000148655 | LRMDA | 0 | INTRON | 4.70391601 | 2.55E-06 | 0.01106709 |
| 7 | 91311279 | 91311279 | 1 | 7_91311279 | ENSG00000243144 | AC079760.2 | 88 | Upstream | 4.70377345 | 2.55E-06 | 0.011072 |
| 6 | 4923825 | 4923825 | 1 | 6_4923825 | ENSG00000153046 | CDYL | 0 | INTRON | 4.70367835 | 2.56E-06 | 0.01107229 |
| 3 | 186758101 | 186758101 | 1 | 3_186758101 | ENSG00000197099 | AC068631.1 | 0 | INTRON | 4.70366416 | 2.56E-06 | 0.01107229 |
| 7 | 22190204 | 22190204 | 1 | 7_22190204 | ENSG00000136237 | RAPGEF5 | 0 | INTRON | 4.70344949 | 2.56E-06 | 0.01107848 |
| 2 | 116012039 | 116012039 | 1 | 2_116012039 | ENSG00000287451 | AC016721.1 | 71748 | Upstream | 4.70340013 | 2.56E-06 | 0.01107848 |
| 13 | 32138946 | 32138946 | 1 | 13_32138946 | ENSG00000073910 | FRY | 0 | INTRON | 4.70339435 | 2.56E-06 | 0.01107848 |
| 7 | 67278939 | 67278939 | 1 | 7_67278939 | ENSG00000230358 | SPDYE21P | 0 | INTRON | 4.70330038 | 2.56E-06 | 0.01108076 |
| 4 | 138299439 | 138299439 | 1 | 4_138299439 | ENSG00000248397 | LINC00498 | 0 | INTRON | -4.7031817 | 2.56E-06 | 0.01108438 |
| 18 | 23938759 | 23938759 | 1 | 18_23938759 | ENSG00000053747 | LAMA3 | 0 | INTRON | 4.70301407 | 2.56E-06 | 0.01109067 |
| 4 | 21462325 | 21462325 | 1 | 4_21462325 | ENSG00000185774 | KCNIP4 | 0 | INTRON | 4.70284193 | 2.57E-06 | 0.01109721 |
| 1 | 171117317 | 171117317 | 1 | 1_171117317 | ENSG00000007933 | FMO3 | 0 | EXON | 4.70267709 | 2.57E-06 | 0.01110335 |
| 3 | 132688857 | 132688857 | 1 | 3_132688857 | ENSG00000113971 | NPHP3 | 0 | 3UTR | 4.70251341 | 2.57E-06 | 0.01110495 |
| 8 | 61569321 | 61569321 | 1 | 8_61569321 | ENSG00000198363 | ASPH | 0 | INTRON | -4.702479 | 2.57E-06 | 0.01110495 |
| 4 | 48571473 | 48571473 | 1 | 4_48571473 | ENSG00000075539 | FRYL | 0 | INTRON | 4.70243686 | 2.57E-06 | 0.01110495 |
| 14 | 69617573 | 69617573 | 1 | 14_69617573 | ENSG00000273797 | AL133445.2 | 0 | EXON | 4.70239207 | 2.57E-06 | 0.01110495 |
| 17 | 61382551 | 61382551 | 1 | 17_61382551 | ENSG00000141376 | BCAS3 | 0 | INTRON | 4.70236753 | 2.57E-06 | 0.01110495 |
| 9 | 64614648 | 64614648 | 1 | 9_64614648 | ENSG00000181997 | AQP7P2 | 6911 | Downstream | -4.7023368 | 2.57E-06 | 0.01110495 |
| 6 | 54358879 | 54358879 | 1 | 6_54358879 | ENSG00000137251 | TINAG | 0 | INTRON | -4.7022686 | 2.57E-06 | 0.01110584 |
| 7 | 63755312 | 63755312 | 1 | 7_63755312 | ENSG00000271466 | CICP24 | 12944 | Downstream | 4.70213237 | 2.57E-06 | 0.01110877 |
| 2 | 46978600 | 46978600 | 1 | 2_46978600 | ENSG00000068724 | TTC7A | 0 | INTRON | -4.7021111 | 2.57E-06 | 0.01110877 |
| 1 | 111689833 | 111689833 | 1 | 1_111689833 | ENSG00000197852 | INKA2 | 0 | INTRON | 4.70198489 | 2.58E-06 | 0.01111283 |
| 10 | 122355431 | 122355431 | 1 | 10_122355431 | ENSG00000202245 | RNU6-728P | 9638 | Downstream | 4.70183871 | 2.58E-06 | 0.01111797 |
| 1 | 11906195 | 11906195 | 1 | 1_11906195 | ENSG00000285646 | AL021155.5 | 1744 | Upstream | -4.7016559 | 2.58E-06 | 0.01112494 |
| 20 | 31309178 | 31309178 | 1 | 20_31309178 | ENSG00000215545 | DEFB116 | 593 | Upstream | -4.7014694 | 2.58E-06 | 0.01112494 |
| 1 | 149699586 | 149699586 | 1 | 1_149699586 | ENSG00000234232 | AC243772.3 | 0 | INTRON | 4.70145172 | 2.58E-06 | 0.01112494 |
| 3 | 115802222 | 115802222 | 1 | 3_115802222 | ENSG00000185565 | LSAMP | 140 | Downstream | 4.70143842 | 2.58E-06 | 0.01112494 |
| 15 | 90120596 | 90120596 | 1 | 15_90120596 | ENSG00000259685 | IDH2-DT | 0 | INTRON | 4.70143686 | 2.58E-06 | 0.01112494 |
| 17 | 68271533 | 68271533 | 1 | 17_68271533 | ENSG00000108932 | SLC16A6 | 0 | EXON | 4.70139092 | 2.58E-06 | 0.01112494 |
| 10 | 15859202 | 15859202 | 1 | 10_15859202 | ENSG00000148481 | MINDY3 | 0 | INTRON | 4.7012284 | 2.59E-06 | 0.01112494 |
| 10 | 6400551 | 6400551 | 1 | 10_6400551 | ENSG00000065675 | PRKCQ | 26591 | Downstream | 4.70106361 | 2.59E-06 | 0.01112494 |
| 10 | 25110243 | 25110243 | 1 | 10_25110243 | ENSG00000285859 | AL512598.2 | 0 | INTRON | -4.7010622 | 2.59E-06 | 0.01112494 |
| 1 | 29338629 | 29338629 | 1 | 1_29338629 | ENSG00000230523 | LINC01756 | 0 | INTRON | 4.70105623 | 2.59E-06 | 0.01112494 |
| 15 | 77585049 | 77585049 | 1 | 15_77585049 | ENSG00000259420 | AC046168.2 | 0 | INTRON | -4.701054 | 2.59E-06 | 0.01112494 |
| 20 | 16896182 | 16896182 | 1 | 20_16896182 | ENSG00000236985 | AL121892.1 | 32034 | Upstream | 4.70103526 | 2.59E-06 | 0.01112494 |
| 16 | 36139103 | 36139103 | 1 | 16_36139103 | ENSG00000261084 | PPP1R1AP2 | 226587 | Downstream | -4.7010203 | 2.59E-06 | 0.01112494 |
| 11 | 46849475 | 46849475 | 1 | 11_46849475 | ENSG00000247675 | LRP4-AS1 | 0 | INTRON | 4.70098778 | 2.59E-06 | 0.01112494 |
| 12 | 118172461 | 118172461 | 1 | 12_118172461 | ENSG00000135090 | TAOK3 | 0 | EXON | -4.7008661 | 2.59E-06 | 0.01112798 |
| 2 | 29238109 | 29238109 | 1 | 2_29238109 | ENSG00000171094 | ALK | 0 | INTRON | 4.70082894 | 2.59E-06 | 0.01112798 |
| 5 | 179497955 | 179497955 | 1 | 5_179497955 | ENSG00000253652 | AC136628.4 | 5366 | Downstream | 4.70070446 | 2.59E-06 | 0.01113195 |
| 6 | 17622896 | 17622896 | 1 | 6_17622896 | ENSG00000124789 | NUP153 | 0 | INTRON | -4.7004537 | 2.60E-06 | 0.01114282 |
| 1 | 31690624 | 31690624 | 1 | 1_31690624 | ENSG00000084636 | COL16A1 | 0 | INTRON | -4.7003096 | 2.60E-06 | 0.0111468 |
| 5 | 94254461 | 94254461 | 1 | 5_94254461 | ENSG00000185261 | KIAA0825 | 0 | INTRON | -4.7002568 | 2.60E-06 | 0.0111468 |
| 6 | 156978634 | 156978634 | 1 | 6_156978634 | ENSG00000049618 | ARID1B | 0 | INTRON | 4.70022631 | 2.60E-06 | 0.0111468 |
| 3 | 150998001 | 150998001 | 1 | 3_150998001 | ENSG00000243273 | AC020636.1 | 0 | INTRON | 4.70013334 | 2.60E-06 | 0.01114906 |
| 2 | 209851730 | 209851730 | 1 | 2_209851730 | ENSG00000144406 | UNC80 | 0 | INTRON | -4.6999826 | 2.60E-06 | 0.01115448 |
| 8 | 121979217 | 121979217 | 1 | 8_121979217 | ENSG00000248690 | HAS2-AS1 | 0 | INTRON | 4.6998998 | 2.60E-06 | 0.0111562 |
| 2 | 53594986 | 53594986 | 1 | 2_53594986 | ENSG00000115239 | ASB3 | 0 | INTRON | -4.6998012 | 2.60E-06 | 0.01115818 |
| 5 | 110676457 | 110676457 | 1 | 5_110676457 | ENSG00000186952 | TMEM232 | 0 | INTRON | 4.69976071 | 2.60E-06 | 0.01115818 |
| 4 | 23856917 | 23856917 | 1 | 4_23856917 | ENSG00000109819 | PPARGC1A | 0 | INTRON | -4.6993607 | 2.61E-06 | 0.01117724 |
| 2 | 135273373 | 135273373 | 1 | 2_135273373 | ENSG00000121988 | ZRANB3 | 0 | INTRON | 4.69914711 | 2.61E-06 | 0.01118612 |
| 2 | 59244950 | 59244950 | 1 | 2_59244950 | ENSG00000233891 | AC007179.2 | 0 | INTRON | -4.6990139 | 2.61E-06 | 0.01118696 |
| 3 | 144454480 | 144454480 | 1 | 3_144454480 | ENSG00000280397 | AC011592.1 | 8636 | Upstream | 4.69901347 | 2.61E-06 | 0.01118696 |
| 7 | 110494572 | 110494572 | 1 | 7_110494572 | ENSG00000226965 | AC073114.1 | 0 | INTRON | 4.6989776 | 2.61E-06 | 0.01118696 |
| 13 | 104370899 | 104370899 | 1 | 13_104370899 | ENSG00000287734 | AL136524.1 | 236642 | Downstream | 4.69879968 | 2.62E-06 | 0.01119368 |
| 12 | 364503 | 364503 | 1 | 12_364503 | ENSG00000073614 | KDM5A | 0 | INTRON | -4.6987523 | 2.62E-06 | 0.01119368 |
| 22 | 23053104 | 23053104 | 1 | 22_23053104 | ENSG00000100218 | RSPH14 | 6310 | Downstream | -4.6986901 | 2.62E-06 | 0.01119427 |
| 1 | 185387688 | 185387688 | 1 | 1_185387688 | ENSG00000252407 | RNU7-183P | 46555 | Upstream | 4.69852824 | 2.62E-06 | 0.01119758 |
| 5 | 130596815 | 130596815 | 1 | 5_130596815 | ENSG00000249418 | AC005741.1 | 1532 | Upstream | -4.6985194 | 2.62E-06 | 0.01119758 |
| 7 | 142614878 | 142614878 | 1 | 7_142614878 | ENSG00000276557 | TRBV18 | 837 | Upstream | 4.69847595 | 2.62E-06 | 0.01119758 |
| 7 | 26306601 | 26306601 | 1 | 7_26306601 | ENSG00000086300 | SNX10 | 0 | INTRON | 4.69839713 | 2.62E-06 | 0.01119909 |
| 14 | 23273300 | 23273300 | 1 | 14_23273300 | ENSG00000215277 | RNF212B | 0 | 3UTR | -4.6980989 | 2.63E-06 | 0.01121229 |
| 13 | 41001801 | 41001801 | 1 | 13_41001801 | ENSG00000120690 | ELF1 | 0 | INTRON | -4.6980539 | 2.63E-06 | 0.01121229 |
| 1 | 115195420 | 115195420 | 1 | 1_115195420 | ENSG00000285698 | AL049825.1 | 75346 | Downstream | 4.69792521 | 2.63E-06 | 0.01121654 |
| X | 41255069 | 41255069 | 1 | X_41255069 | ENSG00000124486 | USP9X | 18490 | Downstream | -4.6977687 | 2.63E-06 | 0.01122082 |
| 6 | 24096129 | 24096129 | 1 | 6_24096129 | ENSG00000152954 | NRSN1 | 30056 | Upstream | 4.69769821 | 2.63E-06 | 0.01122082 |
| 1 | 52228739 | 52228739 | 1 | 1_52228739 | ENSG00000157077 | ZFYVE9 | 0 | INTRON | -4.6976936 | 2.63E-06 | 0.01122082 |
| 11 | 118424033 | 118424033 | 1 | 11_118424033 | ENSG00000285827 | AP001267.5 | 0 | INTRON | -4.6974039 | 2.63E-06 | 0.01122836 |
| 16 | 14583024 | 14583024 | 1 | 16_14583024 | ENSG00000140694 | PARN | 0 | INTRON | 4.69739558 | 2.63E-06 | 0.01122836 |
| 17 | 28443089 | 28443089 | 1 | 17_28443089 | ENSG00000263870 | AC015917.1 | 973 | Downstream | 4.697361 | 2.64E-06 | 0.01122836 |
| 12 | 112358676 | 112358676 | 1 | 12_112358676 | ENSG00000173064 | HECTD4 | 0 | INTRON | 4.69735164 | 2.64E-06 | 0.01122836 |
| 1 | 243881762 | 243881762 | 1 | 1_243881762 | ENSG00000117020 | AKT3 | 30683 | Upstream | 4.69724551 | 2.64E-06 | 0.01122904 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | 27950823 | 27950823 | 1 | 6_27950823 | ENSG00000124657 | OR2B6 | 6417 | Upstream | -4.6972279 | 2.64E-06 | 0.01122904 |
| 11 | 22067786 | 22067786 | 1 | 11_22067786 | ENSG00000287962 | AC116534.1 | 0 | INTRON | -4.6971858 | 2.64E-06 | 0.01122904 |
| 19 | 53757373 | 53757373 | 1 | 19_53757373 | ENSG00000207767 | MIR516A1 | 543 | Downstream | 4.6970484 | 2.64E-06 | 0.01123378 |
| 17 | 59067062 | 59067062 | 1 | 17_59067062 | ENSG00000108395 | TRIM37 | 0 | INTRON | 4.69696821 | 2.64E-06 | 0.01123538 |
| 12 | 92299835 | 92299835 | 1 | 12_92299835 | ENSG00000277851 | LINC02391 | 0 | INTRON | -4.6967994 | 2.64E-06 | 0.01124186 |
| 11 | 2244431 | 2244431 | 1 | 11_2244431 | ENSG00000183734 | ASCL2 | 24063 | Downstream | 4.6966311 | 2.64E-06 | 0.01124831 |
| 20 | 30197287 | 30197287 | 1 | 20_30197287 | ENSG00000204555 | CFTRP3 | 17477 | Downstream | -4.6965696 | 2.65E-06 | 0.01124888 |
| 20 | 35399214 | 35399214 | 1 | 20_35399214 | ENSG00000101019 | UQCC1 | 0 | INTRON | -4.6961402 | 2.65E-06 | 0.01126973 |
| 14 | 105867344 | 105867344 | 1 | 14_105867344 | ENSG00000227335 | IGHJ1P | 1666 | Upstream | 4.69607189 | 2.65E-06 | 0.01127068 |
| 6 | 75055997 | 75055997 | 1 | 6_75055997 | ENSG00000111799 | COL12A1 | 28328 | Downstream | -4.6956882 | 2.66E-06 | 0.01128904 |
| 1 | 210286649 | 210286649 | 1 | 1_210286649 | ENSG00000233455 | AL035414.1 | 17034 | Upstream | -4.69552 | 2.66E-06 | 0.01129551 |
| 2 | 16513240 | 16513240 | 1 | 2_16513240 | ENSG00000237633 | AC104623.1 | 9935 | Upstream | 4.69546072 | 2.66E-06 | 0.01129597 |
| 2 | 238294298 | 238294298 | 1 | 2_238294298 | ENSG00000283635 | AC012485.3 | 0 | INTRON | 4.69527473 | 2.66E-06 | 0.01129867 |
| 1 | 96697540 | 96697540 | 1 | 1_96697540 | ENSG00000223229 | RN7SKP270 | 1373 | Upstream | -4.6952573 | 2.66E-06 | 0.01129867 |
| 16 | 88847820 | 88847820 | 1 | 16_88847820 | ENSG00000141012 | GALNS | 0 | INTRON | -4.6951223 | 2.66E-06 | 0.01129867 |
| 14 | 105719830 | 105719830 | 1 | 14_105719830 | ENSG00000253692 | IGHEP1 | 1963 | Downstream | -4.6950802 | 2.67E-06 | 0.01129867 |
| 6 | 46970862 | 46970862 | 1 | 6_46970862 | ENSG00000069122 | ADGRF5 | 15919 | Upstream | -4.6950281 | 2.67E-06 | 0.01129867 |
| 8 | 61353180 | 61353180 | 1 | 8_61353180 | ENSG00000177182 | CLVS1 | 0 | INTRON | -4.694978 | 2.67E-06 | 0.01129867 |
| 6 | 116855453 | 116855453 | 1 | 6_116855453 | ENSG00000185002 | RFX6 | 21758 | Upstream | 4.69497715 | 2.67E-06 | 0.01129867 |
| 3 | 111269309 | 111269309 | 1 | 3_111269309 | ENSG00000177707 | NECTIN3 | 0 | INTRON | -4.694966 | 2.67E-06 | 0.01129867 |
| 14 | 65058709 | 65058709 | 1 | 14_65058709 | ENSG00000257365 | FNTB | 0 | INTRON | 4.69495329 | 2.67E-06 | 0.01129867 |
| 6 | 158482658 | 158482658 | 1 | 6_158482658 | ENSG00000130338 | TULP4 | 0 | INTRON | -4.6948596 | 2.67E-06 | 0.01130104 |
| 6 | 20831866 | 20831866 | 1 | 6_20831866 | ENSG00000145996 | CDKAL1 | 0 | INTRON | -4.6948004 | 2.67E-06 | 0.0113015 |
| 16 | 85001299 | 85001299 | 1 | 16_85001299 | ENSG00000153786 | ZDHHC7 | 0 | INTRON | -4.6946049 | 2.67E-06 | 0.0113062 |
| 18 | 61436632 | 61436632 | 1 | 18_61436632 | ENSG00000101542 | CDH20 | 0 | INTRON | -4.6945216 | 2.67E-06 | 0.0113062 |
| 1 | 145467839 | 145467839 | 1 | 1_145467839 | ENSG00000270722 | U1 | 2059 | Upstream | 4.69447476 | 2.67E-06 | 0.0113062 |
| 1 | 102636827 | 102636827 | 1 | 1_102636827 | ENSG00000230864 | AC099567.1 | 126494 | Downstream | 4.69447213 | 2.67E-06 | 0.0113062 |
| 7 | 153146965 | 153146965 | 1 | 7_153146965 | ENSG00000224104 | AC079809.1 | 2377 | Upstream | -4.6944211 | 2.67E-06 | 0.0113062 |
| 12 | 128046708 | 128046708 | 1 | 12_128046708 | ENSG00000287311 | AC140121.1 | 5413 | Downstream | 4.69434289 | 2.67E-06 | 0.0113062 |
| 11 | 5272450 | 5272450 | 1 | 11_5272450 | ENSG00000196565 | HBG2 | 0 | INTRON | 4.69431302 | 2.68E-06 | 0.0113062 |
| 11 | 69454779 | 69454779 | 1 | 11_69454779 | ENSG00000255606 | AP000439.1 | 10036 | Upstream | 4.69426924 | 2.68E-06 | 0.0113062 |
| 16 | 5056607 | 5056607 | 1 | 16_5056607 | ENSG00000033011 | ALG1 | 0 | INTRON | 4.69418467 | 2.68E-06 | 0.0113062 |
| 9 | 4583235 | 4583235 | 1 | 9_4583235 | ENSG00000106686 | SPATA6L | 0 | INTRON | -4.694182 | 2.68E-06 | 0.0113062 |
| 17 | 31053028 | 31053028 | 1 | 17_31053028 | ENSG00000265798 | AC138207.6 | 0 | INTRON | -4.6941564 | 2.68E-06 | 0.0113062 |
| 11 | 27121137 | 27121137 | 1 | 11_27121137 | ENSG00000254560 | BBOX1-AS1 | 0 | INTRON | 4.69387049 | 2.68E-06 | 0.01131849 |
| 5 | 70695712 | 70695712 | 1 | 5_70695712 | ENSG00000253366 | AC139272.1 | 55471 | Upstream | 4.69379193 | 2.68E-06 | 0.01131849 |
| 7 | 147185783 | 147185783 | 1 | 7_147185783 | ENSG00000174469 | CNTNAP2 | 0 | INTRON | 4.69372879 | 2.68E-06 | 0.01131849 |
| 9 | 110170024 | 110170024 | 1 | 9_110170024 | ENSG00000157654 | PALM2-AKAP2 | 0 | 3UTR | 4.69372873 | 2.68E-06 | 0.01131849 |
| 17 | 2421513 | 2421513 | 1 | 17_2421513 | ENSG00000127804 | METTL16 | 0 | INTRON | 4.69365098 | 2.68E-06 | 0.01131849 |
| 2 | 203700435 | 203700435 | 1 | 2_203700435 | ENSG00000178562 | CD28 | 6039 | Upstream | 4.69362999 | 2.68E-06 | 0.01131849 |
| X | 40323504 | 40323504 | 1 | X_40323504 | ENSG00000236393 | AC091806.1 | 24443 | Downstream | -4.6935217 | 2.69E-06 | 0.0113199 |
| 1 | 104436540 | 104436540 | 1 | 1_104436540 | ENSG00000215869 | AC092506.1 | 209862 | Downstream | 4.69338297 | 2.69E-06 | 0.0113199 |
| 1 | 150938528 | 150938528 | 1 | 1_150938528 | ENSG00000143379 | SETDB1 | 0 | INTRON | -4.6933481 | 2.69E-06 | 0.0113199 |
| 19 | 34489147 | 34489147 | 1 | 19_34489147 | ENSG00000142279 | WTIP | 0 | INTRON | -4.6933441 | 2.69E-06 | 0.0113199 |
| 5 | 140422208 | 140422208 | 1 | 5_140422208 | ENSG00000131503 | ANKHD1 | 0 | INTRON | 4.69331916 | 2.69E-06 | 0.0113199 |
| 6 | 82839880 | 82839880 | 1 | 6_82839880 | ENSG00000118420 | UBE3D | 52509 | Downstream | 4.69330064 | 2.69E-06 | 0.0113199 |
| 4 | 4125460 | 4125460 | 1 | 4_4125460 | ENSG00000198787 | OR4D12P | 1198 | Downstream | 4.69320514 | 2.69E-06 | 0.01132165 |
| 1 | 79390471 | 79390471 | 1 | 1_79390471 | ENSG00000285462 | LINC02792 | 44026 | Downstream | 4.69316787 | 2.69E-06 | 0.01132165 |
| 1 | 13018241 | 13018241 | 1 | 1_13018241 | ENSG00000274178 | PRAMEF28P | 11097 | Upstream | -4.6929299 | 2.69E-06 | 0.01133203 |
| 6 | 165874177 | 165874177 | 1 | 6_165874177 | ENSG00000112541 | PDE10A | 0 | INTRON | 4.69284869 | 2.69E-06 | 0.01133373 |
| 7 | 148475286 | 148475286 | 1 | 7_148475286 | ENSG00000283504 | AC006974.1 | 0 | INTRON | 4.6926998 | 2.70E-06 | 0.01133686 |
| 12 | 115578303 | 115578303 | 1 | 12_115578303 | ENSG00000258108 | AC009803.2 | 0 | INTRON | 4.69269112 | 2.70E-06 | 0.01133686 |
| 7 | 45377973 | 45377973 | 1 | 7_45377973 | ENSG00000286738 | AC073968.2 | 0 | INTRON | 4.69248238 | 2.70E-06 | 0.01134271 |
| 10 | 9744136 | 9744136 | 1 | 10_9744136 | ENSG00000228636 | LINC02663 | 14646 | Downstream | 4.6924518 | 2.70E-06 | 0.01134271 |
| 16 | 21420273 | 21420273 | 1 | 16_21420273 | ENSG00000169246 | NPIPB3 | 0 | INTRON | 4.69243403 | 2.70E-06 | 0.01134271 |
| 13 | 94686705 | 94686705 | 1 | 13_94686705 | ENSG00000238230 | LINC00391 | 12019 | Downstream | -4.6922128 | 2.70E-06 | 0.01135058 |
| 5 | 127827206 | 127827206 | 1 | 5_127827206 | ENSG00000230561 | CCDC192 | 0 | INTRON | 4.69214426 | 2.70E-06 | 0.01135058 |
| 5 | 100734139 | 100734139 | 1 | 5_100734139 | ENSG00000207269 | RN7SKP62 | 753 | Downstream | -4.6921354 | 2.70E-06 | 0.01135058 |
| 14 | 85587992 | 85587992 | 1 | 14_85587992 | ENSG00000185070 | FLRT2 | 0 | INTRON | -4.6920903 | 2.70E-06 | 0.01135058 |
| 3 | 196271662 | 196271662 | 1 | 3_196271662 | ENSG00000161217 | PCYT1A | 0 | INTRON | -4.6918752 | 2.71E-06 | 0.0113545 |
| 10 | 45661932 | 45661932 | 1 | 10_45661932 | ENSG00000172671 | ZFAND4 | 0 | INTRON | -4.6918696 | 2.71E-06 | 0.0113545 |
| 16 | 89989133 | 89989133 | 1 | 16_89989133 | ENSG00000223959 | AFG3L1P | 0 | INTRON | -4.6918683 | 2.71E-06 | 0.0113545 |
| 5 | 6737597 | 6737597 | 1 | 5_6737597 | ENSG00000112941 | TENT4A | 0 | EXON | 4.6917626 | 2.71E-06 | 0.01135757 |
| 3 | 189554005 | 189554005 | 1 | 3_189554005 | ENSG00000073282 | TP63 | 77383 | Upstream | 4.69160673 | 2.71E-06 | 0.01135961 |
| 3 | 58091040 | 58091040 | 1 | 3_58091040 | ENSG00000136068 | FLNB | 0 | INTRON | -4.6915999 | 2.71E-06 | 0.01135961 |
| 12 | 56444046 | 56444046 | 1 | 12_56444046 | ENSG00000111602 | TIMELESS | 0 | INTRON | -4.6915602 | 2.71E-06 | 0.01135961 |
| 6 | 162420426 | 162420426 | 1 | 6_162420426 | ENSG00000185345 | PRKN | 0 | INTRON | 4.69149377 | 2.71E-06 | 0.01135961 |
| 11 | 107754875 | 107754875 | 1 | 11_107754875 | ENSG00000254702 | AP002353.1 | 16157 | Upstream | -4.6913922 | 2.71E-06 | 0.01135961 |
| 1 | 93479390 | 93479390 | 1 | 1_93479390 | ENSG00000137942 | FNBP1L | 0 | INTRON | 4.69138084 | 2.71E-06 | 0.01135961 |
| 7 | 12595226 | 12595226 | 1 | 7_12595226 | ENSG00000006747 | SCIN | 0 | INTRON | -4.6913733 | 2.71E-06 | 0.01135961 |
| 3 | 17883548 | 17883548 | 1 | 3_17883548 | ENSG00000131374 | TBC1D5 | 0 | INTRON | -4.6912681 | 2.72E-06 | 0.01136019 |
| 2 | 34631317 | 34631317 | 1 | 2_34631317 | ENSG00000228262 | LINC01320 | 0 | INTRON | 4.69122162 | 2.72E-06 | 0.01136019 |
| 4 | 22357930 | 22357930 | 1 | 4_22357930 | ENSG00000152990 | ADGRA3 | 0 | INTRON | -4.6911804 | 2.72E-06 | 0.01136019 |
| 12 | 91948190 | 91948190 | 1 | 12_91948190 | ENSG00000257242 | LINC01619 | 36785 | Downstream | 4.69109732 | 2.72E-06 | 0.01136019 |
| 4 | 108265813 | 108265813 | 1 | 4_108265813 | ENSG00000232021 | LEF1-AS1 | 7776 | Downstream | 4.6910866 | 2.72E-06 | 0.01136019 |
| 4 | 21555272 | 21555272 | 1 | 4_21555272 | ENSG00000185774 | KCNIP4 | 0 | INTRON | -4.6910612 | 2.72E-06 | 0.01136019 |
| 14 | 57338289 | 57338289 | 1 | 14_57338289 | ENSG00000286355 | AL355834.2 | 0 | INTRON | 4.69090355 | 2.72E-06 | 0.01136616 |
| 17 | 61479979 | 61479979 | 1 | 17_61479979 | ENSG00000121075 | TBX4 | 0 | INTRON | 4.69070645 | 2.72E-06 | 0.01137432 |
| 16 | 3547354 | 3547354 | 1 | 16_3547354 | ENSG00000167984 | NLRC3 | 0 | INTRON | -4.6905286 | 2.73E-06 | 0.01137893 |
| 13 | 25846162 | 25846162 | 1 | 13_25846162 | ENSG00000132932 | ATP8A2 | 0 | INTRON | 4.69044504 | 2.73E-06 | 0.01137893 |
| 16 | 16915661 | 16915661 | 1 | 16_16915661 | ENSG00000261748 | AC098965.1 | 36840 | Downstream | -4.6904215 | 2.73E-06 | 0.01137893 |
| 2 | 46552929 | 46552929 | 1 | 2_46552929 | ENSG00000119729 | RHOQ | 0 | INTRON | 4.69039768 | 2.73E-06 | 0.01137893 |
| 4 | 167719613 | 167719613 | 1 | 4_167719613 | ENSG00000270336 | AC105148.1 | 22265 | Downstream | 4.69037252 | 2.73E-06 | 0.01137893 |
| 14 | 20445952 | 20445952 | 1 | 14_20445952 | ENSG00000092094 | OSGEP | 448 | Downstream | 4.69029592 | 2.73E-06 | 0.0113804 |
| 22 | 35575081 | 35575081 | 1 | 22_35575081 | ENSG00000100302 | RASD2 | 21082 | Downstream | 4.69018235 | 2.73E-06 | 0.01138393 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 15 | 57078043 | 57078043 | 1 | 15_57078043 | ENSG00000140262 | TCF12 | 0 | INTRON | 4.68995883 | 2.73E-06 | 0.01139358 |
| 15 | 51086535 | 51086535 | 1 | 15_51086535 | ENSG00000183578 | TNFAIP8L3 | 0 | INTRON | 4.68986344 | 2.73E-06 | 0.01139553 |
| 4 | 46384543 | 46384543 | 1 | 4_46384543 | ENSG00000151834 | GABRA2 | 0 | INTRON | 4.68982348 | 2.73E-06 | 0.01139553 |
| 15 | 46772976 | 46772976 | 1 | 15_46772976 | ENSG00000259255 | AC073941.1 | 0 | INTRON | 4.68973382 | 2.74E-06 | 0.01139774 |
| 10 | 111765773 | 111765773 | 1 | 10_111765773 | ENSG00000287231 | AL136119.1 | 21459 | Downstream | 4.68961621 | 2.74E-06 | 0.0114015 |
| 18 | 63244490 | 63244490 | 1 | 18_63244490 | ENSG00000171791 | BCL2 | 0 | INTRON | -4.6894744 | 2.74E-06 | 0.0114047 |
| 7 | 31739670 | 31739670 | 1 | 7_31739670 | ENSG00000154678 | PDE1C | 11508 | Downstream | -4.6894359 | 2.74E-06 | 0.0114047 |
| 3 | 44209958 | 44209958 | 1 | 3_44209958 | ENSG00000173769 | TOPAZ1 | 31927 | Upstream | -4.6894085 | 2.74E-06 | 0.0114047 |
| 2 | 62974344 | 62974344 | 1 | 2_62974344 | ENSG00000115504 | EHBP1 | 0 | INTRON | -4.6893214 | 2.74E-06 | 0.01140676 |
| 1 | 92501765 | 92501765 | 1 | 1_92501765 | ENSG00000067208 | EVI5 | 6930 | Downstream | 4.68916557 | 2.74E-06 | 0.01140836 |
| 4 | 86090449 | 86090449 | 1 | 4_86090449 | ENSG00000109339 | MAPK10 | 0 | EXON | 4.68915323 | 2.74E-06 | 0.01140836 |
| 7 | 129674597 | 129674597 | 1 | 7_129674597 | ENSG00000106459 | NRF1 | 0 | INTRON | 4.68914261 | 2.74E-06 | 0.01140836 |
| 1 | 33752126 | 33752126 | 1 | 1_33752126 | ENSG00000121904 | CSMD2 | 0 | INTRON | -4.6889814 | 2.75E-06 | 0.01141456 |
| 1 | 96965831 | 96965831 | 1 | 1_96965831 | ENSG00000188641 | DPYD | 111911 | Downstream | -4.6889121 | 2.75E-06 | 0.01141564 |
| 4 | 91288882 | 91288882 | 1 | 4_91288882 | ENSG00000184305 | CCSER1 | 0 | INTRON | -4.6888333 | 2.75E-06 | 0.01141592 |
| 14 | 46795941 | 46795941 | 1 | 14_46795941 | ENSG00000139915 | MDGA2 | 44150 | Downstream | -4.6888072 | 2.75E-06 | 0.01141592 |
| 17 | 6208696 | 6208696 | 1 | 17_6208696 | ENSG00000206618 | RNU6-1264P | 1427 | Downstream | -4.6886953 | 2.75E-06 | 0.01141937 |
| 4 | 11343623 | 11343623 | 1 | 4_11343623 | ENSG00000207716 | MIR572 | 25203 | Upstream | 4.68848785 | 2.75E-06 | 0.01142589 |
| 8 | 143513622 | 143513622 | 1 | 8_143513622 | ENSG00000014164 | ZC3H3 | 0 | INTRON | 4.68847871 | 2.75E-06 | 0.01142589 |
| 3 | 169927965 | 169927965 | 1 | 3_169927965 | ENSG00000187033 | SAMD7 | 0 | INTRON | -4.6883295 | 2.75E-06 | 0.01142873 |
| 17 | 64575211 | 64575211 | 1 | 17_64575211 | ENSG00000108854 | SMURF2 | 0 | INTRON | -4.6883271 | 2.75E-06 | 0.01142873 |
| 9 | 113389287 | 113389287 | 1 | 9_113389287 | ENSG00000148218 | ALAD | 0 | INTRON | 4.68827757 | 2.76E-06 | 0.01142873 |
| 9 | 81376568 | 81376568 | 1 | 9_81376568 | ENSG00000228375 | RPS20P25 | 33710 | Upstream | -4.6882281 | 2.76E-06 | 0.01142873 |
| 3 | 89900619 | 89900619 | 1 | 3_89900619 | ENSG00000212598 | U3 | 129664 | Upstream | -4.6874905 | 2.77E-06 | 0.01146191 |
| 8 | 130311965 | 130311965 | 1 | 8_130311965 | ENSG00000153317 | ASAP1 | 0 | INTRON | 4.6874782 | 2.77E-06 | 0.01146191 |
| 2 | 182356850 | 182356850 | 1 | 2_182356850 | ENSG00000115252 | PDE1A | 0 | INTRON | 4.68737494 | 2.77E-06 | 0.01146191 |
| 8 | 34190308 | 34190308 | 1 | 8_34190308 | ENSG00000254302 | AC087855.2 | 0 | INTRON | 4.68734709 | 2.77E-06 | 0.01146191 |
| 11 | 105999695 | 105999695 | 1 | 11_105999695 | ENSG00000170903 | MSANTD4 | 0 | INTRON | 4.68725769 | 2.77E-06 | 0.01146191 |
| 2 | 137258954 | 137258954 | 1 | 2_137258954 | ENSG00000144229 | THSD7B | 0 | INTRON | -4.6872511 | 2.77E-06 | 0.01146191 |
| 2 | 9179164 | 9179164 | 1 | 2_9179164 | ENSG00000151693 | ASAP2 | 27600 | Upstream | 4.68721534 | 2.77E-06 | 0.01146191 |
| 11 | 8743727 | 8743727 | 1 | 11_8743727 | ENSG00000166444 | ST5 | 0 | INTRON | 4.68719921 | 2.77E-06 | 0.01146191 |
| 15 | 43553014 | 43553014 | 1 | 15_43553014 | ENSG00000168781 | PPIP5K1 | 0 | INTRON | -4.6871861 | 2.77E-06 | 0.01146191 |
| 3 | 116923505 | 116923505 | 1 | 3_116923505 | ENSG00000242385 | LINC00901 | 0 | INTRON | 4.68706782 | 2.77E-06 | 0.01146575 |
| 10 | 119525254 | 119525254 | 1 | 10_119525254 | ENSG00000148908 | RGS10 | 0 | INTRON | 4.68692827 | 2.77E-06 | 0.01146625 |
| 12 | 18816187 | 18816187 | 1 | 12_18816187 | ENSG00000177938 | CAPZA3 | 76999 | Downstream | -4.6868769 | 2.77E-06 | 0.01146625 |
| 14 | 75417205 | 75417205 | 1 | 14_75417205 | ENSG00000259319 | AF111167.2 | 6477 | Downstream | -4.6868695 | 2.77E-06 | 0.01146625 |
| 21 | 15013893 | 15013893 | 1 | 21_15013893 | ENSG00000180530 | NRIP1 | 0 | INTRON | 4.68685982 | 2.77E-06 | 0.01146625 |
| 1 | 231981045 | 231981045 | 1 | 1_231981045 | ENSG00000162946 | DISC1 | 0 | INTRON | 4.68672727 | 2.78E-06 | 0.01147089 |
| 17 | 31418831 | 31418831 | 1 | 17_31418831 | ENSG00000131242 | RAB11FIP4 | 0 | INTRON | -4.6866566 | 2.78E-06 | 0.01147206 |
| 7 | 43294283 | 43294283 | 1 | 7_43294283 | ENSG00000002746 | HECW1 | 0 | INTRON | -4.6863118 | 2.78E-06 | 0.01148449 |
| 2 | 142756068 | 142756068 | 1 | 2_142756068 | ENSG00000229781 | AC013444.1 | 98026 | Upstream | -4.6862923 | 2.78E-06 | 0.01148449 |
| 9 | 62122033 | 62122033 | 1 | 9_62122033 | ENSG00000231527 | FAM27C | 25113 | Downstream | -4.6862725 | 2.78E-06 | 0.01148449 |
| X | 57810334 | 57810334 | 1 | X_57810334 | ENSG00000227427 | Z93019.1 | 43042 | Downstream | -4.6862361 | 2.78E-06 | 0.01148449 |
| 10 | 86063946 | 86063946 | 1 | 10_86063946 | ENSG00000182771 | GRID1 | 0 | INTRON | 4.68599208 | 2.79E-06 | 0.0114954 |
| 9 | 21631702 | 21631702 | 1 | 9_21631702 | ENSG00000227443 | AL137022.1 | 6582 | Upstream | 4.68577373 | 2.79E-06 | 0.01150487 |
| 14 | 57459152 | 57459152 | 1 | 14_57459152 | ENSG00000100557 | CCDC198 | 10148 | Downstream | -4.6855202 | 2.79E-06 | 0.01151633 |
| 2 | 142361440 | 142361440 | 1 | 2_142361440 | ENSG00000228134 | UBE2V1P14 | 181977 | Upstream | 4.68518344 | 2.80E-06 | 0.01153238 |
| 9 | 28595957 | 28595957 | 1 | 9_28595957 | ENSG00000174482 | LINGO2 | 0 | INTRON | 4.68512993 | 2.80E-06 | 0.01153238 |
| X | 51614877 | 51614877 | 1 | X_51614877 | ENSG00000224109 | CENPVL3 | 2146 | Downstream | 4.68500517 | 2.80E-06 | 0.01153238 |
| 8 | 118457557 | 118457557 | 1 | 8_118457557 | ENSG00000177570 | SAMD12 | 0 | INTRON | -4.6850021 | 2.80E-06 | 0.01153238 |
| 10 | 665374 | 665374 | 1 | 10_665374 | ENSG00000180525 | PRR26 | 0 | EXON | 4.68498698 | 2.80E-06 | 0.01153238 |
| 2 | 57234897 | 57234897 | 1 | 2_57234897 | ENSG00000285755 | AC132153.1 | 54750 | Downstream | -4.6848653 | 2.80E-06 | 0.01153459 |
| 7 | 80932375 | 80932375 | 1 | 7_80932375 | ENSG00000075223 | SEMA3C | 10016 | Upstream | 4.68484865 | 2.80E-06 | 0.01153459 |
| 17 | 37963481 | 37963481 | 1 | 17_37963481 | ENSG00000274512 | TBC1D3L | 14490 | Downstream | -4.6847662 | 2.80E-06 | 0.01153644 |
| 1 | 225312094 | 225312094 | 1 | 1_225312094 | ENSG00000185842 | DNAH14 | 0 | INTRON | 4.68455579 | 2.81E-06 | 0.01154268 |
| 12 | 70307208 | 70307208 | 1 | 12_70307208 | ENSG00000111596 | CNOT2 | 0 | INTRON | 4.68454413 | 2.81E-06 | 0.01154268 |
| 2 | 72935517 | 72935517 | 1 | 2_72935517 | ENSG00000135638 | EMX1 | 0 | EXON | -4.6845069 | 2.81E-06 | 0.01154268 |
| 3 | 51595112 | 51595112 | 1 | 3_51595112 | ENSG00000164080 | RAD54L2 | 0 | INTRON | -4.6844218 | 2.81E-06 | 0.01154468 |
| 4 | 99003410 | 99003410 | 1 | 4_99003410 | ENSG00000164024 | METAP1 | 0 | INTRON | -4.6841531 | 2.81E-06 | 0.01155393 |
| 2 | 86019599 | 86019599 | 1 | 2_86019599 | ENSG00000068654 | POLR1A | 616 | Downstream | 4.6840967 | 2.81E-06 | 0.01155393 |
| 10 | 108357927 | 108357927 | 1 | 10_108357927 | ENSG00000234544 | PTGES3P5 | 61395 | Downstream | -4.6840559 | 2.81E-06 | 0.01155393 |
| 13 | 51871339 | 51871339 | 1 | 13_51871339 | ENSG00000123171 | CCDC70 | 5107 | Downstream | -4.6840266 | 2.81E-06 | 0.01155393 |
| 10 | 3086414 | 3086414 | 1 | 10_3086414 | ENSG00000067057 | PFKP | 0 | INTRON | 4.68401036 | 2.81E-06 | 0.01155393 |
| 10 | 48325122 | 48325122 | 1 | 10_48325122 | ENSG00000107643 | MAPK8 | 0 | INTRON | 4.68391464 | 2.81E-06 | 0.01155654 |
| 13 | 28148844 | 28148844 | 1 | 13_28148844 | ENSG00000152520 | PAN3 | 0 | INTRON | -4.6838034 | 2.82E-06 | 0.01156003 |
| 4 | 126198244 | 126198244 | 1 | 4_126198244 | ENSG00000251005 | AC105758.1 | 91321 | Upstream | 4.683714 | 2.82E-06 | 0.01156229 |
| 15 | 101422766 | 101422766 | 1 | 15_101422766 | ENSG00000140479 | PCSK6 | 0 | INTRON | -4.6834747 | 2.82E-06 | 0.01157301 |
| 15 | 82003040 | 82003040 | 1 | 15_82003040 | ENSG00000259692 | AC104041.1 | 0 | INTRON | 4.68342392 | 2.82E-06 | 0.01157308 |
| 22 | 11704071 | 11704071 | 1 | 22_11704071 | ENSG00000286406 | AC138776.1 | 123451 | Upstream | 4.68314715 | 2.83E-06 | 0.01158129 |
| 12 | 56008652 | 56008652 | 1 | 12_56008652 | ENSG00000123411 | IKZF4 | 0 | INTRON | 4.68312836 | 2.83E-06 | 0.01158129 |
| 18 | 41184278 | 41184278 | 1 | 18_41184278 | ENSG00000286328 | AC079052.1 | 157040 | Upstream | 4.68309304 | 2.83E-06 | 0.01158129 |
| 7 | 1550098 | 1550098 | 1 | 7_1550098 | ENSG00000164855 | TMEM184A | 0 | INTRON | 4.68308121 | 2.83E-06 | 0.01158129 |
| 18 | 23174596 | 23174596 | 1 | 18_23174596 | ENSG00000134508 | CABLES1 | 0 | INTRON | 4.68302658 | 2.83E-06 | 0.01158159 |
| 10 | 13409226 | 13409226 | 1 | 10_13409226 | ENSG00000233256 | AL355870.1 | 5975 | Upstream | -4.6828113 | 2.83E-06 | 0.01159038 |
| 17 | 27431855 | 27431855 | 1 | 17_27431855 | ENSG00000266433 | TBC1D3P5 | 232 | Downstream | -4.6827725 | 2.83E-06 | 0.01159038 |
| 10 | 16341115 | 16341115 | 1 | 10_16341115 | ENSG00000226140 | LINC02654 | 45257 | Downstream | 4.68261154 | 2.83E-06 | 0.01159592 |
| 3 | 828169 | 828169 | 1 | 3_828169 | ENSG00000224957 | LINC01266 | 0 | INTRON | -4.682576 | 2.83E-06 | 0.01159592 |
| 3 | 141999180 | 141999180 | 1 | 3_141999180 | ENSG00000114126 | TFDP2 | 0 | INTRON | 4.68244981 | 2.83E-06 | 0.01160027 |
| 17 | 38710585 | 38710585 | 1 | 17_38710585 | ENSG00000275023 | MLLT6 | 0 | INTRON | 4.68220564 | 2.84E-06 | 0.01160506 |
| 20 | 52237628 | 52237628 | 1 | 20_52237628 | ENSG00000234948 | LINC01524 | 0 | INTRON | -4.6821735 | 2.84E-06 | 0.01160506 |
| 22 | 17080080 | 17080080 | 1 | 22_17080080 | ENSG00000273442 | AC006946.3 | 620 | Upstream | 4.68209126 | 2.84E-06 | 0.01160506 |
| X | 149994097 | 149994097 | 1 | X_149994097 | ENSG00000235703 | LINC00894 | 0 | INTRON | -4.6820878 | 2.84E-06 | 0.01160506 |
| 2 | 134765524 | 134765524 | 1 | 2_134765524 | ENSG00000224043 | CCNT2-AS1 | 0 | INTRON | -4.6820609 | 2.84E-06 | 0.01160506 |
| X | 44644397 | 44644397 | 1 | X_44644397 | ENSG00000229168 | RPL19P20 | 4731 | Upstream | -4.6820329 | 2.84E-06 | 0.01160506 |
| 11 | 113439359 | 113439359 | 1 | 11_113439359 | ENSG00000149295 | DRD2 | 0 | INTRON | 4.68201454 | 2.84E-06 | 0.01160506 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
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| 17 | 40946124 | 40946124 | 1 | 17_40946124 | ENSG00000234477 | AC004231.1 | 0 | INTRON | -4.6819712 | 2.84E-06 | 0.01160506 |
| 5 | 104979415 | 104979415 | 1 | 5_104979415 | ENSG00000253584 | AC091987.1 | 0 | INTRON | 4.68180068 | 2.84E-06 | 0.01160939 |
| 3 | 120196599 | 120196599 | 1 | 3_120196599 | ENSG00000175697 | GPR156 | 0 | INTRON | 4.68178231 | 2.84E-06 | 0.01160939 |
| 1 | 147441803 | 147441803 | 1 | 1_147441803 | ENSG00000278811 | LINC00624 | 0 | INTRON | 4.68171456 | 2.84E-06 | 0.01160939 |
| 2 | 88573612 | 88573612 | 1 | 2_88573612 | ENSG00000225420 | AC104134.1 | 0 | INTRON | 4.68169816 | 2.85E-06 | 0.01160939 |
| 21 | 28792705 | 28792705 | 1 | 21_28792705 | ENSG00000283300 | U6 | 49414 | Downstream | 4.68159231 | 2.85E-06 | 0.01161012 |
| 12 | 84164914 | 84164914 | 1 | 12_84164914 | ENSG00000257729 | AC090679.2 | 0 | INTRON | 4.68153966 | 2.85E-06 | 0.01161012 |
| 9 | 65726234 | 65726234 | 1 | 9_65726234 | ENSG00000147996 | CBWD5 | 0 | INTRON | -4.6815379 | 2.85E-06 | 0.01161012 |
| 10 | 17262327 | 17262327 | 1 | 10_17262327 | ENSG00000026025 | VIM | 24734 | Downstream | -4.6813172 | 2.85E-06 | 0.01161984 |
| 4 | 188055502 | 188055502 | 1 | 4_188055502 | ENSG00000179046 | TRIML2 | 35770 | Downstream | -4.6812207 | 2.85E-06 | 0.01162253 |
| 11 | 62827852 | 62827852 | 1 | 11_62827852 | ENSG00000162236 | STX5 | 0 | INTRON | 4.68108204 | 2.85E-06 | 0.01162539 |
| 4 | 114630600 | 114630600 | 1 | 4_114630600 | ENSG00000174607 | UGT8 | 0 | INTRON | -4.6810708 | 2.85E-06 | 0.01162539 |
| 12 | 89453278 | 89453278 | 1 | 12_89453278 | ENSG00000139323 | POC1B | 0 | INTRON | 4.68102304 | 2.85E-06 | 0.01162539 |
| 7 | 138169440 | 138169440 | 1 | 7_138169440 | ENSG00000225559 | AC083867.2 | 4803 | Downstream | 4.68092838 | 2.86E-06 | 0.01162749 |
| 1 | 188783788 | 188783788 | 1 | 1_188783788 | ENSG00000237283 | AL691515.1 | 51580 | Upstream | -4.6808482 | 2.86E-06 | 0.01162749 |
| 4 | 174783165 | 174783165 | 1 | 4_174783165 | ENSG00000145451 | GLRA3 | 0 | INTRON | -4.6807938 | 2.86E-06 | 0.01162749 |
| 12 | 4665636 | 4665636 | 1 | 12_4665636 | ENSG00000139180 | NDUFA9 | 0 | INTRON | 4.68078988 | 2.86E-06 | 0.01162749 |
| 2 | 179384921 | 179384921 | 1 | 2_179384921 | ENSG00000237964 | AC068042.1 | 14806 | Downstream | 4.68065645 | 2.86E-06 | 0.01162824 |
| 10 | 104888209 | 104888209 | 1 | 10_104888209 | ENSG00000156395 | SORCS3 | 0 | INTRON | 4.68061793 | 2.86E-06 | 0.01162824 |
| 6 | 12064742 | 12064742 | 1 | 6_12064742 | ENSG00000095951 | HIVEP1 | 0 | INTRON | 4.68061377 | 2.86E-06 | 0.01162824 |
| 2 | 209861191 | 209861191 | 1 | 2_209861191 | ENSG00000144406 | UNC80 | 0 | INTRON | 4.68057004 | 2.86E-06 | 0.01162824 |
| 11 | 82571705 | 82571705 | 1 | 11_82571705 | ENSG00000245832 | MIR4300HG | 0 | INTRON | -4.6804712 | 2.86E-06 | 0.01162824 |
| 17 | 44017741 | 44017741 | 1 | 17_44017741 | ENSG00000091947 | TMEM101 | 0 | INTRON | 4.68037545 | 2.86E-06 | 0.01162824 |
| 15 | 85529876 | 85529876 | 1 | 15_85529876 | ENSG00000170776 | AKAP13 | 0 | INTRON | -4.6803746 | 2.86E-06 | 0.01162824 |
| 19 | 37517945 | 37517945 | 1 | 19_37517945 | ENSG00000188227 | ZNF793 | 0 | INTRON | 4.68033675 | 2.86E-06 | 0.01162824 |
| 1 | 73497255 | 73497255 | 1 | 1_73497255 | ENSG00000223479 | LINC02238 | 137960 | Upstream | -4.6803215 | 2.86E-06 | 0.01162824 |
| 1 | 160799174 | 160799174 | 1 | 1_160799174 | ENSG00000122224 | LY9 | 0 | EXON | -4.6802403 | 2.87E-06 | 0.01162824 |
| 1 | 23148378 | 23148378 | 1 | 1_23148378 | ENSG00000169641 | LUZP1 | 0 | INTRON | 4.68023199 | 2.87E-06 | 0.01162824 |
| 7 | 99751683 | 99751683 | 1 | 7_99751683 | ENSG00000160868 | CYP3A4 | 5276 | Downstream | -4.6801893 | 2.87E-06 | 0.01162824 |
| 11 | 94971009 | 94971009 | 1 | 11_94971009 | ENSG00000150316 | CWC15 | 0 | EXON | 4.68000819 | 2.87E-06 | 0.01163216 |
| 10 | 27328536 | 27328536 | 1 | 10_27328536 | ENSG00000215409 | AL355493.1 | 2820 | Downstream | -4.6799762 | 2.87E-06 | 0.01163216 |
| 11 | 19644425 | 19644425 | 1 | 11_19644425 | ENSG00000166833 | NAV2 | 0 | INTRON | 4.67992413 | 2.87E-06 | 0.01163216 |
| X | 54500934 | 54500934 | 1 | X_54500934 | ENSG00000102302 | FGD1 | 4700 | Upstream | -4.6798571 | 2.87E-06 | 0.01163216 |
| 11 | 68608990 | 68608990 | 1 | 11_68608990 | ENSG00000110075 | PPP6R3 | 0 | INTRON | 4.67982831 | 2.87E-06 | 0.01163216 |
| 1 | 46830198 | 46830198 | 1 | 1_46830198 | ENSG00000142973 | CYP4B1 | 10785 | Downstream | -4.6797178 | 2.87E-06 | 0.01163216 |
| 10 | 82388914 | 82388914 | 1 | 10_82388914 | ENSG00000185737 | NRG3 | 0 | INTRON | -4.6797139 | 2.87E-06 | 0.01163216 |
| 14 | 75781436 | 75781436 | 1 | 14_75781436 | ENSG00000119685 | TTLL5 | 0 | INTRON | 4.67970623 | 2.87E-06 | 0.01163216 |
| 1 | 225697659 | 225697659 | 1 | 1_225697659 | ENSG00000227496 | AC099066.2 | 2604 | Upstream | 4.67968064 | 2.87E-06 | 0.01163216 |
| 12 | 21114931 | 21114931 | 1 | 12_21114931 | ENSG00000257062 | AC022335.1 | 0 | INTRON | 4.67959952 | 2.87E-06 | 0.01163324 |
| 22 | 49815852 | 49815852 | 1 | 22_49815852 | ENSG00000100425 | BRD1 | 0 | INTRON | 4.67956403 | 2.87E-06 | 0.01163324 |
| 9 | 15599508 | 15599508 | 1 | 9_15599508 | ENSG00000164989 | CCDC171 | 0 | INTRON | -4.6794917 | 2.88E-06 | 0.01163458 |
| 16 | 33974854 | 33974854 | 1 | 16_33974854 | ENSG00000205452 | AC140658.1 | 0 | EXON | 4.67938986 | 2.88E-06 | 0.01163759 |
| 2 | 128436678 | 128436678 | 1 | 2_128436678 | ENSG00000238379 | RNA5SP103 | 8402 | Downstream | 4.67925642 | 2.88E-06 | 0.01164216 |
| 12 | 32292394 | 32292394 | 1 | 12_32292394 | ENSG00000151746 | BICD1 | 0 | INTRON | 4.67921194 | 2.88E-06 | 0.01164216 |
| 15 | 69971317 | 69971317 | 1 | 15_69971317 | ENSG00000140332 | TLE3 | 76472 | Downstream | -4.6790833 | 2.88E-06 | 0.0116467 |
| 5 | 95675014 | 95675014 | 1 | 5_95675014 | ENSG00000145757 | SPATA9 | 0 | INTRON | 4.67898297 | 2.88E-06 | 0.01164685 |
| 7 | 121558542 | 121558542 | 1 | 7_121558542 | ENSG00000227743 | AC004875.1 | 84791 | Downstream | -4.6789349 | 2.88E-06 | 0.01164685 |
| 2 | 164248189 | 164248189 | 1 | 2_164248189 | ENSG00000237844 | AC016766.1 | 0 | INTRON | -4.6789345 | 2.88E-06 | 0.01164685 |
| 3 | 167402102 | 167402102 | 1 | 3_167402102 | ENSG00000241669 | LINC01327 | 0 | INTRON | 4.67855018 | 2.89E-06 | 0.01165962 |
| 3 | 149921626 | 149921626 | 1 | 3_149921626 | ENSG00000206199 | ANKUB1 | 0 | INTRON | 4.67846169 | 2.89E-06 | 0.01165962 |
| 20 | 12937414 | 12937414 | 1 | 20_12937414 | ENSG00000286087 | AL133331.1 | 0 | EXON | 4.6784535 | 2.89E-06 | 0.01165962 |
| 6 | 96683608 | 96683608 | 1 | 6_96683608 | ENSG00000217331 | AL355143.1 | 10639 | Upstream | -4.6783246 | 2.89E-06 | 0.01165962 |
| 3 | 183617743 | 183617743 | 1 | 3_183617743 | ENSG00000243584 | AC068769.1 | 1001 | Downstream | 4.67832178 | 2.89E-06 | 0.01165962 |
| 15 | 24247381 | 24247381 | 1 | 15_24247381 | ENSG00000259905 | PWRN1 | 0 | INTRON | 4.67829201 | 2.89E-06 | 0.01165962 |
| 19 | 12628979 | 12628979 | 1 | 19_12628979 | ENSG00000173875 | ZNF791 | 0 | 3UTR | 4.67829123 | 2.89E-06 | 0.01165962 |
| 6 | 64033292 | 64033292 | 1 | 6_64033292 | ENSG00000188107 | EYS | 0 | INTRON | -4.6782893 | 2.89E-06 | 0.01165962 |
| 9 | 132768297 | 132768297 | 1 | 9_132768297 | ENSG00000165695 | AK8 | 0 | INTRON | -4.6782723 | 2.89E-06 | 0.01165962 |
| 9 | 19867822 | 19867822 | 1 | 9_19867822 | ENSG00000286685 | AL158077.2 | 0 | INTRON | 4.67809815 | 2.90E-06 | 0.01166675 |
| 4 | 145386490 | 145386490 | 1 | 4_145386490 | ENSG00000278943 | AC079228.1 | 8533 | Downstream | -4.6780493 | 2.90E-06 | 0.01166677 |
| 12 | 67950250 | 67950250 | 1 | 12_67950250 | ENSG00000255772 | LINC01479 | 0 | INTRON | 4.67785667 | 2.90E-06 | 0.01167497 |
| 9 | 120780550 | 120780550 | 1 | 9_120780550 | ENSG00000119402 | FBXW2 | 0 | INTRON | 4.67748531 | 2.90E-06 | 0.01168847 |
| 7 | 147608136 | 147608136 | 1 | 7_147608136 | ENSG00000174469 | CNTNAP2 | 0 | INTRON | 4.67747779 | 2.90E-06 | 0.01168847 |
| 18 | 47860631 | 47860631 | 1 | 18_47860631 | ENSG00000175387 | SMAD2 | 0 | INTRON | -4.6774741 | 2.90E-06 | 0.01168847 |
| 11 | 22075574 | 22075574 | 1 | 11_22075574 | ENSG00000171714 | ANO5 | 0 | INTRON | -4.6773204 | 2.91E-06 | 0.01169446 |
| 17 | 5591148 | 5591148 | 1 | 17_5591148 | ENSG00000091592 | NLRP1 | 0 | INTRON | -4.6769625 | 2.91E-06 | 0.01170025 |
| 16 | 2953467 | 2953467 | 1 | 16_2953467 | ENSG00000262482 | AC004034.1 | 0 | INTRON | 4.67694866 | 2.91E-06 | 0.01170025 |
| 6 | 121473644 | 121473644 | 1 | 6_121473644 | ENSG00000219784 | AL138729.1 | 4628 | Downstream | -4.676933 | 2.91E-06 | 0.01170025 |
| 1 | 19629918 | 19629918 | 1 | 1_19629918 | ENSG00000270136 | MICOS10-NBL1 | 0 | INTRON | 4.67692803 | 2.91E-06 | 0.01170025 |
| 12 | 62768358 | 62768358 | 1 | 12_62768358 | ENSG00000111110 | PPM1H | 0 | INTRON | -4.6769267 | 2.91E-06 | 0.01170025 |
| 17 | 5529645 | 5529645 | 1 | 17_5529645 | ENSG00000091592 | NLRP1 | 0 | INTRON | -4.6769261 | 2.91E-06 | 0.01170025 |
| 20 | 29460276 | 29460276 | 1 | 20_29460276 | ENSG00000282911 | DUX4L35 | 10970 | Upstream | -4.6768501 | 2.91E-06 | 0.01170025 |
| 14 | 104563119 | 104563119 | 1 | 14_104563119 | ENSG00000258986 | TMEM179 | 0 | INTRON | 4.67683125 | 2.91E-06 | 0.01170025 |
| 1 | 145255335 | 145255335 | 1 | 1_145255335 | ENSG00000256374 | PPIAL4D | 13211 | Upstream | 4.67671093 | 2.92E-06 | 0.01170435 |
| 1 | 43577864 | 43577864 | 1 | 1_43577864 | ENSG00000142949 | PTPRF | 0 | INTRON | 4.67652047 | 2.92E-06 | 0.01171245 |
| 5 | 104242153 | 104242153 | 1 | 5_104242153 | ENSG00000251026 | LINC02163 | 0 | INTRON | -4.6763476 | 2.92E-06 | 0.01171853 |
| 11 | 87167736 | 87167736 | 1 | 11_87167736 | ENSG00000166575 | TMEM135 | 0 | INTRON | 4.67624037 | 2.92E-06 | 0.01171853 |
| Y | 12596386 | 12596386 | 1 | Y_12596386 | ENSG00000114374 | USP9Y | 0 | INTRON | 4.67622194 | 2.92E-06 | 0.01171853 |
| 22 | 12428179 | 12428179 | 1 | 22_12428179 | ENSG00000283023 | FRG1GP | 174286 | Upstream | -4.6762205 | 2.92E-06 | 0.01171853 |
| 2 | 128129555 | 128129555 | 1 | 2_128129555 | ENSG00000136731 | UGGT1 | 0 | INTRON | -4.6761506 | 2.92E-06 | 0.01171976 |
| 3 | 73141905 | 73141905 | 1 | 3_73141905 | ENSG00000223247 | RNU2-64P | 30723 | Downstream | -4.6758623 | 2.93E-06 | 0.01172734 |
| 18 | 77598485 | 77598485 | 1 | 18_77598485 | ENSG00000264693 | AC123786.1 | 24066 | Upstream | 4.67584983 | 2.93E-06 | 0.01172734 |
| 11 | 3669343 | 3669343 | 1 | 11_3669343 | ENSG00000129749 | CHRNA10 | 0 | 5UTR | 4.67583596 | 2.93E-06 | 0.01172734 |
| 10 | 14708666 | 14708666 | 1 | 10_14708666 | ENSG00000065809 | FAM107B | 0 | INTRON | -4.6758028 | 2.93E-06 | 0.01172734 |
| 19 | 22731466 | 22731466 | 1 | 19_22731466 | ENSG00000268789 | VN1R87P | 11457 | Downstream | -4.6757764 | 2.93E-06 | 0.01172734 |
| X | 101207265 | 101207265 | 1 | X_101207265 | ENSG00000102385 | DRP2 | 12503 | Upstream | 4.67568304 | 2.93E-06 | 0.01172992 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
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| 7 | 158600840 | 158600840 | 1 | 7_158600840 | ENSG00000265598 | MIR5707 | 9144 | Downstream | 4.67557476 | 2.93E-06 | 0.01173335 |
| 7 | 74544895 | 74544895 | 1 | 7_74544895 | ENSG00000006704 | GTF2IRD1 | 0 | INTRON | 4.67514483 | 2.94E-06 | 0.01175294 |
| X | 7219692 | 7219692 | 1 | X_7219692 | ENSG00000101846 | STS | 0 | INTRON | 4.67513594 | 2.94E-06 | 0.01175294 |
| 3 | 65971095 | 65971095 | 1 | 3_65971095 | ENSG00000151276 | MAGI1 | 0 | INTRON | -4.6747382 | 2.94E-06 | 0.01176816 |
| 7 | 140448642 | 140448642 | 1 | 7_140448642 | ENSG00000133606 | MKRN1 | 4390 | Downstream | -4.6747276 | 2.94E-06 | 0.01176816 |
| 1 | 206112939 | 206112939 | 1 | 1_206112939 | ENSG00000198049 | AVPR1B | 0 | INTRON | 4.67472557 | 2.94E-06 | 0.01176816 |
| 4 | 171041669 | 171041669 | 1 | 4_171041669 | ENSG00000248872 | LINC02431 | 0 | INTRON | 4.67459038 | 2.95E-06 | 0.01177244 |
| X | 13637558 | 13637558 | 1 | X_13637558 | ENSG00000198759 | EGFL6 | 3983 | Downstream | -4.6745545 | 2.95E-06 | 0.01177244 |
| 12 | 63403815 | 63403815 | 1 | 12_63403815 | ENSG00000258117 | AC026116.1 | 43778 | Upstream | -4.6743699 | 2.95E-06 | 0.01178027 |
| 18 | 65361227 | 65361227 | 1 | 18_65361227 | ENSG00000264232 | LINC01916 | 62730 | Upstream | 4.6743116 | 2.95E-06 | 0.01178085 |
| 2 | 2059588 | 2059588 | 1 | 2_2059588 | ENSG00000186487 | MYT1L | 0 | INTRON | -4.6742207 | 2.95E-06 | 0.0117833 |
| 15 | 94114119 | 94114119 | 1 | 15_94114119 | ENSG00000259724 | LINC01581 | 6181 | Upstream | -4.6741309 | 2.95E-06 | 0.01178569 |
| 5 | 59747014 | 59747014 | 1 | 5_59747014 | ENSG00000113448 | PDE4D | 0 | INTRON | -4.6738956 | 2.96E-06 | 0.01179513 |
| 6 | 101258993 | 101258993 | 1 | 6_101258993 | ENSG00000164418 | GRIK2 | 0 | INTRON | 4.67383177 | 2.96E-06 | 0.01179513 |
| 13 | 64236271 | 64236271 | 1 | 13_64236271 | ENSG00000227674 | LINC00355 | 160227 | Upstream | 4.67382218 | 2.96E-06 | 0.01179513 |
| 22 | 33907788 | 33907788 | 1 | 22_33907788 | ENSG00000133424 | LARGE1 | 0 | INTRON | 4.673653 | 2.96E-06 | 0.01179736 |
| 6 | 136023575 | 136023575 | 1 | 6_136023575 | ENSG00000237596 | AL138828.1 | 0 | INTRON | -4.6735836 | 2.96E-06 | 0.01179736 |
| 10 | 68378601 | 68378601 | 1 | 10_68378601 | ENSG00000204130 | RUFY2 | 0 | EXON | -4.6734897 | 2.96E-06 | 0.01179736 |
| X | 147991803 | 147991803 | 1 | X_147991803 | ENSG00000176988 | FMR1NB | 0 | INTRON | 4.67346967 | 2.96E-06 | 0.01179736 |
| 15 | 32697067 | 32697067 | 1 | 15_32697067 | ENSG00000166922 | SCG5 | 0 | 3UTR | 4.67346312 | 2.96E-06 | 0.01179736 |
| 6 | 78866156 | 78866156 | 1 | 6_78866156 | ENSG00000146243 | IRAK1BP1 | 1394 | Upstream | -4.6733764 | 2.96E-06 | 0.01179736 |
| 3 | 78326269 | 78326269 | 1 | 3_78326269 | ENSG00000240241 | AC108752.1 | 31538 | Downstream | 4.67335289 | 2.96E-06 | 0.01179736 |
| 11 | 102388814 | 102388814 | 1 | 11_102388814 | ENSG00000152558 | TMEM123 | 7517 | Downstream | 4.67328572 | 2.96E-06 | 0.01179736 |
| 2 | 113950954 | 113950954 | 1 | 2_113950954 | ENSG00000115091 | ACTR3 | 0 | EXON | 4.67327103 | 2.96E-06 | 0.01179736 |
| 16 | 87207133 | 87207133 | 1 | 16_87207133 | ENSG00000260456 | C16orf95 | 0 | INTRON | 4.67324194 | 2.96E-06 | 0.01179736 |
| 2 | 230576566 | 230576566 | 1 | 2_230576566 | ENSG00000235419 | AC010149.1 | 0 | INTRON | 4.6732293 | 2.97E-06 | 0.01179736 |
| 6 | 159885532 | 159885532 | 1 | 6_159885532 | ENSG00000236823 | AL035691.1 | 13653 | Upstream | 4.67315212 | 2.97E-06 | 0.01179736 |
| 8 | 28107421 | 28107421 | 1 | 8_28107421 | ENSG00000134014 | ELP3 | 0 | INTRON | 4.67311268 | 2.97E-06 | 0.01179736 |
| 6 | 78855112 | 78855112 | 1 | 6_78855112 | ENSG00000146243 | IRAK1BP1 | 12438 | Upstream | 4.6731105 | 2.97E-06 | 0.01179736 |
| 1 | 15450108 | 15450108 | 1 | 1_15450108 | ENSG00000162438 | CTRC | 866 | Downstream | 4.6730558 | 2.97E-06 | 0.01179775 |
| 12 | 49076134 | 49076134 | 1 | 12_49076134 | ENSG00000277672 | AC011603.4 | 332 | Downstream | 4.6728968 | 2.97E-06 | 0.01180273 |
| 4 | 2317718 | 2317718 | 1 | 4_2317718 | ENSG00000159733 | ZFYVE28 | 0 | INTRON | 4.67287329 | 2.97E-06 | 0.01180273 |
| 11 | 782149 | 782149 | 1 | 11_782149 | ENSG00000255284 | AP006621.3 | 0 | INTRON | 4.67276746 | 2.97E-06 | 0.01180606 |
| X | 54329530 | 54329530 | 1 | X_54329530 | ENSG00000196632 | WNK3 | 0 | INTRON | -4.6725845 | 2.97E-06 | 0.01181383 |
| 10 | 130490832 | 130490832 | 1 | 10_130490832 | ENSG00000236303 | LINC02646 | 7639 | Downstream | -4.6724816 | 2.98E-06 | 0.01181699 |
| 19 | 3711048 | 3711048 | 1 | 19_3711048 | ENSG00000105289 | TJP3 | 0 | INTRON | -4.672428 | 2.98E-06 | 0.01181732 |
| 13 | 38900290 | 38900290 | 1 | 13_38900290 | ENSG00000225221 | PLA2G12AP2 | 2096 | Upstream | 4.6723298 | 2.98E-06 | 0.01181876 |
| 7 | 146183900 | 146183900 | 1 | 7_146183900 | ENSG00000174469 | CNTNAP2 | 0 | INTRON | -4.6722976 | 2.98E-06 | 0.01181876 |
| 1 | 25183022 | 25183022 | 1 | 1_25183022 | ENSG00000231953 | AL031432.1 | 25116 | Upstream | -4.6722591 | 2.98E-06 | 0.01181876 |
| 7 | 157682227 | 157682227 | 1 | 7_157682227 | ENSG00000155093 | PTPRN2 | 0 | INTRON | 4.67214551 | 2.98E-06 | 0.01182255 |
| 15 | 92948615 | 92948615 | 1 | 15_92948615 | ENSG00000279765 | AC013394.1 | 0 | INTRON | -4.6720545 | 2.98E-06 | 0.01182255 |
| 9 | 94783656 | 94783656 | 1 | 9_94783656 | ENSG00000148120 | AOPEP | 0 | INTRON | 4.67204982 | 2.98E-06 | 0.01182255 |
| 18 | 71412639 | 71412639 | 1 | 18_71412639 | ENSG00000260676 | LINC01541 | 107322 | Downstream | 4.67195231 | 2.98E-06 | 0.01182499 |
| 20 | 64145939 | 64145939 | 1 | 20_64145939 | ENSG00000196132 | MYT1 | 0 | INTRON | -4.6719118 | 2.98E-06 | 0.01182499 |
| 11 | 8404592 | 8404592 | 1 | 11_8404592 | ENSG00000130413 | STK33 | 0 | INTRON | 4.67180814 | 2.99E-06 | 0.01182658 |
| 8 | 136850797 | 136850797 | 1 | 8_136850797 | ENSG00000254101 | LINC02055 | 0 | INTRON | -4.6717886 | 2.99E-06 | 0.01182658 |
| 8 | 117966599 | 117966599 | 1 | 8_117966599 | ENSG00000182197 | EXT1 | 0 | INTRON | 4.67166724 | 2.99E-06 | 0.01182769 |
| 16 | 88157162 | 88157162 | 1 | 16_88157162 | ENSG00000260162 | AC134312.2 | 20126 | Upstream | 4.67164344 | 2.99E-06 | 0.01182769 |
| 2 | 207661665 | 207661665 | 1 | 2_207661665 | ENSG00000224137 | LINC01857 | 709 | Upstream | -4.6716259 | 2.99E-06 | 0.01182769 |
| 13 | 110371682 | 110371682 | 1 | 13_110371682 | ENSG00000134871 | COL4A2 | 0 | INTRON | 4.67152887 | 2.99E-06 | 0.01183006 |
| 10 | 8097619 | 8097619 | 1 | 10_8097619 | ENSG00000107485 | GATA3 | 22421 | Downstream | 4.67148914 | 2.99E-06 | 0.01183006 |
| 14 | 105272121 | 105272121 | 1 | 14_105272121 | ENSG00000185024 | BRF1 | 0 | INTRON | -4.6710983 | 3.00E-06 | 0.01184985 |
| 11 | 8574326 | 8574326 | 1 | 11_8574326 | ENSG00000130413 | STK33 | 0 | INTRON | 4.67079767 | 3.00E-06 | 0.01186444 |
| 15 | 45750051 | 45750051 | 1 | 15_45750051 | ENSG00000259200 | AC068722.1 | 0 | INTRON | 4.67068775 | 3.00E-06 | 0.01186804 |
| 13 | 100904290 | 100904290 | 1 | 13_100904290 | ENSG00000233009 | NALCN-AS1 | 0 | INTRON | -4.6706149 | 3.00E-06 | 0.01186835 |
| 12 | 123925647 | 123925647 | 1 | 12_123925647 | ENSG00000250091 | DNAH10OS | 0 | EXON | 4.67058697 | 3.00E-06 | 0.01186835 |
| 3 | 192130290 | 192130290 | 1 | 3_192130290 | ENSG00000114279 | FGF12 | 9104 | Downstream | -4.6704665 | 3.01E-06 | 0.01187255 |
| 1 | 226774962 | 226774962 | 1 | 1_226774962 | ENSG00000238183 | RPS27P5 | 6538 | Upstream | 4.67038847 | 3.01E-06 | 0.01187316 |
| 5 | 178425314 | 178425314 | 1 | 5_178425314 | ENSG00000050767 | COL23A1 | 0 | INTRON | -4.6703606 | 3.01E-06 | 0.01187316 |
| 2 | 65638000 | 65638000 | 1 | 2_65638000 | ENSG00000235725 | AC007389.3 | 0 | INTRON | 4.67028118 | 3.01E-06 | 0.011875 |
| 6 | 169381431 | 169381431 | 1 | 6_169381431 | ENSG00000226194 | LINC02519 | 0 | INTRON | 4.67017456 | 3.01E-06 | 0.01187841 |
| 7 | 156815664 | 156815664 | 1 | 7_156815664 | ENSG00000105983 | LMBR1 | 0 | INTRON | 4.66995984 | 3.01E-06 | 0.01188807 |
| 6 | 152753168 | 152753168 | 1 | 6_152753168 | ENSG00000146469 | VIP | 0 | INTRON | -4.6698933 | 3.01E-06 | 0.01188917 |
| 11 | 18847465 | 18847465 | 1 | 11_18847465 | ENSG00000276789 | MRGPRX8P | 10384 | Downstream | -4.6697638 | 3.02E-06 | 0.01189391 |
| 3 | 80137056 | 80137056 | 1 | 3_80137056 | ENSG00000271389 | OSBPL9P1 | 26270 | Upstream | 4.66971538 | 3.02E-06 | 0.01189395 |
| 18 | 22555285 | 22555285 | 1 | 18_22555285 | ENSG00000239490 | RPS4XP18 | 31179 | Upstream | 4.66964483 | 3.02E-06 | 0.01189528 |
| 12 | 99698454 | 99698454 | 1 | 12_99698454 | ENSG00000185046 | ANKS1B | 0 | INTRON | 4.66950856 | 3.02E-06 | 0.01190041 |
| 2 | 189260484 | 189260484 | 1 | 2_189260484 | ENSG00000204262 | COL5A2 | 35172 | Upstream | -4.6692597 | 3.02E-06 | 0.01191208 |
| 19 | 7166873 | 7166873 | 1 | 19_7166873 | ENSG00000171105 | INSR | 0 | INTRON | -4.6691733 | 3.02E-06 | 0.01191433 |
| 19 | 39967098 | 39967098 | 1 | 19_39967098 | ENSG00000013275 | PSMC4 | 4066 | Upstream | -4.6690571 | 3.03E-06 | 0.01191831 |
| 15 | 22703989 | 22703989 | 1 | 15_22703989 | ENSG00000283273 | AC138649.5 | 10352 | Upstream | 4.6689824 | 3.03E-06 | 0.01191988 |
| 17 | 82382795 | 82382795 | 1 | 17_82382795 | ENSG00000260011 | AC132938.1 | 105 | Upstream | 4.66881494 | 3.03E-06 | 0.01192598 |
| 5 | 176894807 | 176894807 | 1 | 5_176894807 | ENSG00000160883 | HK3 | 0 | INTRON | -4.668731 | 3.03E-06 | 0.01192598 |
| 9 | 63367368 | 63367368 | 1 | 9_63367368 | ENSG00000237238 | BMS1P10 | 0 | INTRON | 4.66869001 | 3.03E-06 | 0.01192598 |
| 7 | 74267141 | 74267141 | 1 | 7_74267141 | ENSG00000049541 | RFC2 | 12683 | Upstream | 4.66868727 | 3.03E-06 | 0.01192598 |
| 15 | 49102905 | 49102905 | 1 | 15_49102905 | ENSG00000259656 | AC013452.2 | 0 | INTRON | 4.66859505 | 3.03E-06 | 0.01192723 |
| 7 | 5080877 | 5080877 | 1 | 7_5080877 | ENSG00000273313 | RBAKDN | 7654 | Downstream | 4.66855174 | 3.03E-06 | 0.01192723 |
| 10 | 30554010 | 30554010 | 1 | 10_30554010 | ENSG00000287420 | AL590068.4 | 0 | EXON | 4.66852318 | 3.03E-06 | 0.01192723 |
| 13 | 110164113 | 110164113 | 1 | 13_110164113 | ENSG00000187498 | COL4A1 | 0 | INTRON | 4.66846457 | 3.03E-06 | 0.01192788 |
| 15 | 100203065 | 100203065 | 1 | 15_100203065 | ENSG00000140470 | ADAMTS17 | 0 | INTRON | 4.66839234 | 3.04E-06 | 0.01192932 |
| 12 | 8602349 | 8602349 | 1 | 12_8602349 | ENSG00000111732 | AICDA | 0 | 3UTR | 4.66830038 | 3.04E-06 | 0.0119319 |
| 14 | 99404245 | 99404245 | 1 | 14_99404245 | ENSG00000183576 | SETD3 | 0 | 3UTR | -4.668214 | 3.04E-06 | 0.01193416 |
| 22 | 37302883 | 37302883 | 1 | 22_37302883 | ENSG00000100055 | CYTH4 | 0 | INTRON | 4.66809798 | 3.04E-06 | 0.01193815 |
| 11 | 13357938 | 13357938 | 1 | 11_13357938 | ENSG00000133794 | ARNTL | 0 | INTRON | -4.667985 | 3.04E-06 | 0.01193823 |
| 6 | 14185092 | 14185092 | 1 | 6_14185092 | ENSG00000285639 | AL133259.1 | 0 | INTRON | -4.6679562 | 3.04E-06 | 0.01193823 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
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| 17 | 18352503 | 18352503 | 1 | 17_18352503 | ENSG00000176974 | SHMT1 | 0 | INTRON | 4.66791138 | 3.04E-06 | 0.01193823 |
| 8 | 26795292 | 26795292 | 1 | 8_26795292 | ENSG00000120907 | ADRA1A | 0 | INTRON | 4.66786159 | 3.04E-06 | 0.01193823 |
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| 12 | 6219248 | 6219248 | 1 | 12_6219248 | ENSG00000010278 | CD9 | 0 | INTRON | -4.6677855 | 3.04E-06 | 0.01193823 |
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| 14 | 67807599 | 67807599 | 1 | 14_67807599 | ENSG00000072121 | ZFYVE26 | 0 | EXON | -4.6677015 | 3.05E-06 | 0.01193916 |
| 9 | 137031905 | 137031905 | 1 | 9_137031905 | ENSG00000180539 | C9orf139 | 0 | INTRON | 4.6674518 | 3.05E-06 | 0.01195092 |
| 9 | 113330712 | 113330712 | 1 | 9_113330712 | ENSG00000148225 | WDR31 | 0 | INTRON | 4.66734981 | 3.05E-06 | 0.0119541 |
| 9 | 93629190 | 93629190 | 1 | 9_93629190 | ENSG00000197724 | PHF2 | 0 | INTRON | -4.6672691 | 3.05E-06 | 0.01195604 |
| 4 | 149469153 | 149469153 | 1 | 4_149469153 | ENSG00000234828 | IQCM | 0 | INTRON | 4.66719909 | 3.05E-06 | 0.01195726 |
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| 8 | 121510951 | 121510951 | 1 | 8_121510951 | ENSG00000170961 | HAS2 | 101164 | Downstream | 4.66710026 | 3.05E-06 | 0.0119576 |
| 12 | 7211526 | 7211526 | 1 | 12_7211526 | ENSG00000139197 | PEX5 | 0 | INTRON | 4.66695388 | 3.06E-06 | 0.01196335 |
| 16 | 67067436 | 67067436 | 1 | 16_67067436 | ENSG00000067955 | CBFB | 0 | INTRON | 4.66690701 | 3.06E-06 | 0.01196335 |
| 4 | 183824456 | 183824456 | 1 | 4_183824456 | ENSG00000173320 | STOX2 | 0 | INTRON | -4.6668525 | 3.06E-06 | 0.01196377 |
| 7 | 55682095 | 55682095 | 1 | 7_55682095 | ENSG00000176826 | FKBP9P1 | 0 | EXON | 4.66676926 | 3.06E-06 | 0.01196586 |
| 15 | 23941612 | 23941612 | 1 | 15_23941612 | ENSG00000260232 | PWRN4 | 0 | INTRON | -4.6666808 | 3.06E-06 | 0.01196738 |
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| 15 | 90303852 | 90303852 | 1 | 15_90303852 | ENSG00000275674 | AC091167.6 | 0 | INTRON | -4.6662745 | 3.07E-06 | 0.01197818 |
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| 4 | 112255899 | 112255899 | 1 | 4_112255899 | ENSG00000138660 | AP1AR | 0 | INTRON | 4.66584656 | 3.07E-06 | 0.01199488 |
| 15 | 79977239 | 79977239 | 1 | 15_79977239 | ENSG00000140379 | BCL2A1 | 6043 | Upstream | 4.66572918 | 3.08E-06 | 0.01199898 |
| 8 | 104929689 | 104929689 | 1 | 8_104929689 | ENSG00000169946 | ZFPM2 | 0 | INTRON | -4.6656079 | 3.08E-06 | 0.01200145 |
| 6 | 169943610 | 169943610 | 1 | 6_169943610 | ENSG00000236173 | AL049612.1 | 133508 | Upstream | -4.6655925 | 3.08E-06 | 0.01200145 |
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| 10 | 26811386 | 26811386 | 1 | 10_26811386 | ENSG00000136754 | ABI1 | 0 | INTRON | 4.66511736 | 3.08E-06 | 0.01202323 |
| 6 | 28942618 | 28942618 | 1 | 6_28942618 | ENSG00000204709 | LINC01556 | 1258 | Upstream | 4.66507772 | 3.09E-06 | 0.01202323 |
| 3 | 70644615 | 70644615 | 1 | 3_70644615 | ENSG00000287669 | AC104633.2 | 24290 | Downstream | -4.6650222 | 3.09E-06 | 0.01202323 |
| 13 | 106384770 | 106384770 | 1 | 13_106384770 | ENSG00000233532 | LINC00460 | 455 | Downstream | -4.6649842 | 3.09E-06 | 0.01202323 |
| 2 | 12642574 | 12642574 | 1 | 2_12642574 | ENSG00000224184 | MIR3681HG | 0 | INTRON | 4.6647468 | 3.09E-06 | 0.01203437 |
| 12 | 10144993 | 10144993 | 1 | 12_10144993 | ENSG00000173391 | OLR1 | 13307 | Downstream | -4.6644132 | 3.09E-06 | 0.01204342 |
| 3 | 8756845 | 8756845 | 1 | 3_8756845 | ENSG00000180914 | OXTR | 0 | INTRON | -4.6644057 | 3.10E-06 | 0.01204342 |
| 7 | 129330902 | 129330902 | 1 | 7_129330902 | ENSG00000158467 | AHCYL2 | 0 | INTRON | 4.66440412 | 3.10E-06 | 0.01204342 |
| 15 | 57952751 | 57952751 | 1 | 15_57952751 | ENSG00000128918 | ALDH1A2 | 672 | Downstream | 4.66440392 | 3.10E-06 | 0.01204342 |
| 1 | 1390427 | 1390427 | 1 | 1_1390427 | ENSG00000221978 | CCNL2 | 0 | INTRON | 4.66421929 | 3.10E-06 | 0.01205141 |
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| 2 | 118563176 | 118563176 | 1 | 2_118563176 | ENSG00000258910 | LINC01956 | 203788 | Downstream | 4.66412656 | 3.10E-06 | 0.01205141 |
| 18 | 39095979 | 39095979 | 1 | 18_39095979 | ENSG00000253038 | RNU6-706P | 61869 | Downstream | 4.66403111 | 3.10E-06 | 0.01205425 |
| 11 | 82107867 | 82107867 | 1 | 11_82107867 | ENSG00000245832 | MIR4300HG | 0 | INTRON | 4.66392575 | 3.10E-06 | 0.01205766 |
| 7 | 967844 | 967844 | 1 | 7_967844 | ENSG00000240230 | COX19 | 0 | 3UTR | 4.66387897 | 3.10E-06 | 0.01205766 |
| 5 | 73720598 | 73720598 | 1 | 5_73720598 | ENSG00000214944 | ARHGEF28 | 0 | INTRON | 4.66358914 | 3.11E-06 | 0.01206987 |
| 6 | 161590395 | 161590395 | 1 | 6_161590395 | ENSG00000185345 | PRKN | 0 | INTRON | 4.66357692 | 3.11E-06 | 0.01206987 |
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| 1 | 214005059 | 214005059 | 1 | 1_214005059 | ENSG00000117707 | PROX1 | 0 | INTRON | -4.6630065 | 3.12E-06 | 0.01209722 |
| 17 | 18934798 | 18934798 | 1 | 17_18934798 | ENSG00000141127 | PRPSAP2 | 3511 | Downstream | -4.6629575 | 3.12E-06 | 0.01209722 |
| 15 | 46085970 | 46085970 | 1 | 15_46085970 | ENSG00000259743 | AC068714.1 | 13222 | Downstream | -4.662912 | 3.12E-06 | 0.01209722 |
| 17 | 48213139 | 48213139 | 1 | 17_48213139 | ENSG00000141293 | SKAP1 | 0 | INTRON | -4.6628288 | 3.12E-06 | 0.01209722 |
| 21 | 38291735 | 38291735 | 1 | 21_38291735 | ENSG00000157551 | KCNJ15 | 0 | 5UTR | -4.6628241 | 3.12E-06 | 0.01209722 |
| 5 | 78721156 | 78721156 | 1 | 5_78721156 | ENSG00000145685 | LHFPL2 | 0 | INTRON | 4.66272308 | 3.12E-06 | 0.01209722 |
| 2 | 115751959 | 115751959 | 1 | 2_115751959 | ENSG00000175497 | DPP10 | 0 | INTRON | 4.66268784 | 3.12E-06 | 0.01209722 |
| X | 77181930 | 77181930 | 1 | X_77181930 | ENSG00000201447 | RNA5SP509 | 115103 | Downstream | -4.6626199 | 3.12E-06 | 0.01209722 |
| 17 | 27449559 | 27449559 | 1 | 17_27449559 | ENSG00000141068 | KSR1 | 6910 | Upstream | -4.6625514 | 3.12E-06 | 0.01209722 |
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| 3 | 166316756 | 166316756 | 1 | 3_166316756 | ENSG00000244429 | AC104629.1 | 22403 | Downstream | 4.66233531 | 3.13E-06 | 0.01209875 |
| 19 | 45247648 | 45247648 | 1 | 19_45247648 | ENSG00000007047 | MARK4 | 0 | INTRON | -4.6621533 | 3.13E-06 | 0.01210671 |
| 15 | 58986117 | 58986117 | 1 | 15_58986117 | ENSG00000157450 | RNF111 | 0 | INTRON | 4.66194182 | 3.13E-06 | 0.0121164 |
| 9 | 130762767 | 130762767 | 1 | 9_130762767 | ENSG00000097007 | ABL1 | 0 | INTRON | -4.6616573 | 3.14E-06 | 0.01213041 |
| 10 | 62696716 | 62696716 | 1 | 10_62696716 | ENSG00000238280 | AC067751.1 | 0 | INTRON | -4.6615632 | 3.14E-06 | 0.01213078 |
| 20 | 32685731 | 32685731 | 1 | 20_32685731 | ENSG00000285382 | FO393400.1 | 0 | INTRON | -4.6615575 | 3.14E-06 | 0.01213078 |
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| 15 | 56951037 | 56951037 | 1 | 15_56951037 | ENSG00000140262 | TCF12 | 0 | INTRON | 4.66121511 | 3.14E-06 | 0.01213719 |
| 17 | 4159037 | 4159037 | 1 | 17_4159037 | ENSG00000167740 | CYB5D2 | 0 | INTRON | 4.66113462 | 3.14E-06 | 0.01213919 |
| 18 | 69173711 | 69173711 | 1 | 18_69173711 | ENSG00000264705 | AC090337.1 | 38565 | Upstream | -4.6608579 | 3.15E-06 | 0.01215276 |
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| 1 | 215604262 | 215604262 | 1 | 1_215604262 | ENSG00000136636 | KCTD3 | 0 | EXON | 4.66027219 | 3.16E-06 | 0.01217083 |
| 9 | 121448579 | 121448579 | 1 | 9_121448579 | ENSG00000204136 | GGTA1P | 0 | INTRON | 4.66007386 | 3.16E-06 | 0.01217981 |
| 12 | 32131139 | 32131139 | 1 | 12_32131139 | ENSG00000151746 | BICD1 | 0 | INTRON | -4.6599677 | 3.16E-06 | 0.01218256 |
| 15 | 96809176 | 96809176 | 1 | 15_96809176 | ENSG00000185594 | SPATA8 | 23561 | Downstream | 4.6598884 | 3.16E-06 | 0.01218256 |
| 2 | 65105887 | 65105887 | 1 | 2_65105887 | ENSG00000138069 | RAB1A | 0 | INTRON | -4.6598764 | 3.16E-06 | 0.01218256 |
| 6 | 9174509 | 9174509 | 1 | 6_9174509 | ENSG00000285219 | HULC | 0 | INTRON | 4.659841 | 3.16E-06 | 0.01218256 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
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| 14 | 58405862 | 58405862 | 1 | 14_58405862 | ENSG00000196860 | TOMM20L | 0 | INTRON | 4.65976534 | 3.17E-06 | 0.01218359 |
| 11 | 69461339 | 69461339 | 1 | 11_69461339 | ENSG00000261347 | AP000439.3 | 6258 | Upstream | 4.65973046 | 3.17E-06 | 0.01218359 |
| 8 | 11106369 | 11106369 | 1 | 8_11106369 | ENSG00000269918 | AF131215.6 | 0 | EXON | 4.65967725 | 3.17E-06 | 0.01218399 |
| 12 | 109293738 | 109293738 | 1 | 12_109293738 | ENSG00000139445 | FOXN4 | 0 | INTRON | -4.6591625 | 3.17E-06 | 0.01221173 |
| 19 | 22847818 | 22847818 | 1 | 19_22847818 | ENSG00000268696 | ZNF723 | 0 | INTRON | -4.6590828 | 3.18E-06 | 0.0122137 |
| 3 | 186262186 | 186262186 | 1 | 3_186262186 | ENSG00000058866 | DGKG | 0 | INTRON | -4.6590262 | 3.18E-06 | 0.0122143 |
| 7 | 49287706 | 49287706 | 1 | 7_49287706 | ENSG00000270763 | DDX43P2 | 27860 | Upstream | 4.65895163 | 3.18E-06 | 0.01221596 |
| 1 | 235091859 | 235091859 | 1 | 1_235091859 | ENSG00000233018 | AL732292.1 | 5327 | Downstream | 4.658896 | 3.18E-06 | 0.0122165 |
| 6 | 7738677 | 7738677 | 1 | 6_7738677 | ENSG00000153162 | BMP6 | 0 | INTRON | 4.65884282 | 3.18E-06 | 0.0122169 |
| 13 | 106772325 | 106772325 | 1 | 13_106772325 | ENSG00000278698 | AL162574.2 | 1297 | Downstream | -4.6583389 | 3.19E-06 | 0.01224199 |
| 20 | 46962312 | 46962312 | 1 | 20_46962312 | ENSG00000064655 | EYA2 | 0 | INTRON | -4.6583275 | 3.19E-06 | 0.01224199 |
| 18 | 38333080 | 38333080 | 1 | 18_38333080 | ENSG00000268566 | AC100781.1 | 322128 | Downstream | 4.65818423 | 3.19E-06 | 0.0122467 |
| 1 | 10137313 | 10137313 | 1 | 1_10137313 | ENSG00000130939 | UBE4B | 0 | INTRON | 4.65815527 | 3.19E-06 | 0.0122467 |
| 7 | 114176529 | 114176529 | 1 | 7_114176529 | ENSG00000128573 | FOXP2 | 0 | INTRON | 4.65804215 | 3.19E-06 | 0.01225067 |
| 4 | 58860367 | 58860367 | 1 | 4_58860367 | ENSG00000251339 | AC017091.1 | 0 | INTRON | -4.6579382 | 3.19E-06 | 0.01225409 |
| 17 | 78960167 | 78960167 | 1 | 17_78960167 | ENSG00000108679 | LGALS3BP | 11070 | Downstream | 4.65769462 | 3.20E-06 | 0.01226487 |
| 4 | 164803076 | 164803076 | 1 | 4_164803076 | ENSG00000248771 | SMIM31 | 0 | 3UTR | 4.65766143 | 3.20E-06 | 0.01226487 |
| 15 | 20048089 | 20048089 | 1 | 15_20048089 | ENSG00000259769 | AC127381.1 | 95 | Upstream | -4.6576179 | 3.20E-06 | 0.01226487 |
| 1 | 115326452 | 115326452 | 1 | 1_115326452 | ENSG00000228035 | NGF-AS1 | 0 | INTRON | -4.6574696 | 3.20E-06 | 0.0122659 |
| 7 | 99427509 | 99427509 | 1 | 7_99427509 | ENSG00000106246 | PTCD1 | 0 | INTRON | 4.65744737 | 3.20E-06 | 0.0122659 |
| 12 | 65004704 | 65004704 | 1 | 12_65004704 | ENSG00000198671 | AC135895.1 | 12763 | Upstream | 4.65741775 | 3.20E-06 | 0.0122659 |
| 17 | 81691394 | 81691394 | 1 | 17_81691394 | ENSG00000185359 | HGS | 0 | EXON | 4.65741505 | 3.20E-06 | 0.0122659 |
| 10 | 2365309 | 2365309 | 1 | 10_2365309 | ENSG00000234170 | LINC02645 | 3251 | Downstream | -4.6571779 | 3.21E-06 | 0.01227508 |
| 9 | 87917395 | 87917395 | 1 | 9_87917395 | ENSG00000230246 | SPATA31C1 | 0 | INTRON | -4.6571212 | 3.21E-06 | 0.01227508 |
| 17 | 5666098 | 5666098 | 1 | 17_5666098 | ENSG00000286356 | AC135726.1 | 34127 | Downstream | 4.65712046 | 3.21E-06 | 0.01227508 |
| 7 | 113519541 | 113519541 | 1 | 7_113519541 | ENSG00000287592 | AC073348.2 | 24671 | Upstream | -4.657038 | 3.21E-06 | 0.01227508 |
| 9 | 15298874 | 15298874 | 1 | 9_15298874 | ENSG00000155158 | TTC39B | 0 | INTRON | 4.65702925 | 3.21E-06 | 0.01227508 |
| 5 | 175695827 | 175695827 | 1 | 5_175695827 | ENSG00000113749 | HRH2 | 0 | INTRON | 4.65664352 | 3.21E-06 | 0.01229533 |
| 4 | 2717778 | 2717778 | 1 | 4_2717778 | ENSG00000125386 | FAM193A | 0 | INTRON | 4.65655025 | 3.22E-06 | 0.01229813 |
| 18 | 12949821 | 12949821 | 1 | 18_12949821 | ENSG00000085415 | SEH1L | 0 | INTRON | 4.65637359 | 3.22E-06 | 0.01230592 |
| 10 | 67616874 | 67616874 | 1 | 10_67616874 | ENSG00000183230 | CTNNA3 | 0 | INTRON | 4.6562681 | 3.22E-06 | 0.01230863 |
| 8 | 12037358 | 12037358 | 1 | 8_12037358 | ENSG00000254817 | AC107918.1 | 2746 | Upstream | -4.6562357 | 3.22E-06 | 0.01230863 |
| 2 | 26369632 | 26369632 | 1 | 2_26369632 | ENSG00000138018 | SELENOI | 0 | INTRON | 4.65613546 | 3.22E-06 | 0.01231185 |
| 5 | 50716360 | 50716360 | 1 | 5_50716360 | ENSG00000151883 | PARP8 | 0 | INTRON | 4.65582867 | 3.23E-06 | 0.01232469 |
| 1 | 32185590 | 32185590 | 1 | 1_32185590 | ENSG00000084652 | TXLNA | 0 | INTRON | -4.6558283 | 3.23E-06 | 0.01232469 |
| 9 | 23621113 | 23621113 | 1 | 9_23621113 | ENSG00000283982 | AL445623.2 | 0 | INTRON | 4.65573097 | 3.23E-06 | 0.01232666 |
| 2 | 136971367 | 136971367 | 1 | 2_136971367 | ENSG00000144229 | THSD7B | 0 | INTRON | -4.6556821 | 3.23E-06 | 0.01232666 |
| 3 | 8751035 | 8751035 | 1 | 3_8751035 | ENSG00000180914 | OXTR | 0 | 3UTR | -4.6556567 | 3.23E-06 | 0.01232666 |
| 12 | 64685308 | 64685308 | 1 | 12_64685308 | ENSG00000153179 | RASSF3 | 0 | INTRON | -4.6553548 | 3.23E-06 | 0.01234197 |
| 11 | 75844772 | 75844772 | 1 | 11_75844772 | ENSG00000198382 | UVRAG | 0 | INTRON | 4.65521934 | 3.24E-06 | 0.01234732 |
| 9 | 83853750 | 83853750 | 1 | 9_83853750 | ENSG00000165115 | KIF27 | 0 | EXON | 4.65515193 | 3.24E-06 | 0.01234859 |
| 5 | 30655542 | 30655542 | 1 | 5_30655542 | ENSG00000287176 | AC099517.1 | 0 | INTRON | 4.65498518 | 3.24E-06 | 0.01235582 |
| 1 | 1362729 | 1362729 | 1 | 1_1362729 | ENSG00000162576 | MXRA8 | 952 | Upstream | 4.65492074 | 3.24E-06 | 0.01235691 |
| 10 | 18594056 | 18594056 | 1 | 10_18594056 | ENSG00000241058 | NSUN6 | 0 | INTRON | -4.6545754 | 3.25E-06 | 0.01237291 |
| 9 | 34363965 | 34363965 | 1 | 9_34363965 | ENSG00000164976 | MYORG | 2700 | Downstream | -4.6545618 | 3.25E-06 | 0.01237291 |
| 9 | 62844954 | 62844954 | 1 | 9_62844954 | ENSG00000237451 | CDK2AP2P2 | 0 | EXON | 4.65447401 | 3.25E-06 | 0.01237326 |
| 16 | 33124514 | 33124514 | 1 | 16_33124514 | ENSG00000261599 | HERC2P8 | 0 | INTRON | 4.65445576 | 3.25E-06 | 0.01237326 |
| 11 | 28345973 | 28345973 | 1 | 11_28345973 | ENSG00000169519 | METTL15 | 0 | INTRON | -4.6544177 | 3.25E-06 | 0.01237326 |
| 11 | 67160500 | 67160500 | 1 | 11_67160500 | ENSG00000173120 | KDM2A | 0 | INTRON | 4.65421879 | 3.25E-06 | 0.01237996 |
| 2 | 208193533 | 208193533 | 1 | 2_208193533 | ENSG00000188674 | C2orf80 | 3503 | Upstream | 4.65420569 | 3.25E-06 | 0.01237996 |
| 10 | 63762054 | 63762054 | 1 | 10_63762054 | ENSG00000228566 | AC013287.1 | 0 | INTRON | 4.65411901 | 3.25E-06 | 0.01237996 |
| 4 | 180309771 | 180309771 | 1 | 4_180309771 | ENSG00000287775 | AC096747.1 | 192608 | Upstream | 4.65407535 | 3.25E-06 | 0.01237996 |
| 12 | 123048569 | 123048569 | 1 | 12_123048569 | ENSG00000090975 | PITPNM2 | 0 | INTRON | 4.65405349 | 3.25E-06 | 0.01237996 |
| 14 | 35317191 | 35317191 | 1 | 14_35317191 | ENSG00000100902 | PSMA6 | 0 | EXON | 4.65399537 | 3.26E-06 | 0.01237996 |
| 4 | 62010297 | 62010297 | 1 | 4_62010297 | ENSG00000150471 | ADGRL3 | 0 | INTRON | -4.6539834 | 3.26E-06 | 0.01237996 |
| 7 | 67328080 | 67328080 | 1 | 7_67328080 | ENSG00000106610 | STAG3L4 | 0 | INTRON | 4.65390703 | 3.26E-06 | 0.01238178 |
| 11 | 128006489 | 128006489 | 1 | 11_128006489 | ENSG00000254612 | AP001000.1 | 64835 | Upstream | 4.65369004 | 3.26E-06 | 0.01239199 |
| 10 | 132758761 | 132758761 | 1 | 10_132758761 | ENSG00000068383 | INPP5A | 0 | INTRON | -4.6536452 | 3.26E-06 | 0.01239199 |
| 15 | 92862553 | 92862553 | 1 | 15_92862553 | ENSG00000272888 | LINC01578 | 0 | INTRON | -4.6535284 | 3.26E-06 | 0.01239478 |
| 22 | 31625470 | 31625470 | 1 | 22_31625470 | ENSG00000241878 | PISD | 0 | INTRON | -4.6534999 | 3.26E-06 | 0.01239478 |
| 17 | 2774431 | 2774431 | 1 | 17_2774431 | ENSG00000132359 | RAP1GAP2 | 0 | INTRON | -4.653457 | 3.26E-06 | 0.01239478 |
| 14 | 58019647 | 58019647 | 1 | 14_58019647 | ENSG00000139971 | ARMH4 | 0 | INTRON | 4.65340056 | 3.27E-06 | 0.01239478 |
| 9 | 28881280 | 28881280 | 1 | 9_28881280 | ENSG00000215939 | MIR873 | 7598 | Downstream | -4.6533688 | 3.27E-06 | 0.01239478 |
| 17 | 43344918 | 43344918 | 1 | 17_43344918 | ENSG00000188825 | LINC00910 | 0 | INTRON | -4.6532698 | 3.27E-06 | 0.01239636 |
| 3 | 40768402 | 40768402 | 1 | 3_40768402 | ENSG00000231873 | AC099560.1 | 0 | INTRON | 4.65325051 | 3.27E-06 | 0.01239636 |
| 20 | 17657829 | 17657829 | 1 | 20_17657829 | ENSG00000125844 | RRBP1 | 0 | INTRON | -4.6531153 | 3.27E-06 | 0.01239941 |
| 1 | 81557684 | 81557684 | 1 | 1_81557684 | ENSG00000234953 | AL138799.4 | 0 | EXON | 4.65310805 | 3.27E-06 | 0.01239941 |
| 19 | 15458755 | 15458755 | 1 | 19_15458755 | ENSG00000105122 | RASAL3 | 0 | INTRON | 4.65279663 | 3.27E-06 | 0.01241539 |
| 7 | 117718595 | 117718595 | 1 | 7_117718595 | ENSG00000077063 | CTTNBP2 | 0 | INTRON | 4.65258226 | 3.28E-06 | 0.01242317 |
| 3 | 61167143 | 61167143 | 1 | 3_61167143 | ENSG00000189283 | FHIT | 0 | INTRON | 4.65256908 | 3.28E-06 | 0.01242317 |
| 1 | 46374980 | 46374980 | 1 | 1_46374980 | ENSG00000225779 | AL122001.1 | 4025 | Downstream | -4.6525298 | 3.28E-06 | 0.01242317 |
| 20 | 12680741 | 12680741 | 1 | 20_12680741 | ENSG00000233048 | LINC01722 | 184460 | Downstream | 4.65237045 | 3.28E-06 | 0.01242849 |
| 10 | 103186680 | 103186680 | 1 | 10_103186680 | ENSG00000076685 | NT5C2 | 0 | INTRON | -4.6523109 | 3.28E-06 | 0.01242849 |
| 2 | 29837570 | 29837570 | 1 | 2_29837570 | ENSG00000171094 | ALK | 0 | INTRON | 4.65230372 | 3.28E-06 | 0.01242849 |
| 19 | 4628505 | 4628505 | 1 | 19_4628505 | ENSG00000267408 | AC011498.5 | 6198 | Downstream | -4.6521393 | 3.29E-06 | 0.01243564 |
| 14 | 99463191 | 99463191 | 1 | 14_99463191 | ENSG00000183576 | SETD3 | 0 | INTRON | 4.65208213 | 3.29E-06 | 0.01243633 |
| 10 | 53922280 | 53922280 | 1 | 10_53922280 | ENSG00000150275 | PCDH15 | 0 | INTRON | 4.65202677 | 3.29E-06 | 0.0124369 |
| 5 | 105329777 | 105329777 | 1 | 5_105329777 | ENSG00000251574 | AC099520.1 | 0 | INTRON | -4.6518851 | 3.29E-06 | 0.01244238 |
| 7 | 60918811 | 60918811 | 1 | 7_60918811 | ENSG00000233918 | AC128676.1 | 1356549 | Downstream | -4.6518442 | 3.29E-06 | 0.01244238 |
| 9 | 136522038 | 136522038 | 1 | 9_136522038 | ENSG00000148400 | NOTCH1 | 0 | INTRON | -4.6517487 | 3.29E-06 | 0.01244297 |
| 8 | 79649222 | 79649222 | 1 | 8_79649222 | ENSG00000104435 | STMN2 | 0 | INTRON | 4.65174294 | 3.29E-06 | 0.01244297 |
| 3 | 177387166 | 177387166 | 1 | 3_177387166 | ENSG00000226782 | AC117465.1 | 38000 | Upstream | 4.65169317 | 3.29E-06 | 0.0124432 |
| 7 | 40727306 | 40727306 | 1 | 7_40727306 | ENSG00000175600 | SUGCT | 0 | INTRON | 4.65158078 | 3.29E-06 | 0.01244722 |
| 10 | 70229977 | 70229977 | 1 | 10_70229977 | ENSG00000180817 | PPA1 | 0 | INTRON | 4.65145417 | 3.30E-06 | 0.01245211 |
| 5 | 117615627 | 117615627 | 1 | 5_117615627 | ENSG00000248663 | LINC00992 | 69329 | Downstream | -4.6513456 | 3.30E-06 | 0.01245487 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
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| 13 | 33399490 | 33399490 | 1 | 13_33399490 | ENSG00000230490 | AL139383.1 | 0 | INTRON | 4.65131687 | 3.30E-06 | 0.01245487 |
| 8 | 20607573 | 20607573 | 1 | 8_20607573 | ENSG00000253300 | AC018541.1 | 47610 | Downstream | -4.6512438 | 3.30E-06 | 0.01245652 |
| 1 | 8709199 | 8709199 | 1 | 1_8709199 | ENSG00000142599 | RERE | 0 | INTRON | -4.6511864 | 3.30E-06 | 0.01245723 |
| 6 | 51222199 | 51222199 | 1 | 6_51222199 | ENSG00000270306 | AL158050.2 | 163082 | Downstream | -4.6507536 | 3.31E-06 | 0.01248046 |
| 9 | 113288553 | 113288553 | 1 | 9_113288553 | ENSG00000136875 | PRPF4 | 0 | INTRON | -4.6507107 | 3.31E-06 | 0.01248046 |
| 7 | 14087648 | 14087648 | 1 | 7_14087648 | ENSG00000223445 | RPL6P21 | 16268 | Upstream | -4.6506585 | 3.31E-06 | 0.01248085 |
| 7 | 60929749 | 60929749 | 1 | 7_60929749 | ENSG00000233918 | AC128676.1 | 1345611 | Downstream | -4.650612 | 3.31E-06 | 0.0124809 |
| 7 | 123266379 | 123266379 | 1 | 7_123266379 | ENSG00000223595 | LYPLA1P1 | 35638 | Upstream | -4.6503732 | 3.31E-06 | 0.01249259 |
| 5 | 133478427 | 133478427 | 1 | 5_133478427 | ENSG00000053108 | FSTL4 | 0 | INTRON | -4.6502851 | 3.31E-06 | 0.01249443 |
| 2 | 125911710 | 125911710 | 1 | 2_125911710 | ENSG00000224410 | AC097499.1 | 88395 | Downstream | 4.65022943 | 3.32E-06 | 0.01249443 |
| 16 | 17432904 | 17432904 | 1 | 16_17432904 | ENSG00000103489 | XYLT1 | 0 | INTRON | -4.6501633 | 3.32E-06 | 0.01249443 |
| 2 | 51492613 | 51492613 | 1 | 2_51492613 | ENSG00000231918 | AC007402.1 | 0 | INTRON | -4.6501601 | 3.32E-06 | 0.01249443 |
| 12 | 74549412 | 74549412 | 1 | 12_74549412 | ENSG00000253719 | ATXN7L3B | 3982 | Downstream | 4.65001217 | 3.32E-06 | 0.01250013 |
| 5 | 73174237 | 73174237 | 1 | 5_73174237 | ENSG00000164325 | TMEM174 | 0 | 3UTR | 4.64994878 | 3.32E-06 | 0.01250013 |
| 4 | 16205347 | 16205347 | 1 | 4_16205347 | ENSG00000169762 | TAPT1 | 0 | INTRON | -4.6499291 | 3.32E-06 | 0.01250013 |
| 5 | 5454860 | 5454860 | 1 | 5_5454860 | ENSG00000164151 | ICE1 | 0 | INTRON | -4.6497887 | 3.32E-06 | 0.01250588 |
| 2 | 82776454 | 82776454 | 1 | 2_82776454 | ENSG00000226700 | MTND4P25 | 38529 | Upstream | -4.6497025 | 3.32E-06 | 0.01250794 |
| 5 | 142328691 | 142328691 | 1 | 5_142328691 | ENSG00000231185 | SPRY4-AS1 | 0 | INTRON | 4.64966341 | 3.32E-06 | 0.01250794 |
| 6 | 68119328 | 68119328 | 1 | 6_68119328 | ENSG00000285838 | AL646090.2 | 26327 | Downstream | 4.64959177 | 3.33E-06 | 0.01250952 |
| 3 | 139246939 | 139246939 | 1 | 3_139246939 | ENSG00000175110 | MRPS22 | 0 | INTRON | 4.64953883 | 3.33E-06 | 0.01250997 |
| 4 | 98571911 | 98571911 | 1 | 4_98571911 | ENSG00000168785 | TSPAN5 | 0 | INTRON | -4.6493879 | 3.33E-06 | 0.01251636 |
| 21 | 38767024 | 38767024 | 1 | 21_38767024 | ENSG00000223806 | LINC00114 | 19564 | Upstream | -4.6492877 | 3.33E-06 | 0.01251833 |
| 3 | 62466469 | 62466469 | 1 | 3_62466469 | ENSG00000163618 | CADPS | 0 | EXON | 4.64926437 | 3.33E-06 | 0.01251833 |
| X | 69350919 | 69350919 | 1 | X_69350919 | ENSG00000231706 | CYCSP43 | 134423 | Downstream | -4.6491295 | 3.33E-06 | 0.01252145 |
| 7 | 74779295 | 74779295 | 1 | 7_74779295 | ENSG00000158517 | NCF1 | 0 | EXON | -4.6491169 | 3.33E-06 | 0.01252145 |
| 20 | 36990234 | 36990234 | 1 | 20_36990234 | ENSG00000080839 | RBL1 | 6114 | Downstream | -4.6490762 | 3.33E-06 | 0.01252145 |
| 3 | 131723679 | 131723679 | 1 | 3_131723679 | ENSG00000196353 | CPNE4 | 0 | INTRON | -4.6489347 | 3.34E-06 | 0.01252728 |
| 16 | 80616802 | 80616802 | 1 | 16_80616802 | ENSG00000166446 | CDYL2 | 0 | INTRON | -4.6488374 | 3.34E-06 | 0.01253043 |
| 6 | 106806151 | 106806151 | 1 | 6_106806151 | ENSG00000235142 | LINC02532 | 18003 | Upstream | 4.6487767 | 3.34E-06 | 0.01253135 |
| 18 | 34675393 | 34675393 | 1 | 18_34675393 | ENSG00000134769 | DTNA | 0 | INTRON | 4.64868084 | 3.34E-06 | 0.01253441 |
| 1 | 112869310 | 112869310 | 1 | 1_112869310 | ENSG00000224167 | LINC01357 | 0 | INTRON | 4.64848722 | 3.34E-06 | 0.01254162 |
| 2 | 118884660 | 118884660 | 1 | 2_118884660 | ENSG00000163064 | EN1 | 36982 | Upstream | 4.64846006 | 3.34E-06 | 0.01254162 |
| 2 | 74347208 | 74347208 | 1 | 2_74347208 | ENSG00000264324 | AC006030.1 | 0 | INTRON | 4.64842573 | 3.34E-06 | 0.01254162 |
| 5 | 152219863 | 152219863 | 1 | 5_152219863 | ENSG00000254226 | LINC01933 | 0 | INTRON | 4.64818906 | 3.35E-06 | 0.01255325 |
| 20 | 7205715 | 7205715 | 1 | 20_7205715 | ENSG00000228888 | LINC01428 | 0 | INTRON | 4.648002 | 3.35E-06 | 0.01256187 |
| 5 | 178347678 | 178347678 | 1 | 5_178347678 | ENSG00000050767 | COL23A1 | 0 | INTRON | 4.64781447 | 3.35E-06 | 0.01257052 |
| 10 | 22915642 | 22915642 | 1 | 10_22915642 | ENSG00000165309 | ARMC3 | 12381 | Upstream | 4.64765076 | 3.36E-06 | 0.01257529 |
| 3 | 74868978 | 74868978 | 1 | 3_74868978 | ENSG00000241022 | NIPA2P2 | 215176 | Upstream | 4.64764412 | 3.36E-06 | 0.01257529 |
| X | 120510773 | 120510773 | 1 | X_120510773 | ENSG00000251707 | RNU7-37P | 7677 | Upstream | 4.64760006 | 3.36E-06 | 0.01257529 |
| 4 | 114661861 | 114661861 | 1 | 4_114661861 | ENSG00000174607 | UGT8 | 0 | INTRON | 4.64716175 | 3.37E-06 | 0.01259465 |
| 4 | 188355739 | 188355739 | 1 | 4_188355739 | ENSG00000242169 | AC093789.1 | 5715 | Upstream | -4.6471521 | 3.37E-06 | 0.01259465 |
| 8 | 66057931 | 66057931 | 1 | 8_66057931 | ENSG00000147570 | DNAJC5B | 0 | EXON | 4.64706015 | 3.37E-06 | 0.01259465 |
| 6 | 69345598 | 69345598 | 1 | 6_69345598 | ENSG00000135298 | ADGRB3 | 0 | INTRON | -4.6470226 | 3.37E-06 | 0.01259465 |
| 18 | 37008310 | 37008310 | 1 | 18_37008310 | ENSG00000150477 | KIAA1328 | 0 | INTRON | 4.6470221 | 3.37E-06 | 0.01259465 |
| 3 | 165852426 | 165852426 | 1 | 3_165852426 | ENSG00000244128 | LINC01322 | 5907 | Downstream | 4.64701023 | 3.37E-06 | 0.01259465 |
| 5 | 157042129 | 157042129 | 1 | 5_157042129 | ENSG00000113249 | HAVCR1 | 0 | INTRON | 4.64680396 | 3.37E-06 | 0.01260401 |
| 12 | 19951541 | 19951541 | 1 | 12_19951541 | ENSG00000255910 | AC024901.1 | 0 | INTRON | -4.6467248 | 3.37E-06 | 0.01260401 |
| 9 | 130718744 | 130718744 | 1 | 9_130718744 | ENSG00000097007 | ABL1 | 0 | INTRON | 4.64671662 | 3.37E-06 | 0.01260401 |
| 10 | 97339875 | 97339875 | 1 | 10_97339875 | ENSG00000225850 | AL355490.1 | 0 | INTRON | 4.64667563 | 3.37E-06 | 0.01260401 |
| 19 | 51967681 | 51967681 | 1 | 19_51967681 | ENSG00000256683 | ZNF350 | 0 | INTRON | 4.64659316 | 3.37E-06 | 0.01260628 |
| 9 | 89948544 | 89948544 | 1 | 9_89948544 | ENSG00000237626 | AL161629.1 | 0 | INTRON | -4.6462529 | 3.38E-06 | 0.0126243 |
| 16 | 11402637 | 11402637 | 1 | 16_11402637 | ENSG00000188897 | AC099489.1 | 0 | INTRON | -4.6461716 | 3.38E-06 | 0.01262651 |
| 5 | 15872081 | 15872081 | 1 | 5_15872081 | ENSG00000183580 | FBXL7 | 0 | INTRON | 4.64606861 | 3.38E-06 | 0.01263004 |
| 18 | 27681608 | 27681608 | 1 | 18_27681608 | ENSG00000264151 | AC090403.1 | 86444 | Upstream | 4.64601406 | 3.38E-06 | 0.01263061 |
| 20 | 31899803 | 31899803 | 1 | 20_31899803 | ENSG00000131044 | TTLL9 | 0 | INTRON | 4.64573255 | 3.39E-06 | 0.01264507 |
| 18 | 71816136 | 71816136 | 1 | 18_71816136 | ENSG00000260457 | AC027458.1 | 20902 | Upstream | -4.6456762 | 3.39E-06 | 0.01264575 |
| 9 | 121792144 | 121792144 | 1 | 9_121792144 | ENSG00000136848 | DAB2IP | 6614 | Downstream | 4.64548528 | 3.39E-06 | 0.01265468 |
| 14 | 60747054 | 60747054 | 1 | 14_60747054 | ENSG00000020426 | MNAT1 | 0 | INTRON | -4.6453162 | 3.40E-06 | 0.01266227 |
| 14 | 71099348 | 71099348 | 1 | 14_71099348 | ENSG00000100731 | PCNX1 | 0 | INTRON | -4.6448471 | 3.40E-06 | 0.01268774 |
| 15 | 22741930 | 22741930 | 1 | 15_22741930 | ENSG00000275325 | PDCD6IPP1 | 0 | INTRON | 4.6447909 | 3.40E-06 | 0.01268774 |
| 7 | 80800107 | 80800107 | 1 | 7_80800107 | ENSG00000075223 | SEMA3C | 0 | INTRON | 4.64475796 | 3.40E-06 | 0.01268774 |
| 9 | 85752687 | 85752687 | 1 | 9_85752687 | ENSG00000234424 | AL353743.4 | 618 | Upstream | -4.6447204 | 3.41E-06 | 0.01268774 |
| 12 | 47260554 | 47260554 | 1 | 12_47260554 | ENSG00000257925 | AC008083.2 | 0 | INTRON | 4.6445409 | 3.41E-06 | 0.012696 |
| 1 | 225640964 | 225640964 | 1 | 1_225640964 | ENSG00000154380 | ENAH | 0 | INTRON | -4.6444736 | 3.41E-06 | 0.01269736 |
| 12 | 80216745 | 80216745 | 1 | 12_80216745 | ENSG00000165899 | OTOGL | 0 | INTRON | -4.6443836 | 3.41E-06 | 0.01269762 |
| 6 | 131172109 | 131172109 | 1 | 6_131172109 | ENSG00000118507 | AKAP7 | 0 | INTRON | -4.644379 | 3.41E-06 | 0.01269762 |
| 9 | 17167873 | 17167873 | 1 | 9_17167873 | ENSG00000044459 | CNTLN | 0 | EXON | -4.6443283 | 3.41E-06 | 0.01269796 |
| 17 | 66269368 | 66269368 | 1 | 17_66269368 | ENSG00000252653 | RNA5SP444 | 1520 | Downstream | 4.64423448 | 3.41E-06 | 0.01270095 |
| 4 | 152078156 | 152078156 | 1 | 4_152078156 | ENSG00000245954 | LINC02273 | 12302 | Upstream | -4.6439097 | 3.42E-06 | 0.01271095 |
| 2 | 18396785 | 18396785 | 1 | 2_18396785 | ENSG00000287881 | AC079148.3 | 7181 | Upstream | 4.6438541 | 3.42E-06 | 0.01271095 |
| 7 | 68121605 | 68121605 | 1 | 7_68121605 | ENSG00000236531 | AC006013.1 | 2396 | Downstream | -4.6438335 | 3.42E-06 | 0.01271095 |
| 1 | 30482068 | 30482068 | 1 | 1_30482068 | ENSG00000231949 | AL161638.1 | 60960 | Downstream | -4.643804 | 3.42E-06 | 0.01271095 |
| 3 | 54635028 | 54635028 | 1 | 3_54635028 | ENSG00000265992 | ESRG | 0 | INTRON | 4.64378013 | 3.42E-06 | 0.01271095 |
| 10 | 78695999 | 78695999 | 1 | 10_78695999 | ENSG00000228683 | AC016820.1 | 62 | Downstream | 4.64373719 | 3.42E-06 | 0.01271095 |
| 5 | 15224885 | 15224885 | 1 | 5_15224885 | ENSG00000249332 | LINC02149 | 0 | INTRON | -4.6437333 | 3.42E-06 | 0.01271095 |
| X | 72080475 | 72080475 | 1 | X_72080475 | ENSG00000204131 | NHSL2 | 0 | INTRON | -4.6436996 | 3.42E-06 | 0.01271095 |
| 12 | 110180288 | 110180288 | 1 | 12_110180288 | ENSG00000122970 | IFT81 | 0 | INTRON | -4.643666 | 3.42E-06 | 0.01271095 |
| 20 | 55430987 | 55430987 | 1 | 20_55430987 | ENSG00000235166 | LINC01440 | 0 | INTRON | -4.6435585 | 3.42E-06 | 0.01271312 |
| 15 | 82723148 | 82723148 | 1 | 15_82723148 | ENSG00000259315 | ACTG1P17 | 2724 | Downstream | -4.6435407 | 3.42E-06 | 0.01271312 |
| 17 | 48761902 | 48761902 | 1 | 17_48761902 | ENSG00000170703 | TTLL6 | 332 | Downstream | 4.64347065 | 3.43E-06 | 0.01271466 |
| 16 | 88769192 | 88769192 | 1 | 16_88769192 | ENSG00000103335 | PIEZO1 | 0 | INTRON | 4.64342039 | 3.43E-06 | 0.01271498 |
| 9 | 135806680 | 135806680 | 1 | 9_135806680 | ENSG00000130559 | CAMSAP1 | 1806 | Downstream | -4.6433263 | 3.43E-06 | 0.012718 |
| 8 | 9605329 | 9605329 | 1 | 8_9605329 | ENSG00000173273 | TNKS | 0 | INTRON | 4.64316837 | 3.43E-06 | 0.01272495 |
| 4 | 5938237 | 5938237 | 1 | 4_5938237 | ENSG00000181215 | C4orf50 | 0 | INTRON | -4.6430507 | 3.43E-06 | 0.01272943 |
| 4 | 53670988 | 53670988 | 1 | 4_53670988 | ENSG00000072201 | LNX1 | 0 | INTRON | 4.64297185 | 3.43E-06 | 0.01273152 |

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| 3 | 75650187 | 75650187 | 1 | 3_75650187 | ENSG00000243422 | RPL23AP49 | 0 | INTRON | -4.6426086 | 3.44E-06 | 0.01274837 |
| 19 | 1097583 | 1097583 | 1 | 19_1097583 | ENSG00000099817 | POLR2E | 2203 | Upstream | 4.64250622 | 3.44E-06 | 0.01274936 |
| 10 | 41903634 | 41903634 | 1 | 10_41903634 | ENSG00000229485 | KSR1P1 | 245675 | Downstream | -4.6424654 | 3.44E-06 | 0.01274936 |
| 10 | 36421452 | 36421452 | 1 | 10_36421452 | ENSG00000236626 | MTND5P17 | 11429 | Downstream | -4.6424012 | 3.44E-06 | 0.01274936 |
| 5 | 96694617 | 96694617 | 1 | 5_96694617 | ENSG00000153113 | CAST | 0 | INTRON | 4.64238043 | 3.44E-06 | 0.01274936 |
| 3 | 24466615 | 24466615 | 1 | 3_24466615 | ENSG00000151090 | THRB | 0 | INTRON | 4.64236777 | 3.44E-06 | 0.01274936 |
| X | 23669654 | 23669654 | 1 | X_23669654 | ENSG00000123131 | PRDX4 | 0 | INTRON | 4.64230878 | 3.45E-06 | 0.01275023 |
| 7 | 24780143 | 24780143 | 1 | 7_24780143 | ENSG00000287093 | AC003093.1 | 0 | INTRON | 4.6421056 | 3.45E-06 | 0.01276001 |
| 4 | 177759266 | 177759266 | 1 | 4_177759266 | ENSG00000251504 | LINC01099 | 0 | INTRON | -4.6417843 | 3.45E-06 | 0.01277693 |
| 22 | 23237056 | 23237056 | 1 | 22_23237056 | ENSG00000186716 | BCR | 0 | INTRON | 4.64174197 | 3.45E-06 | 0.01277693 |
| 5 | 33343191 | 33343191 | 1 | 5_33343191 | ENSG00000250697 | AC010343.3 | 45125 | Upstream | -4.6416721 | 3.46E-06 | 0.0127771 |
| 9 | 17768137 | 17768137 | 1 | 9_17768137 | ENSG00000107295 | SH3GL2 | 0 | INTRON | -4.6416155 | 3.46E-06 | 0.0127771 |
| 6 | 120386002 | 120386002 | 1 | 6_120386002 | ENSG00000286540 | AL096854.1 | 76508 | Upstream | 4.64160456 | 3.46E-06 | 0.0127771 |
| 17 | 36745062 | 36745062 | 1 | 17_36745062 | ENSG00000275613 | AC243830.1 | 18716 | Downstream | 4.64150483 | 3.46E-06 | 0.01278049 |
| 17 | 74164580 | 74164580 | 1 | 17_74164580 | ENSG00000266357 | LINC02074 | 10368 | Upstream | -4.641417 | 3.46E-06 | 0.01278315 |
| X | 46897854 | 46897854 | 1 | X_46897854 | ENSG00000204904 | LINC01545 | 0 | INTRON | 4.64114805 | 3.46E-06 | 0.01278939 |
| 22 | 28075346 | 28075346 | 1 | 22_28075346 | ENSG00000100154 | TTC28 | 0 | INTRON | 4.64110668 | 3.47E-06 | 0.01278939 |
| 6 | 128789224 | 128789224 | 1 | 6_128789224 | ENSG00000202200 | Y_RNA | 27416 | Upstream | -4.6410232 | 3.47E-06 | 0.01278939 |
| 10 | 125200887 | 125200887 | 1 | 10_125200887 | ENSG00000214298 | MRPS21P6 | 33950 | Downstream | 4.64102244 | 3.47E-06 | 0.01278939 |
| 19 | 33394999 | 33394999 | 1 | 19_33394999 | ENSG00000124299 | PEPD | 0 | INTRON | 4.64098406 | 3.47E-06 | 0.01278939 |
| 18 | 29772240 | 29772240 | 1 | 18_29772240 | ENSG00000287803 | AC117569.2 | 121800 | Downstream | 4.64097278 | 3.47E-06 | 0.01278939 |
| 5 | 163406460 | 163406460 | 1 | 5_163406460 | ENSG00000254186 | AC113414.1 | 0 | INTRON | 4.64097242 | 3.47E-06 | 0.01278939 |
| 9 | 95485517 | 95485517 | 1 | 9_95485517 | ENSG00000185920 | PTCH1 | 0 | INTRON | 4.64095164 | 3.47E-06 | 0.01278939 |
| 18 | 24274257 | 24274257 | 1 | 18_24274257 | ENSG00000141447 | OSBPL1A | 0 | INTRON | -4.6409129 | 3.47E-06 | 0.01278939 |
| 16 | 51646511 | 51646511 | 1 | 16_51646511 | ENSG00000224578 | HNRNPA1P48 | 0 | EXON | 4.64079926 | 3.47E-06 | 0.01279294 |
| 2 | 148139461 | 148139461 | 1 | 2_148139461 | ENSG00000204406 | MBD5 | 0 | INTRON | 4.64076604 | 3.47E-06 | 0.01279294 |
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| 7 | 39212522 | 39212522 | 1 | 7_39212522 | ENSG00000106536 | POU6F2 | 0 | INTRON | 4.64056893 | 3.47E-06 | 0.0127996 |
| 7 | 74276642 | 74276642 | 1 | 7_74276642 | ENSG00000287815 | AC005081.1 | 4104 | Downstream | 4.64043492 | 3.48E-06 | 0.01280237 |
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| 12 | 42521170 | 42521170 | 1 | 12_42521170 | ENSG00000139174 | PRICKLE1 | 0 | INTRON | 4.64021678 | 3.48E-06 | 0.0128048 |
| 19 | 44487462 | 44487462 | 1 | 19_44487462 | ENSG00000167384 | ZNF180 | 0 | INTRON | -4.6401114 | 3.48E-06 | 0.01280731 |
| 17 | 67621562 | 67621562 | 1 | 17_67621562 | ENSG00000154217 | PITPNC1 | 0 | INTRON | 4.64005386 | 3.48E-06 | 0.01280731 |
| 11 | 129412963 | 129412963 | 1 | 11_129412963 | ENSG00000043039 | BARX2 | 0 | INTRON | 4.64002184 | 3.48E-06 | 0.01280731 |
| 19 | 16729554 | 16729554 | 1 | 19_16729554 | ENSG00000188039 | NWD1 | 0 | INTRON | -4.6399899 | 3.48E-06 | 0.01280731 |
| 5 | 22827246 | 22827246 | 1 | 5_22827246 | ENSG00000154162 | CDH12 | 0 | INTRON | -4.6399531 | 3.48E-06 | 0.01280731 |
| 7 | 104783488 | 104783488 | 1 | 7_104783488 | ENSG00000187416 | LHFPL3 | 0 | INTRON | 4.63988697 | 3.49E-06 | 0.01280768 |
| X | 149830642 | 149830642 | 1 | X_149830642 | ENSG00000280752 | LINC00850 | 0 | INTRON | -4.6397764 | 3.49E-06 | 0.01280768 |
| 9 | 40806718 | 40806718 | 1 | 9_40806718 | ENSG00000275390 | AL353626.1 | 374 | Downstream | 4.63976621 | 3.49E-06 | 0.01280768 |
| 10 | 29069145 | 29069145 | 1 | 10_29069145 | ENSG00000232624 | LINC01517 | 127235 | Downstream | 4.63972052 | 3.49E-06 | 0.01280768 |
| 9 | 26105720 | 26105720 | 1 | 9_26105720 | ENSG00000276759 | AL353753.1 | 0 | INTRON | -4.6396911 | 3.49E-06 | 0.01280768 |
| 2 | 211955729 | 211955729 | 1 | 2_211955729 | ENSG00000178568 | ERBB4 | 0 | INTRON | -4.6396794 | 3.49E-06 | 0.01280768 |
| 4 | 39689499 | 39689499 | 1 | 4_39689499 | ENSG00000078140 | UBE2K | 8609 | Upstream | -4.6396257 | 3.49E-06 | 0.01280825 |
| 8 | 109435673 | 109435673 | 1 | 8_109435673 | ENSG00000205038 | PKHD1L1 | 0 | INTRON | 4.63956274 | 3.49E-06 | 0.01280939 |
| 1 | 62869548 | 62869548 | 1 | 1_62869548 | ENSG00000125703 | ATG4C | 4032 | Downstream | -4.6393917 | 3.49E-06 | 0.01281723 |
| 15 | 96447863 | 96447863 | 1 | 15_96447863 | ENSG00000242295 | AC087477.1 | 290 | Upstream | -4.6392849 | 3.50E-06 | 0.01282109 |
| 7 | 114970919 | 114970919 | 1 | 7_114970919 | ENSG00000135272 | MDFIC | 0 | INTRON | -4.6390541 | 3.50E-06 | 0.01283265 |
| 15 | 72000899 | 72000899 | 1 | 15_72000899 | ENSG00000261632 | AC022872.1 | 0 | INTRON | -4.6389743 | 3.50E-06 | 0.01283484 |
| 19 | 4876406 | 4876406 | 1 | 19_4876406 | ENSG00000105355 | PLIN3 | 8712 | Upstream | 4.63891888 | 3.50E-06 | 0.01283552 |
| 14 | 58253994 | 58253994 | 1 | 14_58253994 | ENSG00000100567 | PSMA3 | 0 | INTRON | -4.6388328 | 3.50E-06 | 0.01283675 |
| 17 | 57162851 | 57162851 | 1 | 17_57162851 | ENSG00000285785 | AC003950.1 | 33229 | Downstream | 4.63881004 | 3.50E-06 | 0.01283675 |
| 20 | 9412947 | 9412947 | 1 | 20_9412947 | ENSG00000101333 | PLCB4 | 0 | INTRON | 4.63871346 | 3.51E-06 | 0.01283874 |
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| 12 | 70038028 | 70038028 | 1 | 12_70038028 | ENSG00000257815 | AC025159.1 | 0 | INTRON | 4.63864453 | 3.51E-06 | 0.01283874 |
| 3 | 81916464 | 81916464 | 1 | 3_81916464 | ENSG00000242009 | AC129807.1 | 0 | INTRON | 4.6385409 | 3.51E-06 | 0.01284241 |
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| 11 | 74186533 | 74186533 | 1 | 11_74186533 | ENSG00000214517 | PPME1 | 0 | INTRON | 4.63811941 | 3.52E-06 | 0.0128487 |
| 18 | 50445568 | 50445568 | 1 | 18_50445568 | ENSG00000239780 | RPLP0P11 | 12318 | Upstream | -4.6380912 | 3.52E-06 | 0.0128487 |
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| 6 | 105706560 | 105706560 | 1 | 6_105706560 | ENSG00000284999 | AL591518.1 | 0 | INTRON | -4.6379512 | 3.52E-06 | 0.0128487 |
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| X | 15396975 | 15396975 | 1 | X_15396975 | ENSG00000087842 | PIR | 0 | INTRON | -4.6377305 | 3.52E-06 | 0.01285172 |
| 6 | 46613186 | 46613186 | 1 | 6_46613186 | ENSG00000146233 | CYP39A1 | 0 | INTRON | 4.63772513 | 3.52E-06 | 0.01285172 |
| 5 | 161892580 | 161892580 | 1 | 5_161892580 | ENSG00000022355 | GABRA1 | 0 | INTRON | 4.63763739 | 3.52E-06 | 0.01285442 |
| 4 | 123540969 | 123540969 | 1 | 4_123540969 | ENSG00000249464 | LINC01091 | 0 | INTRON | 4.63758827 | 3.52E-06 | 0.01285472 |
| 1 | 11709557 | 11709557 | 1 | 1_11709557 | ENSG00000162490 | DRAXIN | 0 | INTRON | -4.6374934 | 3.53E-06 | 0.01285483 |
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| 8 | 64512672 | 64512672 | 1 | 8_64512672 | ENSG00000253750 | AC090136.1 | 41563 | Downstream | 4.63745368 | 3.53E-06 | 0.01285483 |
| 7 | 103778777 | 103778777 | 1 | 7_103778777 | ENSG00000189056 | RELN | 0 | INTRON | -4.6373216 | 3.53E-06 | 0.01285737 |
| 17 | 14783833 | 14783833 | 1 | 17_14783833 | ENSG00000205325 | AC005863.1 | 3147 | Upstream | -4.6372809 | 3.53E-06 | 0.01285737 |
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| Y | 21529285 | 21529285 | 1 | Y_21529285 | ENSG00000242875 | RBMY1B | 0 | INTRON | -4.6371645 | 3.53E-06 | 0.0128618 |
| 6 | 40704358 | 40704358 | 1 | 6_40704358 | ENSG00000237947 | AL583854.1 | 9052 | Downstream | 4.63708783 | 3.53E-06 | 0.01286382 |
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|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | 181287161 | 181287161 | 1 | 4_181287161 | ENSG00000249460 | LINC02500 | 22016 | Upstream | 4.63693747 | 3.54E-06 | 0.01286523 |
| 4 | 66354560 | 66354560 | 1 | 4_66354560 | ENSG00000287383 | AC110809.1 | 25183 | Upstream | 4.6369088 | 3.54E-06 | 0.01286523 |
| 8 | 22626504 | 22626504 | 1 | 8_22626504 | ENSG00000147439 | BIN3 | 0 | EXON | -4.6368883 | 3.54E-06 | 0.01286523 |
| 2 | 39769467 | 39769467 | 1 | 2_39769467 | ENSG00000138050 | THUMPD2 | 0 | EXON | -4.6368019 | 3.54E-06 | 0.01286726 |
| 1 | 27957994 | 27957994 | 1 | 1_27957994 | ENSG00000227050 | AL512288.1 | 0 | INTRON | 4.63674816 | 3.54E-06 | 0.01286726 |
| 2 | 32283055 | 32283055 | 1 | 2_32283055 | ENSG00000119820 | YIPF4 | 0 | INTRON | 4.63671794 | 3.54E-06 | 0.01286726 |
| 13 | 59129453 | 59129453 | 1 | 13_59129453 | ENSG00000288015 | AL159156.1 | 0 | INTRON | 4.63667894 | 3.54E-06 | 0.01286726 |
| 6 | 111567637 | 111567637 | 1 | 6_111567637 | ENSG00000056972 | TRAF3IP2 | 0 | EXON | 4.63658732 | 3.54E-06 | 0.01287021 |
| 18 | 67934828 | 67934828 | 1 | 18_67934828 | ENSG00000264634 | AC100844.1 | 6120 | Upstream | -4.6364474 | 3.54E-06 | 0.01287309 |
| 19 | 33579362 | 33579362 | 1 | 19_33579362 | ENSG00000232429 | RPL21P131 | 9843 | Downstream | 4.63642684 | 3.54E-06 | 0.01287309 |
| 5 | 157244206 | 157244206 | 1 | 5_157244206 | ENSG00000113263 | ITK | 0 | EXON | 4.63640864 | 3.55E-06 | 0.01287309 |
| 8 | 2804364 | 2804364 | 1 | 8_2804364 | ENSG00000253853 | AC246817.1 | 0 | INTRON | -4.6362879 | 3.55E-06 | 0.01287786 |
| 16 | 14507052 | 14507052 | 1 | 16_14507052 | ENSG00000140694 | PARN | 0 | INTRON | -4.6360903 | 3.55E-06 | 0.01288696 |
| 6 | 68822760 | 68822760 | 1 | 6_68822760 | ENSG00000135298 | ADGRB3 | 0 | INTRON | 4.63602164 | 3.55E-06 | 0.01288696 |
| 12 | 12219069 | 12219069 | 1 | 12_12219069 | ENSG00000070018 | LRP6 | 0 | INTRON | 4.63599522 | 3.55E-06 | 0.01288696 |
| Y | 7563149 | 7563149 | 1 | Y_7563149 | ENSG00000275280 | AC007274.3 | 93818 | Upstream | -4.6359451 | 3.55E-06 | 0.01288696 |
| 2 | 95374036 | 95374036 | 1 | 2_95374036 | ENSG00000115041 | KCNIP3 | 0 | INTRON | 4.63592125 | 3.55E-06 | 0.01288696 |
| 9 | 77676872 | 77676872 | 1 | 9_77676872 | ENSG00000156049 | GNA14 | 28550 | Upstream | -4.6358099 | 3.56E-06 | 0.01288978 |
| 3 | 163341018 | 163341018 | 1 | 3_163341018 | ENSG00000241369 | LINC01192 | 0 | INTRON | 4.63578786 | 3.56E-06 | 0.01288978 |
| 6 | 4471357 | 4471357 | 1 | 6_4471357 | ENSG00000285424 | AL162718.1 | 0 | INTRON | 4.63550011 | 3.56E-06 | 0.01290225 |
| 8 | 71671349 | 71671349 | 1 | 8_71671349 | ENSG00000254277 | AC009446.1 | 3950 | Upstream | 4.63549972 | 3.56E-06 | 0.01290225 |
| 18 | 39206256 | 39206256 | 1 | 18_39206256 | ENSG00000267374 | MIR924HG | 660 | Downstream | 4.63541161 | 3.56E-06 | 0.012905 |
| 1 | 28831559 | 28831559 | 1 | 1_28831559 | ENSG00000116329 | OPRD1 | 0 | INTRON | 4.6352171 | 3.57E-06 | 0.01291439 |
| 11 | 44908869 | 44908869 | 1 | 11_44908869 | ENSG00000157570 | TSPAN18 | 0 | INTRON | 4.63510226 | 3.57E-06 | 0.01291881 |
| 10 | 35472980 | 35472980 | 1 | 10_35472980 | ENSG00000108100 | CCNY | 0 | INTRON | 4.63500164 | 3.57E-06 | 0.01292235 |
| 4 | 75416112 | 75416112 | 1 | 4_75416112 | ENSG00000250735 | AC096759.2 | 0 | INTRON | -4.6348584 | 3.57E-06 | 0.01292736 |
| 1 | 67739376 | 67739376 | 1 | 1_67739376 | ENSG00000172380 | GNG12 | 0 | INTRON | 4.63483348 | 3.57E-06 | 0.01292736 |
| 1 | 236178673 | 236178673 | 1 | 1_236178673 | ENSG00000077585 | GPR137B | 0 | INTRON | 4.63477969 | 3.57E-06 | 0.01292797 |
| 1 | 152532996 | 152532996 | 1 | 1_152532996 | ENSG00000169509 | CRCT1 | 16988 | Downstream | 4.63469131 | 3.57E-06 | 0.01293074 |
| 2 | 219608105 | 219608105 | 1 | 2_219608105 | ENSG00000144589 | STK11IP | 0 | EXON | 4.63463711 | 3.58E-06 | 0.01293138 |
| 4 | 40751532 | 40751532 | 1 | 4_40751532 | ENSG00000179299 | NSUN7 | 0 | INTRON | 4.6344369 | 3.58E-06 | 0.01294115 |
| 5 | 131234508 | 131234508 | 1 | 5_131234508 | ENSG00000158985 | CDC42SE2 | 10984 | Upstream | 4.63429032 | 3.58E-06 | 0.01294757 |
| 19 | 1246916 | 1246916 | 1 | 19_1246916 | ENSG00000167470 | MIDN | 1636 | Upstream | 4.63422254 | 3.58E-06 | 0.01294858 |
| 18 | 27130109 | 27130109 | 1 | 18_27130109 | ENSG00000154080 | CHST9 | 0 | INTRON | 4.63411921 | 3.58E-06 | 0.01294858 |
| 4 | 186569605 | 186569605 | 1 | 4_186569605 | ENSG00000168412 | MTNR1A | 14038 | Upstream | 4.63410354 | 3.58E-06 | 0.01294858 |
| 12 | 15535503 | 15535503 | 1 | 12_15535503 | ENSG00000151490 | PTPRO | 0 | INTRON | -4.6340985 | 3.58E-06 | 0.01294858 |
| 7 | 115498224 | 115498224 | 1 | 7_115498224 | ENSG00000244565 | AC073901.1 | 5142 | Upstream | 4.63403104 | 3.59E-06 | 0.01295006 |
| 15 | 40481267 | 40481267 | 1 | 15_40481267 | ENSG00000244251 | AC013356.1 | 0 | EXON | -4.6339793 | 3.59E-06 | 0.01295055 |
| 10 | 29695806 | 29695806 | 1 | 10_29695806 | ENSG00000197321 | SVIL | 0 | INTRON | 4.63374067 | 3.59E-06 | 0.01295424 |
| 1 | 3037171 | 3037171 | 1 | 1_3037171 | ENSG00000169717 | ACTRT2 | 14268 | Downstream | 4.63373345 | 3.59E-06 | 0.01295424 |
| 4 | 146557749 | 146557749 | 1 | 4_146557749 | ENSG00000207182 | RNU1-44P | 22298 | Upstream | -4.6337027 | 3.59E-06 | 0.01295424 |
| 2 | 196872443 | 196872443 | 1 | 2_196872443 | ENSG00000197121 | PGAP1 | 0 | 3UTR | 4.63370238 | 3.59E-06 | 0.01295424 |
| 17 | 64570080 | 64570080 | 1 | 17_64570080 | ENSG00000108854 | SMURF2 | 0 | INTRON | -4.6337008 | 3.59E-06 | 0.01295424 |
| 19 | 30216999 | 30216999 | 1 | 19_30216999 | ENSG00000267223 | AC005597.1 | 2666 | Downstream | 4.6334852 | 3.60E-06 | 0.01296283 |
| 9 | 112772504 | 112772504 | 1 | 9_112772504 | ENSG00000148158 | SNX30 | 0 | INTRON | -4.6334323 | 3.60E-06 | 0.01296283 |
| 14 | 19952635 | 19952635 | 1 | 14_19952635 | ENSG00000258822 | OR4K16P | 1854 | Upstream | 4.63341605 | 3.60E-06 | 0.01296283 |
| 1 | 224086636 | 224086636 | 1 | 1_224086636 | ENSG00000252484 | RN7SKP49 | 20645 | Downstream | 4.63337074 | 3.60E-06 | 0.01296283 |
| 8 | 78696135 | 78696135 | 1 | 8_78696135 | ENSG00000104427 | ZC2HC1A | 0 | INTRON | -4.6332751 | 3.60E-06 | 0.01296283 |
| X | 5646934 | 5646934 | 1 | X_5646934 | ENSG00000236120 | AC110995.1 | 6483 | Downstream | 4.63318258 | 3.60E-06 | 0.01296283 |
| 17 | 49318226 | 49318226 | 1 | 17_49318226 | ENSG00000198740 | ZNF652 | 0 | INTRON | 4.63314731 | 3.60E-06 | 0.01296283 |
| 1 | 244794486 | 244794486 | 1 | 1_244794486 | ENSG00000287601 | BX323046.2 | 39887 | Downstream | 4.63313495 | 3.60E-06 | 0.01296283 |
| 6 | 23296950 | 23296950 | 1 | 6_23296950 | ENSG00000235743 | AL139231.1 | 40760 | Upstream | 4.63313014 | 3.60E-06 | 0.01296283 |
| 2 | 233286774 | 233286774 | 1 | 2_233286774 | ENSG00000085978 | ATG16L1 | 0 | INTRON | 4.63312565 | 3.60E-06 | 0.01296283 |
| 12 | 15708626 | 15708626 | 1 | 12_15708626 | ENSG00000151491 | EPS8 | 0 | INTRON | -4.6329592 | 3.60E-06 | 0.01297051 |
| 4 | 510381 | 510381 | 1 | 4_510381 | ENSG00000174227 | PIGG | 0 | INTRON | 4.63291054 | 3.61E-06 | 0.01297082 |
| 3 | 91056385 | 91056385 | 1 | 3_91056385 | ENSG00000283367 | ABBA01000933.1 | 300369 | Upstream | -4.6328158 | 3.61E-06 | 0.01297402 |
| 5 | 96405619 | 96405619 | 1 | 5_96405619 | ENSG00000175426 | PCSK1 | 0 | INTRON | 4.63267299 | 3.61E-06 | 0.01297865 |
| 9 | 136824416 | 136824416 | 1 | 9_136824416 | ENSG00000196642 | RABL6 | 0 | INTRON | 4.6326544 | 3.61E-06 | 0.01297865 |
| 3 | 144776381 | 144776381 | 1 | 3_144776381 | ENSG00000280397 | AC011592.1 | 330537 | Upstream | 4.63253968 | 3.61E-06 | 0.01298311 |
| 13 | 90442649 | 90442649 | 1 | 13_90442649 | ENSG00000234384 | LINC01049 | 50637 | Upstream | 4.63243537 | 3.61E-06 | 0.01298613 |
| 1 | 59674991 | 59674991 | 1 | 1_59674991 | ENSG00000172456 | FGGY | 0 | INTRON | 4.63240414 | 3.61E-06 | 0.01298613 |
| 7 | 76024725 | 76024725 | 1 | 7_76024725 | ENSG00000127952 | STYXL1 | 0 | INTRON | 4.63221341 | 3.62E-06 | 0.01299535 |
| 11 | 46013642 | 46013642 | 1 | 11_46013642 | ENSG00000135365 | PHF21A | 0 | INTRON | -4.6320448 | 3.62E-06 | 0.01300289 |
| 11 | 102265824 | 102265824 | 1 | 11_102265824 | ENSG00000243777 | AP000942.1 | 29235 | Upstream | 4.63200366 | 3.62E-06 | 0.01300289 |
| 10 | 93249487 | 93249487 | 1 | 10_93249487 | ENSG00000213432 | RPL17P34 | 34516 | Downstream | 4.63196234 | 3.62E-06 | 0.01300289 |
| 11 | 133308963 | 133308963 | 1 | 11_133308963 | ENSG00000183715 | OPCML | 0 | INTRON | 4.6318153 | 3.62E-06 | 0.01300887 |
| 9 | 78964486 | 78964486 | 1 | 9_78964486 | ENSG00000226234 | KRT18P24 | 71926 | Downstream | 4.63177998 | 3.63E-06 | 0.01300887 |
| 19 | 28588349 | 28588349 | 1 | 19_28588349 | ENSG00000266893 | AC005394.1 | 0 | INTRON | 4.63166865 | 3.63E-06 | 0.01301055 |
| 20 | 15862751 | 15862751 | 1 | 20_15862751 | ENSG00000172264 | MACROD2 | 0 | 5UTR | -4.631652 | 3.63E-06 | 0.01301055 |
| 4 | 101840464 | 101840464 | 1 | 4_101840464 | ENSG00000153064 | BANK1 | 0 | INTRON | 4.63162222 | 3.63E-06 | 0.01301055 |
| 10 | 80906809 | 80906809 | 1 | 10_80906809 | ENSG00000227209 | WARS2P1 | 33855 | Downstream | 4.63150937 | 3.63E-06 | 0.01301247 |
| 8 | 67208060 | 67208060 | 1 | 8_67208060 | ENSG00000066777 | ARFGEF1 | 0 | INTRON | 4.63150452 | 3.63E-06 | 0.01301247 |
| 14 | 23313430 | 23313430 | 1 | 14_23313430 | ENSG00000258643 | BCL2L2-PABPN1 | 0 | INTRON | 4.63144755 | 3.63E-06 | 0.01301331 |
| 9 | 77907287 | 77907287 | 1 | 9_77907287 | ENSG00000156052 | GNAQ | 0 | INTRON | -4.6313952 | 3.63E-06 | 0.01301386 |
| 7 | 23327405 | 23327405 | 1 | 7_23327405 | ENSG00000136231 | IGF2BP3 | 0 | INTRON | -4.6312291 | 3.64E-06 | 0.01302156 |
| 10 | 43447226 | 43447226 | 1 | 10_43447226 | ENSG00000243660 | ZNF487 | 0 | INTRON | 4.63108294 | 3.64E-06 | 0.01302802 |
| 16 | 1196898 | 1196898 | 1 | 16_1196898 | ENSG00000196557 | CACNA1H | 0 | INTRON | -4.631011 | 3.64E-06 | 0.0130298 |
| 21 | 22424570 | 22424570 | 1 | 21_22424570 | ENSG00000226043 | AP000561.1 | 3751 | Downstream | 4.63089452 | 3.64E-06 | 0.01303439 |
| 7 | 61018566 | 61018566 | 1 | 7_61018566 | ENSG00000233918 | AC128676.1 | 1256794 | Downstream | -4.6306835 | 3.64E-06 | 0.01303931 |
| 7 | 152686240 | 152686240 | 1 | 7_152686240 | ENSG00000196584 | XRCC2 | 10099 | Upstream | -4.6306395 | 3.65E-06 | 0.01303931 |
| 15 | 48910726 | 48910726 | 1 | 15_48910726 | ENSG00000185634 | SHC4 | 0 | INTRON | -4.6306354 | 3.65E-06 | 0.01303931 |
| 12 | 90787924 | 90787924 | 1 | 12_90787924 | ENSG00000286021 | LINC02822 | 0 | INTRON | -4.6306044 | 3.65E-06 | 0.01303931 |
| 19 | 49826167 | 49826167 | 1 | 19_49826167 | ENSG00000104973 | MED25 | 0 | INTRON | 4.63059869 | 3.65E-06 | 0.01303931 |
| 9 | 10192850 | 10192850 | 1 | 9_10192850 | ENSG00000153707 | PTPRD | 0 | INTRON | 4.63053963 | 3.65E-06 | 0.01304029 |
| 7 | 13364497 | 13364497 | 1 | 7_13364497 | ENSG00000237713 | AC011287.2 | 0 | EXON | 4.63036036 | 3.65E-06 | 0.01304859 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | 107218885 | 107218885 | 1 | 3_107218885 | ENSG00000242759 | LINC00882 | 0 | INTRON | 4.63032091 | 3.65E-06 | 0.01304859 |
| 2 | 201755558 | 201755558 | 1 | 2_201755558 | ENSG00000003393 | ALS2 | 0 | INTRON | -4.630019 | 3.66E-06 | 0.01305851 |
| 17 | 9235467 | 9235467 | 1 | 17_9235467 | ENSG00000065320 | NTN1 | 0 | INTRON | 4.6300139 | 3.66E-06 | 0.01305851 |
| 20 | 34052718 | 34052718 | 1 | 20_34052718 | ENSG00000125970 | RALY | 0 | INTRON | 4.63000898 | 3.66E-06 | 0.01305851 |
| 11 | 97435018 | 97435018 | 1 | 11_97435018 | ENSG00000255039 | LINC02553 | 175031 | Upstream | -4.6299897 | 3.66E-06 | 0.01305851 |
| 4 | 164338842 | 164338842 | 1 | 4_164338842 | ENSG00000145416 | MARCH1 | 0 | INTRON | -4.6299081 | 3.66E-06 | 0.01306092 |
| 7 | 94889214 | 94889214 | 1 | 7_94889214 | ENSG00000158528 | PPP1R9A | 17987 | Upstream | -4.6297341 | 3.66E-06 | 0.01306916 |
| 8 | 35597219 | 35597219 | 1 | 8_35597219 | ENSG00000156687 | UNC5D | 0 | INTRON | -4.6296825 | 3.66E-06 | 0.01306937 |
| 2 | 233236694 | 233236694 | 1 | 2_233236694 | ENSG00000085978 | ATG16L1 | 0 | INTRON | -4.6296437 | 3.66E-06 | 0.01306937 |
| 10 | 125965919 | 125965919 | 1 | 10_125965919 | ENSG00000203780 | FANK1 | 0 | INTRON | 4.62950717 | 3.67E-06 | 0.01307525 |
| 16 | 72599298 | 72599298 | 1 | 16_72599298 | ENSG00000261008 | LINC01572 | 0 | INTRON | 4.62937442 | 3.67E-06 | 0.01308022 |
| 15 | 101424314 | 101424314 | 1 | 15_101424314 | ENSG00000140479 | PCSK6 | 0 | INTRON | 4.62934164 | 3.67E-06 | 0.01308022 |
| 20 | 17347540 | 17347540 | 1 | 20_17347540 | ENSG00000125851 | PCSK2 | 0 | INTRON | -4.6292428 | 3.67E-06 | 0.01308373 |
| 2 | 62882648 | 62882648 | 1 | 2_62882648 | ENSG00000115504 | EHBP1 | 0 | INTRON | -4.6290825 | 3.67E-06 | 0.01309075 |
| 1 | 107992455 | 107992455 | 1 | 1_107992455 | ENSG00000230489 | VAV3-AS1 | 0 | INTRON | -4.6290449 | 3.67E-06 | 0.01309075 |
| 2 | 70325333 | 70325333 | 1 | 2_70325333 | ENSG00000035141 | FAM136A | 23243 | Upstream | -4.6287982 | 3.68E-06 | 0.0131007 |
| 10 | 64527968 | 64527968 | 1 | 10_64527968 | ENSG00000228566 | AC013287.1 | 0 | INTRON | 4.62879102 | 3.68E-06 | 0.0131007 |
| 3 | 46155172 | 46155172 | 1 | 3_46155172 | ENSG00000183625 | CCR3 | 8431 | Upstream | -4.6287575 | 3.68E-06 | 0.0131007 |
| 6 | 43780865 | 43780865 | 1 | 6_43780865 | ENSG00000112715 | VEGFA | 0 | EXON | 4.62859261 | 3.68E-06 | 0.01310839 |
| 11 | 124581882 | 124581882 | 1 | 11_124581882 | ENSG00000196119 | OR8A1 | 0 | INTRON | 4.62832981 | 3.69E-06 | 0.01312228 |
| 3 | 183026187 | 183026187 | 1 | 3_183026187 | ENSG00000078070 | MCCC1 | 0 | INTRON | -4.6282547 | 3.69E-06 | 0.0131243 |
| 11 | 46587562 | 46587562 | 1 | 11_46587562 | ENSG00000285658 | AC127035.1 | 0 | EXON | -4.6280748 | 3.69E-06 | 0.01313296 |
| 13 | 60133133 | 60133133 | 1 | 13_60133133 | ENSG00000139734 | DIAPH3 | 0 | INTRON | 4.62785047 | 3.69E-06 | 0.01314289 |
| 10 | 5327215 | 5327215 | 1 | 10_5327215 | ENSG00000280450 | AL683826.1 | 19435 | Upstream | -4.6277941 | 3.70E-06 | 0.01314289 |
| 14 | 47387580 | 47387580 | 1 | 14_47387580 | ENSG00000139915 | MDGA2 | 0 | INTRON | 4.6277882 | 3.70E-06 | 0.01314289 |
| X | 76334950 | 76334950 | 1 | X_76334950 | ENSG00000213684 | LDHBP2 | 0 | EXON | 4.62753819 | 3.70E-06 | 0.01315601 |
| 5 | 176553087 | 176553087 | 1 | 5_176553087 | ENSG00000074276 | CDHR2 | 0 | INTRON | 4.62740225 | 3.70E-06 | 0.01315925 |
| 4 | 66000191 | 66000191 | 1 | 4_66000191 | ENSG00000249413 | AC116049.2 | 0 | INTRON | 4.62740061 | 3.70E-06 | 0.01315925 |
| 14 | 64442131 | 64442131 | 1 | 14_64442131 | ENSG00000272909 | AL122035.2 | 0 | EXON | 4.62733214 | 3.70E-06 | 0.01316085 |
| 3 | 30522682 | 30522682 | 1 | 3_30522682 | ENSG00000227260 | LINC01985 | 0 | INTRON | 4.62727174 | 3.71E-06 | 0.01316188 |
| 7 | 136848514 | 136848514 | 1 | 7_136848514 | ENSG00000234352 | AC009264.1 | 0 | INTRON | 4.62722943 | 3.71E-06 | 0.01316188 |
| 5 | 44635072 | 44635072 | 1 | 5_44635072 | ENSG00000249203 | LINC02224 | 0 | INTRON | 4.62716299 | 3.71E-06 | 0.01316336 |
| 10 | 82674714 | 82674714 | 1 | 10_82674714 | ENSG00000185737 | NRG3 | 0 | INTRON | 4.62704949 | 3.71E-06 | 0.01316782 |
| 4 | 96321131 | 96321131 | 1 | 4_96321131 | ENSG00000248510 | LINC02267 | 0 | INTRON | 4.62685606 | 3.71E-06 | 0.01317637 |
| 10 | 102115882 | 102115882 | 1 | 10_102115882 | ENSG00000198728 | LDB1 | 0 | INTRON | 4.62682868 | 3.71E-06 | 0.01317637 |
| 22 | 46586278 | 46586278 | 1 | 22_46586278 | ENSG00000075240 | GRAMD4 | 0 | INTRON | 4.62660397 | 3.72E-06 | 0.01318791 |
| 1 | 161450161 | 161450161 | 1 | 1_161450161 | ENSG00000283360 | AL592295.3 | 0 | INTRON | 4.62648716 | 3.72E-06 | 0.01319134 |
| 11 | 87622513 | 87622513 | 1 | 11_87622513 | ENSG00000223015 | RNU6-1135P | 15628 | Downstream | -4.6264312 | 3.72E-06 | 0.01319134 |
| 5 | 167112252 | 167112252 | 1 | 5_167112252 | ENSG00000253713 | AC091819.2 | 4065 | Downstream | -4.6264205 | 3.72E-06 | 0.01319134 |
| 15 | 26448119 | 26448119 | 1 | 15_26448119 | ENSG00000287280 | AC009878.2 | 0 | INTRON | -4.6262866 | 3.72E-06 | 0.01319709 |
| 14 | 105374635 | 105374635 | 1 | 14_105374635 | ENSG00000242085 | RPS20P33 | 0 | EXON | 4.62624392 | 3.72E-06 | 0.01319709 |
| 22 | 44849078 | 44849078 | 1 | 22_44849078 | ENSG00000241484 | ARHGAP8 | 0 | EXON | 4.62582438 | 3.73E-06 | 0.01322108 |
| 9 | 74812387 | 74812387 | 1 | 9_74812387 | ENSG00000119121 | TRPM6 | 0 | EXON | -4.6257038 | 3.73E-06 | 0.01322536 |
| 4 | 88517746 | 88517746 | 1 | 4_88517746 | ENSG00000145337 | PYURF | 3251 | Downstream | 4.62561922 | 3.73E-06 | 0.01322536 |
| 21 | 6660568 | 6660568 | 1 | 21_6660568 | ENSG00000280145 | CU638689.4 | 0 | INTRON | -4.6254674 | 3.74E-06 | 0.01322536 |
| 4 | 72180301 | 72180301 | 1 | 4_72180301 | ENSG00000056291 | NPFFR2 | 32234 | Downstream | -4.6254334 | 3.74E-06 | 0.01322536 |
| 2 | 74411141 | 74411141 | 1 | 2_74411141 | ENSG00000234521 | AC005041.2 | 0 | INTRON | 4.62542599 | 3.74E-06 | 0.01322536 |
| 1 | 94943586 | 94943586 | 1 | 1_94943586 | ENSG00000235501 | AC105942.1 | 0 | INTRON | -4.6253634 | 3.74E-06 | 0.01322536 |
| 6 | 164096489 | 164096489 | 1 | 6_164096489 | ENSG00000260422 | Z97205.2 | 10828 | Upstream | 4.62535504 | 3.74E-06 | 0.01322536 |
| 5 | 36466294 | 36466294 | 1 | 5_36466294 | ENSG00000222178 | RNA5SP181 | 19048 | Upstream | -4.6253403 | 3.74E-06 | 0.01322536 |
| 2 | 44399850 | 44399850 | 1 | 2_44399850 | ENSG00000143919 | CAMKMT | 0 | INTRON | 4.62533883 | 3.74E-06 | 0.01322536 |
| 6 | 214129 | 214129 | 1 | 6_214129 | ENSG00000205653 | AL035696.1 | 7737 | Downstream | 4.62532612 | 3.74E-06 | 0.01322536 |
| 2 | 32308771 | 32308771 | 1 | 2_32308771 | ENSG00000119820 | YIPF4 | 0 | 3UTR | -4.6252775 | 3.74E-06 | 0.01322572 |
| 18 | 77855657 | 77855657 | 1 | 18_77855657 | ENSG00000252260 | RNA5SP461 | 7806 | Downstream | 4.62519132 | 3.74E-06 | 0.013228 |
| 9 | 118923088 | 118923088 | 1 | 9_118923088 | ENSG00000231166 | TUBB4BP6 | 158743 | Downstream | 4.62515568 | 3.74E-06 | 0.013228 |
| 10 | 131717371 | 131717371 | 1 | 10_131717371 | ENSG00000189275 | LINC01164 | 55026 | Downstream | 4.62481723 | 3.75E-06 | 0.01324655 |
| 5 | 120454833 | 120454833 | 1 | 5_120454833 | ENSG00000184838 | PRR16 | 9466 | Upstream | 4.62477274 | 3.75E-06 | 0.01324655 |
| 1 | 217598111 | 217598111 | 1 | 1_217598111 | ENSG00000092978 | GPATCH2 | 0 | INTRON | -4.624736 | 3.75E-06 | 0.01324655 |
| 9 | 490029 | 490029 | 1 | 9_490029 | ENSG00000107104 | KANK1 | 0 | INTRON | -4.6246846 | 3.75E-06 | 0.01324709 |
| 8 | 116655751 | 116655751 | 1 | 8_116655751 | ENSG00000147677 | EIF3H | 0 | INTRON | 4.62462113 | 3.75E-06 | 0.0132484 |
| 7 | 475405 | 475405 | 1 | 7_475405 | ENSG00000234471 | AC147651.3 | 8701 | Downstream | -4.6244383 | 3.76E-06 | 0.01325422 |
| 9 | 76585915 | 76585915 | 1 | 9_76585915 | ENSG00000187210 | GCNT1 | 0 | INTRON | 4.62443236 | 3.76E-06 | 0.01325422 |
| 1 | 90146427 | 90146427 | 1 | 1_90146427 | ENSG00000287406 | AC098656.1 | 95660 | Upstream | 4.62438194 | 3.76E-06 | 0.01325422 |
| 13 | 31826648 | 31826648 | 1 | 13_31826648 | ENSG00000287904 | AL138708.1 | 12103 | Downstream | -4.6243581 | 3.76E-06 | 0.01325422 |
| 17 | 73687734 | 73687734 | 1 | 17_73687734 | ENSG00000265935 | AC032019.2 | 23886 | Upstream | 4.62417221 | 3.76E-06 | 0.01326336 |
| 8 | 29220628 | 29220628 | 1 | 8_29220628 | ENSG00000197892 | KIF13B | 0 | INTRON | -4.6240421 | 3.76E-06 | 0.01326894 |
| 2 | 207179648 | 207179648 | 1 | 2_207179648 | ENSG00000224342 | AC007879.1 | 0 | INTRON | -4.623993 | 3.76E-06 | 0.01326933 |
| 1 | 222764315 | 222764315 | 1 | 1_222764315 | ENSG00000287684 | AL392172.2 | 0 | INTRON | 4.62390023 | 3.77E-06 | 0.01327252 |
| 10 | 3261582 | 3261582 | 1 | 10_3261582 | ENSG00000227338 | AL139280.1 | 1763 | Upstream | -4.6238273 | 3.77E-06 | 0.01327444 |
| 10 | 69205523 | 69205523 | 1 | 10_69205523 | ENSG00000156502 | SUPV3L1 | 0 | INTRON | 4.62369522 | 3.77E-06 | 0.01327662 |
| 12 | 45385313 | 45385313 | 1 | 12_45385313 | ENSG00000177119 | ANO6 | 0 | INTRON | -4.623633 | 3.77E-06 | 0.01327662 |
| 13 | 97924428 | 97924428 | 1 | 13_97924428 | ENSG00000270725 | AL356580.1 | 14927 | Upstream | 4.62362706 | 3.77E-06 | 0.01327662 |
| 15 | 87214941 | 87214941 | 1 | 15_87214941 | ENSG00000259560 | AC020687.1 | 110887 | Downstream | 4.62362156 | 3.77E-06 | 0.01327662 |
| 4 | 53281140 | 53281140 | 1 | 4_53281140 | ENSG00000184178 | SCFD2 | 0 | INTRON | -4.6235676 | 3.77E-06 | 0.01327733 |
| 10 | 96402609 | 96402609 | 1 | 10_96402609 | ENSG00000095587 | TLL2 | 0 | INTRON | -4.6235147 | 3.77E-06 | 0.01327797 |
| 16 | 75190278 | 75190278 | 1 | 16_75190278 | ENSG00000213318 | AC009078.1 | 2186 | Downstream | 4.62344379 | 3.77E-06 | 0.01327977 |
| 11 | 127465778 | 127465778 | 1 | 11_127465778 | ENSG00000223315 | RN7SKP279 | 57630 | Downstream | -4.62331 | 3.78E-06 | 0.01328559 |
| 2 | 107926047 | 107926047 | 1 | 2_107926047 | ENSG00000235325 | AC009963.3 | 4799 | Upstream | 4.62317617 | 3.78E-06 | 0.01328853 |
| 3 | 54610659 | 54610659 | 1 | 3_54610659 | ENSG00000157445 | CACNA2D3 | 0 | INTRON | -4.623167 | 3.78E-06 | 0.01328853 |
| 7 | 82711922 | 82711922 | 1 | 7_82711922 | ENSG00000186472 | PCLO | 42089 | Downstream | -4.6231097 | 3.78E-06 | 0.01328853 |
| 8 | 123030618 | 123030618 | 1 | 8_123030618 | ENSG00000136986 | DERL1 | 0 | EXON | 4.6230854 | 3.78E-06 | 0.01328853 |
| 5 | 37816927 | 37816927 | 1 | 5_37816927 | ENSG00000168621 | GDNF | 0 | INTRON | 4.62304987 | 3.78E-06 | 0.01328853 |
| 1 | 235446423 | 235446423 | 1 | 1_235446423 | ENSG00000284770 | TBCE | 0 | INTRON | 4.62295921 | 3.78E-06 | 0.01328939 |
| 6 | 34080933 | 34080933 | 1 | 6_34080933 | ENSG00000124493 | GRM4 | 0 | INTRON | 4.62295095 | 3.78E-06 | 0.01328939 |
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| 7 | 31918384 | 31918384 | 1 | 7_31918384 | ENSG00000154678 | PDE1C | 0 | INTRON | -4.6227021 | 3.79E-06 | 0.01329253 |
| 5 | 101642853 | 101642853 | 1 | 5_101642853 | ENSG00000277506 | RN7SL802P | 60725 | Downstream | -4.6226881 | 3.79E-06 | 0.01329253 |
| 2 | 39799244 | 39799244 | 1 | 2_39799244 | ENSG00000227028 | SLC8A1-AS1 | 0 | INTRON | 4.62268797 | 3.79E-06 | 0.01329253 |
| 10 | 105261222 | 105261222 | 1 | 10_105261222 | ENSG00000156395 | SORCS3 | 0 | INTRON | -4.6226169 | 3.79E-06 | 0.01329435 |
| 13 | 24278365 | 24278365 | 1 | 13_24278365 | ENSG00000273167 | AL359736.1 | 0 | INTRON | -4.6225505 | 3.79E-06 | 0.01329586 |
| 7 | 70492998 | 70492998 | 1 | 7_70492998 | ENSG00000158321 | AUTS2 | 0 | INTRON | 4.62225035 | 3.80E-06 | 0.01331105 |
| 1 | 65533449 | 65533449 | 1 | 1_65533449 | ENSG00000116678 | LEPR | 0 | INTRON | 4.62222822 | 3.80E-06 | 0.01331105 |
| 5 | 69441559 | 69441559 | 1 | 5_69441559 | ENSG00000152939 | MARVELD2 | 0 | EXON | -4.6220978 | 3.80E-06 | 0.01331105 |
| 5 | 96570657 | 96570657 | 1 | 5_96570657 | ENSG00000153113 | CAST | 0 | INTRON | 4.62205652 | 3.80E-06 | 0.01331105 |
| 10 | 128970755 | 128970755 | 1 | 10_128970755 | ENSG00000287361 | AL355537.2 | 2015 | Upstream | -4.6220456 | 3.80E-06 | 0.01331105 |
| 11 | 29181889 | 29181889 | 1 | 11_29181889 | ENSG00000254526 | AC090791.1 | 0 | INTRON | 4.6220008 | 3.80E-06 | 0.01331105 |
| 7 | 128260573 | 128260573 | 1 | 7_128260573 | ENSG00000174697 | LEP | 2944 | Downstream | 4.62199549 | 3.80E-06 | 0.01331105 |
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| 4 | 38051847 | 38051847 | 1 | 4_38051847 | ENSG00000065882 | TBC1D1 | 0 | INTRON | -4.6219293 | 3.80E-06 | 0.01331105 |
| 20 | 22416220 | 22416220 | 1 | 20_22416220 | ENSG00000204684 | AL133464.1 | 0 | INTRON | 4.62187365 | 3.80E-06 | 0.01331188 |
| 7 | 65127584 | 65127584 | 1 | 7_65127584 | ENSG00000164669 | INTS4P1 | 13447 | Upstream | -4.6217107 | 3.81E-06 | 0.01331961 |
| X | 2876897 | 2876897 | 1 | X_2876897 | ENSG00000056998 | GYG2 | 0 | INTRON | -4.6216493 | 3.81E-06 | 0.01332081 |
| 1 | 229457075 | 229457075 | 1 | 1_229457075 | ENSG00000069248 | NUP133 | 0 | INTRON | -4.6215541 | 3.81E-06 | 0.01332301 |
| 22 | 39064436 | 39064436 | 1 | 22_39064436 | ENSG00000259421 | AL022318.2 | 5977 | Upstream | 4.62149921 | 3.81E-06 | 0.01332301 |
| 1 | 85441433 | 85441433 | 1 | 1_85441433 | ENSG00000223653 | AL078459.1 | 0 | INTRON | 4.62143729 | 3.81E-06 | 0.01332301 |
| 4 | 160195096 | 160195096 | 1 | 4_160195096 | ENSG00000250997 | AC093853.1 | 326732 | Downstream | 4.62136923 | 3.81E-06 | 0.01332301 |
| 2 | 174589335 | 174589335 | 1 | 2_174589335 | ENSG00000236449 | AC010894.3 | 0 | INTRON | -4.6213425 | 3.81E-06 | 0.01332301 |
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| 3 | 193705589 | 193705589 | 1 | 3_193705589 | ENSG00000198836 | OPA1 | 7778 | Downstream | 4.62122213 | 3.81E-06 | 0.01332301 |
| 4 | 146208138 | 146208138 | 1 | 4_146208138 | ENSG00000250673 | REELD1 | 6376 | Upstream | 4.62120432 | 3.82E-06 | 0.01332301 |
| 8 | 126677500 | 126677500 | 1 | 8_126677500 | ENSG00000253438 | PCAT1 | 0 | INTRON | -4.6211583 | 3.82E-06 | 0.01332301 |
| 20 | 20882392 | 20882392 | 1 | 20_20882392 | ENSG00000225803 | MRPS11P1 | 27750 | Upstream | 4.62115191 | 3.82E-06 | 0.01332301 |
| 12 | 45133442 | 45133442 | 1 | 12_45133442 | ENSG00000199556 | RNA5SP361 | 15554 | Downstream | 4.62114633 | 3.82E-06 | 0.01332301 |
| 9 | 65472478 | 65472478 | 1 | 9_65472478 | ENSG00000287329 | FP326651.1 | 76106 | Downstream | 4.6210115 | 3.82E-06 | 0.01332479 |
| 1 | 94697376 | 94697376 | 1 | 1_94697376 | ENSG00000224081 | SLC44A3-AS1 | 0 | INTRON | -4.6209977 | 3.82E-06 | 0.01332479 |
| 10 | 96091785 | 96091785 | 1 | 10_96091785 | ENSG00000226688 | ENTPD1-AS1 | 1535 | Upstream | 4.62095109 | 3.82E-06 | 0.01332479 |
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| 12 | 112120973 | 112120973 | 1 | 12_112120973 | ENSG00000135148 | TRAFD1 | 4564 | Upstream | 4.62050988 | 3.83E-06 | 0.01334479 |
| 5 | 180492423 | 180492423 | 1 | 5_180492423 | ENSG00000113300 | CNOT6 | 1955 | Upstream | 4.62044168 | 3.83E-06 | 0.01334644 |
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| 16 | 87270548 | 87270548 | 1 | 16_87270548 | ENSG00000260456 | C16orf95 | 0 | INTRON | 4.62026906 | 3.83E-06 | 0.01334945 |
| 2 | 91530174 | 91530174 | 1 | 2_91530174 | ENSG00000230964 | AC233266.1 | 48303 | Upstream | 4.62023013 | 3.83E-06 | 0.01334945 |
| 2 | 38801379 | 38801379 | 1 | 2_38801379 | ENSG00000163214 | DHX57 | 0 | INTRON | 4.62022493 | 3.83E-06 | 0.01334945 |
| 17 | 15268166 | 15268166 | 1 | 17_15268166 | ENSG00000230971 | AC005703.1 | 0 | EXON | 4.6201263 | 3.84E-06 | 0.01335173 |
| 13 | 46634324 | 46634324 | 1 | 13_46634324 | ENSG00000136141 | LRCH1 | 0 | INTRON | 4.62003057 | 3.84E-06 | 0.01335173 |
| 15 | 26700267 | 26700267 | 1 | 15_26700267 | ENSG00000166206 | GABRB3 | 0 | INTRON | 4.62002562 | 3.84E-06 | 0.01335173 |
| 16 | 64897948 | 64897948 | 1 | 16_64897948 | ENSG00000140937 | CDH11 | 45804 | Downstream | -4.6200197 | 3.84E-06 | 0.01335173 |
| 7 | 48821921 | 48821921 | 1 | 7_48821921 | ENSG00000225705 | AC004899.1 | 24504 | Downstream | -4.6199614 | 3.84E-06 | 0.01335275 |
| 15 | 80497068 | 80497068 | 1 | 15_80497068 | ENSG00000172379 | ARNT2 | 0 | INTRON | -4.6197387 | 3.84E-06 | 0.01336249 |
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| 9 | 134632812 | 134632812 | 1 | 9_134632812 | ENSG00000130635 | COL5A1 | 8961 | Upstream | 4.61949979 | 3.85E-06 | 0.01337429 |
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| 13 | 111190222 | 111190222 | 1 | 13_111190222 | ENSG00000102606 | ARHGEF7 | 0 | INTRON | 4.61918501 | 3.85E-06 | 0.01338792 |
| 17 | 5897113 | 5897113 | 1 | 17_5897113 | ENSG00000285471 | AC007846.2 | 0 | INTRON | 4.61916121 | 3.85E-06 | 0.01338792 |
| 16 | 33977902 | 33977902 | 1 | 16_33977902 | ENSG00000198555 | AC133561.1 | 0 | EXON | 4.61905611 | 3.85E-06 | 0.01339149 |
| 10 | 33092200 | 33092200 | 1 | 10_33092200 | ENSG00000233387 | IATPR | 4056 | Downstream | 4.61901334 | 3.86E-06 | 0.01339149 |
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| 11 | 57550233 | 57550233 | 1 | 11_57550233 | ENSG00000214872 | SMTNL1 | 0 | 3UTR | 4.61892627 | 3.86E-06 | 0.01339149 |
| 11 | 61546765 | 61546765 | 1 | 11_61546765 | ENSG00000011347 | SYT7 | 0 | INTRON | -4.6188356 | 3.86E-06 | 0.01339149 |
| 11 | 1764908 | 1764908 | 1 | 11_1764908 | ENSG00000117984 | CTSD | 335 | Upstream | 4.61879881 | 3.86E-06 | 0.01339149 |
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| 7 | 92692549 | 92692549 | 1 | 7_92692549 | ENSG00000105810 | CDK6 | 0 | INTRON | -4.6183049 | 3.87E-06 | 0.01341041 |
| 1 | 143360574 | 143360574 | 1 | 1_143360574 | ENSG00000277095 | AC242852.2 | 0 | INTRON | 4.61818074 | 3.87E-06 | 0.01341483 |
| 9 | 70093843 | 70093843 | 1 | 9_70093843 | ENSG00000204706 | MAMDC2-AS1 | 0 | EXON | -4.6181025 | 3.87E-06 | 0.01341483 |
| 10 | 9781809 | 9781809 | 1 | 10_9781809 | ENSG00000228636 | LINC02663 | 0 | INTRON | -4.6180808 | 3.87E-06 | 0.01341483 |
| 10 | 46130209 | 46130209 | 1 | 10_46130209 | ENSG00000264204 | AGAP7P | 0 | EXON | -4.6180594 | 3.87E-06 | 0.01341483 |
| 20 | 18261997 | 18261997 | 1 | 20_18261997 | ENSG00000266720 | RN7SL14P | 3146 | Upstream | 4.61802528 | 3.87E-06 | 0.01341483 |
| 20 | 3357341 | 3357341 | 1 | 20_3357341 | ENSG00000088854 | C20orf194 | 0 | INTRON | 4.61796532 | 3.88E-06 | 0.01341598 |
| 5 | 11358397 | 11358397 | 1 | 5_11358397 | ENSG00000169862 | CTNND2 | 0 | INTRON | -4.6176815 | 3.88E-06 | 0.01343135 |
| 19 | 4037548 | 4037548 | 1 | 19_4037548 | ENSG00000105229 | PIAS4 | 0 | INTRON | -4.6176086 | 3.88E-06 | 0.01343135 |
| 17 | 56338218 | 56338218 | 1 | 17_56338218 | ENSG00000153930 | ANKFN1 | 0 | INTRON | -4.6176009 | 3.88E-06 | 0.01343135 |
| 11 | 4573190 | 4573190 | 1 | 11_4573190 | ENSG00000171987 | C11orf40 | 0 | INTRON | 4.61754514 | 3.88E-06 | 0.01343169 |
| 7 | 82774348 | 82774348 | 1 | 7_82774348 | ENSG00000186472 | PCLO | 0 | INTRON | 4.61751128 | 3.88E-06 | 0.01343169 |
| 2 | 232356288 | 232356288 | 1 | 2_232356288 | ENSG00000230122 | ECEL1P3 | 4979 | Upstream | 4.61741015 | 3.89E-06 | 0.01343551 |
| 10 | 56855362 | 56855362 | 1 | 10_56855362 | ENSG00000238707 | AC025039.1 | 259331 | Upstream | 4.6173084 | 3.89E-06 | 0.01343936 |
| 17 | 63984071 | 63984071 | 1 | 17_63984071 | ENSG00000263489 | AC127029.2 | 0 | INTRON | 4.61718681 | 3.89E-06 | 0.01344179 |
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| 4 | 60843007 | 60843007 | 1 | 4_60843007 | ENSG00000249066 | LINC02496 | 46904 | Downstream | 4.61695694 | 3.89E-06 | 0.01345393 |
| 8 | 3849846 | 3849846 | 1 | 8_3849846 | ENSG00000183117 | CSMD1 | 0 | INTRON | 4.61682903 | 3.90E-06 | 0.01345788 |
| 2 | 210531811 | 210531811 | 1 | 2_210531811 | ENSG00000021826 | CPS1 | 0 | INTRON | 4.61681184 | 3.90E-06 | 0.01345788 |
| 10 | 80201630 | 80201630 | 1 | 10_80201630 | ENSG00000122359 | ANXA11 | 0 | INTRON | 4.61666395 | 3.90E-06 | 0.01346473 |
| 4 | 24027751 | 24027751 | 1 | 4_24027751 | ENSG00000109819 | PPARGC1A | 123662 | Upstream | -4.6165929 | 3.90E-06 | 0.01346661 |
| 1 | 205074152 | 205074152 | 1 | 1_205074152 | ENSG00000184144 | CNTN2 | 0 | 3UTR | 4.61646065 | 3.90E-06 | 0.01347226 |

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| 19 | 55658686 | 55658686 | 1 | 19_55658686 | ENSG00000063244 | U2AF2 | 0 | INTRON | 4.61627428 | 3.91E-06 | 0.01347609 |
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| 2 | 135230899 | 135230899 | 1 | 2_135230899 | ENSG00000121988 | ZRANB3 | 0 | 5UTR | 4.61614203 | 3.91E-06 | 0.01347651 |
| 8 | 142964479 | 142964479 | 1 | 8_142964479 | ENSG00000247317 | LY6E-DT | 17258 | Downstream | 4.6161124 | 3.91E-06 | 0.01347651 |
| 20 | 22664089 | 22664089 | 1 | 20_22664089 | ENSG00000230400 | LINC01747 | 4390 | Downstream | 4.6161035 | 3.91E-06 | 0.01347651 |
| 13 | 58030389 | 58030389 | 1 | 13_58030389 | ENSG00000202422 | RNA5SP30 | 38925 | Downstream | -4.616034 | 3.91E-06 | 0.0134783 |
| 5 | 9156111 | 9156111 | 1 | 5_9156111 | ENSG00000112902 | SEMA5A | 0 | INTRON | -4.6158618 | 3.91E-06 | 0.01347934 |
| 18 | 12048123 | 12048123 | 1 | 18_12048123 | ENSG00000267292 | AP001542.2 | 2185 | Downstream | 4.61585183 | 3.91E-06 | 0.01347934 |
| 3 | 43774075 | 43774075 | 1 | 3_43774075 | ENSG00000235886 | AC006055.1 | 4885 | Downstream | 4.61582314 | 3.92E-06 | 0.01347934 |
| 17 | 42973514 | 42973514 | 1 | 17_42973514 | ENSG00000267060 | PTGES3L | 0 | INTRON | 4.61582056 | 3.92E-06 | 0.01347934 |
| 9 | 18822929 | 18822929 | 1 | 9_18822929 | ENSG00000178031 | ADAMTSL1 | 0 | INTRON | -4.6158078 | 3.92E-06 | 0.01347934 |
| 9 | 70103509 | 70103509 | 1 | 9_70103509 | ENSG00000204706 | MAMDC2-AS1 | 0 | INTRON | 4.61566906 | 3.92E-06 | 0.01348365 |
| 14 | 28699274 | 28699274 | 1 | 14_28699274 | ENSG00000258282 | BTF3P2 | 25547 | Upstream | 4.61563083 | 3.92E-06 | 0.01348365 |
| 15 | 57025631 | 57025631 | 1 | 15_57025631 | ENSG00000140262 | TCF12 | 0 | INTRON | -4.6156154 | 3.92E-06 | 0.01348365 |
| 18 | 70718894 | 70718894 | 1 | 18_70718894 | ENSG00000263417 | GTSCR1 | 68150 | Upstream | 4.61544246 | 3.92E-06 | 0.01349216 |
| 16 | 13960071 | 13960071 | 1 | 16_13960071 | ENSG00000263234 | AC010401.2 | 5246 | Downstream | -4.6152501 | 3.93E-06 | 0.01350063 |
| 2 | 24692891 | 24692891 | 1 | 2_24692891 | ENSG00000084676 | NCOA1 | 0 | INTRON | -4.6152281 | 3.93E-06 | 0.01350063 |
| 2 | 201668706 | 201668706 | 1 | 2_201668706 | ENSG00000082126 | MPP4 | 0 | INTRON | -4.6150289 | 3.93E-06 | 0.01351086 |
| 9 | 13852958 | 13852958 | 1 | 9_13852958 | ENSG00000226197 | AL583785.1 | 16387 | Downstream | -4.6148914 | 3.93E-06 | 0.01351707 |
| 5 | 146549057 | 146549057 | 1 | 5_146549057 | ENSG00000250407 | AC008728.1 | 14168 | Upstream | -4.6148066 | 3.93E-06 | 0.01351986 |
| 18 | 60502654 | 60502654 | 1 | 18_60502654 | ENSG00000285681 | AC091576.1 | 0 | INTRON | -4.614753 | 3.94E-06 | 0.01352062 |
| 3 | 195499266 | 195499266 | 1 | 3_195499266 | ENSG00000184203 | PPP1R2 | 15161 | Downstream | -4.6146696 | 3.94E-06 | 0.01352332 |
| X | 119771752 | 119771752 | 1 | X_119771752 | ENSG00000187808 | SOWAHD | 11550 | Downstream | 4.61441279 | 3.94E-06 | 0.01353348 |
| 1 | 208891246 | 208891246 | 1 | 1_208891246 | ENSG00000236950 | LINC01774 | 81207 | Upstream | -4.614369 | 3.94E-06 | 0.01353348 |
| 18 | 64711505 | 64711505 | 1 | 18_64711505 | ENSG00000275448 | AC027506.1 | 33512 | Upstream | -4.6143651 | 3.94E-06 | 0.01353348 |
| 4 | 134221054 | 134221054 | 1 | 4_134221054 | ENSG00000251199 | AC015631.1 | 0 | INTRON | -4.6143459 | 3.94E-06 | 0.01353348 |
| 9 | 19144189 | 19144189 | 1 | 9_19144189 | ENSG00000147872 | PLIN2 | 0 | INTRON | 4.61424814 | 3.95E-06 | 0.01353713 |
| 19 | 11450690 | 11450690 | 1 | 19_11450690 | ENSG00000130175 | PRKCSH | 0 | 3UTR | 4.61407423 | 3.95E-06 | 0.01354266 |
| 2 | 229502816 | 229502816 | 1 | 2_229502816 | ENSG00000187957 | DNER | 0 | INTRON | 4.61401153 | 3.95E-06 | 0.01354266 |
| 12 | 119428761 | 119428761 | 1 | 12_119428761 | ENSG00000183273 | CCDC60 | 0 | EXON | -4.6140025 | 3.95E-06 | 0.01354266 |
| 1 | 44780748 | 44780748 | 1 | 1_44780748 | ENSG00000234093 | RPS15AP11 | 33 | Upstream | 4.6139958 | 3.95E-06 | 0.01354266 |
| 8 | 41584260 | 41584260 | 1 | 8_41584260 | ENSG00000158669 | GPAT4 | 0 | INTRON | 4.61390897 | 3.95E-06 | 0.01354559 |
| 8 | 49223845 | 49223845 | 1 | 8_49223845 | ENSG00000253474 | AC044893.1 | 0 | INTRON | -4.6138349 | 3.95E-06 | 0.01354769 |
| 6 | 167367268 | 167367268 | 1 | 6_167367268 | ENSG00000203690 | TCP10 | 0 | INTRON | -4.6137647 | 3.95E-06 | 0.01354954 |
| 16 | 25399015 | 25399015 | 1 | 16_25399015 | ENSG00000261636 | LINC02191 | 20796 | Downstream | 4.61358179 | 3.96E-06 | 0.01355759 |
| 1 | 216915051 | 216915051 | 1 | 1_216915051 | ENSG00000196482 | ESRRG | 0 | INTRON | 4.61351003 | 3.96E-06 | 0.01355759 |
| 3 | 71823419 | 71823419 | 1 | 3_71823419 | ENSG00000239250 | RN7SL271P | 3757 | Upstream | -4.6134793 | 3.96E-06 | 0.01355759 |
| 2 | 61279487 | 61279487 | 1 | 2_61279487 | ENSG00000115464 | USP34 | 0 | INTRON | 4.61347407 | 3.96E-06 | 0.01355759 |
| 2 | 6457339 | 6457339 | 1 | 2_6457339 | ENSG00000226488 | LINC01824 | 38311 | Upstream | 4.61335913 | 3.96E-06 | 0.01355969 |
| X | 102552206 | 102552206 | 1 | X_102552206 | ENSG00000196970 | NXF4 | 0 | INTRON | 4.61335837 | 3.96E-06 | 0.01355969 |
| 8 | 13664781 | 13664781 | 1 | 8_13664781 | ENSG00000255457 | AC022880.2 | 30792 | Upstream | 4.61309893 | 3.97E-06 | 0.01357208 |
| 5 | 69099704 | 69099704 | 1 | 5_69099704 | ENSG00000145740 | SLC30A5 | 0 | INTRON | 4.61308502 | 3.97E-06 | 0.01357208 |
| 4 | 105432235 | 105432235 | 1 | 4_105432235 | ENSG00000138777 | PPA2 | 0 | INTRON | -4.6126499 | 3.98E-06 | 0.0135978 |
| 1 | 14460392 | 14460392 | 1 | 1_14460392 | ENSG00000189337 | KAZN | 0 | INTRON | -4.6125481 | 3.98E-06 | 0.01360143 |
| 2 | 172430528 | 172430528 | 1 | 2_172430528 | ENSG00000091409 | ITGA6 | 0 | INTRON | 4.61251086 | 3.98E-06 | 0.01360143 |
| 5 | 24346177 | 24346177 | 1 | 5_24346177 | ENSG00000250694 | AC010387.1 | 6131 | Downstream | 4.6123286 | 3.98E-06 | 0.01361063 |
| 3 | 75143632 | 75143632 | 1 | 3_75143632 | ENSG00000242638 | RN7SL294P | 39121 | Downstream | 4.61219514 | 3.98E-06 | 0.01361664 |
| 7 | 3809877 | 3809877 | 1 | 7_3809877 | ENSG00000146555 | SDK1 | 0 | INTRON | 4.6121525 | 3.99E-06 | 0.0136167 |
| 1 | 3150514 | 3150514 | 1 | 1_3150514 | ENSG00000142611 | PRDM16 | 0 | INTRON | -4.6118944 | 3.99E-06 | 0.0136268 |
| 5 | 36291505 | 36291505 | 1 | 5_36291505 | ENSG00000164188 | RANBP3L | 0 | INTRON | 4.61189384 | 3.99E-06 | 0.0136268 |
| 19 | 3166422 | 3166422 | 1 | 19_3166422 | ENSG00000060558 | GNA15 | 2673 | Downstream | -4.6118662 | 3.99E-06 | 0.0136268 |
| 20 | 21177278 | 21177278 | 1 | 20_21177278 | ENSG00000088970 | KIZ | 0 | INTRON | -4.6117909 | 3.99E-06 | 0.0136268 |
| 20 | 46879296 | 46879296 | 1 | 20_46879296 | ENSG00000235922 | AL354766.1 | 15192 | Upstream | -4.6117386 | 3.99E-06 | 0.0136268 |
| 14 | 54496209 | 54496209 | 1 | 14_54496209 | ENSG00000197045 | GMFB | 7183 | Upstream | 4.61171184 | 3.99E-06 | 0.0136268 |
| 3 | 82507065 | 82507065 | 1 | 3_82507065 | ENSG00000239440 | LINC02008 | 43390 | Downstream | 4.61170654 | 3.99E-06 | 0.0136268 |
| 17 | 60710500 | 60710500 | 1 | 17_60710500 | ENSG00000141376 | BCAS3 | 0 | INTRON | 4.61151788 | 4.00E-06 | 0.01363378 |
| 3 | 189942871 | 189942871 | 1 | 3_189942871 | ENSG00000090530 | P3H2 | 13856 | Downstream | 4.61151684 | 4.00E-06 | 0.01363378 |
| 5 | 134578990 | 134578990 | 1 | 5_134578990 | ENSG00000043143 | JADE2 | 0 | 3UTR | -4.6113639 | 4.00E-06 | 0.01363947 |
| 7 | 99150475 | 99150475 | 1 | 7_99150475 | ENSG00000198742 | SMURF1 | 6375 | Upstream | -4.6113467 | 4.00E-06 | 0.01363947 |
| 9 | 2196695 | 2196695 | 1 | 9_2196695 | ENSG00000080503 | SMARCA2 | 3071 | Downstream | 4.61124623 | 4.00E-06 | 0.01364099 |
| 4 | 40362281 | 40362281 | 1 | 4_40362281 | ENSG00000174343 | CHRNA9 | 7064 | Downstream | 4.61124027 | 4.00E-06 | 0.01364099 |
| 5 | 164793441 | 164793441 | 1 | 5_164793441 | ENSG00000241956 | AC109466.1 | 0 | INTRON | 4.61090704 | 4.01E-06 | 0.01366014 |
| 2 | 91627196 | 91627196 | 1 | 2_91627196 | ENSG00000143429 | LSP1P4 | 0 | INTRON | -4.6107741 | 4.01E-06 | 0.01366096 |
| 8 | 7242764 | 7242764 | 1 | 8_7242764 | ENSG00000177306 | OR7E125P | 3961 | Downstream | -4.6107219 | 4.01E-06 | 0.01366096 |
| 4 | 152392626 | 152392626 | 1 | 4_152392626 | ENSG00000109670 | FBXW7 | 0 | INTRON | 4.61071535 | 4.01E-06 | 0.01366096 |
| 13 | 59762845 | 59762845 | 1 | 13_59762845 | ENSG00000139734 | DIAPH3 | 0 | INTRON | 4.61070376 | 4.01E-06 | 0.01366096 |
| 5 | 9249024 | 9249024 | 1 | 5_9249024 | ENSG00000112902 | SEMA5A | 0 | INTRON | 4.61068655 | 4.01E-06 | 0.01366096 |
| 22 | 29593391 | 29593391 | 1 | 22_29593391 | ENSG00000186575 | NF2 | 10164 | Upstream | 4.61061267 | 4.01E-06 | 0.0136624 |
| 2 | 152388283 | 152388283 | 1 | 2_152388283 | ENSG00000157827 | FMNL2 | 0 | INTRON | 4.61055361 | 4.02E-06 | 0.0136624 |
| 9 | 125829859 | 125829859 | 1 | 9_125829859 | ENSG00000167081 | PBX3 | 0 | INTRON | 4.61051929 | 4.02E-06 | 0.0136624 |
| 10 | 101398913 | 101398913 | 1 | 10_101398913 | ENSG00000166167 | BTRC | 0 | INTRON | 4.61049848 | 4.02E-06 | 0.0136624 |
| 10 | 123018683 | 123018683 | 1 | 10_123018683 | ENSG00000196177 | ACADSB | 0 | INTRON | 4.61022653 | 4.02E-06 | 0.01367532 |
| 18 | 45666740 | 45666740 | 1 | 18_45666740 | ENSG00000132874 | SLC14A2 | 0 | INTRON | 4.61020474 | 4.02E-06 | 0.01367532 |
| 4 | 133266417 | 133266417 | 1 | 4_133266417 | ENSG00000286467 | AC108052.1 | 3302 | Upstream | -4.6101774 | 4.02E-06 | 0.01367532 |
| 1 | 11049617 | 11049617 | 1 | 1_11049617 | ENSG00000009724 | MASP2 | 2378 | Upstream | -4.610008 | 4.03E-06 | 0.01368306 |
| 6 | 4876457 | 4876457 | 1 | 6_4876457 | ENSG00000153046 | CDYL | 0 | INTRON | 4.60995684 | 4.03E-06 | 0.01368306 |
| 16 | 21725347 | 21725347 | 1 | 16_21725347 | ENSG00000155719 | OTOA | 0 | INTRON | 4.60993522 | 4.03E-06 | 0.01368306 |
| 11 | 27026656 | 27026656 | 1 | 11_27026656 | ENSG00000129151 | BBOX1 | 14068 | Upstream | -4.6097573 | 4.03E-06 | 0.01368692 |
| X | 44568715 | 44568715 | 1 | X_44568715 | ENSG00000069509 | FUNDC1 | 25856 | Upstream | -4.6097536 | 4.03E-06 | 0.01368692 |
| 2 | 136664245 | 136664245 | 1 | 2_136664245 | ENSG00000144229 | THSD7B | 101299 | Upstream | 4.609752 | 4.03E-06 | 0.01368692 |
| 3 | 117398372 | 117398372 | 1 | 3_117398372 | ENSG00000206889 | RNU6-1200P | 145832 | Upstream | -4.6095879 | 4.03E-06 | 0.0136912 |
| 1 | 48041584 | 48041584 | 1 | 1_48041584 | ENSG00000226133 | LINC02794 | 9074 | Upstream | -4.6095826 | 4.03E-06 | 0.0136912 |
| 17 | 56839906 | 56839906 | 1 | 17_56839906 | ENSG00000153933 | DGKE | 0 | INTRON | -4.6095377 | 4.04E-06 | 0.0136912 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | 176380727 | 176380727 | 1 | 4_176380727 | ENSG00000129128 | SPCS3 | 48482 | Downstream | 4.60949371 | 4.04E-06 | 0.0136912 |
| 11 | 10984017 | 10984017 | 1 | 11_10984017 | ENSG00000254401 | LINC02752 | 36865 | Upstream | 4.60947683 | 4.04E-06 | 0.0136912 |
| 21 | 35952259 | 35952259 | 1 | 21_35952259 | ENSG00000159216 | RUNX1 | 0 | INTRON | -4.6094382 | 4.04E-06 | 0.0136912 |
| 4 | 170857545 | 170857545 | 1 | 4_170857545 | ENSG00000251961 | RNU6ATAC13P | 33921 | Upstream | 4.60917854 | 4.04E-06 | 0.01370558 |
| 11 | 35165514 | 35165514 | 1 | 11_35165514 | ENSG00000026508 | CD44 | 0 | INTRON | 4.60898991 | 4.05E-06 | 0.01371515 |
| 5 | 4740255 | 4740255 | 1 | 5_4740255 | ENSG00000248973 | AC106799.2 | 0 | INTRON | -4.6089507 | 4.05E-06 | 0.01371515 |
| 15 | 33607853 | 33607853 | 1 | 15_33607853 | ENSG00000198838 | RYR3 | 0 | INTRON | -4.6086432 | 4.05E-06 | 0.01373028 |
| 4 | 167326276 | 167326276 | 1 | 4_167326276 | ENSG00000250150 | AC079349.1 | 17487 | Upstream | 4.60863847 | 4.05E-06 | 0.01373028 |
| 6 | 67278377 | 67278377 | 1 | 6_67278377 | ENSG00000212229 | AL591004.1 | 67897 | Upstream | -4.6085754 | 4.05E-06 | 0.01373144 |
| 12 | 132820407 | 132820407 | 1 | 12_132820407 | ENSG00000090615 | GOLGA3 | 0 | INTRON | 4.60851939 | 4.06E-06 | 0.01373144 |
| 1 | 54466913 | 54466913 | 1 | 1_54466913 | ENSG00000232245 | AL035415.1 | 46053 | Downstream | 4.60849675 | 4.06E-06 | 0.01373144 |
| X | 143014268 | 143014268 | 1 | X_143014268 | ENSG00000189326 | SPANXN4 | 11649 | Upstream | -4.6081385 | 4.06E-06 | 0.01375238 |
| 15 | 46401137 | 46401137 | 1 | 15_46401137 | ENSG00000287704 | AC012405.1 | 9171 | Upstream | 4.60806487 | 4.06E-06 | 0.01375366 |
| 1 | 178885271 | 178885271 | 1 | 1_178885271 | ENSG00000116191 | RALGPS2 | 0 | 3UTR | 4.60803646 | 4.06E-06 | 0.01375366 |
| 2 | 21724859 | 21724859 | 1 | 2_21724859 | ENSG00000233005 | AC018742.1 | 0 | INTRON | -4.6078186 | 4.07E-06 | 0.01376533 |
| 9 | 105508143 | 105508143 | 1 | 9_105508143 | ENSG00000106701 | FSD1L | 0 | INTRON | -4.6076024 | 4.07E-06 | 0.01377 |
| 3 | 196357022 | 196357022 | 1 | 3_196357022 | ENSG00000163960 | UBXN7 | 0 | INTRON | 4.60757595 | 4.07E-06 | 0.01377 |
| 5 | 57539326 | 57539326 | 1 | 5_57539326 | ENSG00000250961 | AC025470.2 | 4822 | Downstream | 4.60753329 | 4.07E-06 | 0.01377 |
| 7 | 107311326 | 107311326 | 1 | 7_107311326 | ENSG00000164597 | COG5 | 0 | INTRON | -4.6075125 | 4.08E-06 | 0.01377 |
| 3 | 162492516 | 162492516 | 1 | 3_162492516 | ENSG00000241874 | TOMM22P6 | 5567 | Upstream | -4.6074855 | 4.08E-06 | 0.01377 |
| 14 | 105483592 | 105483592 | 1 | 14_105483592 | ENSG00000213145 | CRIP1 | 2724 | Upstream | -4.6074769 | 4.08E-06 | 0.01377 |
| 16 | 10887581 | 10887581 | 1 | 16_10887581 | ENSG00000262151 | AC133065.1 | 0 | INTRON | -4.6074589 | 4.08E-06 | 0.01377 |
| 2 | 46120730 | 46120730 | 1 | 2_46120730 | ENSG00000171132 | PRKCE | 0 | INTRON | 4.60740837 | 4.08E-06 | 0.01377061 |
| 7 | 60913146 | 60913146 | 1 | 7_60913146 | ENSG00000233918 | AC128676.1 | 1362214 | Downstream | -4.6073113 | 4.08E-06 | 0.0137743 |
| 14 | 50055712 | 50055712 | 1 | 14_50055712 | ENSG00000214900 | LINC01588 | 0 | INTRON | -4.6071085 | 4.08E-06 | 0.01378272 |
| 2 | 177937420 | 177937420 | 1 | 2_177937420 | ENSG00000128655 | PDE11A | 0 | INTRON | 4.60710175 | 4.08E-06 | 0.01378272 |
| 19 | 20223738 | 20223738 | 1 | 19_20223738 | ENSG00000267383 | AC011447.3 | 0 | INTRON | -4.6069782 | 4.09E-06 | 0.01378817 |
| 10 | 26125547 | 26125547 | 1 | 10_26125547 | ENSG00000095777 | MYO3A | 0 | 3UTR | 4.60686805 | 4.09E-06 | 0.01379121 |
| 13 | 49746223 | 49746223 | 1 | 13_49746223 | ENSG00000102753 | KPNA3 | 0 | INTRON | 4.60684978 | 4.09E-06 | 0.01379121 |
| 1 | 35519211 | 35519211 | 1 | 1_35519211 | ENSG00000142687 | KIAA0319L | 0 | INTRON | -4.6067727 | 4.09E-06 | 0.01379183 |
| 20 | 60340896 | 60340896 | 1 | 20_60340896 | ENSG00000228340 | MIR646HG | 0 | INTRON | -4.6067581 | 4.09E-06 | 0.01379183 |
| 8 | 110148121 | 110148121 | 1 | 8_110148121 | ENSG00000240590 | RPSAP48 | 42157 | Upstream | -4.6062952 | 4.10E-06 | 0.01381981 |
| 2 | 132117337 | 132117337 | 1 | 2_132117337 | ENSG00000225594 | AC098826.1 | 14773 | Downstream | 4.60620378 | 4.10E-06 | 0.01382088 |
| 5 | 1636762 | 1636762 | 1 | 5_1636762 | ENSG00000188002 | AC026412.1 | 2757 | Upstream | -4.606154 | 4.10E-06 | 0.01382088 |
| 1 | 167808927 | 167808927 | 1 | 1_167808927 | ENSG00000143199 | ADCY10 | 458 | Downstream | 4.60610502 | 4.10E-06 | 0.01382088 |
| X | 82933475 | 82933475 | 1 | X_82933475 | ENSG00000236365 | AL008987.1 | 57590 | Downstream | 4.60609292 | 4.10E-06 | 0.01382088 |
| 4 | 99987154 | 99987154 | 1 | 4_99987154 | ENSG00000245322 | AC097460.1 | 0 | INTRON | 4.60607306 | 4.10E-06 | 0.01382088 |
| 2 | 205613178 | 205613178 | 1 | 2_205613178 | ENSG00000116117 | PARD3B | 0 | INTRON | -4.6059689 | 4.11E-06 | 0.01382506 |
| 2 | 80546020 | 80546020 | 1 | 2_80546020 | ENSG00000066032 | CTNNA2 | 0 | EXON | 4.60577011 | 4.11E-06 | 0.01383554 |
| 8 | 14580959 | 14580959 | 1 | 8_14580959 | ENSG00000185053 | SGCZ | 0 | INTRON | -4.6057073 | 4.11E-06 | 0.01383556 |
| 11 | 291411 | 291411 | 1 | 11_291411 | ENSG00000142102 | PGGHG | 0 | EXON | 4.60568743 | 4.11E-06 | 0.01383556 |
| 9 | 11257188 | 11257188 | 1 | 9_11257188 | ENSG00000230365 | AL451129.1 | 18125 | Downstream | 4.60546549 | 4.12E-06 | 0.01384657 |
| 2 | 157742113 | 157742113 | 1 | 2_157742113 | ENSG00000115170 | ACVR1 | 0 | INTRON | 4.60543059 | 4.12E-06 | 0.01384657 |
| 5 | 30967302 | 30967302 | 1 | 5_30967302 | ENSG00000241668 | RPL19P11 | 86262 | Upstream | 4.60539851 | 4.12E-06 | 0.01384657 |
| 20 | 21339249 | 21339249 | 1 | 20_21339249 | ENSG00000088930 | XRN2 | 0 | INTRON | 4.60492187 | 4.13E-06 | 0.01387526 |
| 12 | 22401365 | 22401365 | 1 | 12_22401365 | ENSG00000111728 | ST8SIA1 | 0 | INTRON | 4.60488557 | 4.13E-06 | 0.01387526 |
| 1 | 20966720 | 20966720 | 1 | 1_20966720 | ENSG00000075151 | EIF4G3 | 0 | INTRON | -4.6047843 | 4.13E-06 | 0.01387927 |
| 12 | 81430308 | 81430308 | 1 | 12_81430308 | ENSG00000258162 | AC069228.1 | 0 | EXON | -4.6046652 | 4.13E-06 | 0.01388376 |
| 17 | 35600492 | 35600492 | 1 | 17_35600492 | ENSG00000006125 | AP2B1 | 0 | INTRON | -4.6046032 | 4.13E-06 | 0.01388376 |
| 9 | 21633469 | 21633469 | 1 | 9_21633469 | ENSG00000227443 | AL137022.1 | 4815 | Upstream | 4.60459372 | 4.13E-06 | 0.01388376 |
| 13 | 87854021 | 87854021 | 1 | 13_87854021 | ENSG00000232204 | TET1P1 | 36150 | Downstream | 4.60422952 | 4.14E-06 | 0.01390459 |
| Y | 10105650 | 10105650 | 1 | Y_10105650 | ENSG00000252289 | RNA5SP519 | 12657 | Upstream | -4.6041995 | 4.14E-06 | 0.01390459 |
| 13 | 110772584 | 110772584 | 1 | 13_110772584 | ENSG00000225239 | RPL21P107 | 9451 | Upstream | -4.6041568 | 4.14E-06 | 0.0139047 |
| 21 | 40217403 | 40217403 | 1 | 21_40217403 | ENSG00000171587 | DSCAM | 0 | INTRON | 4.6040642 | 4.14E-06 | 0.01390814 |
| 8 | 94713796 | 94713796 | 1 | 8_94713796 | ENSG00000199701 | Y_RNA | 0 | EXON | -4.6039605 | 4.15E-06 | 0.01391233 |
| 1 | 92620082 | 92620082 | 1 | 1_92620082 | ENSG00000067208 | EVI5 | 0 | INTRON | -4.6038804 | 4.15E-06 | 0.01391478 |
| 7 | 138818662 | 138818662 | 1 | 7_138818662 | ENSG00000214128 | TMEM213 | 0 | INTRON | 4.60380778 | 4.15E-06 | 0.01391478 |
| 5 | 98933214 | 98933214 | 1 | 5_98933214 | ENSG00000248489 | LINC02062 | 0 | INTRON | 4.60376349 | 4.15E-06 | 0.01391478 |
| 16 | 66050246 | 66050246 | 1 | 16_66050246 | ENSG00000261234 | AC025281.1 | 111793 | Upstream | 4.60372809 | 4.15E-06 | 0.01391478 |
| 7 | 37294305 | 37294305 | 1 | 7_37294305 | ENSG00000155849 | ELMO1 | 0 | INTRON | -4.6037186 | 4.15E-06 | 0.01391478 |
| 6 | 29126563 | 29126563 | 1 | 6_29126563 | ENSG00000227206 | AL645937.2 | 0 | INTRON | 4.60341926 | 4.16E-06 | 0.01393037 |
| 3 | 66208111 | 66208111 | 1 | 3_66208111 | ENSG00000144741 | SLC25A26 | 0 | INTRON | 4.60340355 | 4.16E-06 | 0.01393037 |
| 12 | 70448915 | 70448915 | 1 | 12_70448915 | ENSG00000222405 | RNU4-65P | 4992 | Upstream | 4.60335141 | 4.16E-06 | 0.01393111 |
| 9 | 97671872 | 97671872 | 1 | 9_97671872 | ENSG00000136937 | NCBP1 | 0 | 3UTR | 4.60324962 | 4.16E-06 | 0.01393472 |
| 4 | 29418102 | 29418102 | 1 | 4_29418102 | ENSG00000251373 | AC092593.2 | 10090 | Downstream | 4.60321551 | 4.16E-06 | 0.01393472 |
| 7 | 32267059 | 32267059 | 1 | 7_32267059 | ENSG00000154678 | PDE1C | 0 | INTRON | 4.60314314 | 4.16E-06 | 0.01393683 |
| 4 | 11625001 | 11625001 | 1 | 4_11625001 | ENSG00000249631 | AC005699.1 | 712 | Upstream | 4.6030503 | 4.16E-06 | 0.0139403 |
| 9 | 126650699 | 126650699 | 1 | 9_126650699 | ENSG00000136944 | LMX1B | 0 | INTRON | -4.6028872 | 4.17E-06 | 0.01394848 |
| 6 | 26461566 | 26461566 | 1 | 6_26461566 | ENSG00000112763 | BTN2A1 | 0 | INTRON | 4.60283042 | 4.17E-06 | 0.01394954 |
| 7 | 62335679 | 62335679 | 1 | 7_62335679 | ENSG00000233918 | AC128676.1 | 60001 | Upstream | -4.6025815 | 4.17E-06 | 0.01396279 |
| 16 | 19127022 | 19127022 | 1 | 16_19127022 | ENSG00000261427 | AC099518.3 | 0 | INTRON | 4.6025509 | 4.17E-06 | 0.01396279 |
| 8 | 24700662 | 24700662 | 1 | 8_24700662 | ENSG00000253535 | AC120193.1 | 0 | INTRON | 4.60234829 | 4.18E-06 | 0.01397363 |
| 7 | 110692093 | 110692093 | 1 | 7_110692093 | ENSG00000184903 | IMMP2L | 0 | INTRON | 4.6022214 | 4.18E-06 | 0.01397827 |
| Y | 11491306 | 11491306 | 1 | Y_11491306 | ENSG00000271375 | AC134879.2 | 17069 | Upstream | 4.60219739 | 4.18E-06 | 0.01397827 |
| 4 | 128819469 | 128819469 | 1 | 4_128819469 | ENSG00000077684 | JADE1 | 0 | INTRON | -4.602048 | 4.18E-06 | 0.01398299 |
| 5 | 32305827 | 32305827 | 1 | 5_32305827 | ENSG00000150712 | MTMR12 | 0 | INTRON | 4.60201041 | 4.18E-06 | 0.01398299 |
| 2 | 48022619 | 48022619 | 1 | 2_48022619 | ENSG00000230773 | AC092650.1 | 0 | INTRON | -4.6020043 | 4.18E-06 | 0.01398299 |
| 5 | 41649048 | 41649048 | 1 | 5_41649048 | ENSG00000251478 | AC008817.1 | 61261 | Upstream | -4.6019552 | 4.19E-06 | 0.01398354 |
| 16 | 28759628 | 28759628 | 1 | 16_28759628 | ENSG00000196993 | NPIPB9 | 0 | INTRON | -4.6017665 | 4.19E-06 | 0.01399348 |
| 15 | 52353866 | 52353866 | 1 | 15_52353866 | ENSG00000197535 | MYO5A | 0 | INTRON | 4.60169214 | 4.19E-06 | 0.01399404 |
| 2 | 36245200 | 36245200 | 1 | 2_36245200 | ENSG00000233752 | AC009414.1 | 54187 | Downstream | -4.6016368 | 4.19E-06 | 0.01399404 |
| 15 | 75710665 | 75710665 | 1 | 15_75710665 | ENSG00000173546 | CSPG4 | 0 | INTRON | 4.60156871 | 4.19E-06 | 0.01399404 |
| 1 | 120015156 | 120015156 | 1 | 1_120015156 | ENSG00000134250 | NOTCH2 | 0 | INTRON | 4.60155946 | 4.19E-06 | 0.01399404 |
| 3 | 11439129 | 11439129 | 1 | 3_11439129 | ENSG00000197548 | ATG7 | 0 | INTRON | -4.6015539 | 4.19E-06 | 0.01399404 |
| 7 | 97256591 | 97256591 | 1 | 7_97256591 | ENSG00000224475 | AC073900.1 | 55108 | Upstream | 4.60147147 | 4.20E-06 | 0.01399571 |

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| 12 | 27414935 | 27414935 | 1 | 12_27414935 | ENSG00000245311 | ARNTL2-AS1 | 0 | INTRON | 4.60144721 | 4.20E-06 | 0.01399571 |
| 2 | 149236618 | 149236618 | 1 | 2_149236618 | ENSG00000150556 | LYPD6B | 21356 | Downstream | -4.6011307 | 4.20E-06 | 0.01401425 |
| 2 | 9186141 | 9186141 | 1 | 2_9186141 | ENSG00000151693 | ASAP2 | 20623 | Upstream | 4.60066086 | 4.21E-06 | 0.01404313 |
| 10 | 25040728 | 25040728 | 1 | 10_25040728 | ENSG00000285859 | AL512598.2 | 0 | INTRON | 4.60061236 | 4.21E-06 | 0.01404313 |
| 14 | 86173125 | 86173125 | 1 | 14_86173125 | ENSG00000258733 | LINC02328 | 11625 | Downstream | -4.6005616 | 4.21E-06 | 0.01404313 |
| 8 | 78789687 | 78789687 | 1 | 8_78789687 | ENSG00000104432 | IL7 | 0 | INTRON | 4.600472 | 4.22E-06 | 0.01404313 |
| 17 | 77724672 | 77724672 | 1 | 17_77724672 | ENSG00000267790 | LINC01987 | 0 | EXON | -4.6004342 | 4.22E-06 | 0.01404313 |
| 6 | 85446263 | 85446263 | 1 | 6_85446263 | ENSG00000135318 | NT5E | 3320 | Upstream | 4.60042576 | 4.22E-06 | 0.01404313 |
| 14 | 82091746 | 82091746 | 1 | 14_82091746 | ENSG00000259035 | AL355838.1 | 61397 | Downstream | 4.60041636 | 4.22E-06 | 0.01404313 |
| 7 | 21085550 | 21085550 | 1 | 7_21085550 | ENSG00000285592 | AC080068.1 | 56737 | Upstream | -4.6002442 | 4.22E-06 | 0.01404562 |
| 6 | 19067130 | 19067130 | 1 | 6_19067130 | ENSG00000217379 | AL589647.1 | 76564 | Upstream | 4.60022612 | 4.22E-06 | 0.01404562 |
| 3 | 114924080 | 114924080 | 1 | 3_114924080 | ENSG00000181722 | ZBTB20 | 0 | INTRON | 4.60022154 | 4.22E-06 | 0.01404562 |
| 3 | 27473280 | 27473280 | 1 | 3_27473280 | ENSG00000033867 | SLC4A7 | 0 | INTRON | 4.6002165 | 4.22E-06 | 0.01404562 |
| 13 | 72990475 | 72990475 | 1 | 13_72990475 | ENSG00000083535 | PIBF1 | 0 | INTRON | 4.60016815 | 4.22E-06 | 0.01404613 |
| 8 | 102869366 | 102869366 | 1 | 8_102869366 | ENSG00000155096 | AZIN1 | 0 | INTRON | 4.60000885 | 4.22E-06 | 0.01405413 |
| 7 | 96118530 | 96118530 | 1 | 7_96118530 | ENSG00000279067 | AC002540.1 | 116 | Upstream | 4.59979694 | 4.23E-06 | 0.01406568 |
| 11 | 1012635 | 1012635 | 1 | 11_1012635 | ENSG00000184956 | MUC6 | 187 | Downstream | 4.59951443 | 4.23E-06 | 0.01407823 |
| 13 | 113735994 | 113735994 | 1 | 13_113735994 | ENSG00000185974 | GRK1 | 0 | 3UTR | -4.5994688 | 4.24E-06 | 0.01407823 |
| 3 | 58610300 | 58610300 | 1 | 3_58610300 | ENSG00000168309 | FAM107A | 0 | INTRON | 4.59945747 | 4.24E-06 | 0.01407823 |
| 2 | 120852338 | 120852338 | 1 | 2_120852338 | ENSG00000074047 | GLI2 | 0 | INTRON | 4.59944838 | 4.24E-06 | 0.01407823 |
| 11 | 16323579 | 16323579 | 1 | 11_16323579 | ENSG00000110693 | SOX6 | 0 | INTRON | -4.5994042 | 4.24E-06 | 0.01407846 |
| 9 | 101192056 | 101192056 | 1 | 9_101192056 | ENSG00000148123 | PLPPR1 | 0 | INTRON | 4.59933541 | 4.24E-06 | 0.01408037 |
| 16 | 28452634 | 28452634 | 1 | 16_28452634 | ENSG00000275654 | AC138894.4 | 0 | INTRON | -4.599192 | 4.24E-06 | 0.01408367 |
| 6 | 136053140 | 136053140 | 1 | 6_136053140 | ENSG00000237596 | AL138828.1 | 0 | INTRON | 4.59917065 | 4.24E-06 | 0.01408367 |
| 21 | 27490750 | 27490750 | 1 | 21_27490750 | ENSG00000219592 | NCSTNP1 | 1367 | Upstream | -4.5991645 | 4.24E-06 | 0.01408367 |
| 21 | 46446657 | 46446657 | 1 | 21_46446657 | ENSG00000160299 | PCNT | 888 | Downstream | -4.5986472 | 4.25E-06 | 0.01411593 |
| 1 | 99519810 | 99519810 | 1 | 1_99519810 | ENSG00000224445 | LINC01708 | 0 | INTRON | -4.5985496 | 4.25E-06 | 0.01411843 |
| 3 | 173526115 | 173526115 | 1 | 3_173526115 | ENSG00000169760 | NLGN1 | 0 | INTRON | -4.598529 | 4.25E-06 | 0.01411843 |
| 6 | 154861470 | 154861470 | 1 | 6_154861470 | ENSG00000146426 | TIAM2 | 0 | INTRON | 4.59846193 | 4.26E-06 | 0.01412022 |
| 4 | 79256079 | 79256079 | 1 | 4_79256079 | ENSG00000249307 | LINC01088 | 0 | INTRON | 4.59841454 | 4.26E-06 | 0.01412068 |
| 15 | 21923933 | 21923933 | 1 | 15_21923933 | ENSG00000258997 | NF1P2 | 3723 | Downstream | 4.59832156 | 4.26E-06 | 0.01412074 |
| 3 | 117540085 | 117540085 | 1 | 3_117540085 | ENSG00000206889 | RNU6-1200P | 4119 | Upstream | 4.59829949 | 4.26E-06 | 0.01412074 |
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| 13 | 30852831 | 30852831 | 1 | 13_30852831 | ENSG00000236094 | LINC00545 | 28080 | Upstream | -4.598249 | 4.26E-06 | 0.01412074 |
| 4 | 123208650 | 123208650 | 1 | 4_123208650 | ENSG00000145375 | SPATA5 | 0 | INTRON | 4.59821056 | 4.26E-06 | 0.01412074 |
| 8 | 91519806 | 91519806 | 1 | 8_91519806 | ENSG00000253901 | AC103409.1 | 23117 | Downstream | -4.5981042 | 4.26E-06 | 0.0141252 |
| 2 | 59533724 | 59533724 | 1 | 2_59533724 | ENSG00000233891 | AC007179.2 | 0 | INTRON | -4.5979847 | 4.27E-06 | 0.01412775 |
| 4 | 71320826 | 71320826 | 1 | 4_71320826 | ENSG00000080493 | SLC4A4 | 0 | INTRON | -4.5979802 | 4.27E-06 | 0.01412775 |
| 1 | 92121472 | 92121472 | 1 | 1_92121472 | ENSG00000189195 | BTBD8 | 0 | INTRON | 4.59794496 | 4.27E-06 | 0.01412775 |
| 12 | 62198484 | 62198484 | 1 | 12_62198484 | ENSG00000198673 | TAFA2 | 0 | INTRON | -4.5978935 | 4.27E-06 | 0.01412849 |
| 8 | 24295346 | 24295346 | 1 | 8_24295346 | ENSG00000042980 | ADAM28 | 0 | INTRON | 4.59774288 | 4.27E-06 | 0.01413499 |
| X | 33180135 | 33180135 | 1 | X_33180135 | ENSG00000198947 | DMD | 0 | INTRON | 4.5977165 | 4.27E-06 | 0.01413499 |
| 5 | 147905982 | 147905982 | 1 | 5_147905982 | ENSG00000178776 | C5orf46 | 0 | INTRON | 4.59763657 | 4.27E-06 | 0.01413767 |
| 14 | 62994912 | 62994912 | 1 | 14_62994912 | ENSG00000140015 | KCNH5 | 0 | INTRON | 4.59740423 | 4.28E-06 | 0.01414889 |
| 11 | 132298246 | 132298246 | 1 | 11_132298246 | ENSG00000182667 | NTM | 0 | INTRON | 4.59739016 | 4.28E-06 | 0.01414889 |
| 11 | 41367696 | 41367696 | 1 | 11_41367696 | ENSG00000148948 | LRRC4C | 0 | INTRON | -4.5973308 | 4.28E-06 | 0.01414979 |
| 3 | 54637699 | 54637699 | 1 | 3_54637699 | ENSG00000265992 | ESRG | 0 | EXON | -4.5972959 | 4.28E-06 | 0.01414979 |
| 17 | 60887119 | 60887119 | 1 | 17_60887119 | ENSG00000141376 | BCAS3 | 0 | 5UTR | 4.59719097 | 4.28E-06 | 0.01415344 |
| 20 | 62076173 | 62076173 | 1 | 20_62076173 | ENSG00000283078 | AL137077.2 | 7736 | Downstream | 4.59716112 | 4.28E-06 | 0.01415344 |
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| 12 | 91264931 | 91264931 | 1 | 12_91264931 | ENSG00000258100 | LINC02823 | 62113 | Upstream | 4.5970303 | 4.29E-06 | 0.01415453 |
| 2 | 218521449 | 218521449 | 1 | 2_218521449 | ENSG00000135913 | USP37 | 0 | INTRON | 4.59698765 | 4.29E-06 | 0.01415453 |
| 10 | 28513124 | 28513124 | 1 | 10_28513124 | ENSG00000254635 | WAC-AS1 | 9527 | Downstream | 4.59694576 | 4.29E-06 | 0.01415453 |
| 4 | 147569493 | 147569493 | 1 | 4_147569493 | ENSG00000251688 | LINC02507 | 0 | EXON | -4.5969008 | 4.29E-06 | 0.01415453 |
| 1 | 144413958 | 144413958 | 1 | 1_144413958 | ENSG00000207205 | RNVU1-15 | 1218 | Downstream | -4.5968624 | 4.29E-06 | 0.01415453 |
| 3 | 164484509 | 164484509 | 1 | 3_164484509 | ENSG00000241636 | LINC01323 | 186368 | Downstream | 4.59686196 | 4.29E-06 | 0.01415453 |
| 17 | 83124457 | 83124457 | 1 | 17_83124457 | ENSG00000279143 | AC139099.3 | 8189 | Downstream | -4.5967262 | 4.29E-06 | 0.0141579 |
| 5 | 109372703 | 109372703 | 1 | 5_109372703 | ENSG00000198961 | PJA2 | 0 | INTRON | 4.59669355 | 4.29E-06 | 0.0141579 |
| 10 | 61409011 | 61409011 | 1 | 10_61409011 | ENSG00000196932 | TMEM26 | 0 | 3UTR | 4.59669102 | 4.29E-06 | 0.0141579 |
| 15 | 91189974 | 91189974 | 1 | 15_91189974 | ENSG00000185518 | SV2B | 0 | INTRON | 4.59662123 | 4.29E-06 | 0.0141599 |
| 13 | 62870787 | 62870787 | 1 | 13_62870787 | ENSG00000228669 | LINC00448 | 74073 | Upstream | 4.59652925 | 4.30E-06 | 0.01416186 |
| 2 | 79179635 | 79179635 | 1 | 2_79179635 | ENSG00000224879 | AC011754.1 | 0 | INTRON | -4.5965116 | 4.30E-06 | 0.01416186 |
| 15 | 64262816 | 64262816 | 1 | 15_64262816 | ENSG00000259316 | AC087632.2 | 0 | INTRON | -4.5963323 | 4.30E-06 | 0.01416974 |
| 17 | 13991627 | 13991627 | 1 | 17_13991627 | ENSG00000236088 | COX10-AS1 | 0 | INTRON | -4.5963148 | 4.30E-06 | 0.01416974 |
| 3 | 188789483 | 188789483 | 1 | 3_188789483 | ENSG00000145012 | LPP | 0 | INTRON | 4.59611668 | 4.30E-06 | 0.01417631 |
| 8 | 17353431 | 17353431 | 1 | 8_17353431 | ENSG00000003987 | MTMR7 | 0 | INTRON | 4.59610289 | 4.30E-06 | 0.01417631 |
| 2 | 165390075 | 165390075 | 1 | 2_165390075 | ENSG00000136531 | SCN2A | 0 | 3UTR | 4.59609714 | 4.30E-06 | 0.01417631 |
| 8 | 73427085 | 73427085 | 1 | 8_73427085 | ENSG00000253302 | STAU2-AS1 | 0 | INTRON | -4.5958289 | 4.31E-06 | 0.01419182 |
| 2 | 199267008 | 199267008 | 1 | 2_199267008 | ENSG00000119042 | SATB2 | 2491 | Downstream | 4.59567513 | 4.31E-06 | 0.0141974 |
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| 13 | 75344729 | 75344729 | 1 | 13_75344729 | ENSG00000136111 | TBC1D4 | 0 | INTRON | 4.59553781 | 4.32E-06 | 0.0142034 |
| 21 | 9837447 | 9837447 | 1 | 21_9837447 | ENSG00000280081 | LINC01667 | 0 | INTRON | 4.59543184 | 4.32E-06 | 0.01420717 |
| 4 | 111273204 | 111273204 | 1 | 4_111273204 | ENSG00000200963 | RNU6-289P | 58207 | Upstream | 4.59540183 | 4.32E-06 | 0.01420717 |
| 7 | 105368612 | 105368612 | 1 | 7_105368612 | ENSG00000135250 | SRPK2 | 0 | INTRON | 4.59517801 | 4.32E-06 | 0.01421446 |
| 7 | 112250365 | 112250365 | 1 | 7_112250365 | ENSG00000198839 | ZNF277 | 0 | INTRON | -4.5951747 | 4.32E-06 | 0.01421446 |
| 13 | 28207926 | 28207926 | 1 | 13_28207926 | ENSG00000152520 | PAN3 | 0 | INTRON | -4.5951739 | 4.32E-06 | 0.01421446 |
| 11 | 99460133 | 99460133 | 1 | 11_99460133 | ENSG00000149972 | CNTN5 | 0 | INTRON | -4.5951135 | 4.33E-06 | 0.01421568 |
| 18 | 66215150 | 66215150 | 1 | 18_66215150 | ENSG00000264685 | PRPF19P1 | 145503 | Upstream | 4.59504091 | 4.33E-06 | 0.01421568 |
| 20 | 3619343 | 3619343 | 1 | 20_3619343 | ENSG00000088812 | ATRN | 0 | INTRON | 4.59501842 | 4.33E-06 | 0.01421568 |
| 20 | 18359316 | 18359316 | 1 | 20_18359316 | ENSG00000230010 | AL049646.1 | 16 | Upstream | 4.59498684 | 4.33E-06 | 0.01421568 |
| 18 | 69637993 | 69637993 | 1 | 18_69637993 | ENSG00000206052 | DOK6 | 0 | INTRON | -4.5949547 | 4.33E-06 | 0.01421568 |
| 6 | 87636221 | 87636221 | 1 | 6_87636221 | ENSG00000135336 | ORC3 | 0 | INTRON | -4.5948017 | 4.33E-06 | 0.01422098 |
| 4 | 172074085 | 172074085 | 1 | 4_172074085 | ENSG00000174473 | GALNTL6 | 0 | INTRON | 4.59478923 | 4.33E-06 | 0.01422098 |
| 6 | 79426241 | 79426241 | 1 | 6_79426241 | ENSG00000231533 | AL391840.1 | 0 | INTRON | 4.59475627 | 4.33E-06 | 0.01422098 |
| 19 | 10015031 | 10015031 | 1 | 19_10015031 | ENSG00000080511 | RDH8 | 0 | INTRON | -4.5946749 | 4.33E-06 | 0.0142218 |

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| 8 | 4315118 | 4315118 | 1 | 8_4315118 | ENSG00000183117 | CSMD1 | 0 | INTRON | -4.5946545 | 4.33E-06 | 0.0142218 |
| 9 | 35662969 | 35662969 | 1 | 9_35662969 | ENSG00000137135 | ARHGEF39 | 0 | EXON | -4.5945916 | 4.34E-06 | 0.0142218 |
| 13 | 25854744 | 25854744 | 1 | 13_25854744 | ENSG00000132932 | ATP8A2 | 0 | INTRON | -4.5945682 | 4.34E-06 | 0.0142218 |
| 11 | 60506459 | 60506459 | 1 | 11_60506459 | ENSG00000071203 | MS4A12 | 0 | INTRON | -4.5945205 | 4.34E-06 | 0.0142218 |
| 1 | 233211077 | 233211077 | 1 | 1_233211077 | ENSG00000135749 | PCNX2 | 0 | INTRON | 4.59446229 | 4.34E-06 | 0.0142218 |
| 4 | 99739651 | 99739651 | 1 | 4_99739651 | ENSG00000070190 | DAPP1 | 77175 | Upstream | -4.5944083 | 4.34E-06 | 0.0142218 |
| 13 | 65234775 | 65234775 | 1 | 13_65234775 | ENSG00000214266 | STARP1 | 75079 | Downstream | 4.59440677 | 4.34E-06 | 0.0142218 |
| 17 | 6787301 | 6787301 | 1 | 17_6787301 | ENSG00000177294 | FBXO39 | 0 | EXON | 4.59438249 | 4.34E-06 | 0.0142218 |
| 16 | 54792066 | 54792066 | 1 | 16_54792066 | ENSG00000245694 | CRNDE | 53122 | Downstream | 4.59425759 | 4.34E-06 | 0.01422758 |
| 6 | 13039795 | 13039795 | 1 | 6_13039795 | ENSG00000112137 | PHACTR1 | 0 | INTRON | -4.5936633 | 4.36E-06 | 0.01426543 |
| 4 | 93370490 | 93370490 | 1 | 4_93370490 | ENSG00000152208 | GRID2 | 0 | INTRON | 4.59342235 | 4.36E-06 | 0.01427918 |
| 10 | 103328818 | 103328818 | 1 | 10_103328818 | ENSG00000156374 | PCGF6 | 0 | INTRON | 4.59306148 | 4.37E-06 | 0.01430006 |
| 3 | 50274046 | 50274046 | 1 | 3_50274046 | ENSG00000012171 | SEMA3B | 0 | EXON | 4.59300203 | 4.37E-06 | 0.01430006 |
| 16 | 61910810 | 61910810 | 1 | 16_61910810 | ENSG00000150394 | CDH8 | 0 | INTRON | 4.59299709 | 4.37E-06 | 0.01430006 |
| 8 | 131855434 | 131855434 | 1 | 8_131855434 | ENSG00000132294 | EFR3A | 48658 | Upstream | -4.5929124 | 4.37E-06 | 0.01430311 |
| 2 | 42698088 | 42698088 | 1 | 2_42698088 | ENSG00000057935 | MTA3 | 0 | INTRON | 4.59277469 | 4.37E-06 | 0.01430981 |
| 8 | 25958122 | 25958122 | 1 | 8_25958122 | ENSG00000221818 | EBF2 | 0 | INTRON | 4.5926312 | 4.38E-06 | 0.01431446 |
| 20 | 52625887 | 52625887 | 1 | 20_52625887 | ENSG00000234948 | LINC01524 | 0 | INTRON | 4.59262674 | 4.38E-06 | 0.01431446 |
| 3 | 63968430 | 63968430 | 1 | 3_63968430 | ENSG00000163635 | ATXN7 | 0 | EXON | 4.59257746 | 4.38E-06 | 0.01431509 |
| 6 | 62775168 | 62775168 | 1 | 6_62775168 | ENSG00000262566 | AL355375.2 | 163841 | Upstream | 4.59251622 | 4.38E-06 | 0.01431654 |
| 1 | 216644638 | 216644638 | 1 | 1_216644638 | ENSG00000196482 | ESRRG | 0 | INTRON | -4.5924165 | 4.38E-06 | 0.0143198 |
| 4 | 60272061 | 60272061 | 1 | 4_60272061 | ENSG00000283043 | AC097655.1 | 233475 | Downstream | -4.5923519 | 4.38E-06 | 0.0143198 |
| 8 | 130283132 | 130283132 | 1 | 8_130283132 | ENSG00000153317 | ASAP1 | 0 | INTRON | 4.59234854 | 4.38E-06 | 0.0143198 |
| 13 | 31882817 | 31882817 | 1 | 13_31882817 | ENSG00000073910 | FRY | 0 | INTRON | -4.5922306 | 4.39E-06 | 0.01432398 |
| 1 | 170798913 | 170798913 | 1 | 1_170798913 | ENSG00000231424 | BX284613.2 | 0 | INTRON | -4.5922074 | 4.39E-06 | 0.01432398 |
| 13 | 106046166 | 106046166 | 1 | 13_106046166 | ENSG00000287923 | AL138701.2 | 0 | INTRON | -4.5921382 | 4.39E-06 | 0.01432598 |
| 10 | 11010809 | 11010809 | 1 | 10_11010809 | ENSG00000048740 | CELF2 | 0 | INTRON | 4.59203573 | 4.39E-06 | 0.01433028 |
| X | 134662801 | 134662801 | 1 | X_134662801 | ENSG00000170965 | PLAC1 | 0 | INTRON | 4.59185667 | 4.39E-06 | 0.01433983 |
| 2 | 129547322 | 129547322 | 1 | 2_129547322 | ENSG00000233428 | PPIAP65 | 50534 | Downstream | 4.59171295 | 4.40E-06 | 0.01434696 |
| 8 | 46613868 | 46613868 | 1 | 8_46613868 | ENSG00000248498 | ASNSP1 | 0 | INTRON | 4.59166891 | 4.40E-06 | 0.01434723 |
| 4 | 61930044 | 61930044 | 1 | 4_61930044 | ENSG00000150471 | ADGRL3 | 0 | INTRON | 4.59153638 | 4.40E-06 | 0.0143536 |
| 13 | 91169211 | 91169211 | 1 | 13_91169211 | ENSG00000229557 | LINC00379 | 37804 | Upstream | 4.59143405 | 4.40E-06 | 0.01435788 |
| 8 | 58479841 | 58479841 | 1 | 8_58479841 | ENSG00000167910 | CYP7A1 | 10336 | Downstream | 4.59128158 | 4.41E-06 | 0.01436367 |
| 16 | 70193637 | 70193637 | 1 | 16_70193637 | ENSG00000157335 | CLEC18C | 6276 | Downstream | -4.5912611 | 4.41E-06 | 0.01436367 |
| 1 | 8070063 | 8070063 | 1 | 1_8070063 | ENSG00000238290 | AL034417.2 | 0 | INTRON | -4.5912299 | 4.41E-06 | 0.01436367 |
| 10 | 87325820 | 87325820 | 1 | 10_87325820 | ENSG00000223482 | NUTM2A-AS1 | 0 | INTRON | 4.59096702 | 4.41E-06 | 0.01437903 |
| 18 | 42235065 | 42235065 | 1 | 18_42235065 | ENSG00000267586 | LINC00907 | 0 | INTRON | -4.5908729 | 4.41E-06 | 0.01438276 |
| 11 | 129026895 | 129026895 | 1 | 11_129026895 | ENSG00000134909 | ARHGAP32 | 0 | INTRON | -4.5908327 | 4.41E-06 | 0.01438278 |
| 16 | 80110310 | 80110310 | 1 | 16_80110310 | ENSG00000260706 | AC022166.1 | 0 | INTRON | 4.59074721 | 4.42E-06 | 0.01438551 |
| X | 47020974 | 47020974 | 1 | X_47020974 | ENSG00000102221 | JADE3 | 0 | INTRON | 4.59067825 | 4.42E-06 | 0.01438551 |
| 1 | 86859931 | 86859931 | 1 | 1_86859931 | ENSG00000183291 | SELENOF | 2513 | Downstream | 4.59067314 | 4.42E-06 | 0.01438551 |
| 8 | 35101055 | 35101055 | 1 | 8_35101055 | ENSG00000287152 | AC099685.1 | 7546 | Downstream | -4.5906313 | 4.42E-06 | 0.01438565 |
| 16 | 70821564 | 70821564 | 1 | 16_70821564 | ENSG00000157423 | HYDIN | 0 | INTRON | 4.5905829 | 4.42E-06 | 0.01438579 |
| 1 | 73104899 | 73104899 | 1 | 1_73104899 | ENSG00000229636 | KRT8P21 | 0 | EXON | -4.5905426 | 4.42E-06 | 0.01438579 |
| 1 | 80713487 | 80713487 | 1 | 1_80713487 | ENSG00000234184 | LINC01781 | 66696 | Downstream | -4.5905094 | 4.42E-06 | 0.01438579 |
| 8 | 119913045 | 119913045 | 1 | 8_119913045 | ENSG00000155792 | DEPTOR | 0 | INTRON | -4.5904354 | 4.42E-06 | 0.01438814 |
| X | 40992044 | 40992044 | 1 | X_40992044 | ENSG00000287549 | AC092268.2 | 16382 | Downstream | -4.5903466 | 4.43E-06 | 0.01439152 |
| 18 | 473654 | 473654 | 1 | 18_473654 | ENSG00000158270 | COLEC12 | 0 | INTRON | 4.59018776 | 4.43E-06 | 0.01439972 |
| 1 | 37963847 | 37963847 | 1 | 1_37963847 | ENSG00000183431 | SF3A3 | 0 | INTRON | -4.5901076 | 4.43E-06 | 0.01440126 |
| 1 | 234694167 | 234694167 | 1 | 1_234694167 | ENSG00000230628 | AL160408.3 | 0 | INTRON | -4.5900857 | 4.43E-06 | 0.01440126 |
| 13 | 42879069 | 42879069 | 1 | 13_42879069 | ENSG00000133106 | EPSTI1 | 7318 | Downstream | 4.5899884 | 4.43E-06 | 0.01440522 |
| 2 | 38478237 | 38478237 | 1 | 2_38478237 | ENSG00000231367 | LINC02613 | 0 | INTRON | -4.5897456 | 4.44E-06 | 0.01441924 |
| 2 | 78552131 | 78552131 | 1 | 2_78552131 | ENSG00000234877 | AC092660.1 | 45779 | Upstream | 4.589575 | 4.44E-06 | 0.01442827 |
| 2 | 143751463 | 143751463 | 1 | 2_143751463 | ENSG00000075884 | ARHGAP15 | 0 | INTRON | 4.58941792 | 4.44E-06 | 0.01443637 |
| 1 | 163180584 | 163180584 | 1 | 1_163180584 | ENSG00000143248 | RGS5 | 0 | INTRON | 4.58926943 | 4.45E-06 | 0.01444389 |
| 16 | 76716417 | 76716417 | 1 | 16_76716417 | ENSG00000287694 | AC106741.1 | 0 | INTRON | 4.58901979 | 4.45E-06 | 0.01445841 |
| 15 | 33795593 | 33795593 | 1 | 15_33795593 | ENSG00000198838 | RYR3 | 0 | INTRON | -4.5889269 | 4.46E-06 | 0.01445951 |
| 1 | 64398154 | 64398154 | 1 | 1_64398154 | ENSG00000238653 | RNU7-62P | 13695 | Upstream | 4.58892423 | 4.46E-06 | 0.01445951 |
| 14 | 76895625 | 76895625 | 1 | 14_76895625 | ENSG00000223174 | RN7SKP17 | 5012 | Downstream | 4.58875507 | 4.46E-06 | 0.01446847 |
| 19 | 56308274 | 56308274 | 1 | 19_56308274 | ENSG00000131848 | ZSCAN5A | 0 | INTRON | -4.5886443 | 4.46E-06 | 0.01447336 |
| 10 | 58299074 | 58299074 | 1 | 10_58299074 | ENSG00000228527 | AC016396.1 | 5478 | Upstream | 4.58860501 | 4.46E-06 | 0.01447336 |
| 13 | 90351616 | 90351616 | 1 | 13_90351616 | ENSG00000224419 | KRT18P27 | 119934 | Downstream | -4.5884744 | 4.46E-06 | 0.01447549 |
| 12 | 110030456 | 110030456 | 1 | 12_110030456 | ENSG00000076513 | ANKRD13A | 0 | INTRON | -4.5884706 | 4.47E-06 | 0.01447549 |
| 2 | 53516570 | 53516570 | 1 | 2_53516570 | ENSG00000115239 | ASB3 | 16101 | Downstream | 4.58842253 | 4.47E-06 | 0.01447549 |
| 14 | 95211630 | 95211630 | 1 | 14_95211630 | ENSG00000165959 | CLMN | 0 | INTRON | -4.5883915 | 4.47E-06 | 0.01447549 |
| 13 | 72125662 | 72125662 | 1 | 13_72125662 | ENSG00000232881 | RPS10P21 | 211484 | Upstream | 4.58837528 | 4.47E-06 | 0.01447549 |
| 3 | 71544542 | 71544542 | 1 | 3_71544542 | ENSG00000114861 | FOXP1 | 0 | INTRON | 4.58822333 | 4.47E-06 | 0.01448327 |
| 7 | 42738749 | 42738749 | 1 | 7_42738749 | ENSG00000238284 | LINC01448 | 32302 | Upstream | -4.5881437 | 4.47E-06 | 0.01448604 |
| 8 | 17239735 | 17239735 | 1 | 8_17239735 | ENSG00000198791 | CNOT7 | 0 | INTRON | 4.58807812 | 4.47E-06 | 0.01448638 |
| 3 | 190753376 | 190753376 | 1 | 3_190753376 | ENSG00000232610 | CCT6P4 | 36977 | Downstream | 4.58805933 | 4.47E-06 | 0.01448638 |
| 19 | 32588832 | 32588832 | 1 | 19_32588832 | ENSG00000105185 | PDCD5 | 1379 | Downstream | 4.58793475 | 4.48E-06 | 0.01449227 |
| 3 | 164004318 | 164004318 | 1 | 3_164004318 | ENSG00000214210 | AC084017.1 | 1853 | Upstream | 4.58778476 | 4.48E-06 | 0.0144977 |
| 6 | 140170359 | 140170359 | 1 | 6_140170359 | ENSG00000252107 | RNA5SP220 | 11665 | Upstream | 4.58776608 | 4.48E-06 | 0.0144977 |
| 11 | 34261125 | 34261125 | 1 | 11_34261125 | ENSG00000166016 | ABTB2 | 0 | INTRON | 4.58773401 | 4.48E-06 | 0.0144977 |
| 9 | 91836494 | 91836494 | 1 | 9_91836494 | ENSG00000169071 | ROR2 | 0 | INTRON | 4.58769754 | 4.48E-06 | 0.0144977 |
| 14 | 82671441 | 82671441 | 1 | 14_82671441 | ENSG00000258743 | LINC02301 | 0 | INTRON | 4.58762785 | 4.48E-06 | 0.01449783 |
| 4 | 165071227 | 165071227 | 1 | 4_165071227 | ENSG00000170088 | TMEM192 | 0 | 3UTR | 4.58759795 | 4.48E-06 | 0.01449783 |
| 2 | 219394285 | 219394285 | 1 | 2_219394285 | ENSG00000123992 | DNPEP | 0 | INTRON | 4.58757662 | 4.48E-06 | 0.01449783 |
| 4 | 28763003 | 28763003 | 1 | 4_28763003 | ENSG00000243548 | RN7SL101P | 51527 | Downstream | 4.58739603 | 4.49E-06 | 0.01450762 |
| 20 | 45591115 | 45591115 | 1 | 20_45591115 | ENSG00000158901 | WFDC8 | 11789 | Upstream | 4.58715619 | 4.49E-06 | 0.0145209 |
| 1 | 33275479 | 33275479 | 1 | 1_33275479 | ENSG00000160094 | ZNF362 | 0 | INTRON | 4.58712562 | 4.49E-06 | 0.0145209 |
| 5 | 39428587 | 39428587 | 1 | 5_39428587 | ENSG00000153071 | DAB2 | 0 | INTRON | -4.5869904 | 4.50E-06 | 0.01452755 |
| 17 | 61170043 | 61170043 | 1 | 17_61170043 | ENSG00000141376 | BCAS3 | 0 | INTRON | 4.58692694 | 4.50E-06 | 0.0145292 |
| 1 | 146576589 | 146576589 | 1 | 1_146576589 | ENSG00000276975 | HYDIN2 | 0 | INTRON | -4.586845 | 4.50E-06 | 0.01453214 |
| 2 | 2456078 | 2456078 | 1 | 2_2456078 | ENSG00000186487 | MYT1L | 124414 | Upstream | -4.5865948 | 4.51E-06 | 0.0145468 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 113479594 | 113479594 | 1 | 2_113479594 | ENSG00000136682 | CBWD2 | 0 | INTRON | 4.5864349 | 4.51E-06 | 0.01455135 |
| 10 | 4663763 | 4663763 | 1 | 10_4663763 | ENSG00000225269 | LINC00705 | 0 | INTRON | 4.58641875 | 4.51E-06 | 0.01455135 |
| 4 | 108655187 | 108655187 | 1 | 4_108655187 | ENSG00000198856 | OSTC | 0 | INTRON | 4.586377 | 4.51E-06 | 0.01455135 |
| 4 | 31941170 | 31941170 | 1 | 4_31941170 | ENSG00000251129 | LINC02506 | 56205 | Upstream | 4.586341 | 4.51E-06 | 0.01455135 |
| 4 | 110287119 | 110287119 | 1 | 4_110287119 | ENSG00000250304 | ZBED1P1 | 4524 | Upstream | 4.58633133 | 4.51E-06 | 0.01455135 |
| 3 | 77216597 | 77216597 | 1 | 3_77216597 | ENSG00000185008 | ROBO2 | 0 | INTRON | -4.5861234 | 4.52E-06 | 0.01456113 |
| 9 | 136233068 | 136233068 | 1 | 9_136233068 | ENSG00000165661 | QSOX2 | 0 | INTRON | -4.5861119 | 4.52E-06 | 0.01456113 |
| 7 | 71855388 | 71855388 | 1 | 7_71855388 | ENSG00000183166 | CALN1 | 0 | INTRON | -4.5859671 | 4.52E-06 | 0.01456625 |
| 16 | 34768068 | 34768068 | 1 | 16_34768068 | ENSG00000279165 | AC135776.4 | 173908 | Upstream | -4.5859593 | 4.52E-06 | 0.01456625 |
| 10 | 123269763 | 123269763 | 1 | 10_123269763 | ENSG00000270902 | AL160290.2 | 53658 | Downstream | 4.58582976 | 4.52E-06 | 0.0145721 |
| 4 | 95502371 | 95502371 | 1 | 4_95502371 | ENSG00000182168 | UNC5C | 0 | INTRON | 4.58579621 | 4.52E-06 | 0.0145721 |
| 2 | 160668360 | 160668360 | 1 | 2_160668360 | ENSG00000153250 | RBMS1 | 174553 | Upstream | -4.5856316 | 4.53E-06 | 0.01457838 |
| 5 | 896409 | 896409 | 1 | 5_896409 | ENSG00000071539 | TRIP13 | 0 | INTRON | 4.58553683 | 4.53E-06 | 0.01457838 |
| 20 | 14399354 | 14399354 | 1 | 20_14399354 | ENSG00000172264 | MACROD2 | 0 | INTRON | 4.58553464 | 4.53E-06 | 0.01457838 |
| 19 | 8236064 | 8236064 | 1 | 19_8236064 | ENSG00000090661 | CERS4 | 0 | INTRON | 4.58547123 | 4.53E-06 | 0.01457838 |
| 2 | 220263476 | 220263476 | 1 | 2_220263476 | ENSG00000239498 | AC019211.1 | 0 | INTRON | 4.58546691 | 4.53E-06 | 0.01457838 |
| X | 130957490 | 130957490 | 1 | X_130957490 | ENSG00000228659 | LINC01201 | 24099 | Downstream | -4.5854386 | 4.53E-06 | 0.01457838 |
| 5 | 100090419 | 100090419 | 1 | 5_100090419 | ENSG00000274455 | AC092278.1 | 22465 | Upstream | 4.58541406 | 4.53E-06 | 0.01457838 |
| 15 | 41656602 | 41656602 | 1 | 15_41656602 | ENSG00000174197 | MGA | 0 | INTRON | -4.5853686 | 4.53E-06 | 0.01457838 |
| 14 | 88573374 | 88573374 | 1 | 14_88573374 | ENSG00000100722 | ZC3H14 | 0 | INTRON | -4.5853505 | 4.53E-06 | 0.01457838 |
| 6 | 12829233 | 12829233 | 1 | 6_12829233 | ENSG00000112137 | PHACTR1 | 0 | INTRON | 4.58528136 | 4.53E-06 | 0.0145795 |
| 7 | 130659836 | 130659836 | 1 | 7_130659836 | ENSG00000158623 | COPG2 | 0 | INTRON | 4.58525427 | 4.53E-06 | 0.0145795 |
| 7 | 137424777 | 137424777 | 1 | 7_137424777 | ENSG00000157680 | DGKI | 0 | INTRON | 4.58521607 | 4.54E-06 | 0.0145795 |
| 1 | 91419921 | 91419921 | 1 | 1_91419921 | ENSG00000162669 | HFM1 | 15065 | Upstream | 4.5851184 | 4.54E-06 | 0.01457952 |
| 14 | 82729807 | 82729807 | 1 | 14_82729807 | ENSG00000258743 | LINC02301 | 0 | INTRON | -4.5850564 | 4.54E-06 | 0.01457952 |
| 11 | 57307697 | 57307697 | 1 | 11_57307697 | ENSG00000149115 | TNKS1BP1 | 0 | INTRON | 4.58504518 | 4.54E-06 | 0.01457952 |
| 14 | 93567733 | 93567733 | 1 | 14_93567733 | ENSG00000133958 | UNC79 | 0 | INTRON | 4.58502253 | 4.54E-06 | 0.01457952 |
| X | 2572633 | 2572633 | 1 | X_2572633 | ENSG00000277120 | MIR6089 | 36557 | Upstream | 4.58499575 | 4.54E-06 | 0.01457952 |
| 16 | 32046477 | 32046477 | 1 | 16_32046477 | ENSG00000261727 | AC142381.4 | 0 | INTRON | 4.58497895 | 4.54E-06 | 0.01457952 |
| 7 | 38013868 | 38013868 | 1 | 7_38013868 | ENSG00000106483 | SFRP4 | 0 | INTRON | 4.58467582 | 4.55E-06 | 0.01459794 |
| 18 | 58790687 | 58790687 | 1 | 18_58790687 | ENSG00000201598 | RNU6-219P | 14580 | Upstream | -4.5846128 | 4.55E-06 | 0.01459958 |
| 12 | 44206859 | 44206859 | 1 | 12_44206859 | ENSG00000139173 | TMEM117 | 0 | INTRON | -4.5845138 | 4.55E-06 | 0.01460375 |
| 4 | 66790687 | 66790687 | 1 | 4_66790687 | ENSG00000252890 | RNU6-699P | 106574 | Upstream | 4.58443656 | 4.55E-06 | 0.0146044 |
| 13 | 72307089 | 72307089 | 1 | 13_72307089 | ENSG00000212377 | AL139003.1 | 146812 | Downstream | -4.5844256 | 4.55E-06 | 0.0146044 |
| 7 | 95338388 | 95338388 | 1 | 7_95338388 | ENSG00000237160 | AC004022.2 | 10329 | Downstream | -4.5843387 | 4.55E-06 | 0.01460773 |
| 15 | 90452029 | 90452029 | 1 | 15_90452029 | ENSG00000140575 | IQGAP1 | 0 | INTRON | -4.5841104 | 4.56E-06 | 0.01462036 |
| 8 | 87490119 | 87490119 | 1 | 8_87490119 | ENSG00000176571 | CNBD1 | 0 | INTRON | 4.58406885 | 4.56E-06 | 0.01462036 |
| 7 | 52696187 | 52696187 | 1 | 7_52696187 | ENSG00000286908 | AC006459.1 | 192753 | Downstream | 4.58403983 | 4.56E-06 | 0.01462036 |
| 8 | 106977465 | 106977465 | 1 | 8_106977465 | ENSG00000275905 | AP003789.1 | 3501 | Downstream | 4.58392839 | 4.56E-06 | 0.01462541 |
| 13 | 61336953 | 61336953 | 1 | 13_61336953 | ENSG00000280165 | PCDH20 | 72731 | Downstream | 4.5837904 | 4.57E-06 | 0.01463231 |
| 17 | 2806593 | 2806593 | 1 | 17_2806593 | ENSG00000132359 | RAP1GAP2 | 0 | INTRON | 4.58371747 | 4.57E-06 | 0.01463245 |
| 16 | 13859568 | 13859568 | 1 | 16_13859568 | ENSG00000175595 | ERCC4 | 60588 | Upstream | -4.5837098 | 4.57E-06 | 0.01463245 |
| X | 143228823 | 143228823 | 1 | X_143228823 | ENSG00000199878 | RN7SKP149 | 31232 | Upstream | 4.58364769 | 4.57E-06 | 0.01463256 |
| 8 | 122949050 | 122949050 | 1 | 8_122949050 | ENSG00000178764 | ZHX2 | 0 | INTRON | -4.5836222 | 4.57E-06 | 0.01463256 |
| 13 | 39343966 | 39343966 | 1 | 13_39343966 | ENSG00000183722 | LHFPL6 | 0 | EXON | -4.5835892 | 4.57E-06 | 0.01463256 |
| 14 | 101479100 | 101479100 | 1 | 14_101479100 | ENSG00000259166 | AL049836.2 | 21983 | Downstream | 4.58355089 | 4.57E-06 | 0.01463256 |
| 13 | 21139251 | 21139251 | 1 | 13_21139251 | ENSG00000252128 | SNORD27 | 634 | Downstream | 4.58346265 | 4.57E-06 | 0.01463413 |
| 1 | 116290653 | 116290653 | 1 | 1_116290653 | ENSG00000287217 | AL355538.1 | 0 | INTRON | 4.58344972 | 4.57E-06 | 0.01463413 |
| 4 | 45757816 | 45757816 | 1 | 4_45757816 | ENSG00000222257 | RN7SKP199 | 237302 | Upstream | 4.58338042 | 4.58E-06 | 0.01463581 |
| 1 | 74076030 | 74076030 | 1 | 1_74076030 | ENSG00000162620 | LRRIQ3 | 0 | INTRON | -4.5833449 | 4.58E-06 | 0.01463581 |
| X | 135296348 | 135296348 | 1 | X_135296348 | ENSG00000186376 | ZNF75D | 0 | INTRON | 4.58327007 | 4.58E-06 | 0.01463581 |
| 14 | 42016555 | 42016555 | 1 | 14_42016555 | ENSG00000165379 | LRFN5 | 112006 | Downstream | 4.58326865 | 4.58E-06 | 0.01463581 |
| 2 | 71528432 | 71528432 | 1 | 2_71528432 | ENSG00000135636 | DYSF | 0 | INTRON | 4.58307843 | 4.58E-06 | 0.01464638 |
| 9 | 136442855 | 136442855 | 1 | 9_136442855 | ENSG00000148396 | SEC16A | 0 | INTRON | -4.5829656 | 4.58E-06 | 0.01465154 |
| 18 | 24293059 | 24293059 | 1 | 18_24293059 | ENSG00000141447 | OSBPL1A | 0 | INTRON | 4.5826969 | 4.59E-06 | 0.01466377 |
| 12 | 117048186 | 117048186 | 1 | 12_117048186 | ENSG00000088992 | TESC | 0 | INTRON | -4.5826811 | 4.59E-06 | 0.01466377 |
| 14 | 45616458 | 45616458 | 1 | 14_45616458 | ENSG00000258845 | AL139354.1 | 47389 | Downstream | -4.5826734 | 4.59E-06 | 0.01466377 |
| 1 | 118163619 | 118163619 | 1 | 1_118163619 | ENSG00000155761 | SPAG17 | 0 | INTRON | -4.5825999 | 4.59E-06 | 0.01466618 |
| 1 | 181863530 | 181863530 | 1 | 1_181863530 | ENSG00000222397 | RN7SKP229 | 23756 | Upstream | 4.58234324 | 4.60E-06 | 0.01467988 |
| 16 | 88620605 | 88620605 | 1 | 16_88620605 | ENSG00000158545 | ZC3H18 | 0 | INTRON | 4.58230346 | 4.60E-06 | 0.01467988 |
| 6 | 15560222 | 15560222 | 1 | 6_15560222 | ENSG00000047579 | DTNBP1 | 0 | INTRON | 4.58228698 | 4.60E-06 | 0.01467988 |
| 7 | 152433848 | 152433848 | 1 | 7_152433848 | ENSG00000055609 | KMT2C | 0 | INTRON | 4.5822442 | 4.60E-06 | 0.01468013 |
| 14 | 88095796 | 88095796 | 1 | 14_88095796 | ENSG00000258867 | LINC01146 | 0 | INTRON | -4.5820015 | 4.61E-06 | 0.01469442 |
| 10 | 28280206 | 28280206 | 1 | 10_28280206 | ENSG00000150054 | MPP7 | 0 | INTRON | -4.5818666 | 4.61E-06 | 0.01470115 |
| 17 | 26867715 | 26867715 | 1 | 17_26867715 | ENSG00000263433 | AC069061.1 | 113978 | Upstream | -4.5817807 | 4.61E-06 | 0.0147043 |
| 10 | 51649014 | 51649014 | 1 | 10_51649014 | ENSG00000185532 | PRKG1 | 0 | INTRON | 4.5817435 | 4.61E-06 | 0.0147043 |
| 5 | 76064310 | 76064310 | 1 | 5_76064310 | ENSG00000249777 | SAP18P1 | 11220 | Upstream | 4.58139655 | 4.62E-06 | 0.01472596 |
| 5 | 59487519 | 59487519 | 1 | 5_59487519 | ENSG00000113448 | PDE4D | 0 | INTRON | -4.5811397 | 4.62E-06 | 0.01473964 |
| 2 | 98710655 | 98710655 | 1 | 2_98710655 | ENSG00000071073 | MGAT4A | 0 | INTRON | 4.58109978 | 4.63E-06 | 0.01473964 |
| 22 | 46620768 | 46620768 | 1 | 22_46620768 | ENSG00000075240 | GRAMD4 | 0 | INTRON | -4.5810849 | 4.63E-06 | 0.01473964 |
| 4 | 139216354 | 139216354 | 1 | 4_139216354 | ENSG00000252362 | RNU6-506P | 14671 | Downstream | -4.5808953 | 4.63E-06 | 0.01475025 |
| 4 | 79209774 | 79209774 | 1 | 4_79209774 | ENSG00000249307 | LINC01088 | 0 | INTRON | 4.58082317 | 4.63E-06 | 0.01475062 |
| 1 | 1015982 | 1015982 | 1 | 1_1015982 | ENSG00000187608 | ISG15 | 1442 | Downstream | 4.58081173 | 4.63E-06 | 0.01475062 |
| 10 | 120829123 | 120829123 | 1 | 10_120829123 | ENSG00000227165 | WDR11-AS1 | 0 | INTRON | 4.58070547 | 4.63E-06 | 0.01475536 |
| 15 | 78711268 | 78711268 | 1 | 15_78711268 | ENSG00000261303 | AC022748.2 | 0 | INTRON | 4.58063962 | 4.64E-06 | 0.01475724 |
| 9 | 94872653 | 94872653 | 1 | 9_94872653 | ENSG00000148120 | AOPEP | 0 | INTRON | -4.5805533 | 4.64E-06 | 0.01476057 |
| 7 | 77518712 | 77518712 | 1 | 7_77518712 | ENSG00000127947 | PTPN12 | 18582 | Upstream | 4.58039318 | 4.64E-06 | 0.01476911 |
| 15 | 84752697 | 84752697 | 1 | 15_84752697 | ENSG00000166716 | ZNF592 | 0 | INTRON | 4.5803436 | 4.64E-06 | 0.0147698 |
| Y | 11366342 | 11366342 | 1 | Y_11366342 | ENSG00000183704 | SLC9B1P1 | 0 | INTRON | -4.5803052 | 4.64E-06 | 0.0147698 |
| 11 | 118183712 | 118183712 | 1 | 11_118183712 | ENSG00000149575 | SCN2B | 7073 | Upstream | 4.58024912 | 4.64E-06 | 0.014771 |
| 11 | 63990009 | 63990009 | 1 | 11_63990009 | ENSG00000167770 | OTUB1 | 0 | EXON | -4.5802038 | 4.65E-06 | 0.01477144 |
| 9 | 119921977 | 119921977 | 1 | 9_119921977 | ENSG00000261432 | LINC01613 | 13075 | Upstream | -4.5800109 | 4.65E-06 | 0.0147814 |
| 3 | 179353139 | 179353139 | 1 | 3_179353139 | ENSG00000171109 | MFN1 | 0 | INTRON | -4.5799297 | 4.65E-06 | 0.0147814 |
| 14 | 49098591 | 49098591 | 1 | 14_49098591 | ENSG00000258868 | AL110505.1 | 21086 | Upstream | -4.5799121 | 4.65E-06 | 0.0147814 |
| 4 | 177266973 | 177266973 | 1 | 4_177266973 | ENSG00000287544 | AC097518.2 | 0 | INTRON | 4.57985934 | 4.65E-06 | 0.0147814 |

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| 18 | 37721471 | 37721471 | 1 | 18_37721471 | ENSG00000285940 | AC009899.1 | 0 | INTRON | -4.5798029 | 4.65E-06 | 0.0147814 |
| 6 | 155157876 | 155157876 | 1 | 6_155157876 | ENSG00000146426 | TIAM2 | 0 | INTRON | -4.5797895 | 4.65E-06 | 0.0147814 |
| 9 | 4622959 | 4622959 | 1 | 9_4622959 | ENSG00000106686 | SPATA6L | 0 | INTRON | 4.57972818 | 4.66E-06 | 0.01478297 |
| 3 | 13539814 | 13539814 | 1 | 3_13539814 | ENSG00000163520 | FBLN2 | 9310 | Upstream | 4.57958524 | 4.66E-06 | 0.01479032 |
| 14 | 38074000 | 38074000 | 1 | 14_38074000 | ENSG00000259048 | AL392023.2 | 0 | INTRON | -4.5794849 | 4.66E-06 | 0.01479466 |
| 11 | 32301457 | 32301457 | 1 | 11_32301457 | ENSG00000227160 | THEM7P | 0 | INTRON | 4.5793879 | 4.66E-06 | 0.01479876 |
| 16 | 48943040 | 48943040 | 1 | 16_48943040 | ENSG00000260184 | AC023827.1 | 93025 | Upstream | 4.57930592 | 4.67E-06 | 0.0148018 |
| 11 | 111616864 | 111616864 | 1 | 11_111616864 | ENSG00000170145 | SIK2 | 0 | INTRON | 4.57922468 | 4.67E-06 | 0.01480479 |
| 11 | 60712686 | 60712686 | 1 | 11_60712686 | ENSG00000166959 | MS4A8 | 0 | INTRON | 4.57911081 | 4.67E-06 | 0.01480851 |
| 21 | 7327735 | 7327735 | 1 | 21_7327735 | ENSG00000279647 | CU633904.2 | 57322 | Downstream | -4.5790584 | 4.67E-06 | 0.01480851 |
| 16 | 78536428 | 78536428 | 1 | 16_78536428 | ENSG00000186153 | WWOX | 0 | INTRON | 4.57905514 | 4.67E-06 | 0.01480851 |
| 15 | 78219811 | 78219811 | 1 | 15_78219811 | ENSG00000103740 | ACSBG1 | 0 | INTRON | 4.57893401 | 4.67E-06 | 0.01481433 |
| 2 | 11664591 | 11664591 | 1 | 2_11664591 | ENSG00000169006 | NTSR2 | 0 | INTRON | -4.5788528 | 4.68E-06 | 0.01481628 |
| 4 | 155519255 | 155519255 | 1 | 4_155519255 | ENSG00000251244 | AC107208.1 | 0 | EXON | 4.57882846 | 4.68E-06 | 0.01481628 |
| 19 | 1927083 | 1927083 | 1 | 19_1927083 | ENSG00000227500 | SCAMP4 | 1070 | Downstream | 4.57872837 | 4.68E-06 | 0.01482061 |
| X | 151183610 | 151183610 | 1 | X_151183610 | ENSG00000269993 | KC877982.1 | 755 | Downstream | 4.57857585 | 4.68E-06 | 0.01482143 |
| 4 | 93805814 | 93805814 | 1 | 4_93805814 | ENSG00000152208 | GRID2 | 0 | INTRON | -4.5785664 | 4.68E-06 | 0.01482143 |
| 5 | 69453045 | 69453045 | 1 | 5_69453045 | ENSG00000152939 | MARVELD2 | 8715 | Downstream | -4.578536 | 4.68E-06 | 0.01482143 |
| 1 | 221533897 | 221533897 | 1 | 1_221533897 | ENSG00000286398 | AL360013.3 | 15464 | Upstream | -4.5785123 | 4.68E-06 | 0.01482143 |
| 4 | 49126760 | 49126760 | 1 | 4_49126760 | ENSG00000109182 | CWH43 | 64679 | Downstream | -4.5785053 | 4.68E-06 | 0.01482143 |
| 4 | 185785996 | 185785996 | 1 | 4_185785996 | ENSG00000154556 | SORBS2 | 0 | INTRON | -4.5784833 | 4.68E-06 | 0.01482143 |
| 3 | 143843957 | 143843957 | 1 | 3_143843957 | ENSG00000181804 | SLC9A9 | 0 | INTRON | 4.57835331 | 4.69E-06 | 0.01482788 |
| 4 | 14903457 | 14903457 | 1 | 4_14903457 | ENSG00000247624 | CPEB2-DT | 6503 | Downstream | -4.5782223 | 4.69E-06 | 0.0148342 |
| 4 | 72040691 | 72040691 | 1 | 4_72040691 | ENSG00000056291 | NPFFR2 | 0 | INTRON | 4.57818637 | 4.69E-06 | 0.0148342 |
| 1 | 34994763 | 34994763 | 1 | 1_34994763 | ENSG00000163867 | ZMYM6 | 0 | INTRON | -4.5780149 | 4.69E-06 | 0.0148436 |
| 13 | 40181372 | 40181372 | 1 | 13_40181372 | ENSG00000230710 | LINC00332 | 0 | EXON | -4.5778528 | 4.70E-06 | 0.01485235 |
| 12 | 57075824 | 57075824 | 1 | 12_57075824 | ENSG00000166881 | NEMP1 | 0 | INTRON | 4.57776613 | 4.70E-06 | 0.01485348 |
| 8 | 46675837 | 46675837 | 1 | 8_46675837 | ENSG00000254070 | AC104576.1 | 3911 | Downstream | -4.5777591 | 4.70E-06 | 0.01485348 |
| 20 | 52269813 | 52269813 | 1 | 20_52269813 | ENSG00000234948 | LINC01524 | 0 | INTRON | 4.5773329 | 4.71E-06 | 0.01487825 |
| 16 | 11367251 | 11367251 | 1 | 16_11367251 | ENSG00000175643 | RMI2 | 0 | INTRON | -4.5773327 | 4.71E-06 | 0.01487825 |
| 21 | 22587669 | 22587669 | 1 | 21_22587669 | ENSG00000234034 | AP000959.1 | 67611 | Upstream | 4.57693865 | 4.72E-06 | 0.01490232 |
| 13 | 42249298 | 42249298 | 1 | 13_42249298 | ENSG00000102780 | DGKH | 0 | INTRON | -4.5768863 | 4.72E-06 | 0.01490232 |
| 3 | 190087416 | 190087416 | 1 | 3_190087416 | ENSG00000090530 | P3H2 | 0 | INTRON | -4.5768779 | 4.72E-06 | 0.01490232 |
| 6 | 93519217 | 93519217 | 1 | 6_93519217 | ENSG00000287683 | AL591519.1 | 0 | INTRON | 4.57681796 | 4.72E-06 | 0.014903 |
| 21 | 42269599 | 42269599 | 1 | 21_42269599 | ENSG00000160179 | ABCG1 | 0 | INTRON | 4.57674841 | 4.72E-06 | 0.014903 |
| 11 | 109989116 | 109989116 | 1 | 11_109989116 | ENSG00000137710 | RDX | 0 | INTRON | -4.5767214 | 4.72E-06 | 0.014903 |
| 16 | 18411964 | 18411964 | 1 | 16_18411964 | ENSG00000266454 | MIR3179-3 | 0 | EXON | 4.57667879 | 4.72E-06 | 0.014903 |
| 4 | 144201338 | 144201338 | 1 | 4_144201338 | ENSG00000251600 | AC107223.1 | 0 | INTRON | -4.5766134 | 4.73E-06 | 0.014903 |
| 3 | 30531040 | 30531040 | 1 | 3_30531040 | ENSG00000227260 | LINC01985 | 3847 | Downstream | 4.57652238 | 4.73E-06 | 0.014903 |
| 3 | 101393637 | 101393637 | 1 | 3_101393637 | ENSG00000138468 | SENP7 | 0 | INTRON | 4.57648353 | 4.73E-06 | 0.014903 |
| 12 | 95335476 | 95335476 | 1 | 12_95335476 | ENSG00000257943 | AC084879.1 | 0 | INTRON | -4.5764638 | 4.73E-06 | 0.014903 |
| 1 | 43128033 | 43128033 | 1 | 1_43128033 | ENSG00000186973 | FAM183A | 17119 | Upstream | -4.5764352 | 4.73E-06 | 0.014903 |
| 1 | 15707914 | 15707914 | 1 | 1_15707914 | ENSG00000116786 | PLEKHM2 | 0 | INTRON | -4.5764198 | 4.73E-06 | 0.014903 |
| 19 | 37603076 | 37603076 | 1 | 19_37603076 | ENSG00000171817 | ZNF540 | 0 | INTRON | 4.57640965 | 4.73E-06 | 0.014903 |
| 4 | 118989545 | 118989545 | 1 | 4_118989545 | ENSG00000172403 | SYNPO2 | 0 | INTRON | -4.5764029 | 4.73E-06 | 0.014903 |
| 1 | 225592493 | 225592493 | 1 | 1_225592493 | ENSG00000154380 | ENAH | 0 | INTRON | -4.5763293 | 4.73E-06 | 0.01490547 |
| 1 | 82984633 | 82984633 | 1 | 1_82984633 | ENSG00000236268 | LINC01361 | 0 | INTRON | -4.5762832 | 4.73E-06 | 0.014906 |
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| 12 | 121954882 | 121954882 | 1 | 12_121954882 | ENSG00000158023 | WDR66 | 0 | INTRON | -4.5761079 | 4.74E-06 | 0.01491297 |
| 6 | 43987175 | 43987175 | 1 | 6_43987175 | ENSG00000237686 | AL109615.3 | 8547 | Downstream | 4.57601741 | 4.74E-06 | 0.01491666 |
| 4 | 108090267 | 108090267 | 1 | 4_108090267 | ENSG00000138795 | LEF1 | 0 | INTRON | -4.5758777 | 4.74E-06 | 0.01492299 |
| 6 | 87305553 | 87305553 | 1 | 6_87305553 | ENSG00000164411 | GJB7 | 0 | INTRON | 4.5758502 | 4.74E-06 | 0.01492299 |
| 5 | 59243739 | 59243739 | 1 | 5_59243739 | ENSG00000113448 | PDE4D | 0 | INTRON | 4.57581244 | 4.74E-06 | 0.01492299 |
| 5 | 159843010 | 159843010 | 1 | 5_159843010 | ENSG00000253311 | LINC01847 | 0 | INTRON | -4.575622 | 4.75E-06 | 0.01493099 |
| 4 | 179560418 | 179560418 | 1 | 4_179560418 | ENSG00000250993 | AC020551.1 | 95113 | Upstream | -4.5755896 | 4.75E-06 | 0.01493099 |
| 2 | 128245209 | 128245209 | 1 | 2_128245209 | ENSG00000136720 | HS6ST1 | 0 | INTRON | 4.57558416 | 4.75E-06 | 0.01493099 |
| 20 | 8801967 | 8801967 | 1 | 20_8801967 | ENSG00000182621 | PLCB1 | 0 | INTRON | 4.57549428 | 4.75E-06 | 0.01493432 |
| 17 | 1995357 | 1995357 | 1 | 17_1995357 | ENSG00000185924 | RTN4RL1 | 0 | INTRON | -4.5754602 | 4.75E-06 | 0.01493432 |
| 20 | 10761601 | 10761601 | 1 | 20_10761601 | ENSG00000270792 | AL050403.2 | 0 | INTRON | -4.575396 | 4.75E-06 | 0.01493614 |
| 4 | 67925871 | 67925871 | 1 | 4_67925871 | ENSG00000248049 | UBA6-AS1 | 0 | INTRON | 4.57517033 | 4.76E-06 | 0.01494949 |
| 2 | 184323264 | 184323264 | 1 | 2_184323264 | ENSG00000286980 | AC020584.1 | 0 | INTRON | -4.5749955 | 4.76E-06 | 0.01495687 |
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| 5 | 73863929 | 73863929 | 1 | 5_73863929 | ENSG00000214944 | ARHGEF28 | 0 | INTRON | 4.57491642 | 4.76E-06 | 0.01495934 |
| 6 | 133052043 | 133052043 | 1 | 6_133052043 | ENSG00000231023 | LINC00326 | 0 | INTRON | 4.57476906 | 4.77E-06 | 0.01496711 |
| 16 | 83844267 | 83844267 | 1 | 16_83844267 | ENSG00000230989 | HSBP1 | 24530 | Downstream | -4.5746986 | 4.77E-06 | 0.01496729 |
| 8 | 66279410 | 66279410 | 1 | 8_66279410 | ENSG00000253138 | LINC00967 | 82095 | Downstream | 4.57459212 | 4.77E-06 | 0.01496729 |
| 2 | 89981170 | 89981170 | 1 | 2_89981170 | ENSG00000211623 | IGKV2D-26 | 4751 | Upstream | -4.5745879 | 4.77E-06 | 0.01496729 |
| 4 | 63411110 | 63411110 | 1 | 4_63411110 | ENSG00000250775 | AC093730.1 | 54400 | Downstream | -4.5745377 | 4.77E-06 | 0.01496729 |
| 11 | 55149571 | 55149571 | 1 | 11_55149571 | ENSG00000150244 | TRIM48 | 112583 | Upstream | -4.5745127 | 4.77E-06 | 0.01496729 |
| 3 | 195902810 | 195902810 | 1 | 3_195902810 | ENSG00000286004 | AC124944.3 | 0 | INTRON | 4.57450045 | 4.77E-06 | 0.01496729 |
| 5 | 2734609 | 2734609 | 1 | 5_2734609 | ENSG00000259757 | AC091891.1 | 2052 | Downstream | -4.5744963 | 4.77E-06 | 0.01496729 |
| 7 | 1016154 | 1016154 | 1 | 7_1016154 | ENSG00000146540 | C7orf50 | 0 | INTRON | -4.5744139 | 4.78E-06 | 0.01497043 |
| 7 | 71474446 | 71474446 | 1 | 7_71474446 | ENSG00000185274 | GALNT17 | 0 | INTRON | 4.57435353 | 4.78E-06 | 0.01497198 |
| 7 | 131074860 | 131074860 | 1 | 7_131074860 | ENSG00000231721 | LINC-PINT | 0 | INTRON | 4.57429441 | 4.78E-06 | 0.01497345 |
| 14 | 34193073 | 34193073 | 1 | 14_34193073 | ENSG00000129521 | EGLN3 | 0 | INTRON | -4.5742004 | 4.78E-06 | 0.01497699 |
| 12 | 110087049 | 110087049 | 1 | 12_110087049 | ENSG00000286220 | AC007546.3 | 13363 | Upstream | 4.57416786 | 4.78E-06 | 0.01497699 |
| 9 | 77377898 | 77377898 | 1 | 9_77377898 | ENSG00000197969 | VPS13A | 0 | INTRON | 4.57374682 | 4.79E-06 | 0.01500079 |
| 3 | 62300225 | 62300225 | 1 | 3_62300225 | ENSG00000241472 | PTPRG-AS1 | 0 | INTRON | 4.57371091 | 4.79E-06 | 0.01500079 |
| 2 | 219368215 | 219368215 | 1 | 2_219368215 | ENSG00000123992 | DNPEP | 5311 | Downstream | -4.5737026 | 4.79E-06 | 0.01500079 |
| 6 | 50300111 | 50300111 | 1 | 6_50300111 | ENSG00000286405 | AL132799.1 | 111732 | Upstream | -4.5736811 | 4.79E-06 | 0.01500079 |
| 3 | 38772620 | 38772620 | 1 | 3_38772620 | ENSG00000185313 | SCN10A | 0 | INTRON | 4.5735864 | 4.79E-06 | 0.01500482 |
| 9 | 24187829 | 24187829 | 1 | 9_24187829 | ENSG00000287139 | AL513317.1 | 99778 | Downstream | 4.57337206 | 4.80E-06 | 0.01501497 |
| 4 | 172047109 | 172047109 | 1 | 4_172047109 | ENSG00000174473 | GALNTL6 | 0 | INTRON | 4.57336781 | 4.80E-06 | 0.01501497 |
| 1 | 146027019 | 146027019 | 1 | 1_146027019 | ENSG00000168509 | HJV | 0 | INTRON | 4.57326448 | 4.80E-06 | 0.01501962 |

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| 12 | 52914870 | 52914870 | 1 | 12_52914870 | ENSG00000170421 | KRT8 | 0 | INTRON | -4.5731211 | 4.81E-06 | 0.01502162 |
| 5 | 137500652 | 137500652 | 1 | 5_137500652 | ENSG00000152377 | SPOCK1 | 0 | INTRON | 4.5730725 | 4.81E-06 | 0.0150221 |
| 3 | 116877967 | 116877967 | 1 | 3_116877967 | ENSG00000185565 | LSAMP | 0 | INTRON | 4.57297013 | 4.81E-06 | 0.0150221 |
| 2 | 165623363 | 165623363 | 1 | 2_165623363 | ENSG00000178662 | CSRNP3 | 0 | INTRON | -4.5729173 | 4.81E-06 | 0.0150221 |
| 4 | 189136810 | 189136810 | 1 | 4_189136810 | ENSG00000251310 | AC107391.1 | 56289 | Upstream | -4.572906 | 4.81E-06 | 0.0150221 |
| 9 | 22295962 | 22295962 | 1 | 9_22295962 | ENSG00000236921 | AL157937.1 | 81290 | Upstream | 4.57289359 | 4.81E-06 | 0.0150221 |
| 18 | 4836604 | 4836604 | 1 | 18_4836604 | ENSG00000266268 | AP005203.1 | 0 | INTRON | 4.57288365 | 4.81E-06 | 0.0150221 |
| 10 | 45130320 | 45130320 | 1 | 10_45130320 | ENSG00000235690 | CUBNP3 | 0 | EXON | 4.57281993 | 4.81E-06 | 0.01502391 |
| 12 | 71643182 | 71643182 | 1 | 12_71643182 | ENSG00000133858 | ZFC3H1 | 0 | INTRON | 4.5726899 | 4.82E-06 | 0.01502832 |
| 1 | 219485249 | 219485249 | 1 | 1_219485249 | ENSG00000228536 | LYPLAL1-AS1 | 25880 | Upstream | 4.57268167 | 4.82E-06 | 0.01502832 |
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| 10 | 116125167 | 116125167 | 1 | 10_116125167 | ENSG00000151892 | GFRA1 | 0 | INTRON | -4.5724751 | 4.82E-06 | 0.01503188 |
| X | 154464803 | 154464803 | 1 | X_154464803 | ENSG00000130827 | PLXNA3 | 0 | EXON | 4.57246532 | 4.82E-06 | 0.01503188 |
| 2 | 15269423 | 15269423 | 1 | 2_15269423 | ENSG00000151779 | NBAS | 0 | INTRON | -4.5724617 | 4.82E-06 | 0.01503188 |
| 9 | 76856839 | 76856839 | 1 | 9_76856839 | ENSG00000225937 | PCA3 | 0 | INTRON | -4.5724385 | 4.82E-06 | 0.01503188 |
| 8 | 8575208 | 8575208 | 1 | 8_8575208 | ENSG00000253130 | AC114550.1 | 1170 | Downstream | 4.57240163 | 4.82E-06 | 0.01503188 |
| 3 | 165388297 | 165388297 | 1 | 3_165388297 | ENSG00000244128 | LINC01322 | 0 | INTRON | 4.5722899 | 4.82E-06 | 0.01503715 |
| 14 | 60561105 | 60561105 | 1 | 14_60561105 | ENSG00000258670 | AL049874.3 | 6189 | Downstream | -4.5722298 | 4.83E-06 | 0.0150387 |
| 4 | 53361681 | 53361681 | 1 | 4_53361681 | ENSG00000184178 | SCFD2 | 0 | INTRON | 4.57202319 | 4.83E-06 | 0.0150456 |
| 9 | 109023704 | 109023704 | 1 | 9_109023704 | ENSG00000106771 | TMEM245 | 0 | INTRON | -4.5719823 | 4.83E-06 | 0.0150456 |
| 8 | 63371883 | 63371883 | 1 | 8_63371883 | ENSG00000253205 | AC011124.1 | 12955 | Downstream | 4.57194461 | 4.83E-06 | 0.0150456 |
| 7 | 122027775 | 122027775 | 1 | 7_122027775 | ENSG00000106278 | PTPRZ1 | 0 | INTRON | 4.57194302 | 4.83E-06 | 0.0150456 |
| 2 | 74309897 | 74309897 | 1 | 2_74309897 | ENSG00000188687 | SLC4A5 | 0 | INTRON | 4.57194203 | 4.83E-06 | 0.0150456 |
| 22 | 29811120 | 29811120 | 1 | 22_29811120 | ENSG00000100325 | ASCC2 | 0 | INTRON | 4.57187606 | 4.83E-06 | 0.01504593 |
| 2 | 102317226 | 102317226 | 1 | 2_102317226 | ENSG00000115602 | IL1RL1 | 0 | INTRON | 4.57186083 | 4.83E-06 | 0.01504593 |
| 11 | 37340194 | 37340194 | 1 | 11_37340194 | ENSG00000251838 | AC061997.1 | 361930 | Downstream | 4.57176821 | 4.84E-06 | 0.01504899 |
| 6 | 107425947 | 107425947 | 1 | 6_107425947 | ENSG00000164494 | PDSS2 | 0 | INTRON | -4.5717416 | 4.84E-06 | 0.01504899 |
| 5 | 50672189 | 50672189 | 1 | 5_50672189 | ENSG00000151883 | PARP8 | 0 | INTRON | 4.5716084 | 4.84E-06 | 0.01505581 |
| 1 | 15712074 | 15712074 | 1 | 1_15712074 | ENSG00000116786 | PLEKHM2 | 0 | INTRON | -4.571524 | 4.84E-06 | 0.01505912 |
| 8 | 101695007 | 101695007 | 1 | 8_101695007 | ENSG00000104490 | NCALD | 0 | INTRON | -4.5713422 | 4.85E-06 | 0.01506034 |
| 17 | 82964753 | 82964753 | 1 | 17_82964753 | ENSG00000175711 | B3GNTL1 | 0 | INTRON | -4.5713388 | 4.85E-06 | 0.01506034 |
| 2 | 124575652 | 124575652 | 1 | 2_124575652 | ENSG00000155052 | CNTNAP5 | 0 | INTRON | 4.57133659 | 4.85E-06 | 0.01506034 |
| 11 | 109638275 | 109638275 | 1 | 11_109638275 | ENSG00000254482 | AP003102.1 | 147 | Upstream | -4.571322 | 4.85E-06 | 0.01506034 |
| 16 | 51287694 | 51287694 | 1 | 16_51287694 | ENSG00000285367 | AC087564.1 | 0 | INTRON | 4.57129274 | 4.85E-06 | 0.01506034 |
| 15 | 49464217 | 49464217 | 1 | 15_49464217 | ENSG00000166262 | FAM227B | 0 | INTRON | 4.57124916 | 4.85E-06 | 0.01506034 |
| 3 | 27993863 | 27993863 | 1 | 3_27993863 | ENSG00000235493 | LINC01967 | 0 | INTRON | 4.57123913 | 4.85E-06 | 0.01506034 |
| 11 | 86472766 | 86472766 | 1 | 11_86472766 | ENSG00000151376 | ME3 | 0 | INTRON | 4.57112359 | 4.85E-06 | 0.0150659 |
| 17 | 73258331 | 73258331 | 1 | 17_73258331 | ENSG00000187959 | CPSF4L | 0 | INTRON | 4.57107824 | 4.85E-06 | 0.01506641 |
| 5 | 103231155 | 103231155 | 1 | 5_103231155 | ENSG00000248203 | AC011362.1 | 14892 | Downstream | 4.57087619 | 4.86E-06 | 0.01507819 |
| 2 | 113518677 | 113518677 | 1 | 2_113518677 | ENSG00000234148 | LINC01961 | 3189 | Downstream | -4.570754 | 4.86E-06 | 0.01508423 |
| 3 | 142042832 | 142042832 | 1 | 3_142042832 | ENSG00000114126 | TFDP2 | 0 | INTRON | -4.5706854 | 4.86E-06 | 0.01508642 |
| 2 | 65550423 | 65550423 | 1 | 2_65550423 | ENSG00000204929 | AC007389.1 | 0 | INTRON | 4.57058004 | 4.86E-06 | 0.01509126 |
| X | 103693306 | 103693306 | 1 | X_103693306 | ENSG00000231154 | MORF4L2-AS1 | 1534 | Downstream | -4.5704452 | 4.87E-06 | 0.01509571 |
| 15 | 36385815 | 36385815 | 1 | 15_36385815 | ENSG00000259395 | AC087516.1 | 41649 | Downstream | -4.5704303 | 4.87E-06 | 0.01509571 |
| 3 | 107129212 | 107129212 | 1 | 3_107129212 | ENSG00000242759 | LINC00882 | 0 | EXON | -4.5703963 | 4.87E-06 | 0.01509571 |
| 11 | 117148914 | 117148914 | 1 | 11_117148914 | ENSG00000168092 | PAFAH1B2 | 0 | INTRON | 4.57036539 | 4.87E-06 | 0.01509571 |
| 1 | 50688059 | 50688059 | 1 | 1_50688059 | ENSG00000185104 | FAF1 | 0 | INTRON | -4.5702797 | 4.87E-06 | 0.01509914 |
| 18 | 8228334 | 8228334 | 1 | 18_8228334 | ENSG00000173482 | PTPRM | 0 | INTRON | 4.57023738 | 4.87E-06 | 0.01509943 |
| 22 | 16558781 | 16558781 | 1 | 22_16558781 | ENSG00000233995 | AP000547.1 | 13245 | Upstream | 4.5700867 | 4.88E-06 | 0.01510666 |
| 1 | 23826959 | 23826959 | 1 | 1_23826959 | ENSG00000117305 | HMGCL | 0 | INTRON | 4.57006079 | 4.88E-06 | 0.01510666 |
| 6 | 47515656 | 47515656 | 1 | 6_47515656 | ENSG00000198087 | CD2AP | 0 | INTRON | -4.5699804 | 4.88E-06 | 0.01510836 |
| 13 | 92594761 | 92594761 | 1 | 13_92594761 | ENSG00000179399 | GPC5 | 0 | INTRON | 4.56992707 | 4.88E-06 | 0.01510836 |
| 1 | 247543474 | 247543474 | 1 | 1_247543474 | ENSG00000169224 | GCSAML | 0 | INTRON | -4.5699228 | 4.88E-06 | 0.01510836 |
| 1 | 226835820 | 226835820 | 1 | 1_226835820 | ENSG00000287259 | AL359732.1 | 1914 | Downstream | 4.56982718 | 4.88E-06 | 0.0151125 |
| 1 | 171858435 | 171858435 | 1 | 1_171858435 | ENSG00000197959 | DNM3 | 0 | INTRON | -4.5696294 | 4.89E-06 | 0.01512198 |
| 3 | 191927710 | 191927710 | 1 | 3_191927710 | ENSG00000237653 | AC026320.2 | 24638 | Downstream | 4.56961948 | 4.89E-06 | 0.01512198 |
| 9 | 34766069 | 34766069 | 1 | 9_34766069 | ENSG00000230074 | AL162231.2 | 0 | INTRON | -4.5695165 | 4.89E-06 | 0.01512608 |
| 1 | 145818343 | 145818343 | 1 | 1_145818343 | ENSG00000265491 | RNF115 | 0 | INTRON | 4.5694667 | 4.89E-06 | 0.01512608 |
| 7 | 47032747 | 47032747 | 1 | 7_47032747 | ENSG00000229192 | AC004870.3 | 0 | INTRON | 4.56943734 | 4.89E-06 | 0.01512608 |
| 9 | 103941241 | 103941241 | 1 | 9_103941241 | ENSG00000285483 | AL590381.1 | 58513 | Upstream | 4.56940146 | 4.89E-06 | 0.01512608 |
| 14 | 48870477 | 48870477 | 1 | 14_48870477 | ENSG00000258381 | AL512360.1 | 50884 | Downstream | 4.56937215 | 4.89E-06 | 0.01512608 |
| 5 | 142425022 | 142425022 | 1 | 5_142425022 | ENSG00000231185 | SPRY4-AS1 | 0 | INTRON | -4.5692129 | 4.90E-06 | 0.01513483 |
| 5 | 107233917 | 107233917 | 1 | 5_107233917 | ENSG00000250273 | PSMC1P5 | 38585 | Downstream | 4.56907479 | 4.90E-06 | 0.01514205 |
| 5 | 177465727 | 177465727 | 1 | 5_177465727 | ENSG00000113758 | DBN1 | 0 | INTRON | 4.56888438 | 4.90E-06 | 0.01515201 |
| 10 | 116489010 | 116489010 | 1 | 10_116489010 | ENSG00000203837 | PNLIPRP3 | 11053 | Downstream | -4.5688608 | 4.90E-06 | 0.01515201 |
| 3 | 49434403 | 49434403 | 1 | 3_49434403 | ENSG00000145029 | NICN1 | 5077 | Upstream | 4.56875723 | 4.91E-06 | 0.01515675 |
| 4 | 2629988 | 2629988 | 1 | 4_2629988 | ENSG00000125386 | FAM193A | 0 | INTRON | 4.56870068 | 4.91E-06 | 0.01515809 |
| 18 | 6853533 | 6853533 | 1 | 18_6853533 | ENSG00000088756 | ARHGAP28 | 0 | INTRON | 4.56859854 | 4.91E-06 | 0.01516054 |
| 3 | 195394222 | 195394222 | 1 | 3_195394222 | ENSG00000114331 | ACAP2 | 0 | INTRON | -4.5685189 | 4.91E-06 | 0.01516054 |
| X | 118481278 | 118481278 | 1 | X_118481278 | ENSG00000147251 | DOCK11 | 14619 | Upstream | -4.5685184 | 4.91E-06 | 0.01516054 |
| 10 | 110906628 | 110906628 | 1 | 10_110906628 | ENSG00000214413 | BBIP1 | 0 | EXON | 4.56851458 | 4.91E-06 | 0.01516054 |
| 6 | 43211378 | 43211378 | 1 | 6_43211378 | ENSG00000112659 | CUL9 | 0 | INTRON | 4.56847551 | 4.91E-06 | 0.01516062 |
| 8 | 83322225 | 83322225 | 1 | 8_83322225 | ENSG00000274116 | AC090132.2 | 27954 | Upstream | 4.56839412 | 4.91E-06 | 0.01516342 |
| 14 | 102897825 | 102897825 | 1 | 14_102897825 | ENSG00000131323 | TRAF3 | 0 | INTRON | 4.56834514 | 4.92E-06 | 0.01516342 |
| 21 | 14870980 | 14870980 | 1 | 21_14870980 | ENSG00000281903 | LINC02246 | 0 | INTRON | -4.5682491 | 4.92E-06 | 0.01516342 |
| 3 | 25100188 | 25100188 | 1 | 3_25100188 | ENSG00000237838 | AC092422.1 | 0 | INTRON | 4.56824714 | 4.92E-06 | 0.01516342 |
| 2 | 106748377 | 106748377 | 1 | 2_106748377 | ENSG00000214199 | EEF1A1P12 | 49701 | Upstream | 4.5682467 | 4.92E-06 | 0.01516342 |
| 1 | 161837825 | 161837825 | 1 | 1_161837825 | ENSG00000118217 | ATF6 | 0 | INTRON | 4.56809279 | 4.92E-06 | 0.01516508 |
| 12 | 92549931 | 92549931 | 1 | 12_92549931 | ENSG00000258262 | AC063949.1 | 18607 | Downstream | 4.56808488 | 4.92E-06 | 0.01516508 |
| 18 | 21848398 | 21848398 | 1 | 18_21848398 | ENSG00000101752 | MIB1 | 0 | INTRON | 4.56807088 | 4.92E-06 | 0.01516508 |
| 13 | 57424998 | 57424998 | 1 | 13_57424998 | ENSG00000225352 | RPL31P53 | 33480 | Upstream | 4.56803998 | 4.92E-06 | 0.01516508 |
| 8 | 62044646 | 62044646 | 1 | 8_62044646 | ENSG00000253789 | NARSP2 | 65877 | Upstream | -4.5679689 | 4.92E-06 | 0.01516508 |
| 2 | 41098118 | 41098118 | 1 | 2_41098118 | ENSG00000237442 | HNRNPA1P57 | 45661 | Upstream | 4.56795407 | 4.93E-06 | 0.01516508 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 16 | 58722439 | 58722439 | 1 | 16_58722439 | ENSG00000125166 | GOT2 | 0 | INTRON | 4.56794989 | 4.93E-06 | 0.01516508 |
| 8 | 80175065 | 80175065 | 1 | 8_80175065 | ENSG00000076554 | TPD52 | 0 | INTRON | 4.56792008 | 4.93E-06 | 0.01516508 |
| 20 | 44539075 | 44539075 | 1 | 20_44539075 | ENSG00000168734 | PKIG | 0 | INTRON | 4.56776708 | 4.93E-06 | 0.01517162 |
| 3 | 75650193 | 75650193 | 1 | 3_75650193 | ENSG00000243422 | RPL23AP49 | 0 | INTRON | -4.5677538 | 4.93E-06 | 0.01517162 |
| 7 | 29056442 | 29056442 | 1 | 7_29056442 | ENSG00000106066 | CPVL | 0 | INTRON | 4.56766251 | 4.93E-06 | 0.01517549 |
| 16 | 7650558 | 7650558 | 1 | 16_7650558 | ENSG00000078328 | RBFOX1 | 0 | INTRON | -4.5676182 | 4.93E-06 | 0.01517595 |
| 5 | 93395925 | 93395925 | 1 | 5_93395925 | ENSG00000237187 | NR2F1-AS1 | 0 | INTRON | 4.56754375 | 4.93E-06 | 0.01517684 |
| 18 | 62652186 | 62652186 | 1 | 18_62652186 | ENSG00000243549 | RN7SL705P | 1585 | Upstream | 4.56753013 | 4.94E-06 | 0.01517684 |
| 22 | 11935884 | 11935884 | 1 | 22_11935884 | ENSG00000286406 | AC138776.1 | 25526 | Downstream | -4.5671833 | 4.94E-06 | 0.01519683 |
| Y | 56720481 | 56720481 | 1 | Y_56720481 | ENSG00000235857 | CTBP2P1 | 134762 | Upstream | -4.5671783 | 4.94E-06 | 0.01519683 |
| 4 | 84660747 | 84660747 | 1 | 4_84660747 | ENSG00000163625 | WDFY3 | 8862 | Downstream | -4.5670111 | 4.95E-06 | 0.01520621 |
| 1 | 15582141 | 15582141 | 1 | 1_15582141 | ENSG00000116138 | DNAJC16 | 0 | INTRON | 4.56697114 | 4.95E-06 | 0.01520636 |
| 8 | 35187644 | 35187644 | 1 | 8_35187644 | ENSG00000156687 | UNC5D | 47830 | Upstream | -4.5668951 | 4.95E-06 | 0.01520739 |
| 7 | 52770827 | 52770827 | 1 | 7_52770827 | ENSG00000234304 | SGO1P2 | 121009 | Downstream | 4.56688114 | 4.95E-06 | 0.01520739 |
| 9 | 69225276 | 69225276 | 1 | 9_69225276 | ENSG00000119139 | TJP2 | 0 | INTRON | 4.56677582 | 4.95E-06 | 0.0152113 |
| 7 | 34355696 | 34355696 | 1 | 7_34355696 | ENSG00000197085 | NPSR1-AS1 | 0 | INTRON | 4.56672309 | 4.95E-06 | 0.0152113 |
| 7 | 17494598 | 17494598 | 1 | 7_17494598 | ENSG00000236039 | AC019117.1 | 0 | INTRON | 4.56668998 | 4.95E-06 | 0.0152113 |
| 20 | 59487016 | 59487016 | 1 | 20_59487016 | ENSG00000287752 | AL389889.2 | 17163 | Upstream | -4.5666727 | 4.96E-06 | 0.0152113 |
| 8 | 99615048 | 99615048 | 1 | 8_99615048 | ENSG00000132549 | VPS13B | 0 | INTRON | -4.5666105 | 4.96E-06 | 0.0152113 |
| 4 | 75042724 | 75042724 | 1 | 4_75042724 | ENSG00000169116 | PARM1 | 0 | INTRON | -4.5666002 | 4.96E-06 | 0.0152113 |
| 7 | 80733540 | 80733540 | 1 | 7_80733540 | ENSG00000075223 | SEMA3C | 8997 | Downstream | 4.56643945 | 4.96E-06 | 0.01521903 |
| 10 | 37957031 | 37957031 | 1 | 10_37957031 | ENSG00000175395 | ZNF25 | 0 | EXON | -4.566418 | 4.96E-06 | 0.01521903 |
| 17 | 85714 | 85714 | 1 | 17_85714 | ENSG00000280136 | AC240565.1 | 2926 | Downstream | -4.5663714 | 4.96E-06 | 0.01521967 |
| 9 | 124004235 | 124004235 | 1 | 9_124004235 | ENSG00000106689 | LHX2 | 0 | INTRON | -4.5662688 | 4.96E-06 | 0.01522437 |
| 8 | 78702151 | 78702151 | 1 | 8_78702151 | ENSG00000104427 | ZC2HC1A | 0 | INTRON | -4.5661143 | 4.97E-06 | 0.01522946 |
| 1 | 112025830 | 112025830 | 1 | 1_112025830 | ENSG00000231437 | LINC01750 | 26988 | Downstream | 4.56609122 | 4.97E-06 | 0.01522946 |
| 21 | 34715814 | 34715814 | 1 | 21_34715814 | ENSG00000159212 | CLIC6 | 0 | INTRON | 4.5660854 | 4.97E-06 | 0.01522946 |
| 17 | 68294516 | 68294516 | 1 | 17_68294516 | ENSG00000141337 | ARSG | 0 | INTRON | 4.5659611 | 4.97E-06 | 0.01523528 |
| 10 | 1609389 | 1609389 | 1 | 10_1609389 | ENSG00000185736 | ADARB2 | 0 | INTRON | -4.5659298 | 4.97E-06 | 0.01523528 |
| 4 | 16165668 | 16165668 | 1 | 4_16165668 | ENSG00000169762 | TAPT1 | 0 | INTRON | -4.565875 | 4.97E-06 | 0.0152356 |
| 3 | 713928 | 713928 | 1 | 3_713928 | ENSG00000224957 | LINC01266 | 0 | INTRON | 4.56580063 | 4.98E-06 | 0.0152356 |
| 1 | 58299194 | 58299194 | 1 | 1_58299194 | ENSG00000173406 | DAB1 | 0 | INTRON | -4.5657402 | 4.98E-06 | 0.0152356 |
| 18 | 35201661 | 35201661 | 1 | 18_35201661 | ENSG00000186812 | ZNF397 | 39368 | Upstream | 4.5657349 | 4.98E-06 | 0.0152356 |
| 7 | 11681096 | 11681096 | 1 | 7_11681096 | ENSG00000005108 | THSD7A | 0 | INTRON | -4.5657334 | 4.98E-06 | 0.0152356 |
| Y | 11584624 | 11584624 | 1 | Y_11584624 | ENSG00000271375 | AC134879.2 | 110387 | Upstream | -4.5656988 | 4.98E-06 | 0.0152356 |
| X | 154323648 | 154323648 | 1 | X_154323648 | ENSG00000007350 | TKTL1 | 0 | INTRON | 4.5655941 | 4.98E-06 | 0.01523616 |
| 13 | 28315804 | 28315804 | 1 | 13_28315804 | ENSG00000102755 | FLT1 | 0 | INTRON | -4.5655908 | 4.98E-06 | 0.01523616 |
| 7 | 128730874 | 128730874 | 1 | 7_128730874 | ENSG00000135248 | FAM71F1 | 0 | INTRON | 4.5655408 | 4.98E-06 | 0.01523616 |
| 17 | 64094411 | 64094411 | 1 | 17_64094411 | ENSG00000178607 | ERN1 | 0 | INTRON | 4.56553336 | 4.98E-06 | 0.01523616 |
| 16 | 12090907 | 12090907 | 1 | 16_12090907 | ENSG00000048471 | SNX29 | 0 | INTRON | 4.56546848 | 4.98E-06 | 0.01523616 |
| 12 | 50239626 | 50239626 | 1 | 12_50239626 | ENSG00000050405 | LIMA1 | 0 | INTRON | 4.56546484 | 4.98E-06 | 0.01523616 |
| 1 | 224352505 | 224352505 | 1 | 1_224352505 | ENSG00000143771 | CNIH4 | 4352 | Upstream | 4.56531967 | 4.99E-06 | 0.01524249 |
| 12 | 128501536 | 128501536 | 1 | 12_128501536 | ENSG00000181234 | TMEM132C | 0 | INTRON | 4.56527341 | 4.99E-06 | 0.01524249 |
| 9 | 124914417 | 124914417 | 1 | 9_124914417 | ENSG00000136935 | GOLGA1 | 0 | INTRON | -4.5652647 | 4.99E-06 | 0.01524249 |
| 3 | 62497888 | 62497888 | 1 | 3_62497888 | ENSG00000163618 | CADPS | 0 | INTRON | 4.56513155 | 4.99E-06 | 0.01524943 |
| 2 | 2152298 | 2152298 | 1 | 2_2152298 | ENSG00000186487 | MYT1L | 0 | INTRON | 4.56507531 | 4.99E-06 | 0.01525005 |
| 16 | 19182523 | 19182523 | 1 | 16_19182523 | ENSG00000286790 | AC010494.1 | 0 | INTRON | 4.56502525 | 4.99E-06 | 0.01525005 |
| 2 | 160892337 | 160892337 | 1 | 2_160892337 | ENSG00000244372 | RN7SL423P | 14487 | Downstream | 4.56501004 | 4.99E-06 | 0.01525005 |
| 19 | 53013907 | 53013907 | 1 | 19_53013907 | ENSG00000242779 | ZNF702P | 0 | INTRON | -4.5649325 | 5.00E-06 | 0.01525265 |
| 14 | 56195603 | 56195603 | 1 | 14_56195603 | ENSG00000139946 | PELI2 | 0 | INTRON | -4.564899 | 5.00E-06 | 0.01525265 |
| 7 | 24318041 | 24318041 | 1 | 7_24318041 | ENSG00000287523 | AC003044.1 | 52 | Downstream | -4.5648281 | 5.00E-06 | 0.01525355 |
| 2 | 134266510 | 134266510 | 1 | 2_134266510 | ENSG00000152127 | MGAT5 | 0 | INTRON | -4.5648114 | 5.00E-06 | 0.01525355 |
| 13 | 45097420 | 45097420 | 1 | 13_45097420 | ENSG00000223732 | AL359706.1 | 14295 | Upstream | 4.56466237 | 5.00E-06 | 0.01525597 |
| 2 | 64217278 | 64217278 | 1 | 2_64217278 | ENSG00000225889 | AC012368.1 | 0 | INTRON | 4.56466181 | 5.00E-06 | 0.01525597 |
| 11 | 103872374 | 103872374 | 1 | 11_103872374 | ENSG00000254987 | AP002989.1 | 0 | INTRON | 4.56454657 | 5.01E-06 | 0.01525597 |
| 2 | 132687160 | 132687160 | 1 | 2_132687160 | ENSG00000176771 | NCKAP5 | 0 | INTRON | 4.56454259 | 5.01E-06 | 0.01525597 |
| 3 | 15457912 | 15457912 | 1 | 3_15457912 | ENSG00000206561 | COLQ | 0 | INTRON | -4.5644899 | 5.01E-06 | 0.01525597 |
| 17 | 52367139 | 52367139 | 1 | 17_52367139 | ENSG00000263317 | LINC01982 | 23375 | Upstream | 4.56444924 | 5.01E-06 | 0.01525597 |
| 7 | 86176098 | 86176098 | 1 | 7_86176098 | ENSG00000236610 | SOCS5P1 | 40686 | Downstream | 4.56443497 | 5.01E-06 | 0.01525597 |
| 4 | 68694313 | 68694313 | 1 | 4_68694313 | ENSG00000248635 | AC147055.1 | 10286 | Downstream | 4.56438755 | 5.01E-06 | 0.01525597 |
| 16 | 15138966 | 15138966 | 1 | 16_15138966 | ENSG00000179889 | PDXDC1 | 0 | EXON | 4.56438436 | 5.01E-06 | 0.01525597 |
| 12 | 98154703 | 98154703 | 1 | 12_98154703 | ENSG00000258312 | AC016152.1 | 0 | INTRON | -4.564354 | 5.01E-06 | 0.01525597 |
| 1 | 243132729 | 243132729 | 1 | 1_243132729 | ENSG00000143702 | CEP170 | 0 | INTRON | 4.56433324 | 5.01E-06 | 0.01525597 |
| 18 | 44378295 | 44378295 | 1 | 18_44378295 | ENSG00000267337 | LINC01478 | 0 | INTRON | 4.56432723 | 5.01E-06 | 0.01525597 |
| 3 | 36794000 | 36794000 | 1 | 3_36794000 | ENSG00000230067 | HSPD1P6 | 9833 | Upstream | 4.56412234 | 5.02E-06 | 0.01526814 |
| 16 | 83315233 | 83315233 | 1 | 16_83315233 | ENSG00000140945 | CDH13 | 0 | INTRON | 4.563817 | 5.02E-06 | 0.01528764 |
| 7 | 107524148 | 107524148 | 1 | 7_107524148 | ENSG00000164597 | COG5 | 0 | INTRON | -4.5636374 | 5.03E-06 | 0.01529799 |
| X | 35237972 | 35237972 | 1 | X_35237972 | ENSG00000229347 | AL596268.1 | 177998 | Downstream | 4.56357256 | 5.03E-06 | 0.01529999 |
| 1 | 167754067 | 167754067 | 1 | 1_167754067 | ENSG00000197965 | MPZL1 | 0 | INTRON | 4.56347709 | 5.03E-06 | 0.01530383 |
| 13 | 35894341 | 35894341 | 1 | 13_35894341 | ENSG00000133083 | DCLK1 | 0 | INTRON | -4.5634448 | 5.03E-06 | 0.01530383 |
| 3 | 189251506 | 189251506 | 1 | 3_189251506 | ENSG00000188001 | TPRG1 | 0 | INTRON | 4.56304779 | 5.04E-06 | 0.01533007 |
| 10 | 61466674 | 61466674 | 1 | 10_61466674 | ENSG00000237233 | TMEM26-AS1 | 0 | INTRON | 4.5629411 | 5.04E-06 | 0.01533513 |
| 2 | 85219103 | 85219103 | 1 | 2_85219103 | ENSG00000152284 | TCF7L1 | 0 | INTRON | 4.56287953 | 5.05E-06 | 0.01533689 |
| 2 | 134662170 | 134662170 | 1 | 2_134662170 | ENSG00000152128 | TMEM163 | 0 | INTRON | -4.5628021 | 5.05E-06 | 0.01533981 |
| 13 | 61389866 | 61389866 | 1 | 13_61389866 | ENSG00000280165 | PCDH20 | 19818 | Downstream | -4.5626786 | 5.05E-06 | 0.01534393 |
| 14 | 42492530 | 42492530 | 1 | 14_42492530 | ENSG00000258394 | AL442163.1 | 0 | INTRON | -4.5626368 | 5.05E-06 | 0.01534393 |
| 8 | 84035332 | 84035332 | 1 | 8_84035332 | ENSG00000254202 | AC015522.1 | 0 | INTRON | 4.56263028 | 5.05E-06 | 0.01534393 |
| 10 | 83122342 | 83122342 | 1 | 10_83122342 | ENSG00000200774 | RNU6-478P | 54271 | Upstream | 4.56259577 | 5.05E-06 | 0.01534393 |
| 17 | 70201492 | 70201492 | 1 | 17_70201492 | ENSG00000123700 | KCNJ2 | 21444 | Downstream | 4.5625381 | 5.05E-06 | 0.01534541 |
| 8 | 94090880 | 94090880 | 1 | 8_94090880 | ENSG00000253585 | AP003351.1 | 6883 | Downstream | -4.562439 | 5.06E-06 | 0.01534613 |
| 1 | 103091167 | 103091167 | 1 | 1_103091167 | ENSG00000060718 | COL11A1 | 0 | INTRON | -4.5624297 | 5.06E-06 | 0.01534613 |
| 19 | 58192699 | 58192699 | 1 | 19_58192699 | ENSG00000171606 | ZNF274 | 0 | INTRON | 4.56240599 | 5.06E-06 | 0.01534613 |
| 3 | 140110262 | 140110262 | 1 | 3_140110262 | ENSG00000158258 | CLSTN2 | 0 | INTRON | -4.5623785 | 5.06E-06 | 0.01534613 |
| Y | 10818771 | 10818771 | 1 | Y_10818771 | ENSG00000273858 | AC140113.4 | 223950 | Downstream | -4.5622903 | 5.06E-06 | 0.01534748 |
| 8 | 77976168 | 77976168 | 1 | 8_77976168 | ENSG00000254001 | AC084706.1 | 171932 | Upstream | 4.5622852 | 5.06E-06 | 0.01534748 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
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| 3 | 155959837 | 155959837 | 1 | 3_155959837 | ENSG00000163655 | GMPS | 15817 | Downstream | 4.56214751 | 5.06E-06 | 0.01534908 |
| 2 | 203430803 | 203430803 | 1 | 2_203430803 | ENSG00000138443 | ABI2 | 0 | 3UTR | -4.5621393 | 5.06E-06 | 0.01534908 |
| 7 | 74839567 | 74839567 | 1 | 7_74839567 | ENSG00000196275 | GTF2IRD2 | 0 | INTRON | -4.5621092 | 5.06E-06 | 0.01534908 |
| 13 | 110605701 | 110605701 | 1 | 13_110605701 | ENSG00000275880 | AL139385.1 | 7380 | Downstream | 4.56210291 | 5.06E-06 | 0.01534908 |
| 12 | 68924067 | 68924067 | 1 | 12_68924067 | ENSG00000135678 | CPM | 0 | INTRON | 4.5620763 | 5.07E-06 | 0.01534908 |
| 17 | 40846479 | 40846479 | 1 | 17_40846479 | ENSG00000265359 | AC004231.3 | 4320 | Upstream | -4.5620121 | 5.07E-06 | 0.01535104 |
| 14 | 65844371 | 65844371 | 1 | 14_65844371 | ENSG00000258629 | AL391261.1 | 35220 | Downstream | 4.56185495 | 5.07E-06 | 0.01535922 |
| 1 | 217747747 | 217747747 | 1 | 1_217747747 | ENSG00000162814 | SPATA17 | 0 | INTRON | -4.5618256 | 5.07E-06 | 0.01535922 |
| 10 | 133281295 | 133281295 | 1 | 10_133281295 | ENSG00000130640 | TUBGCP2 | 0 | 3UTR | 4.56175494 | 5.07E-06 | 0.01535976 |
| 2 | 175743269 | 175743269 | 1 | 2_175743269 | ENSG00000223976 | EXTL2P1 | 99617 | Upstream | 4.56174345 | 5.07E-06 | 0.01535976 |
| X | 133557162 | 133557162 | 1 | X_133557162 | ENSG00000147257 | GPC3 | 0 | INTRON | -4.561549 | 5.08E-06 | 0.01537126 |
| 5 | 147303350 | 147303350 | 1 | 5_147303350 | ENSG00000169302 | STK32A | 0 | INTRON | -4.5614578 | 5.08E-06 | 0.0153752 |
| 7 | 78671055 | 78671055 | 1 | 7_78671055 | ENSG00000187391 | MAGI2 | 0 | INTRON | 4.56141725 | 5.08E-06 | 0.01537544 |
| 4 | 103706846 | 103706846 | 1 | 4_103706846 | ENSG00000169836 | TACR3 | 0 | INTRON | 4.56130917 | 5.08E-06 | 0.01538049 |
| 14 | 63282106 | 63282106 | 1 | 14_63282106 | ENSG00000126785 | RHOJ | 0 | INTRON | -4.5612736 | 5.08E-06 | 0.01538049 |
| 16 | 21495212 | 21495212 | 1 | 16_21495212 | ENSG00000180747 | SMG1P3 | 0 | INTRON | 4.56105996 | 5.09E-06 | 0.01539327 |
| 4 | 130770450 | 130770450 | 1 | 4_130770450 | ENSG00000280059 | AC093831.2 | 38056 | Upstream | -4.5610246 | 5.09E-06 | 0.01539327 |
| 18 | 46213845 | 46213845 | 1 | 18_46213845 | ENSG00000152242 | C18orf25 | 0 | INTRON | 4.56087656 | 5.09E-06 | 0.01540139 |
| 2 | 79979107 | 79979107 | 1 | 2_79979107 | ENSG00000066032 | CTNNA2 | 0 | INTRON | -4.5606154 | 5.10E-06 | 0.01541313 |
| 18 | 968500 | 968500 | 1 | 18_968500 | ENSG00000272461 | AP005328.1 | 0 | INTRON | 4.56057884 | 5.10E-06 | 0.01541313 |
| 1 | 245818558 | 245818558 | 1 | 1_245818558 | ENSG00000185420 | SMYD3 | 0 | INTRON | -4.5605307 | 5.10E-06 | 0.01541313 |
| 5 | 32750378 | 32750378 | 1 | 5_32750378 | ENSG00000113389 | NPR3 | 0 | INTRON | 4.56051601 | 5.10E-06 | 0.01541313 |
| 17 | 43476399 | 43476399 | 1 | 17_43476399 | ENSG00000237888 | AC087650.1 | 0 | EXON | 4.56049884 | 5.10E-06 | 0.01541313 |
| 3 | 171311495 | 171311495 | 1 | 3_171311495 | ENSG00000154310 | TNIK | 0 | INTRON | -4.5604601 | 5.10E-06 | 0.01541313 |
| 8 | 113441757 | 113441757 | 1 | 8_113441757 | ENSG00000286937 | AC055788.1 | 0 | INTRON | 4.56045566 | 5.10E-06 | 0.01541313 |
| 2 | 60201940 | 60201940 | 1 | 2_60201940 | ENSG00000271955 | AC007100.1 | 101740 | Upstream | 4.56039486 | 5.11E-06 | 0.01541368 |
| 19 | 14310733 | 14310733 | 1 | 19_14310733 | ENSG00000266913 | LINC01841 | 0 | INTRON | 4.56037365 | 5.11E-06 | 0.01541368 |
| 5 | 4138949 | 4138949 | 1 | 5_4138949 | ENSG00000250921 | LINC02063 | 0 | INTRON | -4.5602975 | 5.11E-06 | 0.01541653 |
| 8 | 94308728 | 94308728 | 1 | 8_94308728 | ENSG00000244217 | RPS4XP10 | 44194 | Upstream | 4.5600261 | 5.11E-06 | 0.01543373 |
| 6 | 134343554 | 134343554 | 1 | 6_134343554 | ENSG00000236700 | LINC01010 | 0 | INTRON | 4.55996494 | 5.12E-06 | 0.01543517 |
| 5 | 177262739 | 177262739 | 1 | 5_177262739 | ENSG00000286634 | AC146507.3 | 0 | INTRON | 4.55991607 | 5.12E-06 | 0.01543517 |
| 20 | 42871241 | 42871241 | 1 | 20_42871241 | ENSG00000196090 | PTPRT | 0 | INTRON | -4.5598682 | 5.12E-06 | 0.01543517 |
| 16 | 61333157 | 61333157 | 1 | 16_61333157 | ENSG00000224631 | RPS27AP16 | 277193 | Upstream | -4.5598576 | 5.12E-06 | 0.01543517 |
| 4 | 115592630 | 115592630 | 1 | 4_115592630 | ENSG00000250693 | RPF2P2 | 36181 | Upstream | 4.55972843 | 5.12E-06 | 0.01543534 |
| 4 | 54354791 | 54354791 | 1 | 4_54354791 | ENSG00000248184 | LINC02283 | 0 | INTRON | -4.5597209 | 5.12E-06 | 0.01543534 |
| 15 | 81914942 | 81914942 | 1 | 15_81914942 | ENSG00000259692 | AC104041.1 | 0 | INTRON | 4.55970221 | 5.12E-06 | 0.01543534 |
| 16 | 2164179 | 2164179 | 1 | 16_2164179 | ENSG00000131653 | TRAF7 | 0 | INTRON | 4.55968844 | 5.12E-06 | 0.01543534 |
| 14 | 31671267 | 31671267 | 1 | 14_31671267 | ENSG00000151413 | NUBPL | 0 | INTRON | 4.55966928 | 5.12E-06 | 0.01543534 |
| 5 | 167472782 | 167472782 | 1 | 5_167472782 | ENSG00000145934 | TENM2 | 0 | INTRON | 4.55960566 | 5.12E-06 | 0.01543624 |
| 4 | 171296291 | 171296291 | 1 | 4_171296291 | ENSG00000248339 | LINC02504 | 0 | INTRON | 4.55958265 | 5.13E-06 | 0.01543624 |
| 1 | 108577947 | 108577947 | 1 | 1_108577947 | ENSG00000162636 | FAM102B | 0 | INTRON | 4.55942674 | 5.13E-06 | 0.01544285 |
| 8 | 24588727 | 24588727 | 1 | 8_24588727 | ENSG00000253535 | AC120193.1 | 0 | INTRON | 4.55941849 | 5.13E-06 | 0.01544285 |
| X | 9687413 | 9687413 | 1 | X_9687413 | ENSG00000101849 | TBL1X | 0 | INTRON | 4.55937404 | 5.13E-06 | 0.01544339 |
| 17 | 43278189 | 43278189 | 1 | 17_43278189 | ENSG00000236383 | CCDC200 | 0 | INTRON | 4.55925555 | 5.13E-06 | 0.01544937 |
| 4 | 149896233 | 149896233 | 1 | 4_149896233 | ENSG00000234828 | IQCM | 0 | TSS | -4.5591607 | 5.14E-06 | 0.01545203 |
| 17 | 939011 | 939011 | 1 | 17_939011 | ENSG00000167693 | NXN | 0 | INTRON | -4.5591451 | 5.14E-06 | 0.01545203 |
| 1 | 149494076 | 149494076 | 1 | 1_149494076 | ENSG00000271383 | NBPF19 | 0 | INTRON | -4.5590663 | 5.14E-06 | 0.01545452 |
| 5 | 66512889 | 66512889 | 1 | 5_66512889 | ENSG00000250313 | LINC02229 | 1245 | Upstream | -4.5590223 | 5.14E-06 | 0.01545452 |
| 7 | 152922872 | 152922872 | 1 | 7_152922872 | ENSG00000286565 | AC006348.1 | 2360 | Upstream | -4.5589999 | 5.14E-06 | 0.01545452 |
| 4 | 139190379 | 139190379 | 1 | 4_139190379 | ENSG00000265892 | RN7SL311P | 4633 | Downstream | -4.558786 | 5.15E-06 | 0.01546753 |
| X | 112288101 | 112288101 | 1 | X_112288101 | ENSG00000271464 | DPRXP7 | 31850 | Downstream | 4.55870882 | 5.15E-06 | 0.01547048 |
| 1 | 82553765 | 82553765 | 1 | 1_82553765 | ENSG00000233290 | AL157944.1 | 0 | INTRON | 4.55866386 | 5.15E-06 | 0.01547106 |
| 8 | 74195941 | 74195941 | 1 | 8_74195941 | ENSG00000253983 | AC087627.1 | 0 | INTRON | 4.55851651 | 5.15E-06 | 0.0154783 |
| 15 | 72306291 | 72306291 | 1 | 15_72306291 | ENSG00000140488 | CELF6 | 0 | TSS | 4.55849141 | 5.15E-06 | 0.0154783 |
| 4 | 186911170 | 186911170 | 1 | 4_186911170 | ENSG00000249539 | MRPS36P2 | 10332 | Downstream | -4.55844 | 5.15E-06 | 0.01547936 |
| 21 | 15227683 | 15227683 | 1 | 21_15227683 | ENSG00000280082 | AF246928.1 | 118968 | Upstream | -4.5583911 | 5.15E-06 | 0.01548022 |
| X | 3926518 | 3926518 | 1 | X_3926518 | ENSG00000285756 | BX890604.2 | 0 | INTRON | -4.5582175 | 5.16E-06 | 0.01549029 |
| 9 | 26989309 | 26989309 | 1 | 9_26989309 | ENSG00000096872 | IFT74 | 0 | INTRON | 4.55814949 | 5.16E-06 | 0.01549257 |
| 7 | 94752297 | 94752297 | 1 | 7_94752297 | ENSG00000214342 | ATP5PBP2 | 12886 | Downstream | 4.55806218 | 5.16E-06 | 0.01549628 |
| 16 | 75256324 | 75256324 | 1 | 16_75256324 | ENSG00000050820 | BCAR1 | 0 | INTRON | -4.5579322 | 5.17E-06 | 0.0155022 |
| 1 | 101146759 | 101146759 | 1 | 1_101146759 | ENSG00000252765 | AC093157.3 | 13420 | Downstream | 4.55784777 | 5.17E-06 | 0.0155022 |
| 15 | 61011593 | 61011593 | 1 | 15_61011593 | ENSG00000069667 | RORA | 0 | INTRON | -4.5578157 | 5.17E-06 | 0.0155022 |
| X | 150565866 | 150565866 | 1 | X_150565866 | ENSG00000171100 | MTM1 | 2752 | Upstream | 4.55777942 | 5.17E-06 | 0.0155022 |
| 1 | 179701229 | 179701229 | 1 | 1_179701229 | ENSG00000162782 | TDRD5 | 9957 | Downstream | -4.5577618 | 5.17E-06 | 0.0155022 |
| 3 | 175960702 | 175960702 | 1 | 3_175960702 | ENSG00000230362 | ACTG1P23 | 16794 | Downstream | -4.5577597 | 5.17E-06 | 0.0155022 |
| 3 | 40160750 | 40160750 | 1 | 3_40160750 | ENSG00000170011 | MYRIP | 0 | INTRON | 4.5576138 | 5.17E-06 | 0.01551024 |
| 10 | 25732401 | 25732401 | 1 | 10_25732401 | ENSG00000280809 | LINC00836 | 0 | EXON | 4.55747474 | 5.18E-06 | 0.01551777 |
| 4 | 121066256 | 121066256 | 1 | 4_121066256 | ENSG00000173376 | NDNF | 0 | INTRON | 4.55735608 | 5.18E-06 | 0.0155238 |
| 14 | 20959659 | 20959659 | 1 | 14_20959659 | ENSG00000169385 | RNASE2 | 3223 | Downstream | 4.55723615 | 5.18E-06 | 0.01552993 |
| 11 | 64695038 | 64695038 | 1 | 11_64695038 | ENSG00000110076 | NRXN2 | 0 | INTRON | 4.5571745 | 5.18E-06 | 0.01553071 |
| 18 | 71258872 | 71258872 | 1 | 18_71258872 | ENSG00000265484 | AC091691.2 | 21714 | Upstream | -4.5571516 | 5.19E-06 | 0.01553071 |
| 2 | 140977146 | 140977146 | 1 | 2_140977146 | ENSG00000168702 | LRP1B | 0 | INTRON | 4.55704154 | 5.19E-06 | 0.01553161 |
| 7 | 158888110 | 158888110 | 1 | 7_158888110 | ENSG00000126870 | WDR60 | 0 | INTRON | -4.5570375 | 5.19E-06 | 0.01553161 |
| 10 | 64527924 | 64527924 | 1 | 10_64527924 | ENSG00000228566 | AC013287.1 | 0 | INTRON | 4.55702846 | 5.19E-06 | 0.01553161 |
| 9 | 88490931 | 88490931 | 1 | 9_88490931 | ENSG00000231804 | AL353748.1 | 5606 | Upstream | 4.55698155 | 5.19E-06 | 0.01553235 |
| 4 | 94859964 | 94859964 | 1 | 4_94859964 | ENSG00000138696 | BMPR1B | 0 | INTRON | -4.5568189 | 5.19E-06 | 0.01554111 |
| 16 | 34002996 | 34002996 | 1 | 16_34002996 | ENSG00000259990 | AC133561.2 | 10397 | Downstream | 4.55678909 | 5.19E-06 | 0.01554111 |
| 8 | 143862426 | 143862426 | 1 | 8_143862426 | ENSG00000261150 | EPPK1 | 0 | EXON | -4.5567262 | 5.20E-06 | 0.01554303 |
| 3 | 196341574 | 196341574 | 1 | 3_196341574 | ENSG00000212146 | RNU6-910P | 34 | Downstream | 4.55666969 | 5.20E-06 | 0.01554448 |
| 1 | 46125885 | 46125885 | 1 | 1_46125885 | ENSG00000117461 | PIK3R3 | 0 | INTRON | -4.5565902 | 5.20E-06 | 0.01554522 |
| 8 | 28435425 | 28435425 | 1 | 8_28435425 | ENSG00000214050 | FBXO16 | 0 | INTRON | -4.5565859 | 5.20E-06 | 0.01554522 |
| 22 | 39322130 | 39322130 | 1 | 22_39322130 | ENSG00000100316 | RPL3 | 1741 | Upstream | 4.5564082 | 5.20E-06 | 0.01555563 |
| 9 | 22031836 | 22031836 | 1 | 9_22031836 | ENSG00000240498 | CDKN2B-AS1 | 0 | INTRON | 4.5561912 | 5.21E-06 | 0.01556751 |
| 18 | 25612215 | 25612215 | 1 | 18_25612215 | ENSG00000242216 | RN7SL97P | 206018 | Downstream | 4.55617394 | 5.21E-06 | 0.01556751 |
| 6 | 72752165 | 72752165 | 1 | 6_72752165 | ENSG00000185760 | KCNQ5 | 0 | INTRON | -4.5560726 | 5.21E-06 | 0.01557228 |

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| 5 | 160775754 | 160775754 | 1 | 5_160775754 | ENSG00000118322 | ATP10B | 0 | INTRON | -4.5558129 | 5.22E-06 | 0.0155888 |
| 4 | 21819448 | 21819448 | 1 | 4_21819448 | ENSG00000185774 | KCNIP4 | 0 | INTRON | 4.55552244 | 5.23E-06 | 0.01560597 |
| 17 | 43187475 | 43187475 | 1 | 17_43187475 | ENSG00000188554 | NBR1 | 0 | INTRON | -4.5555079 | 5.23E-06 | 0.01560597 |
| 11 | 131340267 | 131340267 | 1 | 11_131340267 | ENSG00000231698 | AP002856.2 | 0 | INTRON | -4.5553593 | 5.23E-06 | 0.01561426 |
| 6 | 163161759 | 163161759 | 1 | 6_163161759 | ENSG00000112530 | PACRG | 0 | INTRON | 4.55525627 | 5.23E-06 | 0.01561899 |
| 6 | 57292211 | 57292211 | 1 | 6_57292211 | ENSG00000146143 | PRIM2 | 22593 | Upstream | -4.5552219 | 5.23E-06 | 0.01561899 |
| 15 | 22683350 | 22683350 | 1 | 15_22683350 | ENSG00000276141 | WHAMMP3 | 0 | INTRON | -4.5551471 | 5.23E-06 | 0.01562181 |
| 13 | 88743756 | 88743756 | 1 | 13_88743756 | ENSG00000261666 | LINC00560 | 113359 | Downstream | -4.5550878 | 5.24E-06 | 0.01562318 |
| 2 | 203844980 | 203844980 | 1 | 2_203844980 | ENSG00000163599 | CTLA4 | 22790 | Upstream | 4.55505488 | 5.24E-06 | 0.01562318 |
| 10 | 122584500 | 122584500 | 1 | 10_122584500 | ENSG00000187908 | DMBT1 | 0 | INTRON | -4.5550161 | 5.24E-06 | 0.01562332 |
| 3 | 70439229 | 70439229 | 1 | 3_70439229 | ENSG00000240405 | SAMMSON | 0 | INTRON | 4.55488713 | 5.24E-06 | 0.0156257 |
| 10 | 21345272 | 21345272 | 1 | 10_21345272 | ENSG00000230109 | LINC02643 | 0 | INTRON | 4.55485423 | 5.24E-06 | 0.0156257 |
| 5 | 125401775 | 125401775 | 1 | 5_125401775 | ENSG00000248752 | AC116362.1 | 0 | INTRON | 4.55482086 | 5.24E-06 | 0.0156257 |
| 3 | 28964118 | 28964118 | 1 | 3_28964118 | ENSG00000144642 | RBMS3 | 0 | INTRON | -4.5547372 | 5.25E-06 | 0.0156257 |
| 8 | 30302176 | 30302176 | 1 | 8_30302176 | ENSG00000287590 | AC090820.2 | 20721 | Upstream | 4.55471615 | 5.25E-06 | 0.0156257 |
| 14 | 48327218 | 48327218 | 1 | 14_48327218 | ENSG00000270359 | AL358335.3 | 7824 | Upstream | -4.5546717 | 5.25E-06 | 0.0156257 |
| 3 | 50311141 | 50311141 | 1 | 3_50311141 | ENSG00000114378 | HYAL1 | 0 | INTRON | 4.55466256 | 5.25E-06 | 0.0156257 |
| 21 | 44773122 | 44773122 | 1 | 21_44773122 | ENSG00000184787 | UBE2G2 | 0 | INTRON | -4.5546458 | 5.25E-06 | 0.0156257 |
| 7 | 129456628 | 129456628 | 1 | 7_129456628 | ENSG00000128578 | STRIP2 | 0 | EXON | -4.5546086 | 5.25E-06 | 0.0156257 |
| 11 | 65978347 | 65978347 | 1 | 11_65978347 | ENSG00000175467 | SART1 | 0 | INTRON | 4.55459376 | 5.25E-06 | 0.0156257 |
| 11 | 61651571 | 61651571 | 1 | 11_61651571 | ENSG00000255947 | AP002754.2 | 3093 | Downstream | 4.55457927 | 5.25E-06 | 0.0156257 |
| 2 | 230262320 | 230262320 | 1 | 2_230262320 | ENSG00000079263 | SP140 | 0 | INTRON | -4.5544374 | 5.25E-06 | 0.01563351 |
| 3 | 98009485 | 98009485 | 1 | 3_98009485 | ENSG00000183185 | GABRR3 | 0 | INTRON | 4.55420356 | 5.26E-06 | 0.0156469 |
| 22 | 40965986 | 40965986 | 1 | 22_40965986 | ENSG00000100387 | RBX1 | 0 | INTRON | -4.5541817 | 5.26E-06 | 0.0156469 |
| X | 23864144 | 23864144 | 1 | X_23864144 | ENSG00000184831 | APOO | 0 | INTRON | 4.55414708 | 5.26E-06 | 0.0156469 |
| 20 | 43374067 | 43374067 | 1 | 20_43374067 | ENSG00000237555 | AL031681.1 | 14574 | Downstream | -4.5541097 | 5.26E-06 | 0.01564695 |
| 15 | 95004295 | 95004295 | 1 | 15_95004295 | ENSG00000277654 | AC087633.2 | 0 | INTRON | 4.55402845 | 5.26E-06 | 0.0156476 |
| 3 | 48255455 | 48255455 | 1 | 3_48255455 | ENSG00000164048 | ZNF589 | 0 | INTRON | 4.55402742 | 5.26E-06 | 0.0156476 |
| 3 | 172325237 | 172325237 | 1 | 3_172325237 | ENSG00000075420 | FNDC3B | 0 | INTRON | -4.5539594 | 5.26E-06 | 0.01564993 |
| 18 | 78944669 | 78944669 | 1 | 18_78944669 | ENSG00000287758 | AC091027.3 | 16175 | Downstream | -4.5537829 | 5.27E-06 | 0.01566034 |
| 15 | 43532983 | 43532983 | 1 | 15_43532983 | ENSG00000168781 | PPIP5K1 | 478 | Downstream | 4.55370566 | 5.27E-06 | 0.01566336 |
| 9 | 6406851 | 6406851 | 1 | 9_6406851 | ENSG00000147854 | UHRF2 | 6299 | Upstream | 4.55364859 | 5.27E-06 | 0.01566487 |
| 3 | 167251548 | 167251548 | 1 | 3_167251548 | ENSG00000169064 | ZBBX | 0 | INTRON | 4.553366 | 5.28E-06 | 0.0156832 |
| 1 | 165161652 | 165161652 | 1 | 1_165161652 | ENSG00000162761 | LMX1A | 40214 | Downstream | 4.5532136 | 5.28E-06 | 0.01569183 |
| 8 | 54915438 | 54915438 | 1 | 8_54915438 | ENSG00000104237 | RP1 | 43718 | Downstream | 4.55314502 | 5.28E-06 | 0.01569421 |
| 3 | 11533433 | 11533433 | 1 | 3_11533433 | ENSG00000197548 | ATG7 | 0 | INTRON | 4.55306157 | 5.29E-06 | 0.01569507 |
| 15 | 88748164 | 88748164 | 1 | 15_88748164 | ENSG00000259676 | AC103982.1 | 49248 | Downstream | -4.5530492 | 5.29E-06 | 0.01569507 |
| 2 | 110472223 | 110472223 | 1 | 2_110472223 | ENSG00000257207 | AC112229.3 | 0 | INTRON | -4.5530235 | 5.29E-06 | 0.01569507 |
| 9 | 16838329 | 16838329 | 1 | 9_16838329 | ENSG00000173068 | BNC2 | 0 | INTRON | 4.5528892 | 5.29E-06 | 0.01570079 |
| 11 | 82042106 | 82042106 | 1 | 11_82042106 | ENSG00000245832 | MIR4300HG | 0 | INTRON | 4.55287317 | 5.29E-06 | 0.01570079 |
| 11 | 17592625 | 17592625 | 1 | 11_17592625 | ENSG00000188162 | OTOG | 0 | INTRON | 4.55283686 | 5.29E-06 | 0.01570079 |
| 12 | 5602936 | 5602936 | 1 | 12_5602936 | ENSG00000047617 | ANO2 | 0 | INTRON | -4.5527266 | 5.30E-06 | 0.01570627 |
| 15 | 20449958 | 20449958 | 1 | 15_20449958 | ENSG00000180229 | HERC2P3 | 0 | INTRON | -4.552606 | 5.30E-06 | 0.01570627 |
| 9 | 107783900 | 107783900 | 1 | 9_107783900 | ENSG00000222558 | RNU6-1064P | 13843 | Downstream | -4.5525581 | 5.30E-06 | 0.01570627 |
| 5 | 101111238 | 101111238 | 1 | 5_101111238 | ENSG00000113532 | ST8SIA4 | 207956 | Upstream | -4.5525554 | 5.30E-06 | 0.01570627 |
| 13 | 89480261 | 89480261 | 1 | 13_89480261 | ENSG00000271395 | LINC02336 | 0 | INTRON | 4.55255342 | 5.30E-06 | 0.01570627 |
| 2 | 146934962 | 146934962 | 1 | 2_146934962 | ENSG00000227902 | AC062032.1 | 36744 | Downstream | 4.55251552 | 5.30E-06 | 0.01570627 |
| 13 | 105970292 | 105970292 | 1 | 13_105970292 | ENSG00000287923 | AL138701.2 | 0 | INTRON | -4.5525069 | 5.30E-06 | 0.01570627 |
| 1 | 199268253 | 199268253 | 1 | 1_199268253 | ENSG00000231718 | LINC02789 | 0 | INTRON | 4.55235595 | 5.30E-06 | 0.0157119 |
| 7 | 8977426 | 8977426 | 1 | 7_8977426 | ENSG00000236748 | AC009500.1 | 38057 | Downstream | 4.5523347 | 5.31E-06 | 0.0157119 |
| 17 | 22548607 | 22548607 | 1 | 17_22548607 | ENSG00000284263 | AC132825.6 | 16085 | Downstream | -4.5522961 | 5.31E-06 | 0.0157119 |
| 7 | 8218907 | 8218907 | 1 | 7_8218907 | ENSG00000003147 | ICA1 | 0 | EXON | -4.5522562 | 5.31E-06 | 0.0157119 |
| 1 | 77383151 | 77383151 | 1 | 1_77383151 | ENSG00000154027 | AK5 | 0 | INTRON | 4.55219016 | 5.31E-06 | 0.0157119 |
| 16 | 24462794 | 24462794 | 1 | 16_24462794 | ENSG00000260072 | AC008938.1 | 10003 | Downstream | 4.55213036 | 5.31E-06 | 0.0157119 |
| X | 151404610 | 151404610 | 1 | X_151404610 | ENSG00000160131 | VMA21 | 0 | INTRON | -4.5521236 | 5.31E-06 | 0.0157119 |
| 11 | 92989961 | 92989961 | 1 | 11_92989961 | ENSG00000134640 | MTNR1B | 4895 | Downstream | 4.55210965 | 5.31E-06 | 0.0157119 |
| 14 | 22446978 | 22446978 | 1 | 14_22446978 | ENSG00000251002 | AC244502.1 | 0 | INTRON | -4.5521022 | 5.31E-06 | 0.0157119 |
| 11 | 84613161 | 84613161 | 1 | 11_84613161 | ENSG00000150672 | DLG2 | 0 | INTRON | -4.5520123 | 5.31E-06 | 0.01571589 |
| 20 | 17296642 | 17296642 | 1 | 20_17296642 | ENSG00000125851 | PCSK2 | 0 | INTRON | -4.5519541 | 5.31E-06 | 0.0157175 |
| 7 | 68726353 | 68726353 | 1 | 7_68726353 | ENSG00000222428 | RNA5SP231 | 2305 | Upstream | 4.55153721 | 5.33E-06 | 0.01574595 |
| 15 | 91070327 | 91070327 | 1 | 15_91070327 | ENSG00000285661 | AC127520.1 | 24519 | Downstream | -4.5514522 | 5.33E-06 | 0.0157481 |
| 14 | 101683419 | 101683419 | 1 | 14_101683419 | ENSG00000258404 | LINC02320 | 0 | INTRON | -4.5514325 | 5.33E-06 | 0.0157481 |
| 15 | 100253186 | 100253186 | 1 | 15_100253186 | ENSG00000140470 | ADAMTS17 | 0 | INTRON | -4.5513988 | 5.33E-06 | 0.0157481 |
| 7 | 91433723 | 91433723 | 1 | 7_91433723 | ENSG00000235450 | AC079760.1 | 0 | INTRON | 4.55124477 | 5.33E-06 | 0.0157569 |
| 7 | 103472977 | 103472977 | 1 | 7_103472977 | ENSG00000189056 | RELN | 0 | INTRON | 4.55120115 | 5.33E-06 | 0.01575743 |
| 20 | 14975852 | 14975852 | 1 | 20_14975852 | ENSG00000172264 | MACROD2 | 0 | INTRON | 4.55114597 | 5.34E-06 | 0.01575818 |
| 8 | 44039371 | 44039371 | 1 | 8_44039371 | ENSG00000253198 | AC139365.1 | 364780 | Upstream | 4.55110437 | 5.34E-06 | 0.01575818 |
| 2 | 143705503 | 143705503 | 1 | 2_143705503 | ENSG00000075884 | ARHGAP15 | 0 | INTRON | -4.5510816 | 5.34E-06 | 0.01575818 |
| 3 | 9091205 | 9091205 | 1 | 3_9091205 | ENSG00000196220 | SRGAP3 | 0 | INTRON | 4.5510088 | 5.34E-06 | 0.0157609 |
| 18 | 34802673 | 34802673 | 1 | 18_34802673 | ENSG00000134769 | DTNA | 0 | INTRON | -4.5508884 | 5.34E-06 | 0.01576719 |
| 16 | 72876008 | 72876008 | 1 | 16_72876008 | ENSG00000140836 | ZFHX3 | 0 | INTRON | 4.55078042 | 5.34E-06 | 0.01577255 |
| 10 | 96929095 | 96929095 | 1 | 10_96929095 | ENSG00000196233 | LCOR | 0 | INTRON | -4.5506517 | 5.35E-06 | 0.01577946 |
| X | 40204378 | 40204378 | 1 | X_40204378 | ENSG00000183337 | BCOR | 27049 | Upstream | -4.5503328 | 5.36E-06 | 0.01579892 |
| 10 | 30409092 | 30409092 | 1 | 10_30409092 | ENSG00000224473 | CCND3P1 | 5316 | Upstream | 4.55031951 | 5.36E-06 | 0.01579892 |
| X | 71215179 | 71215179 | 1 | X_71215179 | ENSG00000169562 | GJB1 | 14 | Upstream | 4.5501548 | 5.36E-06 | 0.01580855 |
| 5 | 33639512 | 33639512 | 1 | 5_33639512 | ENSG00000151388 | ADAMTS12 | 0 | INTRON | 4.55008923 | 5.36E-06 | 0.01581074 |
| 7 | 17737685 | 17737685 | 1 | 7_17737685 | ENSG00000071189 | SNX13 | 53075 | Downstream | 4.54995813 | 5.37E-06 | 0.01581513 |
| 15 | 74158993 | 74158993 | 1 | 15_74158993 | ENSG00000261543 | AC010931.3 | 0 | INTRON | 4.54995784 | 5.37E-06 | 0.01581513 |
| 5 | 43455930 | 43455930 | 1 | 5_43455930 | ENSG00000151881 | TMEM267 | 0 | INTRON | 4.54989083 | 5.37E-06 | 0.01581743 |
| 15 | 22906566 | 22906566 | 1 | 15_22906566 | ENSG00000273749 | CYFIP1 | 0 | INTRON | -4.5498045 | 5.37E-06 | 0.01582118 |
| 17 | 37347682 | 37347682 | 1 | 17_37347682 | ENSG00000278540 | ACACA | 0 | INTRON | 4.54958516 | 5.38E-06 | 0.01583493 |
| 8 | 9098902 | 9098902 | 1 | 8_9098902 | ENSG00000104626 | ERI1 | 0 | INTRON | -4.5494168 | 5.38E-06 | 0.01584486 |
| 5 | 15292604 | 15292604 | 1 | 5_15292604 | ENSG00000249332 | LINC02149 | 26063 | Upstream | 4.54928274 | 5.38E-06 | 0.01585069 |
| 2 | 202084563 | 202084563 | 1 | 2_202084563 | ENSG00000182329 | KIAA2012 | 0 | INTRON | 4.54926661 | 5.38E-06 | 0.01585069 |
| 2 | 225947855 | 225947855 | 1 | 2_225947855 | ENSG00000230621 | AC068138.1 | 45125 | Downstream | -4.5492093 | 5.38E-06 | 0.01585109 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | 41468096 | 41468096 | 1 | 11_41468096 | ENSG00000148948 | LRRC4C | 8323 | Upstream | -4.5491795 | 5.39E-06 | 0.01585109 |
| 6 | 106335516 | 106335516 | 1 | 6_106335516 | ENSG00000057663 | ATG5 | 9725 | Upstream | -4.5491521 | 5.39E-06 | 0.01585109 |
| 2 | 125125654 | 125125654 | 1 | 2_125125654 | ENSG00000206726 | RNU6-259P | 136329 | Downstream | -4.5491029 | 5.39E-06 | 0.01585205 |
| 9 | 3231189 | 3231189 | 1 | 9_3231189 | ENSG00000080298 | RFX3 | 0 | INTRON | -4.54902 | 5.39E-06 | 0.01585556 |
| Y | 11322297 | 11322297 | 1 | Y_11322297 | ENSG00000259029 | DUX4L18 | 0 | EXON | -4.5488737 | 5.39E-06 | 0.01586384 |
| 3 | 74095224 | 74095224 | 1 | 3_74095224 | ENSG00000223738 | AC016930.1 | 6124 | Upstream | 4.5488172 | 5.39E-06 | 0.01586536 |
| 18 | 78674199 | 78674199 | 1 | 18_78674199 | ENSG00000266273 | AC044873.1 | 121412 | Downstream | 4.54871558 | 5.40E-06 | 0.01586904 |
| 1 | 173940363 | 173940363 | 1 | 1_173940363 | ENSG00000135870 | RC3H1 | 0 | INTRON | -4.5486956 | 5.40E-06 | 0.01586904 |
| 4 | 62713648 | 62713648 | 1 | 4_62713648 | ENSG00000180673 | EXOC5P1 | 103177 | Upstream | -4.5486059 | 5.40E-06 | 0.01587306 |
| 19 | 30117176 | 30117176 | 1 | 19_30117176 | ENSG00000288072 | AC008507.5 | 31283 | Downstream | -4.5485014 | 5.40E-06 | 0.01587692 |
| 8 | 5843977 | 5843977 | 1 | 8_5843977 | ENSG00000253571 | AC087369.1 | 4719 | Upstream | 4.54844784 | 5.40E-06 | 0.01587692 |
| 13 | 40955712 | 40955712 | 1 | 13_40955712 | ENSG00000120690 | ELF1 | 0 | INTRON | 4.54844567 | 5.40E-06 | 0.01587692 |
| 7 | 73341170 | 73341170 | 1 | 7_73341170 | ENSG00000077800 | FKBP6 | 0 | INTRON | -4.5483133 | 5.41E-06 | 0.01588397 |
| 5 | 81861363 | 81861363 | 1 | 5_81861363 | ENSG00000249483 | AC026726.1 | 9162 | Downstream | -4.5481608 | 5.41E-06 | 0.01588397 |
| 13 | 106769590 | 106769590 | 1 | 13_106769590 | ENSG00000278698 | AL162574.2 | 4032 | Downstream | 4.54815873 | 5.41E-06 | 0.01588397 |
| 18 | 21058671 | 21058671 | 1 | 18_21058671 | ENSG00000067900 | ROCK1 | 0 | INTRON | -4.5481472 | 5.41E-06 | 0.01588397 |
| 6 | 46556497 | 46556497 | 1 | 6_46556497 | ENSG00000146233 | CYP39A1 | 0 | INTRON | 4.54813504 | 5.41E-06 | 0.01588397 |
| 2 | 52972308 | 52972308 | 1 | 2_52972308 | ENSG00000228033 | AC010967.1 | 10856 | Upstream | 4.54813426 | 5.41E-06 | 0.01588397 |
| 2 | 96469668 | 96469668 | 1 | 2_96469668 | ENSG00000163121 | NEURL3 | 27977 | Downstream | 4.54801542 | 5.42E-06 | 0.0158902 |
| 7 | 68457428 | 68457428 | 1 | 7_68457428 | ENSG00000226829 | AC093655.1 | 137752 | Upstream | -4.5478665 | 5.42E-06 | 0.0158987 |
| 5 | 131194068 | 131194068 | 1 | 5_131194068 | ENSG00000186687 | LYRM7 | 0 | INTRON | 4.5477889 | 5.42E-06 | 0.01590131 |
| 22 | 49642158 | 49642158 | 1 | 22_49642158 | ENSG00000188511 | C22orf34 | 0 | INTRON | 4.54771195 | 5.42E-06 | 0.01590131 |
| 16 | 36174177 | 36174177 | 1 | 16_36174177 | ENSG00000261084 | PPP1R1AP2 | 261661 | Downstream | 4.5476484 | 5.42E-06 | 0.01590131 |
| 9 | 122014553 | 122014553 | 1 | 9_122014553 | ENSG00000175764 | TTLL11 | 0 | INTRON | -4.5476378 | 5.43E-06 | 0.01590131 |
| 2 | 99669928 | 99669928 | 1 | 2_99669928 | ENSG00000144218 | AFF3 | 0 | INTRON | 4.54757042 | 5.43E-06 | 0.01590131 |
| 13 | 76906699 | 76906699 | 1 | 13_76906699 | ENSG00000278727 | AC000403.1 | 15564 | Downstream | 4.54751197 | 5.43E-06 | 0.01590131 |
| 9 | 82408240 | 82408240 | 1 | 9_82408240 | ENSG00000228430 | AL162726.3 | 0 | INTRON | -4.5474511 | 5.43E-06 | 0.01590131 |
| 2 | 58130599 | 58130599 | 1 | 2_58130599 | ENSG00000028116 | VRK2 | 0 | INTRON | -4.5474398 | 5.43E-06 | 0.01590131 |
| 10 | 10853911 | 10853911 | 1 | 10_10853911 | ENSG00000048740 | CELF2 | 0 | INTRON | 4.54738744 | 5.43E-06 | 0.01590131 |
| 5 | 92606258 | 92606258 | 1 | 5_92606258 | ENSG00000249776 | AC124854.1 | 0 | INTRON | -4.5473863 | 5.43E-06 | 0.01590131 |
| 11 | 32574138 | 32574138 | 1 | 11_32574138 | ENSG00000149100 | EIF3M | 9659 | Upstream | -4.5473479 | 5.43E-06 | 0.01590131 |
| 3 | 22838037 | 22838037 | 1 | 3_22838037 | ENSG00000271235 | AC114477.1 | 25990 | Upstream | -4.5473245 | 5.43E-06 | 0.01590131 |
| 1 | 167668007 | 167668007 | 1 | 1_167668007 | ENSG00000198771 | RCSD1 | 0 | INTRON | 4.54732265 | 5.43E-06 | 0.01590131 |
| 2 | 100337514 | 100337514 | 1 | 2_100337514 | ENSG00000170500 | LONRF2 | 14781 | Upstream | -4.547311 | 5.43E-06 | 0.01590131 |
| 12 | 42149764 | 42149764 | 1 | 12_42149764 | ENSG00000151233 | GXYLT1 | 4890 | Upstream | -4.5472552 | 5.44E-06 | 0.01590131 |
| 10 | 63564601 | 63564601 | 1 | 10_63564601 | ENSG00000165476 | REEP3 | 0 | INTRON | -4.5472159 | 5.44E-06 | 0.01590131 |
| 2 | 55381425 | 55381425 | 1 | 2_55381425 | ENSG00000115355 | CCDC88A | 0 | INTRON | 4.54721581 | 5.44E-06 | 0.01590131 |
| 5 | 169064003 | 169064003 | 1 | 5_169064003 | ENSG00000184347 | SLIT3 | 0 | INTRON | 4.54709569 | 5.44E-06 | 0.01590675 |
| 3 | 1705388 | 1705388 | 1 | 3_1705388 | ENSG00000214074 | RPL23AP39 | 24681 | Upstream | 4.54707145 | 5.44E-06 | 0.01590675 |
| 19 | 37744669 | 37744669 | 1 | 19_37744669 | ENSG00000189144 | ZNF573 | 0 | INTRON | -4.5469947 | 5.44E-06 | 0.01590731 |
| 11 | 49458848 | 49458848 | 1 | 11_49458848 | ENSG00000226268 | AC135977.1 | 24410 | Upstream | 4.5469917 | 5.44E-06 | 0.01590731 |
| 21 | 32745961 | 32745961 | 1 | 21_32745961 | ENSG00000238197 | PAXBP1-AS1 | 0 | EXON | -4.5469246 | 5.44E-06 | 0.01590964 |
| 3 | 82777511 | 82777511 | 1 | 3_82777511 | ENSG00000241095 | CYP51A1P1 | 29003 | Downstream | 4.54685241 | 5.45E-06 | 0.01591087 |
| 8 | 41958466 | 41958466 | 1 | 8_41958466 | ENSG00000083168 | KAT6A | 0 | INTRON | -4.5467814 | 5.45E-06 | 0.01591087 |
| 4 | 10998796 | 10998796 | 1 | 4_10998796 | ENSG00000283083 | LINC02498 | 249210 | Downstream | -4.5467803 | 5.45E-06 | 0.01591087 |
| 3 | 45655926 | 45655926 | 1 | 3_45655926 | ENSG00000144791 | LIMD1 | 0 | INTRON | 4.546733 | 5.45E-06 | 0.01591087 |
| 7 | 70266232 | 70266232 | 1 | 7_70266232 | ENSG00000158321 | AUTS2 | 0 | INTRON | 4.54672772 | 5.45E-06 | 0.01591087 |
| 14 | 51676507 | 51676507 | 1 | 14_51676507 | ENSG00000139926 | FRMD6 | 0 | INTRON | -4.5466445 | 5.45E-06 | 0.01591443 |
| 14 | 44996852 | 44996852 | 1 | 14_44996852 | ENSG00000198718 | TOGARAM1 | 0 | EXON | 4.54651017 | 5.45E-06 | 0.01591938 |
| 2 | 10942976 | 10942976 | 1 | 2_10942976 | ENSG00000162975 | KCNF1 | 28751 | Downstream | -4.5465067 | 5.45E-06 | 0.01591938 |
| 18 | 21752541 | 21752541 | 1 | 18_21752541 | ENSG00000101752 | MIB1 | 0 | INTRON | -4.5462797 | 5.46E-06 | 0.01593019 |
| 5 | 78901148 | 78901148 | 1 | 5_78901148 | ENSG00000113273 | ARSB | 0 | INTRON | 4.54627561 | 5.46E-06 | 0.01593019 |
| 5 | 164160695 | 164160695 | 1 | 5_164160695 | ENSG00000253331 | AC008662.1 | 0 | INTRON | 4.54625544 | 5.46E-06 | 0.01593019 |
| 16 | 17897498 | 17897498 | 1 | 16_17897498 | ENSG00000228071 | RPL7P47 | 35221 | Upstream | -4.5460841 | 5.47E-06 | 0.01593715 |
| 8 | 117234233 | 117234233 | 1 | 8_117234233 | ENSG00000286308 | AC084114.1 | 31038 | Upstream | 4.5460725 | 5.47E-06 | 0.01593715 |
| 5 | 72475891 | 72475891 | 1 | 5_72475891 | ENSG00000178175 | ZNF366 | 0 | INTRON | -4.5460552 | 5.47E-06 | 0.01593715 |
| 20 | 13191505 | 13191505 | 1 | 20_13191505 | ENSG00000172296 | SPTLC3 | 22402 | Downstream | 4.54592156 | 5.47E-06 | 0.01594453 |
| 7 | 3899451 | 3899451 | 1 | 7_3899451 | ENSG00000146555 | SDK1 | 0 | INTRON | 4.54576583 | 5.47E-06 | 0.01595188 |
| X | 50978195 | 50978195 | 1 | X_50978195 | ENSG00000238190 | HMGB1P15 | 46647 | Upstream | 4.54575243 | 5.47E-06 | 0.01595188 |
| 9 | 7326133 | 7326133 | 1 | 9_7326133 | ENSG00000288042 | AL157703.1 | 0 | INTRON | 4.54568883 | 5.48E-06 | 0.01595396 |
| 15 | 56623980 | 56623980 | 1 | 15_56623980 | ENSG00000260392 | AC090518.1 | 0 | INTRON | 4.54563458 | 5.48E-06 | 0.01595534 |
| 1 | 223871393 | 223871393 | 1 | 1_223871393 | ENSG00000188460 | ACTBP11 | 6542 | Upstream | -4.5455955 | 5.48E-06 | 0.01595557 |
| 3 | 22429489 | 22429489 | 1 | 3_22429489 | ENSG00000132967 | HMGB1P5 | 46560 | Downstream | -4.5454799 | 5.48E-06 | 0.01596159 |
| 16 | 21982001 | 21982001 | 1 | 16_21982001 | ENSG00000140740 | UQCRC2 | 0 | INTRON | -4.5454224 | 5.48E-06 | 0.01596323 |
| 2 | 98467203 | 98467203 | 1 | 2_98467203 | ENSG00000040933 | INPP4A | 0 | INTRON | 4.54537589 | 5.48E-06 | 0.01596402 |
| 2 | 114410901 | 114410901 | 1 | 2_114410901 | ENSG00000222923 | RNU2-41P | 9223 | Upstream | 4.54509903 | 5.49E-06 | 0.01598155 |
| 11 | 66144098 | 66144098 | 1 | 11_66144098 | ENSG00000175115 | PACS1 | 0 | INTRON | 4.54507268 | 5.49E-06 | 0.01598155 |
| 4 | 165880734 | 165880734 | 1 | 4_165880734 | ENSG00000038295 | TLL1 | 0 | INTRON | -4.544926 | 5.50E-06 | 0.01598995 |
| 7 | 13177190 | 13177190 | 1 | 7_13177190 | ENSG00000229618 | AC011287.1 | 0 | INTRON | 4.54482386 | 5.50E-06 | 0.01599283 |
| 5 | 80780753 | 80780753 | 1 | 5_80780753 | ENSG00000113318 | MSH3 | 0 | INTRON | -4.544816 | 5.50E-06 | 0.01599283 |
| 8 | 17565899 | 17565899 | 1 | 8_17565899 | ENSG00000003989 | SLC7A2 | 0 | 3UTR | 4.54469812 | 5.50E-06 | 0.01599905 |
| 10 | 77817255 | 77817255 | 1 | 10_77817255 | ENSG00000151208 | DLG5 | 0 | INTRON | 4.54465263 | 5.50E-06 | 0.01599977 |
| 12 | 2474492 | 2474492 | 1 | 12_2474492 | ENSG00000151067 | CACNA1C | 0 | INTRON | 4.54458012 | 5.50E-06 | 0.01600076 |
| 2 | 47811512 | 47811512 | 1 | 2_47811512 | ENSG00000138081 | FBXO11 | 0 | EXON | 4.54456062 | 5.50E-06 | 0.01600076 |
| 4 | 132088039 | 132088039 | 1 | 4_132088039 | ENSG00000251598 | AC093916.1 | 0 | INTRON | -4.5445316 | 5.51E-06 | 0.01600076 |
| 4 | 187599025 | 187599025 | 1 | 4_187599025 | ENSG00000250590 | LINC02492 | 0 | INTRON | 4.54430948 | 5.51E-06 | 0.01601373 |
| 16 | 85755084 | 85755084 | 1 | 16_85755084 | ENSG00000154102 | C16orf74 | 3955 | Upstream | 4.54423474 | 5.51E-06 | 0.01601373 |
| 22 | 23214722 | 23214722 | 1 | 22_23214722 | ENSG00000186716 | BCR | 0 | INTRON | 4.54422477 | 5.51E-06 | 0.01601373 |
| 5 | 112994380 | 112994380 | 1 | 5_112994380 | ENSG00000172795 | DCP2 | 0 | INTRON | -4.544217 | 5.51E-06 | 0.01601373 |
| 8 | 121389538 | 121389538 | 1 | 8_121389538 | ENSG00000239872 | RPL35AP19 | 9073 | Upstream | -4.5441425 | 5.52E-06 | 0.01601444 |
| 3 | 94137848 | 94137848 | 1 | 3_94137848 | ENSG00000178694 | NSUN3 | 6016 | Downstream | 4.54410177 | 5.52E-06 | 0.01601444 |
| X | 1805141 | 1805141 | 1 | X_1805141 | ENSG00000234622 | AL683807.2 | 36365 | Downstream | 4.54408639 | 5.52E-06 | 0.01601444 |
| 8 | 122485115 | 122485115 | 1 | 8_122485115 | ENSG00000253819 | LINC01151 | 78 | Downstream | 4.54403047 | 5.52E-06 | 0.01601444 |
| 5 | 75579637 | 75579637 | 1 | 5_75579637 | ENSG00000122008 | POLK | 0 | INTRON | 4.54402803 | 5.52E-06 | 0.01601444 |
| 14 | 91348941 | 91348941 | 1 | 14_91348941 | ENSG00000015133 | CCDC88C | 0 | INTRON | 4.54389119 | 5.52E-06 | 0.0160188 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 | 112581693 | 112581693 | 1 | 12_112581693 | ENSG00000089169 | RPH3A | 0 | INTRON | 4.54385454 | 5.52E-06 | 0.0160188 |
| 7 | 24107272 | 24107272 | 1 | 7_24107272 | ENSG00000252041 | RNA5SP228 | 25432 | Upstream | -4.5438505 | 5.52E-06 | 0.0160188 |
| 12 | 93922792 | 93922792 | 1 | 12_93922792 | ENSG00000257283 | AC012464.1 | 0 | INTRON | 4.54381528 | 5.52E-06 | 0.0160188 |
| 8 | 91238860 | 91238860 | 1 | 8_91238860 | ENSG00000147606 | SLC26A7 | 0 | INTRON | 4.54379102 | 5.53E-06 | 0.0160188 |
| 17 | 8861380 | 8861380 | 1 | 17_8861380 | ENSG00000276231 | PIK3R6 | 0 | INTRON | 4.54373287 | 5.53E-06 | 0.01601906 |
| 4 | 35250933 | 35250933 | 1 | 4_35250933 | ENSG00000250416 | SEC63P2 | 236878 | Upstream | 4.54371582 | 5.53E-06 | 0.01601906 |
| 16 | 56324520 | 56324520 | 1 | 16_56324520 | ENSG00000087258 | GNAO1 | 0 | INTRON | -4.5435849 | 5.53E-06 | 0.01602629 |
| 13 | 55032633 | 55032633 | 1 | 13_55032633 | ENSG00000278630 | LINC02335 | 30311 | Upstream | 4.54352247 | 5.53E-06 | 0.01602674 |
| 1 | 116404894 | 116404894 | 1 | 1_116404894 | ENSG00000163399 | ATP1A1 | 0 | INTRON | 4.54348675 | 5.53E-06 | 0.01602674 |
| 4 | 120385593 | 120385593 | 1 | 4_120385593 | ENSG00000250938 | AC073475.1 | 0 | INTRON | 4.54347135 | 5.53E-06 | 0.01602674 |
| 22 | 36048084 | 36048084 | 1 | 22_36048084 | ENSG00000279927 | Z95114.4 | 18448 | Upstream | 4.543339 | 5.54E-06 | 0.01603408 |
| 2 | 224495911 | 224495911 | 1 | 2_224495911 | ENSG00000036257 | CUL3 | 0 | EXON | -4.5431968 | 5.54E-06 | 0.01603686 |
| 3 | 25401925 | 25401925 | 1 | 3_25401925 | ENSG00000077092 | RARB | 0 | INTRON | -4.5431482 | 5.54E-06 | 0.01603686 |
| 3 | 128819931 | 128819931 | 1 | 3_128819931 | ENSG00000075785 | RAB7A | 5135 | Downstream | 4.54308682 | 5.54E-06 | 0.01603686 |
| 9 | 77630440 | 77630440 | 1 | 9_77630440 | ENSG00000156049 | GNA14 | 0 | INTRON | 4.54307787 | 5.54E-06 | 0.01603686 |
| 16 | 7598309 | 7598309 | 1 | 16_7598309 | ENSG00000078328 | RBFOX1 | 0 | INTRON | -4.5430636 | 5.54E-06 | 0.01603686 |
| 9 | 107456804 | 107456804 | 1 | 9_107456804 | ENSG00000226825 | LINC01509 | 0 | INTRON | 4.54303445 | 5.55E-06 | 0.01603686 |
| 8 | 58705297 | 58705297 | 1 | 8_58705297 | ENSG00000035681 | NSMAF | 45444 | Upstream | 4.54300405 | 5.55E-06 | 0.01603686 |
| 12 | 7349626 | 7349626 | 1 | 12_7349626 | ENSG00000177675 | CD163L1 | 0 | INTRON | -4.5429821 | 5.55E-06 | 0.01603686 |
| 18 | 49592485 | 49592485 | 1 | 18_49592485 | ENSG00000101670 | LIPG | 0 | 3UTR | 4.54298004 | 5.55E-06 | 0.01603686 |
| 5 | 155062424 | 155062424 | 1 | 5_155062424 | ENSG00000287963 | AC010476.2 | 25005 | Upstream | -4.5428425 | 5.55E-06 | 0.0160446 |
| 5 | 90845180 | 90845180 | 1 | 5_90845180 | ENSG00000164199 | ADGRV1 | 0 | INTRON | 4.54270056 | 5.55E-06 | 0.01605019 |
| 12 | 54602799 | 54602799 | 1 | 12_54602799 | ENSG00000257780 | GLYCAM1 | 5387 | Downstream | 4.54269754 | 5.55E-06 | 0.01605019 |
| 2 | 213956742 | 213956742 | 1 | 2_213956742 | ENSG00000144451 | SPAG16 | 0 | INTRON | 4.54246904 | 5.56E-06 | 0.01606487 |
| 3 | 113205356 | 113205356 | 1 | 3_113205356 | ENSG00000144857 | BOC | 5646 | Upstream | 4.54239554 | 5.56E-06 | 0.01606775 |
| 16 | 51758975 | 51758975 | 1 | 16_51758975 | ENSG00000260057 | LINC01571 | 0 | INTRON | -4.5423191 | 5.56E-06 | 0.01607085 |
| 17 | 11886120 | 11886120 | 1 | 17_11886120 | ENSG00000007174 | DNAH9 | 0 | INTRON | -4.5422384 | 5.57E-06 | 0.01607428 |
| 15 | 56927242 | 56927242 | 1 | 15_56927242 | ENSG00000140262 | TCF12 | 0 | INTRON | 4.54212219 | 5.57E-06 | 0.01607785 |
| 1 | 20987693 | 20987693 | 1 | 1_20987693 | ENSG00000075151 | EIF4G3 | 0 | INTRON | -4.5421201 | 5.57E-06 | 0.01607785 |
| 16 | 59411000 | 59411000 | 1 | 16_59411000 | ENSG00000200062 | RNU4-58P | 129125 | Upstream | 4.54205205 | 5.57E-06 | 0.01608031 |
| 21 | 40665014 | 40665014 | 1 | 21_40665014 | ENSG00000171587 | DSCAM | 0 | INTRON | 4.54195082 | 5.57E-06 | 0.01608531 |
| 15 | 81398567 | 81398567 | 1 | 15_81398567 | ENSG00000259343 | TMC3-AS1 | 0 | INTRON | 4.54183987 | 5.58E-06 | 0.01608979 |
| 22 | 32583999 | 32583999 | 1 | 22_32583999 | ENSG00000236054 | Z82246.1 | 0 | EXON | 4.54182063 | 5.58E-06 | 0.01608979 |
| 21 | 38890963 | 38890963 | 1 | 21_38890963 | ENSG00000205622 | AP001042.1 | 0 | INTRON | 4.54157573 | 5.58E-06 | 0.01610352 |
| 9 | 41679578 | 41679578 | 1 | 9_41679578 | ENSG00000275239 | FAM242F | 0 | INTRON | 4.5415693 | 5.58E-06 | 0.01610352 |
| 20 | 30904303 | 30904303 | 1 | 20_30904303 | ENSG00000275305 | RNA5SP528 | 88029 | Upstream | -4.5415092 | 5.59E-06 | 0.01610527 |
| 8 | 58712195 | 58712195 | 1 | 8_58712195 | ENSG00000035681 | NSMAF | 52342 | Upstream | 4.54139826 | 5.59E-06 | 0.01610527 |
| 11 | 109038015 | 109038015 | 1 | 11_109038015 | ENSG00000255528 | AP003123.1 | 48 | Upstream | -4.5413575 | 5.59E-06 | 0.01610527 |
| 4 | 144438105 | 144438105 | 1 | 4_144438105 | ENSG00000285713 | AC098588.2 | 0 | INTRON | 4.54135649 | 5.59E-06 | 0.01610527 |
| 9 | 89038065 | 89038065 | 1 | 9_89038065 | ENSG00000148082 | SHC3 | 0 | EXON | 4.54135238 | 5.59E-06 | 0.01610527 |
| 12 | 112776110 | 112776110 | 1 | 12_112776110 | ENSG00000089169 | RPH3A | 0 | INTRON | -4.5413115 | 5.59E-06 | 0.01610527 |
| 8 | 222839 | 222839 | 1 | 8_222839 | ENSG00000223508 | RPL23AP53 | 0 | INTRON | 4.54129651 | 5.59E-06 | 0.01610527 |
| 7 | 140988902 | 140988902 | 1 | 7_140988902 | ENSG00000242703 | CCT4P1 | 9049 | Downstream | 4.54122407 | 5.59E-06 | 0.01610808 |
| 7 | 57868427 | 57868427 | 1 | 7_57868427 | ENSG00000231484 | AC023141.7 | 31381 | Downstream | 4.54118386 | 5.59E-06 | 0.01610842 |
| 22 | 43302824 | 43302824 | 1 | 22_43302824 | ENSG00000159307 | SCUBE1 | 0 | INTRON | 4.54105651 | 5.60E-06 | 0.01611398 |
| 10 | 53954841 | 53954841 | 1 | 10_53954841 | ENSG00000150275 | PCDH15 | 0 | INTRON | -4.5410392 | 5.60E-06 | 0.01611398 |
| 1 | 248082042 | 248082042 | 1 | 1_248082042 | ENSG00000197067 | OR2T32P | 1479 | Downstream | 4.54100252 | 5.60E-06 | 0.01611398 |
| 18 | 32134542 | 32134542 | 1 | 18_32134542 | ENSG00000141441 | GAREM1 | 0 | INTRON | 4.54094784 | 5.60E-06 | 0.01611398 |
| 12 | 73153152 | 73153152 | 1 | 12_73153152 | ENSG00000258123 | LINC02444 | 6037 | Upstream | 4.54093289 | 5.60E-06 | 0.01611398 |
| 7 | 39532302 | 39532302 | 1 | 7_39532302 | ENSG00000227172 | AC011290.1 | 13343 | Downstream | 4.54038214 | 5.62E-06 | 0.0161534 |
| 15 | 84135521 | 84135521 | 1 | 15_84135521 | ENSG00000259404 | EFL1P1 | 8917 | Downstream | 4.5402699 | 5.62E-06 | 0.01615927 |
| 12 | 120611830 | 120611830 | 1 | 12_120611830 | ENSG00000256008 | AC125616.1 | 16999 | Downstream | 4.54022314 | 5.62E-06 | 0.01616012 |
| 21 | 14732468 | 14732468 | 1 | 21_14732468 | ENSG00000232884 | AF127936.2 | 0 | INTRON | -4.5401554 | 5.62E-06 | 0.01616258 |
| 6 | 81939498 | 81939498 | 1 | 6_81939498 | ENSG00000226453 | LINC02542 | 0 | INTRON | 4.54010958 | 5.62E-06 | 0.01616336 |
| 16 | 47408648 | 47408648 | 1 | 16_47408648 | ENSG00000129636 | ITFG1 | 0 | INTRON | 4.539992 | 5.63E-06 | 0.01616888 |
| 1 | 239653217 | 239653217 | 1 | 1_239653217 | ENSG00000133019 | CHRM3 | 0 | INTRON | -4.5399664 | 5.63E-06 | 0.01616888 |
| 6 | 133825491 | 133825491 | 1 | 6_133825491 | ENSG00000227954 | TARID | 0 | INTRON | 4.53984422 | 5.63E-06 | 0.01617552 |
| 15 | 93463350 | 93463350 | 1 | 15_93463350 | ENSG00000257060 | AC091078.1 | 0 | INTRON | 4.53973667 | 5.63E-06 | 0.01617842 |
| 5 | 91232597 | 91232597 | 1 | 5_91232597 | ENSG00000248323 | LUCAT1 | 0 | INTRON | 4.53970159 | 5.63E-06 | 0.01617842 |
| 14 | 47987708 | 47987708 | 1 | 14_47987708 | ENSG00000258639 | AL359212.1 | 57772 | Upstream | 4.53969063 | 5.63E-06 | 0.01617842 |
| 15 | 23084696 | 23084696 | 1 | 15_23084696 | ENSG00000276172 | ELMO2P1 | 0 | INTRON | 4.53965792 | 5.63E-06 | 0.01617842 |
| 11 | 45081019 | 45081019 | 1 | 11_45081019 | ENSG00000019485 | PRDM11 | 14786 | Upstream | 4.53962848 | 5.64E-06 | 0.01617842 |
| 20 | 43073973 | 43073973 | 1 | 20_43073973 | ENSG00000196090 | PTPRT | 0 | INTRON | 4.53957174 | 5.64E-06 | 0.01618004 |
| 17 | 78150888 | 78150888 | 1 | 17_78150888 | ENSG00000187997 | C17orf99 | 0 | INTRON | 4.53940062 | 5.64E-06 | 0.01619045 |
| 2 | 71078237 | 71078237 | 1 | 2_71078237 | ENSG00000124357 | NAGK | 0 | INTRON | 4.53914289 | 5.65E-06 | 0.01620751 |
| 10 | 35860180 | 35860180 | 1 | 10_35860180 | ENSG00000227313 | LINC02630 | 36693 | Downstream | 4.53908048 | 5.65E-06 | 0.01620775 |
| 19 | 13366057 | 13366057 | 1 | 19_13366057 | ENSG00000141837 | CACNA1A | 0 | EXON | -4.5390412 | 5.65E-06 | 0.01620775 |
| 9 | 19686664 | 19686664 | 1 | 9_19686664 | ENSG00000155886 | SLC24A2 | 0 | INTRON | -4.5390331 | 5.65E-06 | 0.01620775 |
| 11 | 16929237 | 16929237 | 1 | 11_16929237 | ENSG00000166689 | PLEKHA7 | 0 | INTRON | 4.53899438 | 5.65E-06 | 0.016208 |
| 10 | 133625451 | 133625451 | 1 | 10_133625451 | ENSG00000225899 | FRG2B | 0 | EXON | -4.5388182 | 5.66E-06 | 0.01621748 |
| 2 | 23894437 | 23894437 | 1 | 2_23894437 | ENSG00000119778 | ATAD2B | 0 | INTRON | -4.5387873 | 5.66E-06 | 0.01621748 |
| 3 | 86909372 | 86909372 | 1 | 3_86909372 | ENSG00000206538 | VGLL3 | 0 | INTRON | 4.53873698 | 5.66E-06 | 0.01621748 |
| 5 | 34110694 | 34110694 | 1 | 5_34110694 | ENSG00000273294 | C1QTNF3-AMACR | 0 | INTRON | 4.53872423 | 5.66E-06 | 0.01621748 |
| 20 | 54180298 | 54180298 | 1 | 20_54180298 | ENSG00000286587 | AL133335.2 | 0 | INTRON | -4.5386548 | 5.66E-06 | 0.01621748 |
| 2 | 239945785 | 239945785 | 1 | 2_239945785 | ENSG00000130414 | NDUFA10 | 0 | INTRON | 4.53864616 | 5.66E-06 | 0.01621748 |
| 6 | 17351162 | 17351162 | 1 | 6_17351162 | ENSG00000219314 | AL034372.1 | 30204 | Upstream | 4.53862244 | 5.66E-06 | 0.01621748 |
| 3 | 84628038 | 84628038 | 1 | 3_84628038 | ENSG00000242641 | LINC00971 | 10366 | Downstream | 4.53853479 | 5.66E-06 | 0.01622149 |
| 2 | 178556409 | 178556409 | 1 | 2_178556409 | ENSG00000279598 | AC009948.4 | 0 | EXON | 4.5383218 | 5.67E-06 | 0.01623515 |
| 2 | 193876484 | 193876484 | 1 | 2_193876484 | ENSG00000286868 | AC074290.2 | 7502 | Downstream | 4.53822919 | 5.67E-06 | 0.01623954 |
| 10 | 100073537 | 100073537 | 1 | 10_100073537 | ENSG00000120054 | CPN1 | 0 | INTRON | 4.53818443 | 5.67E-06 | 0.01624007 |
| 6 | 25325254 | 25325254 | 1 | 6_25325254 | ENSG00000168405 | CMAHP | 0 | INTRON | -4.5381043 | 5.68E-06 | 0.01624007 |
| 1 | 45133940 | 45133940 | 1 | 1_45133940 | ENSG00000162415 | ZSWIM5 | 0 | INTRON | -4.5380675 | 5.68E-06 | 0.01624007 |
| 15 | 48043968 | 48043968 | 1 | 15_48043968 | ENSG00000259754 | AC092078.2 | 0 | INTRON | 4.53804949 | 5.68E-06 | 0.01624007 |
| 5 | 69282509 | 69282509 | 1 | 5_69282509 | ENSG00000183323 | CCDC125 | 0 | 3UTR | -4.538045 | 5.68E-06 | 0.01624007 |
| X | 1900616 | 1900616 | 1 | X_1900616 | ENSG00000234622 | AL683807.2 | 131840 | Downstream | -4.5379842 | 5.68E-06 | 0.01624202 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
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| 11 | 75163948 | 75163948 | 1 | 11_75163948 | ENSG00000137491 | SLCO2B1 | 0 | INTRON | 4.53783514 | 5.68E-06 | 0.01624746 |
| 18 | 40020374 | 40020374 | 1 | 18_40020374 | ENSG00000279034 | AC011266.1 | 42528 | Downstream | 4.53782455 | 5.68E-06 | 0.01624746 |
| 16 | 35125464 | 35125464 | 1 | 16_35125464 | ENSG00000259979 | VN1R68P | 6508 | Upstream | 4.53780726 | 5.68E-06 | 0.01624746 |
| 3 | 71176535 | 71176535 | 1 | 3_71176535 | ENSG00000114861 | FOXP1 | 0 | INTRON | 4.53767868 | 5.69E-06 | 0.01625463 |
| 12 | 10710119 | 10710119 | 1 | 12_10710119 | ENSG00000060138 | YBX3 | 0 | TSS | -4.5376343 | 5.69E-06 | 0.01625532 |
| 17 | 32786541 | 32786541 | 1 | 17_32786541 | ENSG00000176658 | MYO1D | 0 | INTRON | -4.5375968 | 5.69E-06 | 0.01625549 |
| 1 | 236894546 | 236894546 | 1 | 1_236894546 | ENSG00000116984 | MTR | 0 | 3UTR | 4.53755215 | 5.69E-06 | 0.0162562 |
| 6 | 65665341 | 65665341 | 1 | 6_65665341 | ENSG00000188107 | EYS | 0 | INTRON | 4.53745527 | 5.69E-06 | 0.01626093 |
| 18 | 61446181 | 61446181 | 1 | 18_61446181 | ENSG00000101542 | CDH20 | 0 | INTRON | 4.53726237 | 5.70E-06 | 0.01627308 |
| 4 | 146070227 | 146070227 | 1 | 4_146070227 | ENSG00000248809 | LINC01095 | 7489 | Downstream | 4.53719132 | 5.70E-06 | 0.01627583 |
| 16 | 47420671 | 47420671 | 1 | 16_47420671 | ENSG00000129636 | ITFG1 | 0 | INTRON | 4.53713871 | 5.70E-06 | 0.01627716 |
| 14 | 71851037 | 71851037 | 1 | 14_71851037 | ENSG00000266869 | AC005993.1 | 0 | INTRON | -4.5370165 | 5.71E-06 | 0.01628121 |
| 7 | 40307940 | 40307940 | 1 | 7_40307940 | ENSG00000175600 | SUGCT | 0 | INTRON | -4.5370154 | 5.71E-06 | 0.01628121 |
| 7 | 66358870 | 66358870 | 1 | 7_66358870 | ENSG00000169902 | TPST1 | 0 | INTRON | -4.5369788 | 5.71E-06 | 0.0162813 |
| 5 | 167034437 | 167034437 | 1 | 5_167034437 | ENSG00000253713 | AC091819.2 | 81880 | Downstream | 4.5368624 | 5.71E-06 | 0.01628187 |
| 9 | 137379365 | 137379365 | 1 | 9_137379365 | ENSG00000187609 | EXD3 | 0 | INTRON | 4.53685942 | 5.71E-06 | 0.01628187 |
| 11 | 119070278 | 119070278 | 1 | 11_119070278 | ENSG00000160695 | VPS11 | 0 | 5UTR | 4.53682158 | 5.71E-06 | 0.01628187 |
| 14 | 23276083 | 23276083 | 1 | 14_23276083 | ENSG00000215271 | HOMEZ | 0 | EXON | -4.5367847 | 5.71E-06 | 0.01628187 |
| 10 | 67601424 | 67601424 | 1 | 10_67601424 | ENSG00000183230 | CTNNA3 | 0 | INTRON | 4.53674293 | 5.71E-06 | 0.01628187 |
| 16 | 7109314 | 7109314 | 1 | 16_7109314 | ENSG00000078328 | RBFOX1 | 0 | INTRON | -4.5367335 | 5.71E-06 | 0.01628187 |
| 6 | 27676764 | 27676764 | 1 | 6_27676764 | ENSG00000287674 | AL009179.3 | 3206 | Downstream | 4.53672394 | 5.71E-06 | 0.01628187 |
| 1 | 208155132 | 208155132 | 1 | 1_208155132 | ENSG00000076356 | PLXNA2 | 0 | INTRON | 4.53642907 | 5.72E-06 | 0.01630191 |
| 1 | 9522494 | 9522494 | 1 | 1_9522494 | ENSG00000171612 | SLC25A33 | 16970 | Upstream | -4.5363616 | 5.72E-06 | 0.0163044 |
| 2 | 112547165 | 112547165 | 1 | 2_112547165 | ENSG00000125630 | POLR1B | 0 | 3UTR | 4.53628764 | 5.73E-06 | 0.01630738 |
| X | 24398093 | 24398093 | 1 | X_24398093 | ENSG00000225071 | AC004552.1 | 31479 | Downstream | 4.5361881 | 5.73E-06 | 0.01631235 |
| 9 | 97557265 | 97557265 | 1 | 9_97557265 | ENSG00000136842 | TMOD1 | 0 | INTRON | 4.5361311 | 5.73E-06 | 0.01631402 |
| 2 | 135214777 | 135214777 | 1 | 2_135214777 | ENSG00000121988 | ZRANB3 | 0 | INTRON | -4.5360255 | 5.73E-06 | 0.01631946 |
| 1 | 201794181 | 201794181 | 1 | 1_201794181 | ENSG00000134369 | NAV1 | 0 | 3UTR | 4.53597911 | 5.73E-06 | 0.01632032 |
| 17 | 2574249 | 2574249 | 1 | 17_2574249 | ENSG00000262953 | EIF4A1P9 | 12080 | Downstream | -4.5358181 | 5.74E-06 | 0.01633004 |
| 12 | 32580669 | 32580669 | 1 | 12_32580669 | ENSG00000139132 | FGD4 | 0 | INTRON | 4.53570398 | 5.74E-06 | 0.01633614 |
| 11 | 20322669 | 20322669 | 1 | 11_20322669 | ENSG00000109854 | HTATIP2 | 41015 | Upstream | 4.53565791 | 5.74E-06 | 0.01633698 |
| 12 | 101744534 | 101744534 | 1 | 12_101744534 | ENSG00000111666 | CHPT1 | 394 | Downstream | 4.53553786 | 5.75E-06 | 0.01634326 |
| 5 | 63346884 | 63346884 | 1 | 5_63346884 | ENSG00000248185 | AC025445.1 | 44828 | Downstream | 4.53550624 | 5.75E-06 | 0.01634326 |
| 3 | 126938513 | 126938513 | 1 | 3_126938513 | ENSG00000159685 | CHCHD6 | 0 | INTRON | -4.5354617 | 5.75E-06 | 0.01634398 |
| 3 | 136449358 | 136449358 | 1 | 3_136449358 | ENSG00000118007 | STAG1 | 0 | INTRON | 4.53535709 | 5.75E-06 | 0.01634403 |
| 1 | 80897098 | 80897098 | 1 | 1_80897098 | ENSG00000227937 | MTND2P30 | 183691 | Upstream | -4.5353253 | 5.75E-06 | 0.01634403 |
| 2 | 85341889 | 85341889 | 1 | 2_85341889 | ENSG00000270532 | PEBP1P2 | 51 | Upstream | -4.5353033 | 5.75E-06 | 0.01634403 |
| 13 | 93213091 | 93213091 | 1 | 13_93213091 | ENSG00000278177 | AL354811.1 | 13520 | Downstream | 4.53529951 | 5.75E-06 | 0.01634403 |
| 13 | 45793609 | 45793609 | 1 | 13_45793609 | ENSG00000215475 | SIAH3 | 0 | INTRON | 4.53525159 | 5.75E-06 | 0.01634403 |
| 6 | 20450010 | 20450010 | 1 | 6_20450010 | ENSG00000112242 | E2F3 | 0 | INTRON | 4.53523273 | 5.75E-06 | 0.01634403 |
| 8 | 140125541 | 140125541 | 1 | 8_140125541 | ENSG00000167632 | TRAPPC9 | 0 | INTRON | 4.53521423 | 5.75E-06 | 0.01634403 |
| 4 | 145295262 | 145295262 | 1 | 4_145295262 | ENSG00000240992 | RPS23P4 | 24704 | Upstream | 4.53512264 | 5.76E-06 | 0.01634652 |
| 9 | 19192007 | 19192007 | 1 | 9_19192007 | ENSG00000232176 | AL161909.1 | 8327 | Downstream | 4.53511162 | 5.76E-06 | 0.01634652 |
| 21 | 28128418 | 28128418 | 1 | 21_28128418 | ENSG00000232079 | LINC01697 | 0 | INTRON | 4.53501948 | 5.76E-06 | 0.0163507 |
| 10 | 54900293 | 54900293 | 1 | 10_54900293 | ENSG00000150275 | PCDH15 | 0 | INTRON | 4.53490918 | 5.76E-06 | 0.0163507 |
| 6 | 146672875 | 146672875 | 1 | 6_146672875 | ENSG00000118492 | ADGB | 0 | INTRON | -4.5348907 | 5.76E-06 | 0.0163507 |
| 7 | 156793056 | 156793056 | 1 | 7_156793056 | ENSG00000105983 | LMBR1 | 0 | INTRON | -4.5348346 | 5.76E-06 | 0.0163507 |
| 10 | 39372298 | 39372298 | 1 | 10_39372298 | ENSG00000233832 | AL590623.1 | 589190 | Downstream | -4.5348028 | 5.77E-06 | 0.0163507 |
| 3 | 197260066 | 197260066 | 1 | 3_197260066 | ENSG00000075711 | DLG1 | 0 | INTRON | -4.5347984 | 5.77E-06 | 0.0163507 |
| 3 | 175442695 | 175442695 | 1 | 3_175442695 | ENSG00000177694 | NAALADL2 | 0 | INTRON | 4.53475984 | 5.77E-06 | 0.0163507 |
| X | 53966403 | 53966403 | 1 | X_53966403 | ENSG00000172943 | PHF8 | 0 | INTRON | 4.5347512 | 5.77E-06 | 0.0163507 |
| 15 | 23973641 | 23973641 | 1 | 15_23973641 | ENSG00000260232 | PWRN4 | 0 | INTRON | 4.53474097 | 5.77E-06 | 0.0163507 |
| 16 | 29294004 | 29294004 | 1 | 16_29294004 | ENSG00000284685 | AC009093.10 | 0 | INTRON | 4.53459962 | 5.77E-06 | 0.01635893 |
| 3 | 63804003 | 63804003 | 1 | 3_63804003 | ENSG00000224479 | AC104162.1 | 0 | INTRON | -4.5344815 | 5.77E-06 | 0.01636536 |
| 18 | 41467853 | 41467853 | 1 | 18_41467853 | ENSG00000286328 | AC079052.1 | 0 | INTRON | 4.53434124 | 5.78E-06 | 0.01637162 |
| 11 | 120989328 | 120989328 | 1 | 11_120989328 | ENSG00000149403 | GRIK4 | 424 | Downstream | 4.53427817 | 5.78E-06 | 0.01637162 |
| 11 | 39768623 | 39768623 | 1 | 11_39768623 | ENSG00000270588 | AC021749.1 | 105158 | Upstream | 4.53426976 | 5.78E-06 | 0.01637162 |
| 7 | 155409547 | 155409547 | 1 | 7_155409547 | ENSG00000288051 | AC008060.5 | 3048 | Upstream | -4.5342275 | 5.78E-06 | 0.01637162 |
| 15 | 36800677 | 36800677 | 1 | 15_36800677 | ENSG00000223518 | CSNK1A1P1 | 0 | INTRON | -4.534225 | 5.78E-06 | 0.01637162 |
| 17 | 43957152 | 43957152 | 1 | 17_43957152 | ENSG00000131096 | PYY | 0 | INTRON | 4.53414876 | 5.78E-06 | 0.01637466 |
| 22 | 45967126 | 45967126 | 1 | 22_45967126 | ENSG00000188064 | WNT7B | 0 | INTRON | -4.5340998 | 5.78E-06 | 0.01637466 |
| X | 51747599 | 51747599 | 1 | X_51747599 | ENSG00000189369 | GSPT2 | 1367 | Downstream | -4.5340583 | 5.79E-06 | 0.01637466 |
| 15 | 80621728 | 80621728 | 1 | 15_80621728 | ENSG00000172379 | ARNT2 | 23795 | Downstream | -4.5340454 | 5.79E-06 | 0.01637466 |
| 22 | 44715168 | 44715168 | 1 | 22_44715168 | ENSG00000186654 | PRR5 | 0 | INTRON | -4.533844 | 5.79E-06 | 0.01638756 |
| 3 | 36062802 | 36062802 | 1 | 3_36062802 | ENSG00000236158 | RFC3P1 | 106964 | Downstream | 4.53377655 | 5.79E-06 | 0.01638874 |
| 5 | 168067982 | 168067982 | 1 | 5_168067982 | ENSG00000145934 | TENM2 | 0 | INTRON | 4.53375861 | 5.79E-06 | 0.01638874 |
| 3 | 110669066 | 110669066 | 1 | 3_110669066 | ENSG00000244722 | RPSAP29 | 13219 | Downstream | 4.53367602 | 5.80E-06 | 0.01639008 |
| 12 | 98146144 | 98146144 | 1 | 12_98146144 | ENSG00000258312 | AC016152.1 | 0 | INTRON | -4.5336712 | 5.80E-06 | 0.01639008 |
| 14 | 35257717 | 35257717 | 1 | 14_35257717 | ENSG00000258790 | AL121594.1 | 0 | INTRON | 4.53362288 | 5.80E-06 | 0.01639027 |
| 7 | 107213117 | 107213117 | 1 | 7_107213117 | ENSG00000164597 | COG5 | 0 | INTRON | -4.5335688 | 5.80E-06 | 0.01639027 |
| 18 | 4101196 | 4101196 | 1 | 18_4101196 | ENSG00000170579 | DLGAP1 | 0 | INTRON | 4.5335224 | 5.80E-06 | 0.01639027 |
| 2 | 207838061 | 207838061 | 1 | 2_207838061 | ENSG00000178385 | PLEKHM3 | 0 | INTRON | 4.53350411 | 5.80E-06 | 0.01639027 |
| 3 | 103189292 | 103189292 | 1 | 3_103189292 | ENSG00000201922 | RNU1-43P | 29168 | Downstream | 4.53349338 | 5.80E-06 | 0.01639027 |
| 9 | 23762157 | 23762157 | 1 | 9_23762157 | ENSG00000107105 | ELAVL2 | 0 | EXON | 4.53345573 | 5.80E-06 | 0.01639047 |
| 2 | 182128380 | 182128380 | 1 | 2_182128380 | ENSG00000150722 | PPP1R1C | 0 | INTRON | 4.53335468 | 5.81E-06 | 0.01639468 |
| 7 | 27249933 | 27249933 | 1 | 7_27249933 | ENSG00000106038 | EVX1 | 0 | INTRON | -4.5333259 | 5.81E-06 | 0.01639468 |
| 2 | 231815327 | 231815327 | 1 | 2_231815327 | ENSG00000261096 | AC073476.3 | 2975 | Downstream | 4.53329651 | 5.81E-06 | 0.01639468 |
| 5 | 74489147 | 74489147 | 1 | 5_74489147 | ENSG00000248673 | LINC01331 | 0 | INTRON | -4.5332196 | 5.81E-06 | 0.01639792 |
| 1 | 78652174 | 78652174 | 1 | 1_78652174 | ENSG00000137965 | IFI44 | 0 | INTRON | 4.53311613 | 5.81E-06 | 0.01640324 |
| 8 | 78838338 | 78838338 | 1 | 8_78838338 | ENSG00000261618 | LINC02605 | 0 | EXON | -4.5328828 | 5.82E-06 | 0.0164185 |
| 17 | 4120082 | 4120082 | 1 | 17_4120082 | ENSG00000074755 | ZZEF1 | 0 | INTRON | 4.53282168 | 5.82E-06 | 0.0164185 |
| 1 | 24800364 | 24800364 | 1 | 1_24800364 | ENSG00000169504 | CLIC4 | 0 | INTRON | -4.5328148 | 5.82E-06 | 0.0164185 |
| 12 | 94639511 | 94639511 | 1 | 12_94639511 | ENSG00000057704 | TMCC3 | 0 | INTRON | -4.5327476 | 5.82E-06 | 0.01641876 |
| X | 24015855 | 24015855 | 1 | X_24015855 | ENSG00000174010 | KLHL15 | 0 | INTRON | 4.5327414 | 5.82E-06 | 0.01641876 |
| 1 | 47566686 | 47566686 | 1 | 1_47566686 | ENSG00000227883 | ATP6V0E1P4 | 15933 | Downstream | -4.5326412 | 5.83E-06 | 0.01642201 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 | 47717857 | 47717857 | 1 | 7_47717857 | ENSG00000158683 | PKD1L1 | 22344 | Downstream | 4.53262922 | 5.83E-06 | 0.01642201 |
| 7 | 62308091 | 62308091 | 1 | 7_62308091 | ENSG00000233918 | AC128676.1 | 32413 | Upstream | -4.5325948 | 5.83E-06 | 0.01642201 |
| 11 | 57760659 | 57760659 | 1 | 11_57760659 | ENSG00000254462 | TMX2-CTNND1 | 0 | INTRON | 4.53251231 | 5.83E-06 | 0.0164257 |
| 3 | 78713785 | 78713785 | 1 | 3_78713785 | ENSG00000169855 | ROBO1 | 0 | INTRON | -4.5324061 | 5.83E-06 | 0.01642986 |
| 3 | 185016794 | 185016794 | 1 | 3_185016794 | ENSG00000156931 | VPS8 | 0 | INTRON | 4.53237671 | 5.83E-06 | 0.01642986 |
| 15 | 77534743 | 77534743 | 1 | 15_77534743 | ENSG00000259362 | AC046168.1 | 633 | Downstream | 4.53235389 | 5.83E-06 | 0.01642986 |
| 10 | 12503353 | 12503353 | 1 | 10_12503353 | ENSG00000183049 | CAMK1D | 0 | INTRON | 4.53230807 | 5.83E-06 | 0.01643071 |
| 5 | 43829858 | 43829858 | 1 | 5_43829858 | ENSG00000249276 | AC104119.1 | 44508 | Upstream | -4.5321865 | 5.84E-06 | 0.01643635 |
| 13 | 38560761 | 38560761 | 1 | 13_38560761 | ENSG00000229437 | LINC00366 | 6953 | Upstream | -4.5321611 | 5.84E-06 | 0.01643635 |
| 2 | 110861694 | 110861694 | 1 | 2_110861694 | ENSG00000153093 | ACOXL | 0 | INTRON | 4.53209896 | 5.84E-06 | 0.01643635 |
| 21 | 18272446 | 18272446 | 1 | 21_18272446 | ENSG00000154646 | TMPRSS15 | 0 | INTRON | 4.5320958 | 5.84E-06 | 0.01643635 |
| 18 | 57565530 | 57565530 | 1 | 18_57565530 | ENSG00000066926 | FECH | 0 | INTRON | 4.53183458 | 5.85E-06 | 0.01645397 |
| 2 | 179024174 | 179024174 | 1 | 2_179024174 | ENSG00000163492 | CCDC141 | 0 | INTRON | -4.5317711 | 5.85E-06 | 0.0164562 |
| 9 | 113824785 | 113824785 | 1 | 9_113824785 | ENSG00000232905 | AL162393.1 | 25901 | Downstream | 4.53160752 | 5.85E-06 | 0.01646438 |
| 8 | 27716245 | 27716245 | 1 | 8_27716245 | ENSG00000279302 | AC013643.3 | 12456 | Downstream | -4.5315706 | 5.85E-06 | 0.01646438 |
| X | 68396153 | 68396153 | 1 | X_68396153 | ENSG00000079482 | OPHN1 | 0 | INTRON | 4.53156139 | 5.85E-06 | 0.01646438 |
| 1 | 117792810 | 117792810 | 1 | 1_117792810 | ENSG00000228217 | PNRC2P1 | 14304 | Upstream | 4.53146002 | 5.86E-06 | 0.01646723 |
| 4 | 22876745 | 22876745 | 1 | 4_22876745 | ENSG00000249948 | GBA3 | 57170 | Downstream | -4.531455 | 5.86E-06 | 0.01646723 |
| 12 | 116133852 | 116133852 | 1 | 12_116133852 | ENSG00000123066 | MED13L | 0 | INTRON | 4.53125582 | 5.86E-06 | 0.01648004 |
| 10 | 98120970 | 98120970 | 1 | 10_98120970 | ENSG00000166024 | R3HCC1L | 13653 | Upstream | -4.5312024 | 5.86E-06 | 0.0164803 |
| 14 | 48706598 | 48706598 | 1 | 14_48706598 | ENSG00000258381 | AL512360.1 | 112761 | Upstream | -4.5311828 | 5.87E-06 | 0.0164803 |
| 22 | 39570856 | 39570856 | 1 | 22_39570856 | ENSG00000100346 | CACNA1I | 0 | EXON | -4.5308872 | 5.87E-06 | 0.01650065 |
| 17 | 47475950 | 47475950 | 1 | 17_47475950 | ENSG00000228782 | MRPL45P2 | 0 | INTRON | 4.53081291 | 5.88E-06 | 0.01650373 |
| 8 | 119248345 | 119248345 | 1 | 8_119248345 | ENSG00000253972 | MAL2-AS1 | 1497 | Upstream | -4.5306835 | 5.88E-06 | 0.01651112 |
| 5 | 112678892 | 112678892 | 1 | 5_112678892 | ENSG00000134982 | APC | 28605 | Upstream | 4.53057109 | 5.88E-06 | 0.01651718 |
| 16 | 2488876 | 2488876 | 1 | 16_2488876 | ENSG00000162065 | TBC1D24 | 0 | INTRON | -4.530411 | 5.89E-06 | 0.01651957 |
| 17 | 16245649 | 16245649 | 1 | 17_16245649 | ENSG00000108474 | PIGL | 0 | INTRON | -4.5303901 | 5.89E-06 | 0.01651957 |
| 1 | 118409297 | 118409297 | 1 | 1_118409297 | ENSG00000222209 | RNA5SP56 | 144808 | Upstream | -4.5303802 | 5.89E-06 | 0.01651957 |
| 12 | 33308911 | 33308911 | 1 | 12_33308911 | ENSG00000110975 | SYT10 | 65326 | Downstream | 4.53037804 | 5.89E-06 | 0.01651957 |
| 5 | 102602670 | 102602670 | 1 | 5_102602670 | ENSG00000250958 | LINC00492 | 0 | INTRON | -4.5303662 | 5.89E-06 | 0.01651957 |
| 9 | 110776849 | 110776849 | 1 | 9_110776849 | ENSG00000030304 | MUSK | 0 | INTRON | 4.53033147 | 5.89E-06 | 0.01651957 |
| 3 | 63021379 | 63021379 | 1 | 3_63021379 | ENSG00000244342 | LINC00698 | 0 | INTRON | -4.5302869 | 5.89E-06 | 0.01652033 |
| 8 | 76413125 | 76413125 | 1 | 8_76413125 | ENSG00000254300 | LINC01111 | 0 | INTRON | -4.5302303 | 5.89E-06 | 0.01652203 |
| 1 | 30072124 | 30072124 | 1 | 1_30072124 | ENSG00000233399 | LINC01648 | 34512 | Upstream | 4.53013876 | 5.89E-06 | 0.01652307 |
| 11 | 80079585 | 80079585 | 1 | 11_80079585 | ENSG00000254471 | AP001284.1 | 89955 | Downstream | 4.5301134 | 5.90E-06 | 0.01652307 |
| 4 | 149982371 | 149982371 | 1 | 4_149982371 | ENSG00000250704 | AC105343.1 | 23799 | Downstream | 4.53011262 | 5.90E-06 | 0.01652307 |
| 1 | 109003992 | 109003992 | 1 | 1_109003992 | ENSG00000085433 | WDR47 | 0 | INTRON | -4.5300273 | 5.90E-06 | 0.01652496 |
| 9 | 71375509 | 71375509 | 1 | 9_71375509 | ENSG00000083067 | TRPM3 | 0 | INTRON | 4.53001894 | 5.90E-06 | 0.01652496 |
| 14 | 73422694 | 73422694 | 1 | 14_73422694 | ENSG00000285006 | AC005280.3 | 0 | INTRON | -4.5299594 | 5.90E-06 | 0.01652689 |
| 9 | 36560321 | 36560321 | 1 | 9_36560321 | ENSG00000165304 | MELK | 12540 | Upstream | 4.52955921 | 5.91E-06 | 0.0165541 |
| 1 | 162963920 | 162963920 | 1 | 1_162963920 | ENSG00000227667 | AL392003.1 | 15630 | Downstream | 4.52951254 | 5.91E-06 | 0.0165541 |
| 3 | 80821845 | 80821845 | 1 | 3_80821845 | ENSG00000242781 | LINC02050 | 32457 | Downstream | 4.52947865 | 5.91E-06 | 0.0165541 |
| 6 | 87073715 | 87073715 | 1 | 6_87073715 | ENSG00000217776 | AL138827.1 | 3254 | Upstream | -4.5294409 | 5.91E-06 | 0.0165541 |
| 4 | 7774569 | 7774569 | 1 | 4_7774569 | ENSG00000272620 | AFAP1-AS1 | 0 | EXON | -4.529438 | 5.91E-06 | 0.0165541 |
| 4 | 118801645 | 118801645 | 1 | 4_118801645 | ENSG00000150961 | SEC24D | 0 | INTRON | -4.5293341 | 5.92E-06 | 0.01655952 |
| 15 | 81321566 | 81321566 | 1 | 15_81321566 | ENSG00000172345 | STARD5 | 0 | INTRON | 4.52921517 | 5.92E-06 | 0.01656612 |
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| 9 | 40812125 | 40812125 | 1 | 9_40812125 | ENSG00000275390 | AL353626.1 | 5781 | Downstream | -4.5288693 | 5.93E-06 | 0.01658248 |
| 4 | 30283667 | 30283667 | 1 | 4_30283667 | ENSG00000248281 | AC106868.1 | 275351 | Upstream | -4.5288676 | 5.93E-06 | 0.01658248 |
| 19 | 51591893 | 51591893 | 1 | 19_51591893 | ENSG00000105497 | ZNF175 | 0 | 3UTR | -4.528725 | 5.93E-06 | 0.01658888 |
| 2 | 189927496 | 189927496 | 1 | 2_189927496 | ENSG00000187699 | C2orf88 | 0 | INTRON | -4.5287166 | 5.93E-06 | 0.01658888 |
| 3 | 171167148 | 171167148 | 1 | 3_171167148 | ENSG00000154310 | TNIK | 0 | EXON | -4.5286456 | 5.94E-06 | 0.01658993 |
| 5 | 74986642 | 74986642 | 1 | 5_74986642 | ENSG00000249856 | AC116337.3 | 0 | INTRON | 4.52857599 | 5.94E-06 | 0.01658993 |
| 6 | 29661610 | 29661610 | 1 | 6_29661610 | ENSG00000204655 | MOG | 0 | INTRON | -4.5285359 | 5.94E-06 | 0.01658993 |
| 3 | 129349877 | 129349877 | 1 | 3_129349877 | ENSG00000270773 | AC137695.2 | 3713 | Downstream | 4.52850487 | 5.94E-06 | 0.01658993 |
| 3 | 90611988 | 90611988 | 1 | 3_90611988 | ENSG00000271024 | HSPE1P19 | 350280 | Upstream | -4.528502 | 5.94E-06 | 0.01658993 |
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| 9 | 120461254 | 120461254 | 1 | 9_120461254 | ENSG00000136861 | CDK5RAP2 | 0 | INTRON | -4.5284356 | 5.94E-06 | 0.01658993 |
| 20 | 55632351 | 55632351 | 1 | 20_55632351 | ENSG00000235166 | LINC01440 | 0 | INTRON | 4.52842567 | 5.94E-06 | 0.01658993 |
| 16 | 1158861 | 1158861 | 1 | 16_1158861 | ENSG00000196557 | CACNA1H | 0 | INTRON | 4.52828672 | 5.95E-06 | 0.01659258 |
| 12 | 54644471 | 54644471 | 1 | 12_54644471 | ENSG00000161634 | DCD | 117 | Downstream | -4.5282822 | 5.95E-06 | 0.01659258 |
| 4 | 11191067 | 11191067 | 1 | 4_11191067 | ENSG00000207716 | MIR572 | 177759 | Upstream | 4.52827016 | 5.95E-06 | 0.01659258 |
| 6 | 158222083 | 158222083 | 1 | 6_158222083 | ENSG00000130338 | TULP4 | 10152 | Upstream | 4.52821766 | 5.95E-06 | 0.01659258 |
| 11 | 34269897 | 34269897 | 1 | 11_34269897 | ENSG00000166016 | ABTB2 | 0 | INTRON | 4.52820593 | 5.95E-06 | 0.01659258 |
| 6 | 128767286 | 128767286 | 1 | 6_128767286 | ENSG00000202200 | Y_RNA | 5478 | Upstream | -4.5281699 | 5.95E-06 | 0.01659258 |
| 14 | 36954247 | 36954247 | 1 | 14_36954247 | ENSG00000183032 | SLC25A21 | 0 | INTRON | -4.5281005 | 5.95E-06 | 0.01659258 |
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| 3 | 29817306 | 29817306 | 1 | 3_29817306 | ENSG00000144642 | RBMS3 | 0 | INTRON | -4.5280479 | 5.95E-06 | 0.01659258 |
| 2 | 14655075 | 14655075 | 1 | 2_14655075 | ENSG00000162981 | LRATD1 | 4261 | Downstream | 4.52800673 | 5.95E-06 | 0.01659258 |
| 5 | 71219565 | 71219565 | 1 | 5_71219565 | ENSG00000235558 | AC146949.1 | 790 | Downstream | -4.5279876 | 5.95E-06 | 0.01659258 |
| 6 | 52043835 | 52043835 | 1 | 6_52043835 | ENSG00000170927 | PKHD1 | 0 | INTRON | -4.5279762 | 5.96E-06 | 0.01659258 |
| 10 | 67383369 | 67383369 | 1 | 10_67383369 | ENSG00000183230 | CTNNA3 | 0 | INTRON | 4.52783714 | 5.96E-06 | 0.01659647 |
| 22 | 46067660 | 46067660 | 1 | 22_46067660 | ENSG00000235159 | AL121672.2 | 0 | EXON | 4.52783579 | 5.96E-06 | 0.01659647 |
| 3 | 190155422 | 190155422 | 1 | 3_190155422 | ENSG00000212489 | RNU6-1109P | 9994 | Downstream | -4.5278228 | 5.96E-06 | 0.01659647 |
| 11 | 102703667 | 102703667 | 1 | 11_102703667 | ENSG00000137675 | MMP27 | 0 | INTRON | -4.5277325 | 5.96E-06 | 0.01659971 |
| 16 | 65627173 | 65627173 | 1 | 16_65627173 | ENSG00000261818 | AC092138.2 | 0 | INTRON | -4.5277124 | 5.96E-06 | 0.01659971 |
| 3 | 189157855 | 189157855 | 1 | 3_189157855 | ENSG00000188001 | TPRG1 | 0 | INTRON | 4.52755816 | 5.97E-06 | 0.01660911 |
| 21 | 9129583 | 9129583 | 1 | 21_9129583 | ENSG00000188681 | TEKT4P2 | 0 | INTRON | -4.5275033 | 5.97E-06 | 0.01661071 |
| 22 | 41046098 | 41046098 | 1 | 22_41046098 | ENSG00000222698 | Y_RNA | 507 | Downstream | 4.5273624 | 5.97E-06 | 0.0166124 |
| 16 | 53287277 | 53287277 | 1 | 16_53287277 | ENSG00000177200 | CHD9 | 0 | INTRON | 4.52734831 | 5.97E-06 | 0.0166124 |
| 10 | 18766906 | 18766906 | 1 | 10_18766906 | ENSG00000234244 | AL512641.1 | 18564 | Downstream | -4.5273482 | 5.97E-06 | 0.0166124 |
| 8 | 26647835 | 26647835 | 1 | 8_26647835 | ENSG00000092964 | DPYSL2 | 0 | INTRON | -4.5273434 | 5.97E-06 | 0.0166124 |
| 6 | 27405360 | 27405360 | 1 | 6_27405360 | ENSG00000271755 | AL031118.1 | 0 | EXON | -4.5272709 | 5.98E-06 | 0.01661539 |
| 10 | 18799299 | 18799299 | 1 | 10_18799299 | ENSG00000234244 | AL512641.1 | 50957 | Downstream | 4.52720192 | 5.98E-06 | 0.01661809 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 13 | 45155794 | 45155794 | 1 | 13_45155794 | ENSG00000188342 | GTF2F2 | 0 | INTRON | 4.52708963 | 5.98E-06 | 0.01661985 |
| 6 | 126823033 | 126823033 | 1 | 6_126823033 | ENSG00000286215 | AL356534.1 | 0 | INTRON | 4.52702242 | 5.98E-06 | 0.01661985 |
| 9 | 114482720 | 114482720 | 1 | 9_114482720 | ENSG00000095397 | WHRN | 0 | INTRON | 4.52698775 | 5.98E-06 | 0.01661985 |
| 13 | 85167951 | 85167951 | 1 | 13_85167951 | ENSG00000286906 | AL160154.1 | 19830 | Upstream | -4.5269619 | 5.98E-06 | 0.01661985 |
| 13 | 52642966 | 52642966 | 1 | 13_52642966 | ENSG00000139675 | HNRNPA1L2 | 0 | EXON | 4.52694569 | 5.98E-06 | 0.01661985 |
| 2 | 66003092 | 66003092 | 1 | 2_66003092 | ENSG00000204929 | AC007389.1 | 0 | INTRON | -4.5269398 | 5.98E-06 | 0.01661985 |
| 2 | 45397706 | 45397706 | 1 | 2_45397706 | ENSG00000068784 | SRBD1 | 0 | INTRON | -4.5269047 | 5.99E-06 | 0.01661985 |
| 12 | 91654217 | 91654217 | 1 | 12_91654217 | ENSG00000277738 | AC126175.2 | 18573 | Downstream | -4.5268495 | 5.99E-06 | 0.01661985 |
| 6 | 65197142 | 65197142 | 1 | 6_65197142 | ENSG00000188107 | EYS | 0 | INTRON | -4.5268183 | 5.99E-06 | 0.01661985 |
| 12 | 110540384 | 110540384 | 1 | 12_110540384 | ENSG00000196850 | PPTC7 | 0 | INTRON | 4.52679183 | 5.99E-06 | 0.01661985 |
| 2 | 60528657 | 60528657 | 1 | 2_60528657 | ENSG00000119866 | BCL11A | 0 | INTRON | -4.5267883 | 5.99E-06 | 0.01661985 |
| 18 | 9855134 | 9855134 | 1 | 18_9855134 | ENSG00000168461 | RAB31 | 0 | INTRON | 4.52676544 | 5.99E-06 | 0.01661985 |
| 10 | 21716838 | 21716838 | 1 | 10_21716838 | ENSG00000078403 | MLLT10 | 0 | INTRON | 4.52651903 | 6.00E-06 | 0.01663652 |
| 10 | 6198315 | 6198315 | 1 | 10_6198315 | ENSG00000170525 | PFKFB3 | 0 | INTRON | 4.52647042 | 6.00E-06 | 0.01663763 |
| 10 | 56299145 | 56299145 | 1 | 10_56299145 | ENSG00000122952 | ZWINT | 58081 | Downstream | 4.52635762 | 6.00E-06 | 0.0166438 |
| 10 | 61593340 | 61593340 | 1 | 10_61593340 | ENSG00000183346 | CABCOCO1 | 69620 | Upstream | -4.5261717 | 6.01E-06 | 0.01665426 |
| 10 | 24433127 | 24433127 | 1 | 10_24433127 | ENSG00000120549 | KIAA1217 | 0 | EXON | 4.52613278 | 6.01E-06 | 0.01665426 |
| 11 | 26333350 | 26333350 | 1 | 11_26333350 | ENSG00000134343 | ANO3 | 0 | INTRON | 4.52612144 | 6.01E-06 | 0.01665426 |
| 9 | 125765772 | 125765772 | 1 | 9_125765772 | ENSG00000167081 | PBX3 | 0 | INTRON | -4.5260313 | 6.01E-06 | 0.01665493 |
| 2 | 219213245 | 219213245 | 1 | 2_219213245 | ENSG00000284820 | AC068946.2 | 0 | 3UTR | 4.52599717 | 6.01E-06 | 0.01665493 |
| 10 | 130421248 | 130421248 | 1 | 10_130421248 | ENSG00000236303 | LINC02646 | 0 | INTRON | -4.5259787 | 6.01E-06 | 0.01665493 |
| X | 56113041 | 56113041 | 1 | X_56113041 | ENSG00000227486 | AL050309.1 | 0 | INTRON | -4.5259751 | 6.01E-06 | 0.01665493 |
| 3 | 59183531 | 59183531 | 1 | 3_59183531 | ENSG00000243295 | AC126121.3 | 0 | INTRON | 4.52589872 | 6.01E-06 | 0.01665572 |
| 14 | 62304531 | 62304531 | 1 | 14_62304531 | ENSG00000270852 | AL390816.3 | 152273 | Upstream | -4.5258962 | 6.01E-06 | 0.01665572 |
| 6 | 124409245 | 124409245 | 1 | 6_124409245 | ENSG00000188580 | NKAIN2 | 0 | INTRON | 4.52580467 | 6.02E-06 | 0.01666022 |
| 8 | 33166447 | 33166447 | 1 | 8_33166447 | ENSG00000253993 | AC104027.1 | 60400 | Downstream | 4.52573515 | 6.02E-06 | 0.01666188 |
| 1 | 203458316 | 203458316 | 1 | 1_203458316 | ENSG00000188783 | PRELP | 17489 | Upstream | 4.52571487 | 6.02E-06 | 0.01666188 |
| 17 | 67473592 | 67473592 | 1 | 17_67473592 | ENSG00000154217 | PITPNC1 | 0 | INTRON | 4.52559537 | 6.02E-06 | 0.01666858 |
| 11 | 33989715 | 33989715 | 1 | 11_33989715 | ENSG00000286626 | AC090469.1 | 60251 | Downstream | 4.5255248 | 6.02E-06 | 0.01666977 |
| 12 | 95234348 | 95234348 | 1 | 12_95234348 | ENSG00000028203 | VEZT | 0 | INTRON | 4.52551154 | 6.02E-06 | 0.01666977 |
| 14 | 99085941 | 99085941 | 1 | 14_99085941 | ENSG00000229402 | AL162151.1 | 72474 | Upstream | -4.5254061 | 6.03E-06 | 0.01667538 |
| 5 | 96981914 | 96981914 | 1 | 5_96981914 | ENSG00000113441 | LNPEP | 0 | INTRON | 4.52522604 | 6.03E-06 | 0.01668592 |
| 1 | 11082192 | 11082192 | 1 | 1_11082192 | ENSG00000171824 | EXOSC10 | 0 | INTRON | 4.52520364 | 6.03E-06 | 0.01668592 |
| 3 | 106910734 | 106910734 | 1 | 3_106910734 | ENSG00000242759 | LINC00882 | 0 | INTRON | 4.52514772 | 6.04E-06 | 0.01668762 |
| 20 | 26606804 | 26606804 | 1 | 20_26606804 | ENSG00000227195 | MIR663AHG | 355258 | Upstream | -4.5251092 | 6.04E-06 | 0.01668795 |
| 7 | 109582005 | 109582005 | 1 | 7_109582005 | ENSG00000234273 | AC073071.1 | 0 | INTRON | 4.52505693 | 6.04E-06 | 0.01668936 |
| 15 | 99147288 | 99147288 | 1 | 15_99147288 | ENSG00000103852 | TTC23 | 0 | INTRON | -4.5249883 | 6.04E-06 | 0.01669133 |
| 2 | 40965580 | 40965580 | 1 | 2_40965580 | ENSG00000237442 | HNRNPA1P57 | 178199 | Upstream | -4.5249632 | 6.04E-06 | 0.01669133 |
| 5 | 61959464 | 61959464 | 1 | 5_61959464 | ENSG00000248199 | AC008877.1 | 32330 | Downstream | 4.52489471 | 6.04E-06 | 0.01669403 |
| 8 | 25346694 | 25346694 | 1 | 8_25346694 | ENSG00000147459 | DOCK5 | 0 | INTRON | 4.5248474 | 6.04E-06 | 0.01669506 |
| 16 | 34630642 | 34630642 | 1 | 16_34630642 | ENSG00000286968 | FP325313.2 | 181776 | Downstream | -4.5246697 | 6.05E-06 | 0.01670638 |
| 1 | 89051915 | 89051915 | 1 | 1_89051915 | ENSG00000117228 | GBP1 | 403 | Downstream | 4.52457325 | 6.05E-06 | 0.0167111 |
| 11 | 750773 | 750773 | 1 | 11_750773 | ENSG00000177156 | TALDO1 | 0 | INTRON | 4.52454132 | 6.05E-06 | 0.0167111 |
| 2 | 228377755 | 228377755 | 1 | 2_228377755 | ENSG00000286772 | AC009410.1 | 744 | Upstream | -4.5244625 | 6.05E-06 | 0.01671414 |
| 13 | 90705920 | 90705920 | 1 | 13_90705920 | ENSG00000251753 | RNU6-75P | 75845 | Downstream | 4.52443415 | 6.06E-06 | 0.01671414 |
| 7 | 135926037 | 135926037 | 1 | 7_135926037 | ENSG00000224746 | AC015987.1 | 0 | INTRON | -4.5243532 | 6.06E-06 | 0.01671703 |
| 9 | 83067126 | 83067126 | 1 | 9_83067126 | ENSG00000286451 | AL499602.1 | 0 | INTRON | 4.52432235 | 6.06E-06 | 0.01671703 |
| 18 | 28870097 | 28870097 | 1 | 18_28870097 | ENSG00000271238 | AC023932.1 | 45271 | Upstream | 4.52429472 | 6.06E-06 | 0.01671703 |
| 1 | 149000386 | 149000386 | 1 | 1_149000386 | ENSG00000178104 | PDE4DIP | 0 | INTRON | 4.52417495 | 6.06E-06 | 0.01672177 |
| 13 | 105523207 | 105523207 | 1 | 13_105523207 | ENSG00000232307 | DAOA-AS1 | 17526 | Upstream | 4.52412552 | 6.06E-06 | 0.01672177 |
| 17 | 74415394 | 74415394 | 1 | 17_74415394 | ENSG00000200021 | RNA5SP448 | 2199 | Downstream | 4.52411155 | 6.06E-06 | 0.01672177 |
| 12 | 51335549 | 51335549 | 1 | 12_51335549 | ENSG00000139610 | CELA1 | 0 | INTRON | -4.5240977 | 6.07E-06 | 0.01672177 |
| 20 | 4005370 | 4005370 | 1 | 20_4005370 | ENSG00000101236 | RNF24 | 0 | INTRON | 4.5240073 | 6.07E-06 | 0.0167262 |
| 17 | 33668817 | 33668817 | 1 | 17_33668817 | ENSG00000108684 | ASIC2 | 0 | INTRON | 4.52375568 | 6.08E-06 | 0.01673997 |
| 3 | 162981701 | 162981701 | 1 | 3_162981701 | ENSG00000241168 | AC128685.1 | 44694 | Upstream | 4.52371722 | 6.08E-06 | 0.01673997 |
| 13 | 28709270 | 28709270 | 1 | 13_28709270 | ENSG00000139508 | SLC46A3 | 0 | INTRON | -4.5237145 | 6.08E-06 | 0.01673997 |
| 18 | 21231042 | 21231042 | 1 | 18_21231042 | ENSG00000265984 | AC022809.1 | 9632 | Downstream | -4.5236962 | 6.08E-06 | 0.01673997 |
| 14 | 52103285 | 52103285 | 1 | 14_52103285 | ENSG00000258694 | LINC02319 | 7836 | Downstream | 4.52344134 | 6.08E-06 | 0.01675534 |
| 19 | 28565273 | 28565273 | 1 | 19_28565273 | ENSG00000283403 | AC005394.2 | 0 | INTRON | 4.5234336 | 6.08E-06 | 0.01675534 |
| 18 | 12350433 | 12350433 | 1 | 18_12350433 | ENSG00000141385 | AFG3L2 | 0 | INTRON | -4.5232969 | 6.09E-06 | 0.01676273 |
| 13 | 72725020 | 72725020 | 1 | 13_72725020 | ENSG00000204899 | MZT1 | 0 | INTRON | -4.5232719 | 6.09E-06 | 0.01676273 |
| 5 | 94298268 | 94298268 | 1 | 5_94298268 | ENSG00000185261 | KIAA0825 | 0 | INTRON | 4.52321262 | 6.09E-06 | 0.01676425 |
| 12 | 20410549 | 20410549 | 1 | 12_20410549 | ENSG00000172572 | PDE3A | 0 | INTRON | 4.52318415 | 6.09E-06 | 0.01676425 |
| 3 | 148760181 | 148760181 | 1 | 3_148760181 | ENSG00000144891 | AGTR1 | 17173 | Downstream | -4.5230816 | 6.09E-06 | 0.01676967 |
| 4 | 120228228 | 120228228 | 1 | 4_120228228 | ENSG00000250938 | AC073475.1 | 0 | INTRON | 4.5229195 | 6.10E-06 | 0.01677842 |
| 14 | 91759225 | 91759225 | 1 | 14_91759225 | ENSG00000260711 | AL121839.2 | 0 | EXON | 4.52288693 | 6.10E-06 | 0.01677842 |
| 1 | 94843460 | 94843460 | 1 | 1_94843460 | ENSG00000224081 | SLC44A3-AS1 | 0 | EXON | 4.52286859 | 6.10E-06 | 0.01677842 |
| 1 | 243867368 | 243867368 | 1 | 1_243867368 | ENSG00000117020 | AKT3 | 16289 | Upstream | -4.5227709 | 6.10E-06 | 0.01678346 |
| 10 | 32560006 | 32560006 | 1 | 10_32560006 | ENSG00000216937 | CCDC7 | 0 | INTRON | 4.52268336 | 6.11E-06 | 0.01678769 |
| 12 | 122198425 | 122198425 | 1 | 12_122198425 | ENSG00000158113 | LRRC43 | 0 | INTRON | 4.52259298 | 6.11E-06 | 0.01678826 |
| 6 | 58559869 | 58559869 | 1 | 6_58559869 | ENSG00000225096 | AL445250.1 | 121505 | Downstream | 4.52254839 | 6.11E-06 | 0.01678826 |
| 3 | 24606496 | 24606496 | 1 | 3_24606496 | ENSG00000228791 | THRB-AS1 | 0 | INTRON | -4.5225418 | 6.11E-06 | 0.01678826 |
| 2 | 207830072 | 207830072 | 1 | 2_207830072 | ENSG00000178385 | PLEKHM3 | 0 | INTRON | 4.52253941 | 6.11E-06 | 0.01678826 |
| 2 | 119027322 | 119027322 | 1 | 2_119027322 | ENSG00000019169 | MARCO | 32662 | Downstream | -4.5225026 | 6.11E-06 | 0.01678847 |
| 7 | 16101261 | 16101261 | 1 | 7_16101261 | ENSG00000214960 | CRPPA | 0 | INTRON | 4.52244028 | 6.11E-06 | 0.01678929 |
| X | 73969851 | 73969851 | 1 | X_73969851 | ENSG00000225470 | JPX | 0 | INTRON | -4.5223968 | 6.11E-06 | 0.01678929 |
| 1 | 92424283 | 92424283 | 1 | 1_92424283 | ENSG00000242764 | RN7SL824P | 21598 | Upstream | 4.52238442 | 6.11E-06 | 0.01678929 |
| 6 | 164499921 | 164499921 | 1 | 6_164499921 | ENSG00000226739 | AL358972.1 | 151277 | Upstream | 4.52235569 | 6.12E-06 | 0.01678929 |
| 8 | 109181089 | 109181089 | 1 | 8_109181089 | ENSG00000120526 | NUDCD1 | 59829 | Downstream | 4.52223021 | 6.12E-06 | 0.01679654 |
| 2 | 163656029 | 163656029 | 1 | 2_163656029 | ENSG00000182263 | FIGN | 0 | INTRON | -4.5220073 | 6.13E-06 | 0.01680943 |
| 1 | 22801934 | 22801934 | 1 | 1_22801934 | ENSG00000133216 | EPHB2 | 0 | INTRON | 4.52199651 | 6.13E-06 | 0.01680943 |
| 4 | 137196201 | 137196201 | 1 | 4_137196201 | ENSG00000248869 | LINC02511 | 0 | INTRON | 4.52186856 | 6.13E-06 | 0.01680943 |
| 10 | 61069421 | 61069421 | 1 | 10_61069421 | ENSG00000227244 | LINC00845 | 43001 | Downstream | 4.5218064 | 6.13E-06 | 0.01680943 |
| 2 | 95180485 | 95180485 | 1 | 2_95180485 | ENSG00000275111 | ZNF2 | 0 | INTRON | 4.52179692 | 6.13E-06 | 0.01680943 |
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| 1 | 184184485 | 184184485 | 1 | 1_184184485 | ENSG00000199840 | Y_RNA | 12662 | Upstream | -4.5217227 | 6.13E-06 | 0.01680943 |
| 6 | 132771111 | 132771111 | 1 | 6_132771111 | ENSG00000146409 | SLC18B1 | 0 | 3UTR | 4.52170852 | 6.13E-06 | 0.01680943 |
| 20 | 12402441 | 12402441 | 1 | 20_12402441 | ENSG00000235698 | PA2G4P2 | 21186 | Downstream | -4.5216595 | 6.14E-06 | 0.01680943 |
| 5 | 63552234 | 63552234 | 1 | 5_63552234 | ENSG00000287179 | AC008558.1 | 17184 | Upstream | 4.52165788 | 6.14E-06 | 0.01680943 |
| 2 | 227661187 | 227661187 | 1 | 2_227661187 | ENSG00000284667 | SCYGR5 | 5616 | Upstream | 4.52162899 | 6.14E-06 | 0.01680943 |
| 17 | 59412505 | 59412505 | 1 | 17_59412505 | ENSG00000266002 | AC091059.1 | 9202 | Upstream | 4.52162457 | 6.14E-06 | 0.01680943 |
| 13 | 44580463 | 44580463 | 1 | 13_44580463 | ENSG00000278156 | TSC22D1-AS1 | 31 | Downstream | 4.52156813 | 6.14E-06 | 0.0168112 |
| X | 120569649 | 120569649 | 1 | X_120569649 | ENSG00000158290 | CUL4B | 0 | INTRON | -4.521507 | 6.14E-06 | 0.01681335 |
| 8 | 75456843 | 75456843 | 1 | 8_75456843 | ENSG00000164749 | HNF4G | 0 | INTRON | -4.5214173 | 6.14E-06 | 0.01681777 |
| 15 | 48196484 | 48196484 | 1 | 15_48196484 | ENSG00000259385 | AC066612.2 | 0 | INTRON | 4.52133651 | 6.15E-06 | 0.01682136 |
| 6 | 135114524 | 135114524 | 1 | 6_135114524 | ENSG00000112339 | HBS1L | 11468 | Upstream | 4.5213041 | 6.15E-06 | 0.01682136 |
| 15 | 88697520 | 88697520 | 1 | 15_88697520 | ENSG00000172183 | ISG20 | 41037 | Downstream | 4.52123489 | 6.15E-06 | 0.01682415 |
| 16 | 13870322 | 13870322 | 1 | 16_13870322 | ENSG00000175595 | ERCC4 | 49834 | Upstream | -4.5210939 | 6.15E-06 | 0.01683266 |
| 3 | 22455908 | 22455908 | 1 | 3_22455908 | ENSG00000132967 | HMGB1P5 | 72979 | Downstream | 4.52096 | 6.16E-06 | 0.01683985 |
| 6 | 17876930 | 17876930 | 1 | 6_17876930 | ENSG00000137177 | KIF13A | 0 | INTRON | -4.5209355 | 6.16E-06 | 0.01683985 |
| 1 | 159003463 | 159003463 | 1 | 1_159003463 | ENSG00000163565 | IFI16 | 0 | INTRON | -4.5208046 | 6.16E-06 | 0.01684637 |
| 19 | 46532661 | 46532661 | 1 | 19_46532661 | ENSG00000230510 | PPP5D1 | 0 | INTRON | -4.5207568 | 6.16E-06 | 0.01684637 |
| 3 | 156471520 | 156471520 | 1 | 3_156471520 | ENSG00000169282 | KCNAB1 | 0 | INTRON | 4.52069461 | 6.16E-06 | 0.01684637 |
| 16 | 9452580 | 9452580 | 1 | 16_9452580 | ENSG00000260071 | AC012178.1 | 0 | INTRON | -4.5206806 | 6.16E-06 | 0.01684637 |
| 6 | 33767019 | 33767019 | 1 | 6_33767019 | ENSG00000161904 | LEMD2 | 4182 | Downstream | 4.52065293 | 6.16E-06 | 0.01684637 |
| 3 | 108381809 | 108381809 | 1 | 3_108381809 | ENSG00000144821 | MYH15 | 0 | INTRON | -4.5206181 | 6.17E-06 | 0.01684637 |
| 14 | 103840739 | 103840739 | 1 | 14_103840739 | ENSG00000088808 | PPP1R13B | 0 | INTRON | 4.52060817 | 6.17E-06 | 0.01684637 |
| 11 | 118168176 | 118168176 | 1 | 11_118168176 | ENSG00000149575 | SCN2B | 0 | 3UTR | 4.52057941 | 6.17E-06 | 0.01684637 |
| 5 | 70214462 | 70214462 | 1 | 5_70214462 | ENSG00000253816 | AC138866.1 | 5455 | Downstream | 4.52054751 | 6.17E-06 | 0.01684637 |
| 11 | 110706323 | 110706323 | 1 | 11_110706323 | ENSG00000137727 | ARHGAP20 | 0 | INTRON | 4.52043503 | 6.17E-06 | 0.01685024 |
| 20 | 60226721 | 60226721 | 1 | 20_60226721 | ENSG00000228340 | MIR646HG | 0 | INTRON | -4.5204309 | 6.17E-06 | 0.01685024 |
| 6 | 77109935 | 77109935 | 1 | 6_77109935 | ENSG00000271945 | AL355612.1 | 12147 | Downstream | -4.5203487 | 6.17E-06 | 0.01685408 |
| 19 | 56452694 | 56452694 | 1 | 19_56452694 | ENSG00000198046 | ZNF667 | 0 | INTRON | -4.5202643 | 6.18E-06 | 0.01685581 |
| 7 | 30232643 | 30232643 | 1 | 7_30232643 | ENSG00000180233 | ZNRF2 | 51953 | Upstream | -4.520259 | 6.18E-06 | 0.01685581 |
| 7 | 122746602 | 122746602 | 1 | 7_122746602 | ENSG00000081803 | CADPS2 | 0 | INTRON | 4.52022346 | 6.18E-06 | 0.01685594 |
| 18 | 60465128 | 60465128 | 1 | 18_60465128 | ENSG00000285681 | AC091576.1 | 0 | INTRON | -4.5201637 | 6.18E-06 | 0.01685799 |
| 1 | 6768907 | 6768907 | 1 | 1_6768907 | ENSG00000284744 | AL591163.1 | 0 | INTRON | 4.52012929 | 6.18E-06 | 0.01685803 |
| 1 | 196777509 | 196777509 | 1 | 1_196777509 | ENSG00000116785 | CFHR3 | 0 | INTRON | 4.52003097 | 6.18E-06 | 0.01686176 |
| 11 | 60685187 | 60685187 | 1 | 11_60685187 | ENSG00000181995 | LINC00301 | 0 | INTRON | -4.5200147 | 6.18E-06 | 0.01686176 |
| 18 | 45558853 | 45558853 | 1 | 18_45558853 | ENSG00000132874 | SLC14A2 | 0 | INTRON | 4.51984204 | 6.19E-06 | 0.01687281 |
| 7 | 153716051 | 153716051 | 1 | 7_153716051 | ENSG00000287744 | AC005998.1 | 0 | EXON | 4.51979018 | 6.19E-06 | 0.01687424 |
| 12 | 99570413 | 99570413 | 1 | 12_99570413 | ENSG00000185046 | ANKS1B | 0 | INTRON | 4.51972157 | 6.19E-06 | 0.016877 |
| 6 | 170266105 | 170266105 | 1 | 6_170266105 | ENSG00000271820 | AL109910.2 | 563 | Downstream | -4.5196095 | 6.20E-06 | 0.01688324 |
| 6 | 60501124 | 60501124 | 1 | 6_60501124 | ENSG00000283453 | AC244258.1 | 0 | INTRON | 4.51949695 | 6.20E-06 | 0.01688922 |
| 6 | 14713700 | 14713700 | 1 | 6_14713700 | ENSG00000234261 | AL138720.1 | 0 | INTRON | 4.5194666 | 6.20E-06 | 0.01688922 |
| 8 | 97897567 | 97897567 | 1 | 8_97897567 | ENSG00000132561 | MATN2 | 0 | INTRON | 4.51930857 | 6.20E-06 | 0.01689845 |
| 5 | 174629685 | 174629685 | 1 | 5_174629685 | ENSG00000248929 | HIGD1AP3 | 3246 | Upstream | -4.5192745 | 6.21E-06 | 0.01689845 |
| 10 | 72408827 | 72408827 | 1 | 10_72408827 | ENSG00000107745 | MICU1 | 0 | INTRON | -4.5192493 | 6.21E-06 | 0.01689845 |
| 1 | 205654394 | 205654394 | 1 | 1_205654394 | ENSG00000158715 | SLC45A3 | 3456 | Downstream | -4.5191268 | 6.21E-06 | 0.01690374 |
| 5 | 177163173 | 177163173 | 1 | 5_177163173 | ENSG00000165671 | NSD1 | 0 | INTRON | 4.5191153 | 6.21E-06 | 0.01690374 |
| 7 | 32696910 | 32696910 | 1 | 7_32696910 | ENSG00000229358 | DPY19L1P1 | 0 | INTRON | -4.5190048 | 6.21E-06 | 0.01690815 |
| 20 | 47219202 | 47219202 | 1 | 20_47219202 | ENSG00000101040 | ZMYND8 | 0 | INTRON | 4.51899228 | 6.21E-06 | 0.01690815 |
| 10 | 131231411 | 131231411 | 1 | 10_131231411 | ENSG00000176769 | TCERG1L | 0 | INTRON | -4.5189112 | 6.22E-06 | 0.01690921 |
| 19 | 9264324 | 9264324 | 1 | 19_9264324 | ENSG00000225980 | OR7E19P | 1115 | Downstream | 4.51886017 | 6.22E-06 | 0.01690921 |
| 10 | 28228220 | 28228220 | 1 | 10_28228220 | ENSG00000150054 | MPP7 | 0 | INTRON | -4.5188547 | 6.22E-06 | 0.01690921 |
| 1 | 117286376 | 117286376 | 1 | 1_117286376 | ENSG00000235202 | LINC01525 | 0 | INTRON | 4.51884364 | 6.22E-06 | 0.01690921 |
| 16 | 903867 | 903867 | 1 | 16_903867 | ENSG00000260316 | AL008727.1 | 0 | EXON | 4.51872989 | 6.22E-06 | 0.01691128 |
| 1 | 56519967 | 56519967 | 1 | 1_56519967 | ENSG00000284686 | AC119674.2 | 0 | INTRON | 4.5187135 | 6.22E-06 | 0.01691128 |
| 12 | 22598990 | 22598990 | 1 | 12_22598990 | ENSG00000250166 | AC053513.1 | 0 | INTRON | 4.5187001 | 6.22E-06 | 0.01691128 |
| 22 | 30394485 | 30394485 | 1 | 22_30394485 | ENSG00000099999 | RNF215 | 0 | INTRON | -4.5186823 | 6.22E-06 | 0.01691128 |
| 8 | 64154387 | 64154387 | 1 | 8_64154387 | ENSG00000253554 | LINC01414 | 0 | INTRON | 4.51862442 | 6.22E-06 | 0.01691321 |
| 2 | 1339157 | 1339157 | 1 | 2_1339157 | ENSG00000172554 | SNTG2 | 0 | INTRON | 4.51853886 | 6.23E-06 | 0.01691727 |
| 15 | 58293538 | 58293538 | 1 | 15_58293538 | ENSG00000128918 | ALDH1A2 | 0 | INTRON | -4.5185011 | 6.23E-06 | 0.01691727 |
| 16 | 75915779 | 75915779 | 1 | 16_75915779 | ENSG00000199299 | RNA5SP430 | 54622 | Upstream | 4.51845639 | 6.23E-06 | 0.01691727 |
| 4 | 125359492 | 125359492 | 1 | 4_125359492 | ENSG00000196159 | FAT4 | 0 | INTRON | 4.51841878 | 6.23E-06 | 0.01691727 |
| X | 10142141 | 10142141 | 1 | X_10142141 | ENSG00000047644 | WWC3 | 0 | 3UTR | -4.5184045 | 6.23E-06 | 0.01691727 |
| 14 | 77006990 | 77006990 | 1 | 14_77006990 | ENSG00000285966 | AC007686.4 | 6381 | Upstream | 4.51827181 | 6.23E-06 | 0.0169243 |
| 3 | 53263354 | 53263354 | 1 | 3_53263354 | ENSG00000163931 | TKT | 7302 | Upstream | 4.51824892 | 6.24E-06 | 0.0169243 |
| 12 | 172292 | 172292 | 1 | 12_172292 | ENSG00000256540 | AC007406.3 | 0 | INTRON | -4.5181361 | 6.24E-06 | 0.01693062 |
| 8 | 1538548 | 1538548 | 1 | 8_1538548 | ENSG00000198010 | DLGAP2 | 0 | INTRON | 4.51803345 | 6.24E-06 | 0.01693613 |
| 20 | 53230550 | 53230550 | 1 | 20_53230550 | ENSG00000182463 | TSHZ2 | 0 | INTRON | -4.5179574 | 6.24E-06 | 0.01693951 |
| 6 | 68000567 | 68000567 | 1 | 6_68000567 | ENSG00000287557 | AL713998.4 | 1816 | Downstream | -4.5178853 | 6.25E-06 | 0.01694094 |
| 20 | 57286392 | 57286392 | 1 | 20_57286392 | ENSG00000226308 | AL122058.1 | 3394 | Downstream | 4.51776145 | 6.25E-06 | 0.01694094 |
| 14 | 22787430 | 22787430 | 1 | 14_22787430 | ENSG00000155465 | SLC7A7 | 0 | INTRON | 4.51774813 | 6.25E-06 | 0.01694094 |
| 4 | 98719128 | 98719128 | 1 | 4_98719128 | ENSG00000249764 | AC114811.1 | 5157 | Upstream | 4.5177357 | 6.25E-06 | 0.01694094 |
| 12 | 5382082 | 5382082 | 1 | 12_5382082 | ENSG00000256417 | AC006206.2 | 0 | INTRON | 4.51771995 | 6.25E-06 | 0.01694094 |
| 3 | 27106212 | 27106212 | 1 | 3_27106212 | ENSG00000163491 | NEK10 | 3872 | Downstream | -4.5177065 | 6.25E-06 | 0.01694094 |
| 4 | 39777611 | 39777611 | 1 | 4_39777611 | ENSG00000078140 | UBE2K | 0 | INTRON | 4.51770324 | 6.25E-06 | 0.01694094 |
| 13 | 81697840 | 81697840 | 1 | 13_81697840 | ENSG00000214182 | PTMAP5 | 6768 | Downstream | 4.51764279 | 6.25E-06 | 0.01694308 |
| 11 | 125339991 | 125339991 | 1 | 11_125339991 | ENSG00000165495 | PKNOX2 | 0 | INTRON | 4.51739599 | 6.26E-06 | 0.01696013 |
| 4 | 172941834 | 172941834 | 1 | 4_172941834 | ENSG00000174473 | GALNTL6 | 0 | INTRON | -4.5172788 | 6.26E-06 | 0.01696682 |
| 3 | 53732065 | 53732065 | 1 | 3_53732065 | ENSG00000157388 | CACNA1D | 0 | EXON | 4.51721506 | 6.27E-06 | 0.01696922 |
| 10 | 43252708 | 43252708 | 1 | 10_43252708 | ENSG00000198915 | RASGEF1A | 0 | INTRON | 4.51708299 | 6.27E-06 | 0.01697116 |
| 10 | 14963692 | 14963692 | 1 | 10_14963692 | ENSG00000197889 | MEIG1 | 0 | INTRON | -4.5170647 | 6.27E-06 | 0.01697116 |
| 18 | 41345622 | 41345622 | 1 | 18_41345622 | ENSG00000286328 | AC079052.1 | 0 | INTRON | 4.51706285 | 6.27E-06 | 0.01697116 |
| 5 | 165519859 | 165519859 | 1 | 5_165519859 | ENSG00000253693 | AC008415.1 | 0 | INTRON | 4.51705603 | 6.27E-06 | 0.01697116 |
| 6 | 107181256 | 107181256 | 1 | 6_107181256 | ENSG00000164494 | PDSS2 | 0 | INTRON | -4.516988 | 6.27E-06 | 0.01697152 |
| 12 | 32448756 | 32448756 | 1 | 12_32448756 | ENSG00000139132 | FGD4 | 0 | INTRON | -4.5169841 | 6.27E-06 | 0.01697152 |
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| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 | 105444365 | 105444365 | 1 | 7_105444365 | ENSG00000091127 | PUS7 | 0 | INTRON | 4.51676324 | 6.28E-06 | 0.01698271 |
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| 11 | 89181432 | 89181432 | 1 | 11_89181432 | ENSG00000077498 | TYR | 0 | INTRON | 4.51653682 | 6.29E-06 | 0.01699389 |
| 10 | 96933164 | 96933164 | 1 | 10_96933164 | ENSG00000196233 | LCOR | 0 | INTRON | -4.5164842 | 6.29E-06 | 0.01699541 |
| 12 | 132994521 | 132994521 | 1 | 12_132994521 | ENSG00000198393 | ZNF26 | 0 | INTRON | -4.5162984 | 6.29E-06 | 0.01700088 |
| 1 | 32828342 | 32828342 | 1 | 1_32828342 | ENSG00000116497 | S100PBP | 0 | INTRON | 4.51628309 | 6.29E-06 | 0.01700088 |
| 4 | 31752150 | 31752150 | 1 | 4_31752150 | ENSG00000249882 | LINC02501 | 193319 | Downstream | 4.51626183 | 6.29E-06 | 0.01700088 |
| 10 | 31334441 | 31334441 | 1 | 10_31334441 | ENSG00000148516 | ZEB1 | 0 | INTRON | 4.51624784 | 6.29E-06 | 0.01700088 |
| 20 | 35381521 | 35381521 | 1 | 20_35381521 | ENSG00000101019 | UQCC1 | 0 | INTRON | -4.5162478 | 6.29E-06 | 0.01700088 |
| 17 | 44077704 | 44077704 | 1 | 17_44077704 | ENSG00000108840 | HDAC5 | 0 | 3UTR | 4.51618937 | 6.30E-06 | 0.01700287 |
| 22 | 39082394 | 39082394 | 1 | 22_39082394 | ENSG00000239713 | APOBEC3G | 0 | EXON | 4.51593478 | 6.30E-06 | 0.01701993 |
| 2 | 4151523 | 4151523 | 1 | 2_4151523 | ENSG00000229550 | AC012445.1 | 10792 | Upstream | 4.51588808 | 6.31E-06 | 0.01701993 |
| 5 | 4775312 | 4775312 | 1 | 5_4775312 | ENSG00000248973 | AC106799.2 | 0 | INTRON | 4.51587602 | 6.31E-06 | 0.01701993 |
| 6 | 113911962 | 113911962 | 1 | 6_113911962 | ENSG00000175967 | FO393415.1 | 0 | INTRON | 4.51578013 | 6.31E-06 | 0.01702241 |
| 9 | 8553910 | 8553910 | 1 | 9_8553910 | ENSG00000153707 | PTPRD | 0 | INTRON | 4.51573583 | 6.31E-06 | 0.01702241 |
| 6 | 58605486 | 58605486 | 1 | 6_58605486 | ENSG00000225096 | AL445250.1 | 167122 | Downstream | -4.5157297 | 6.31E-06 | 0.01702241 |
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| 1 | 239254669 | 239254669 | 1 | 1_239254669 | ENSG00000259776 | AC093426.1 | 3851 | Upstream | -4.5156772 | 6.31E-06 | 0.01702241 |
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| 2 | 154809576 | 154809576 | 1 | 2_154809576 | ENSG00000162989 | KCNJ3 | 0 | INTRON | 4.51495616 | 6.33E-06 | 0.0170642 |
| 7 | 91483590 | 91483590 | 1 | 7_91483590 | ENSG00000243144 | AC079760.2 | 0 | INTRON | -4.5148213 | 6.34E-06 | 0.01707236 |
| 8 | 94015643 | 94015643 | 1 | 8_94015643 | ENSG00000275386 | AC105081.1 | 40867 | Upstream | 4.51466564 | 6.34E-06 | 0.01708219 |
| 9 | 6422683 | 6422683 | 1 | 9_6422683 | ENSG00000147854 | UHRF2 | 0 | 3UTR | -4.5145967 | 6.34E-06 | 0.01708277 |
| 22 | 17298397 | 17298397 | 1 | 22_17298397 | ENSG00000231004 | CECR9 | 30636 | Upstream | 4.5145914 | 6.34E-06 | 0.01708277 |
| 14 | 61013423 | 61013423 | 1 | 14_61013423 | ENSG00000139974 | SLC38A6 | 0 | INTRON | 4.51455665 | 6.34E-06 | 0.01708287 |
| 7 | 41879716 | 41879716 | 1 | 7_41879716 | ENSG00000106571 | GLI3 | 81232 | Downstream | 4.51441682 | 6.35E-06 | 0.0170904 |
| 15 | 24741745 | 24741745 | 1 | 15_24741745 | ENSG00000259905 | PWRN1 | 0 | INTRON | 4.51439612 | 6.35E-06 | 0.0170904 |
| 1 | 21469718 | 21469718 | 1 | 1_21469718 | ENSG00000142794 | NBPF3 | 0 | INTRON | 4.51434728 | 6.35E-06 | 0.01709164 |
| 22 | 50803534 | 50803534 | 1 | 22_50803534 | ENSG00000184319 | RPL23AP82 | 2225 | Downstream | 4.51429353 | 6.35E-06 | 0.01709308 |
| 4 | 140328453 | 140328453 | 1 | 4_140328453 | ENSG00000196951 | SCOC-AS1 | 0 | INTRON | -4.5142624 | 6.35E-06 | 0.01709308 |
| 7 | 120053026 | 120053026 | 1 | 7_120053026 | ENSG00000271739 | RNU1-29P | 46925 | Upstream | -4.5141803 | 6.36E-06 | 0.01709517 |
| 8 | 100002497 | 100002497 | 1 | 8_100002497 | ENSG00000132554 | RGS22 | 0 | INTRON | 4.51415816 | 6.36E-06 | 0.01709517 |
| 10 | 132783634 | 132783634 | 1 | 10_132783634 | ENSG00000148826 | NKX6-2 | 0 | 3UTR | -4.514136 | 6.36E-06 | 0.01709517 |
| 19 | 24011521 | 24011521 | 1 | 19_24011521 | ENSG00000201966 | RNA5-8SP4 | 7014 | Upstream | 4.51407636 | 6.36E-06 | 0.01709728 |
| 11 | 113988678 | 113988678 | 1 | 11_113988678 | ENSG00000166736 | HTR3A | 0 | INTRON | 4.51399142 | 6.36E-06 | 0.01710143 |
| 2 | 95011351 | 95011351 | 1 | 2_95011351 | ENSG00000277591 | RN7SL575P | 7508 | Upstream | 4.51391578 | 6.36E-06 | 0.01710483 |
| 18 | 79694564 | 79694564 | 1 | 18_79694564 | ENSG00000060069 | CTDP1 | 0 | INTRON | -4.5136823 | 6.37E-06 | 0.01712083 |
| 15 | 23882594 | 23882594 | 1 | 15_23882594 | ENSG00000286973 | AC087490.1 | 26219 | Downstream | 4.51365065 | 6.37E-06 | 0.01712083 |
| 12 | 104676571 | 104676571 | 1 | 12_104676571 | ENSG00000171310 | CHST11 | 0 | INTRON | 4.51359046 | 6.37E-06 | 0.01712096 |
| 19 | 9885430 | 9885430 | 1 | 19_9885430 | ENSG00000105088 | OLFM2 | 0 | INTRON | -4.5135523 | 6.38E-06 | 0.01712096 |
| 7 | 104928685 | 104928685 | 1 | 7_104928685 | ENSG00000225329 | LHFPL3-AS2 | 2040 | Upstream | -4.5135486 | 6.38E-06 | 0.01712096 |
| 2 | 158372606 | 158372606 | 1 | 2_158372606 | ENSG00000153237 | CCDC148 | 0 | INTRON | -4.513432 | 6.38E-06 | 0.01712473 |
| 1 | 174961490 | 174961490 | 1 | 1_174961490 | ENSG00000152061 | RABGAP1L | 0 | INTRON | 4.51342449 | 6.38E-06 | 0.01712473 |
| 9 | 125396020 | 125396020 | 1 | 9_125396020 | ENSG00000274510 | Metazoa_SRP | 21284 | Upstream | 4.5133899 | 6.38E-06 | 0.01712473 |
| 2 | 12893116 | 12893116 | 1 | 2_12893116 | ENSG00000225649 | AC064875.1 | 0 | INTRON | -4.5133681 | 6.38E-06 | 0.01712473 |
| 14 | 29825364 | 29825364 | 1 | 14_29825364 | ENSG00000184304 | PRKD1 | 0 | INTRON | 4.5132901 | 6.38E-06 | 0.01712833 |
| 12 | 94987291 | 94987291 | 1 | 12_94987291 | ENSG00000184752 | NDUFA12 | 0 | INTRON | -4.5131885 | 6.39E-06 | 0.01713257 |
| 10 | 41455173 | 41455173 | 1 | 10_41455173 | ENSG00000229485 | KSR1P1 | 694136 | Downstream | -4.5131709 | 6.39E-06 | 0.01713257 |
| 9 | 23933023 | 23933023 | 1 | 9_23933023 | ENSG00000277608 | AL365204.3 | 22736 | Upstream | 4.51308035 | 6.39E-06 | 0.01713718 |
| 8 | 75026510 | 75026510 | 1 | 8_75026510 | ENSG00000254238 | AC100782.1 | 0 | EXON | 4.51295634 | 6.39E-06 | 0.01714229 |
| 4 | 39152181 | 39152181 | 1 | 4_39152181 | ENSG00000249207 | AC079921.1 | 0 | INTRON | -4.5129503 | 6.39E-06 | 0.01714229 |
| 4 | 18934329 | 18934329 | 1 | 4_18934329 | ENSG00000286046 | AC093898.1 | 45667 | Downstream | 4.51289953 | 6.39E-06 | 0.0171437 |
| 8 | 26964964 | 26964964 | 1 | 8_26964964 | ENSG00000275115 | AC067904.3 | 45521 | Upstream | 4.51274336 | 6.40E-06 | 0.01715363 |
| 2 | 195089302 | 195089302 | 1 | 2_195089302 | ENSG00000235056 | AC010983.1 | 62932 | Upstream | -4.5126454 | 6.40E-06 | 0.01715507 |
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| 4 | 117635501 | 117635501 | 1 | 4_117635501 | ENSG00000236922 | LINC01378 | 0 | INTRON | -4.5126254 | 6.40E-06 | 0.01715507 |
| 9 | 21471471 | 21471471 | 1 | 9_21471471 | ENSG00000171889 | MIR31HG | 0 | INTRON | 4.51259069 | 6.40E-06 | 0.01715517 |
| 2 | 185138841 | 185138841 | 1 | 2_185138841 | ENSG00000170396 | ZNF804A | 199349 | Downstream | 4.51239663 | 6.41E-06 | 0.01716578 |
| 7 | 43563725 | 43563725 | 1 | 7_43563725 | ENSG00000002746 | HECW1 | 0 | 3UTR | 4.51234762 | 6.41E-06 | 0.01716578 |
| 1 | 155672698 | 155672698 | 1 | 1_155672698 | ENSG00000163374 | YY1AP1 | 0 | 3UTR | 4.51233664 | 6.41E-06 | 0.01716578 |
| 14 | 33364804 | 33364804 | 1 | 14_33364804 | ENSG00000151322 | NPAS3 | 0 | INTRON | 4.5123262 | 6.41E-06 | 0.01716578 |
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| 5 | 14520743 | 14520743 | 1 | 5_14520743 | ENSG00000038382 | TRIO | 0 | INTRON | -4.5122425 | 6.41E-06 | 0.01716715 |
| 15 | 55731977 | 55731977 | 1 | 15_55731977 | ENSG00000166450 | PRTG | 0 | INTRON | 4.5121605 | 6.42E-06 | 0.01717109 |
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| 18 | 12208253 | 12208253 | 1 | 18_12208253 | ENSG00000267733 | AP005264.5 | 0 | INTRON | 4.51202946 | 6.42E-06 | 0.01717594 |
| 12 | 6090449 | 6090449 | 1 | 12_6090449 | ENSG00000110799 | VWF | 0 | INTRON | -4.5119826 | 6.42E-06 | 0.01717594 |
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| 6 | 20572633 | 20572633 | 1 | 6_20572633 | ENSG00000145996 | CDKAL1 | 0 | INTRON | -4.5118959 | 6.43E-06 | 0.01717902 |
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| 4 | 180783125 | 180783125 | 1 | 4_180783125 | ENSG00000249883 | AC104803.1 | 24087 | Upstream | -4.511724 | 6.43E-06 | 0.01718756 |
| 15 | 61187757 | 61187757 | 1 | 15_61187757 | ENSG00000069667 | RORA | 0 | INTRON | -4.5116869 | 6.43E-06 | 0.01718786 |
| 11 | 40426559 | 40426559 | 1 | 11_40426559 | ENSG00000148948 | LRRC4C | 0 | INTRON | 4.51162441 | 6.43E-06 | 0.01719023 |
| 2 | 178566798 | 178566798 | 1 | 2_178566798 | ENSG00000155657 | TTN | 0 | EXON | 4.51156589 | 6.44E-06 | 0.01719227 |
| 15 | 24171461 | 24171461 | 1 | 15_24171461 | ENSG00000259905 | PWRN1 | 0 | INTRON | 4.5114536 | 6.44E-06 | 0.01719868 |
| 2 | 25962168 | 25962168 | 1 | 2_25962168 | ENSG00000084731 | KIF3C | 0 | INTRON | 4.51134801 | 6.44E-06 | 0.01720454 |
| 2 | 203134941 | 203134941 | 1 | 2_203134941 | ENSG00000144426 | NBEAL1 | 0 | INTRON | -4.5111255 | 6.45E-06 | 0.0172199 |
| 5 | 165907831 | 165907831 | 1 | 5_165907831 | ENSG00000253946 | AC008489.1 | 2223 | Downstream | -4.5110897 | 6.45E-06 | 0.0172201 |
| 16 | 71355208 | 71355208 | 1 | 16_71355208 | ENSG00000172137 | CALB2 | 3504 | Upstream | -4.5110301 | 6.45E-06 | 0.01722224 |
| 20 | 51558536 | 51558536 | 1 | 20_51558536 | ENSG00000101096 | NFATC2 | 0 | INTRON | 4.51094981 | 6.45E-06 | 0.01722564 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
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| 6 | 104040048 | 104040048 | 1 | 6_104040048 | ENSG00000214428 | NPM1P10 | 13285 | Upstream | -4.5109217 | 6.45E-06 | 0.01722564 |
| 8 | 64080367 | 64080367 | 1 | 8_64080367 | ENSG00000253554 | LINC01414 | 0 | INTRON | 4.5108567 | 6.46E-06 | 0.01722802 |
| 21 | 29285749 | 29285749 | 1 | 21_29285749 | ENSG00000156273 | BACH1 | 0 | INTRON | 4.51082584 | 6.46E-06 | 0.01722802 |
| 17 | 57760164 | 57760164 | 1 | 17_57760164 | ENSG00000265542 | AC015845.2 | 11781 | Downstream | 4.51073589 | 6.46E-06 | 0.01723263 |
| 2 | 33389060 | 33389060 | 1 | 2_33389060 | ENSG00000049323 | LTBP1 | 0 | INTRON | -4.5106976 | 6.46E-06 | 0.01723304 |
| 1 | 21342647 | 21342647 | 1 | 1_21342647 | ENSG00000117298 | ECE1 | 0 | INTRON | -4.5105904 | 6.46E-06 | 0.01723905 |
| 6 | 87448201 | 87448201 | 1 | 6_87448201 | ENSG00000213204 | AL049697.1 | 0 | INTRON | 4.51054061 | 6.47E-06 | 0.01724039 |
| 7 | 130647581 | 130647581 | 1 | 7_130647581 | ENSG00000158623 | COPG2 | 0 | INTRON | 4.51043514 | 6.47E-06 | 0.01724626 |
| 7 | 45973165 | 45973165 | 1 | 7_45973165 | ENSG00000237471 | AC073115.2 | 0 | INTRON | 4.51038739 | 6.47E-06 | 0.01724744 |
| 19 | 46269193 | 46269193 | 1 | 19_46269193 | ENSG00000268238 | IGFL1P2 | 8335 | Upstream | -4.5103161 | 6.47E-06 | 0.01725054 |
| 14 | 77666218 | 77666218 | 1 | 14_77666218 | ENSG00000100601 | ALKBH1 | 6185 | Downstream | 4.51021798 | 6.48E-06 | 0.01725582 |
| 19 | 46938501 | 46938501 | 1 | 19_46938501 | ENSG00000160007 | ARHGAP35 | 0 | INTRON | -4.5101763 | 6.48E-06 | 0.0172565 |
| 4 | 184202526 | 184202526 | 1 | 4_184202526 | ENSG00000164303 | ENPP6 | 0 | INTRON | -4.5100955 | 6.48E-06 | 0.01726038 |
| 15 | 48298800 | 48298800 | 1 | 15_48298800 | ENSG00000074803 | SLC12A1 | 0 | INTRON | 4.51000074 | 6.48E-06 | 0.01726479 |
| 8 | 142832097 | 142832097 | 1 | 8_142832097 | ENSG00000253728 | AC083841.3 | 2040 | Downstream | 4.50997489 | 6.48E-06 | 0.01726479 |
| 2 | 14451716 | 14451716 | 1 | 2_14451716 | ENSG00000230448 | LINC00276 | 50753 | Upstream | 4.50965558 | 6.49E-06 | 0.01728809 |
| 15 | 76615602 | 76615602 | 1 | 15_76615602 | ENSG00000140386 | SCAPER | 0 | INTRON | 4.5095528 | 6.50E-06 | 0.01729376 |
| 4 | 63333121 | 63333121 | 1 | 4_63333121 | ENSG00000231442 | LARP1BP1 | 16992 | Upstream | 4.50948759 | 6.50E-06 | 0.01729637 |
| 1 | 215472414 | 215472414 | 1 | 1_215472414 | ENSG00000282265 | AL450990.1 | 77996 | Upstream | 4.50942317 | 6.50E-06 | 0.01729892 |
| 19 | 31396624 | 31396624 | 1 | 19_31396624 | ENSG00000267662 | AC025809.1 | 0 | INTRON | 4.50924797 | 6.51E-06 | 0.0173105 |
| 1 | 240232796 | 240232796 | 1 | 1_240232796 | ENSG00000155816 | FMN2 | 0 | INTRON | 4.50919064 | 6.51E-06 | 0.01731247 |
| 6 | 29640550 | 29640550 | 1 | 6_29640550 | ENSG00000235238 | SUMO2P1 | 4207 | Upstream | 4.50906654 | 6.51E-06 | 0.01731922 |
| 4 | 42758842 | 42758842 | 1 | 4_42758842 | ENSG00000251517 | AC096734.1 | 51507 | Downstream | -4.5090416 | 6.51E-06 | 0.01731922 |
| 22 | 42245070 | 42245070 | 1 | 22_42245070 | ENSG00000100207 | TCF20 | 0 | INTRON | -4.5088816 | 6.52E-06 | 0.01732789 |
| 17 | 64231938 | 64231938 | 1 | 17_64231938 | ENSG00000136478 | TEX2 | 0 | INTRON | 4.50883983 | 6.52E-06 | 0.01732789 |
| 18 | 73715688 | 73715688 | 1 | 18_73715688 | ENSG00000265380 | AC079070.1 | 198 | Upstream | 4.50883599 | 6.52E-06 | 0.01732789 |
| 8 | 42165592 | 42165592 | 1 | 8_42165592 | ENSG00000070718 | AP3M2 | 0 | 3UTR | 4.50878854 | 6.52E-06 | 0.01732906 |
| 4 | 144405757 | 144405757 | 1 | 4_144405757 | ENSG00000285713 | AC098588.2 | 0 | INTRON | 4.50871105 | 6.52E-06 | 0.01733008 |
| 11 | 87859678 | 87859678 | 1 | 11_87859678 | ENSG00000285835 | AP000676.5 | 0 | INTRON | 4.50870968 | 6.52E-06 | 0.01733008 |
| 15 | 28196422 | 28196422 | 1 | 15_28196422 | ENSG00000128731 | HERC2 | 0 | INTRON | 4.50867094 | 6.52E-06 | 0.01733026 |
| X | 46843893 | 46843893 | 1 | X_46843893 | ENSG00000102218 | RP2 | 0 | INTRON | -4.5086412 | 6.52E-06 | 0.01733026 |
| 16 | 52977289 | 52977289 | 1 | 16_52977289 | ENSG00000260939 | AC007346.2 | 33105 | Downstream | -4.5085478 | 6.53E-06 | 0.0173327 |
| 3 | 189093534 | 189093534 | 1 | 3_189093534 | ENSG00000188001 | TPRG1 | 0 | INTRON | 4.50854514 | 6.53E-06 | 0.0173327 |
| 1 | 59684458 | 59684458 | 1 | 1_59684458 | ENSG00000172456 | FGGY | 0 | INTRON | -4.5084539 | 6.53E-06 | 0.01733366 |
| 3 | 78415851 | 78415851 | 1 | 3_78415851 | ENSG00000239226 | MRPS17P3 | 109249 | Upstream | 4.50844977 | 6.53E-06 | 0.01733366 |
| 2 | 29185766 | 29185766 | 1 | 2_29185766 | ENSG00000115295 | CLIP4 | 0 | INTRON | 4.50843407 | 6.53E-06 | 0.01733366 |
| 18 | 29211103 | 29211103 | 1 | 18_29211103 | ENSG00000266479 | AC105245.1 | 45713 | Downstream | 4.50833423 | 6.53E-06 | 0.01733911 |
| 11 | 46180280 | 46180280 | 1 | 11_46180280 | ENSG00000255314 | AC024475.3 | 3174 | Downstream | 4.50823242 | 6.54E-06 | 0.01734473 |
| 15 | 91882600 | 91882600 | 1 | 15_91882600 | ENSG00000176463 | SLCO3A1 | 0 | INTRON | -4.5081767 | 6.54E-06 | 0.01734658 |
| 2 | 173243772 | 173243772 | 1 | 2_173243772 | ENSG00000238133 | MAP3K20-AS1 | 0 | INTRON | 4.50813695 | 6.54E-06 | 0.01734712 |
| 18 | 70484794 | 70484794 | 1 | 18_70484794 | ENSG00000278971 | AC091305.1 | 4835 | Upstream | 4.508088 | 6.54E-06 | 0.01734842 |
| 10 | 26428827 | 26428827 | 1 | 10_26428827 | ENSG00000077420 | APBB1IP | 9513 | Upstream | 4.50796942 | 6.55E-06 | 0.01735541 |
| 2 | 227160088 | 227160088 | 1 | 2_227160088 | ENSG00000081052 | COL4A4 | 0 | INTRON | 4.50792972 | 6.55E-06 | 0.01735595 |
| 13 | 78015843 | 78015843 | 1 | 13_78015843 | ENSG00000229249 | LINC00446 | 0 | INTRON | 4.50786088 | 6.55E-06 | 0.01735888 |
| 17 | 56337780 | 56337780 | 1 | 17_56337780 | ENSG00000153930 | ANKFN1 | 0 | INTRON | 4.50781104 | 6.55E-06 | 0.01736025 |
| 10 | 128103215 | 128103215 | 1 | 10_128103215 | ENSG00000148773 | MKI67 | 0 | EXON | 4.50774106 | 6.55E-06 | 0.01736041 |
| 1 | 79968603 | 79968603 | 1 | 1_79968603 | ENSG00000285409 | AC099671.1 | 0 | INTRON | -4.5077253 | 6.55E-06 | 0.01736041 |
| 5 | 134664859 | 134664859 | 1 | 5_134664859 | ENSG00000113615 | SEC24A | 0 | INTRON | -4.5077099 | 6.55E-06 | 0.01736041 |
| 9 | 26694759 | 26694759 | 1 | 9_26694759 | ENSG00000279256 | AL442639.1 | 50164 | Upstream | 4.50766352 | 6.55E-06 | 0.01736151 |
| 10 | 66034793 | 66034793 | 1 | 10_66034793 | ENSG00000183230 | CTNNA3 | 0 | INTRON | 4.50757496 | 6.56E-06 | 0.0173644 |
| 22 | 48846543 | 48846543 | 1 | 22_48846543 | ENSG00000219438 | TAFA5 | 0 | INTRON | -4.507562 | 6.56E-06 | 0.0173644 |
| 17 | 890670 | 890670 | 1 | 17_890670 | ENSG00000167693 | NXN | 0 | INTRON | -4.5073953 | 6.56E-06 | 0.01737534 |
| 1 | 40413179 | 40413179 | 1 | 1_40413179 | ENSG00000084070 | SMAP2 | 0 | INTRON | 4.50733369 | 6.56E-06 | 0.01737769 |
| 3 | 107653145 | 107653145 | 1 | 3_107653145 | ENSG00000114439 | BBX | 0 | INTRON | -4.5072826 | 6.57E-06 | 0.01737882 |
| 13 | 69038394 | 69038394 | 1 | 13_69038394 | ENSG00000232380 | ZDHHC20P4 | 52330 | Downstream | 4.50725386 | 6.57E-06 | 0.01737882 |
| 10 | 46038991 | 46038991 | 1 | 10_46038991 | ENSG00000263639 | MSMB | 0 | EXON | 4.50715453 | 6.57E-06 | 0.01738425 |
| 21 | 39402796 | 39402796 | 1 | 21_39402796 | ENSG00000182093 | GET1 | 0 | INTRON | 4.50710963 | 6.57E-06 | 0.01738491 |
| 11 | 35826649 | 35826649 | 1 | 11_35826649 | ENSG00000285705 | AC090692.2 | 0 | INTRON | 4.50707534 | 6.57E-06 | 0.01738491 |
| 3 | 54715339 | 54715339 | 1 | 3_54715339 | ENSG00000157445 | CACNA2D3 | 0 | INTRON | 4.50704749 | 6.57E-06 | 0.01738491 |
| 1 | 107943526 | 107943526 | 1 | 1_107943526 | ENSG00000134215 | VAV3 | 0 | INTRON | -4.5070096 | 6.57E-06 | 0.01738531 |
| 8 | 82664908 | 82664908 | 1 | 8_82664908 | ENSG00000253503 | AC060765.1 | 0 | INTRON | 4.50697243 | 6.58E-06 | 0.01738565 |
| 14 | 35010813 | 35010813 | 1 | 14_35010813 | ENSG00000100883 | SRP54 | 0 | INTRON | 4.50684307 | 6.58E-06 | 0.01739355 |
| 3 | 114268845 | 114268845 | 1 | 3_114268845 | ENSG00000181847 | TIGIT | 8067 | Upstream | 4.50670745 | 6.58E-06 | 0.01740034 |
| 17 | 31923082 | 31923082 | 1 | 17_31923082 | ENSG00000178691 | SUZ12 | 13924 | Upstream | 4.50669418 | 6.58E-06 | 0.01740034 |
| X | 31265112 | 31265112 | 1 | X_31265112 | ENSG00000198947 | DMD | 0 | INTRON | -4.5063985 | 6.59E-06 | 0.01742189 |
| 14 | 79933085 | 79933085 | 1 | 14_79933085 | ENSG00000258416 | AF123462.1 | 0 | INTRON | -4.5062064 | 6.60E-06 | 0.01743495 |
| X | 77763587 | 77763587 | 1 | X_77763587 | ENSG00000085224 | ATRX | 0 | INTRON | 4.50611426 | 6.60E-06 | 0.01743753 |
| 2 | 235973901 | 235973901 | 1 | 2_235973901 | ENSG00000157985 | AGAP1 | 0 | INTRON | 4.50610916 | 6.60E-06 | 0.01743753 |
| 4 | 103732545 | 103732545 | 1 | 4_103732545 | ENSG00000169836 | TACR3 | 12560 | Upstream | -4.5060107 | 6.61E-06 | 0.01744194 |
| 5 | 73839713 | 73839713 | 1 | 5_73839713 | ENSG00000214944 | ARHGEF28 | 0 | INTRON | -4.5059895 | 6.61E-06 | 0.01744194 |
| 13 | 83069581 | 83069581 | 1 | 13_83069581 | ENSG00000286385 | AL445255.1 | 0 | INTRON | -4.5059149 | 6.61E-06 | 0.01744537 |
| 11 | 118730876 | 118730876 | 1 | 11_118730876 | ENSG00000255422 | AP002954.1 | 0 | INTRON | 4.5057779 | 6.61E-06 | 0.01745392 |
| 6 | 5149246 | 5149246 | 1 | 6_5149246 | ENSG00000214113 | LYRM4 | 0 | INTRON | 4.50568513 | 6.62E-06 | 0.01745884 |
| 11 | 114211591 | 114211591 | 1 | 11_114211591 | ENSG00000109906 | ZBTB16 | 0 | INTRON | -4.5054667 | 6.62E-06 | 0.01746886 |
| 3 | 21868880 | 21868880 | 1 | 3_21868880 | ENSG00000151789 | ZNF385D | 0 | INTRON | 4.50545131 | 6.62E-06 | 0.01746886 |
| 7 | 155207555 | 155207555 | 1 | 7_155207555 | ENSG00000228521 | AC099552.3 | 2366 | Downstream | -4.5054507 | 6.62E-06 | 0.01746886 |
| 21 | 32694268 | 32694268 | 1 | 21_32694268 | ENSG00000159082 | SYNJ1 | 0 | EXON | 4.50543159 | 6.62E-06 | 0.01746886 |
| X | 47585470 | 47585470 | 1 | X_47585470 | ENSG00000102265 | TIMP1 | 0 | 3UTR | 4.50536382 | 6.63E-06 | 0.01746962 |
| 2 | 60087082 | 60087082 | 1 | 2_60087082 | ENSG00000271955 | AC007100.1 | 0 | INTRON | -4.5053565 | 6.63E-06 | 0.01746962 |
| 6 | 81686366 | 81686366 | 1 | 6_81686366 | ENSG00000112773 | TENT5A | 0 | INTRON | 4.5051632 | 6.63E-06 | 0.0174801 |
| 22 | 28926566 | 28926566 | 1 | 22_28926566 | ENSG00000183579 | ZNRF3 | 0 | INTRON | 4.5051598 | 6.63E-06 | 0.0174801 |
| 1 | 77215945 | 77215945 | 1 | 1_77215945 | ENSG00000142892 | PIGK | 0 | INTRON | 4.50513052 | 6.63E-06 | 0.0174801 |
| 8 | 77027289 | 77027289 | 1 | 8_77027289 | ENSG00000253952 | HIGD1AP18 | 13261 | Upstream | 4.50507329 | 6.64E-06 | 0.01748101 |
| 12 | 83178270 | 83178270 | 1 | 12_83178270 | ENSG00000258338 | AC090680.1 | 5530 | Downstream | 4.5050537 | 6.64E-06 | 0.01748101 |
| 7 | 72218818 | 72218818 | 1 | 7_72218818 | ENSG00000183166 | CALN1 | 0 | INTRON | 4.50501388 | 6.64E-06 | 0.01748159 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
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| 1 | 160687102 | 160687102 | 1 | 1_160687102 | ENSG00000228863 | AL121985.1 | 0 | INTRON | -4.5049574 | 6.64E-06 | 0.01748353 |
| 18 | 543666 | 543666 | 1 | 18_543666 | ENSG00000264265 | LINC01925 | 28372 | Upstream | 4.50487089 | 6.64E-06 | 0.01748795 |
| 8 | 19129635 | 19129635 | 1 | 8_19129635 | ENSG00000253557 | AC100849.1 | 0 | INTRON | -4.5047285 | 6.65E-06 | 0.01749603 |
| 7 | 129245266 | 129245266 | 1 | 7_129245266 | ENSG00000158467 | AHCYL2 | 0 | INTRON | -4.504707 | 6.65E-06 | 0.01749603 |
| 17 | 42933662 | 42933662 | 1 | 17_42933662 | ENSG00000212149 | AC055866.1 | 6912 | Downstream | 4.504662 | 6.65E-06 | 0.01749703 |
| 6 | 138349169 | 138349169 | 1 | 6_138349169 | ENSG00000112379 | ARFGEF3 | 4506 | Downstream | -4.50458 | 6.65E-06 | 0.01749787 |
| 5 | 140304553 | 140304553 | 1 | 5_140304553 | ENSG00000113068 | PFDN1 | 1440 | Upstream | 4.50453433 | 6.65E-06 | 0.01749787 |
| 2 | 134483653 | 134483653 | 1 | 2_134483653 | ENSG00000152128 | TMEM163 | 0 | INTRON | -4.5045338 | 6.65E-06 | 0.01749787 |
| 17 | 31209777 | 31209777 | 1 | 17_31209777 | ENSG00000196712 | NF1 | 0 | INTRON | 4.50448978 | 6.65E-06 | 0.01749787 |
| X | 70095824 | 70095824 | 1 | X_70095824 | ENSG00000226579 | MTCYBP31 | 24528 | Downstream | 4.50448763 | 6.65E-06 | 0.01749787 |
| 14 | 18669518 | 18669518 | 1 | 14_18669518 | ENSG00000257558 | CR383656.3 | 2148 | Downstream | -4.5042801 | 6.66E-06 | 0.01751227 |
| 1 | 89871715 | 89871715 | 1 | 1_89871715 | ENSG00000171492 | LRRC8D | 0 | INTRON | -4.504116 | 6.66E-06 | 0.0175231 |
| 10 | 71745454 | 71745454 | 1 | 10_71745454 | ENSG00000107736 | CDH23 | 0 | INTRON | -4.5040281 | 6.67E-06 | 0.0175252 |
| 1 | 91013262 | 91013262 | 1 | 1_91013262 | ENSG00000122482 | ZNF644 | 0 | INTRON | -4.5040249 | 6.67E-06 | 0.0175252 |
| 8 | 86214610 | 86214610 | 1 | 8_86214610 | ENSG00000164893 | SLC7A13 | 0 | 3UTR | 4.5039643 | 6.67E-06 | 0.0175275 |
| 2 | 160386720 | 160386720 | 1 | 2_160386720 | ENSG00000153250 | RBMS1 | 0 | INTRON | 4.50392421 | 6.67E-06 | 0.0175281 |
| 8 | 74489032 | 74489032 | 1 | 8_74489032 | ENSG00000104381 | GDAP1 | 160 | Downstream | -4.5038705 | 6.67E-06 | 0.01752983 |
| 18 | 22640242 | 22640242 | 1 | 18_22640242 | ENSG00000206827 | RNU6-1032P | 7339 | Upstream | -4.5037316 | 6.68E-06 | 0.01753689 |
| 10 | 63633796 | 63633796 | 1 | 10_63633796 | ENSG00000286373 | AC022387.2 | 0 | INTRON | -4.5037194 | 6.68E-06 | 0.01753689 |
| 6 | 136531270 | 136531270 | 1 | 6_136531270 | ENSG00000135525 | MAP7 | 0 | INTRON | 4.50363892 | 6.68E-06 | 0.01754082 |
| 15 | 89771615 | 89771615 | 1 | 15_89771615 | ENSG00000188095 | MESP2 | 0 | INTRON | 4.50340819 | 6.69E-06 | 0.01755717 |
| X | 100616193 | 100616193 | 1 | X_100616193 | ENSG00000000003 | TSPAN6 | 10914 | Downstream | -4.5033707 | 6.69E-06 | 0.01755756 |
| 16 | 32770220 | 32770220 | 1 | 16_32770220 | ENSG00000260644 | HERC2P5 | 0 | INTRON | 4.50329544 | 6.69E-06 | 0.01756108 |
| 1 | 42809072 | 42809072 | 1 | 1_42809072 | ENSG00000274386 | TMEM269 | 0 | 3UTR | 4.50283691 | 6.71E-06 | 0.01759631 |
| 12 | 120555338 | 120555338 | 1 | 12_120555338 | ENSG00000022840 | RNF10 | 0 | INTRON | -4.5027702 | 6.71E-06 | 0.01759912 |
| 1 | 3182401 | 3182401 | 1 | 1_3182401 | ENSG00000142611 | PRDM16 | 0 | INTRON | 4.50270835 | 6.71E-06 | 0.01760153 |
| X | 18383100 | 18383100 | 1 | X_18383100 | ENSG00000207025 | Y_RNA | 12893 | Downstream | 4.50263387 | 6.71E-06 | 0.01760499 |
| 14 | 65457487 | 65457487 | 1 | 14_65457487 | ENSG00000033170 | FUT8 | 0 | INTRON | 4.5025705 | 6.71E-06 | 0.01760753 |
| 5 | 19279250 | 19279250 | 1 | 5_19279250 | ENSG00000249557 | HSPD1P15 | 44763 | Downstream | 4.50248703 | 6.72E-06 | 0.01760936 |
| 3 | 166354760 | 166354760 | 1 | 3_166354760 | ENSG00000244429 | AC104629.1 | 60407 | Downstream | -4.5024829 | 6.72E-06 | 0.01760936 |
| 7 | 80800795 | 80800795 | 1 | 7_80800795 | ENSG00000075223 | SEMA3C | 0 | 3UTR | 4.50244425 | 6.72E-06 | 0.01760985 |
| 5 | 152581046 | 152581046 | 1 | 5_152581046 | ENSG00000286749 | AC008571.2 | 0 | INTRON | 4.50237112 | 6.72E-06 | 0.01761123 |
| 15 | 36408243 | 36408243 | 1 | 15_36408243 | ENSG00000259737 | AC087516.2 | 30728 | Downstream | -4.5023621 | 6.72E-06 | 0.01761123 |
| 12 | 16766385 | 16766385 | 1 | 12_16766385 | ENSG00000283240 | AC007529.2 | 0 | INTRON | 4.50231353 | 6.72E-06 | 0.01761255 |
| 4 | 39247724 | 39247724 | 1 | 4_39247724 | ENSG00000157796 | WDR19 | 0 | INTRON | -4.5022284 | 6.72E-06 | 0.01761497 |
| 11 | 116995559 | 116995559 | 1 | 11_116995559 | ENSG00000160584 | SIK3 | 0 | INTRON | -4.50221 | 6.73E-06 | 0.01761497 |
| 14 | 72543777 | 72543777 | 1 | 14_72543777 | ENSG00000286333 | AC004828.2 | 0 | INTRON | 4.50215633 | 6.73E-06 | 0.01761497 |
| 17 | 54380854 | 54380854 | 1 | 17_54380854 | ENSG00000285939 | AC034268.2 | 15220 | Upstream | 4.50215342 | 6.73E-06 | 0.01761497 |
| 5 | 98572064 | 98572064 | 1 | 5_98572064 | ENSG00000251102 | CTBP2P4 | 4276 | Upstream | -4.5020967 | 6.73E-06 | 0.01761697 |
| 3 | 72379419 | 72379419 | 1 | 3_72379419 | ENSG00000163602 | RYBP | 0 | EXON | 4.50200448 | 6.73E-06 | 0.01761924 |
| 12 | 117046716 | 117046716 | 1 | 12_117046716 | ENSG00000088992 | TESC | 0 | INTRON | -4.5019735 | 6.73E-06 | 0.01761924 |
| 4 | 109641910 | 109641910 | 1 | 4_109641910 | ENSG00000005059 | MCUB | 0 | INTRON | 4.50197119 | 6.73E-06 | 0.01761924 |
| 5 | 95408472 | 95408472 | 1 | 5_95408472 | ENSG00000153347 | FAM81B | 0 | INTRON | 4.50174828 | 6.74E-06 | 0.01762886 |
| 1 | 12023528 | 12023528 | 1 | 1_12023528 | ENSG00000116691 | MIIP | 0 | INTRON | 4.50173761 | 6.74E-06 | 0.01762886 |
| 6 | 123558131 | 123558131 | 1 | 6_123558131 | ENSG00000186439 | TRDN | 0 | INTRON | 4.50171692 | 6.74E-06 | 0.01762886 |
| 11 | 72094242 | 72094242 | 1 | 11_72094242 | ENSG00000184154 | LRTOMT | 0 | INTRON | 4.50167697 | 6.74E-06 | 0.01762886 |
| 17 | 51919690 | 51919690 | 1 | 17_51919690 | ENSG00000154975 | CA10 | 0 | INTRON | 4.50159662 | 6.74E-06 | 0.01762886 |
| 18 | 31695458 | 31695458 | 1 | 18_31695458 | ENSG00000259985 | AC017100.1 | 8635 | Downstream | 4.50153295 | 6.75E-06 | 0.01762886 |
| 7 | 98491104 | 98491104 | 1 | 7_98491104 | ENSG00000223402 | AC074121.1 | 11879 | Upstream | 4.50153044 | 6.75E-06 | 0.01762886 |
| 2 | 186241887 | 186241887 | 1 | 2_186241887 | ENSG00000237877 | LINC01473 | 0 | INTRON | 4.50150914 | 6.75E-06 | 0.01762886 |
| 4 | 69348958 | 69348958 | 1 | 4_69348958 | ENSG00000250612 | AC114786.2 | 0 | INTRON | 4.50150236 | 6.75E-06 | 0.01762886 |
| 3 | 111845713 | 111845713 | 1 | 3_111845713 | ENSG00000240891 | PLCXD2 | 0 | INTRON | 4.50143746 | 6.75E-06 | 0.01762886 |
| 9 | 21619286 | 21619286 | 1 | 9_21619286 | ENSG00000227443 | AL137022.1 | 18998 | Upstream | 4.50141527 | 6.75E-06 | 0.01762886 |
| 6 | 105914918 | 105914918 | 1 | 6_105914918 | ENSG00000200198 | RN7SKP211 | 10231 | Downstream | -4.5014124 | 6.75E-06 | 0.01762886 |
| 5 | 29378482 | 29378482 | 1 | 5_29378482 | ENSG00000248391 | LINC02064 | 0 | INTRON | -4.5013989 | 6.75E-06 | 0.01762886 |
| 17 | 56543498 | 56543498 | 1 | 17_56543498 | ENSG00000243058 | RPL39P33 | 29541 | Upstream | -4.5013675 | 6.75E-06 | 0.01762886 |
| 9 | 91844900 | 91844900 | 1 | 9_91844900 | ENSG00000169071 | ROR2 | 0 | INTRON | -4.5013581 | 6.75E-06 | 0.01762886 |
| 4 | 184569234 | 184569234 | 1 | 4_184569234 | ENSG00000249056 | AC099343.1 | 9451 | Upstream | 4.50133298 | 6.75E-06 | 0.01762886 |
| 11 | 25112544 | 25112544 | 1 | 11_25112544 | ENSG00000255368 | AC087373.1 | 27988 | Downstream | -4.5012128 | 6.76E-06 | 0.01763612 |
| 3 | 107272577 | 107272577 | 1 | 3_107272577 | ENSG00000243701 | DUBR | 0 | INTRON | 4.50113929 | 6.76E-06 | 0.01763715 |
| 8 | 115105051 | 115105051 | 1 | 8_115105051 | ENSG00000104447 | TRPS1 | 303444 | Downstream | -4.5010764 | 6.76E-06 | 0.01763715 |
| 2 | 171591007 | 171591007 | 1 | 2_171591007 | ENSG00000233934 | RPL21P38 | 3748 | Downstream | -4.5010027 | 6.76E-06 | 0.01763715 |
| 14 | 28866484 | 28866484 | 1 | 14_28866484 | ENSG00000258038 | LINC02327 | 0 | INTRON | 4.50098192 | 6.76E-06 | 0.01763715 |
| 11 | 21752500 | 21752500 | 1 | 11_21752500 | ENSG00000287753 | AC130307.1 | 30158 | Upstream | 4.50098161 | 6.76E-06 | 0.01763715 |
| 10 | 113416436 | 113416436 | 1 | 10_113416436 | ENSG00000238380 | RNU7-165P | 62952 | Downstream | 4.50094951 | 6.77E-06 | 0.01763715 |
| 18 | 24008721 | 24008721 | 1 | 18_24008721 | ENSG00000264745 | TTC39C-AS1 | 0 | INTRON | 4.50089752 | 6.77E-06 | 0.01763715 |
| 16 | 36130689 | 36130689 | 1 | 16_36130689 | ENSG00000261084 | PPP1R1AP2 | 218173 | Downstream | -4.500896 | 6.77E-06 | 0.01763715 |
| 10 | 63569382 | 63569382 | 1 | 10_63569382 | ENSG00000165476 | REEP3 | 0 | INTRON | -4.5008685 | 6.77E-06 | 0.01763715 |
| 4 | 77720601 | 77720601 | 1 | 4_77720601 | ENSG00000138767 | CNOT6L | 0 | 3UTR | 4.50086748 | 6.77E-06 | 0.01763715 |
| 21 | 10727863 | 10727863 | 1 | 21_10727863 | ENSG00000277282 | IGHV1OR21-1 | 78028 | Upstream | -4.5008421 | 6.77E-06 | 0.01763715 |
| 8 | 17539114 | 17539114 | 1 | 8_17539114 | ENSG00000003989 | SLC7A2 | 0 | INTRON | 4.50069716 | 6.77E-06 | 0.01764445 |
| 14 | 42822422 | 42822422 | 1 | 14_42822422 | ENSG00000258934 | AL356800.1 | 14310 | Upstream | 4.50068904 | 6.77E-06 | 0.01764445 |
| 1 | 218459095 | 218459095 | 1 | 1_218459095 | ENSG00000228208 | C1orf143 | 169 | Upstream | -4.5006208 | 6.78E-06 | 0.01764742 |
| 7 | 4776591 | 4776591 | 1 | 7_4776591 | ENSG00000242802 | AP5Z1 | 0 | INTRON | 4.50052885 | 6.78E-06 | 0.01765235 |
| 10 | 8922154 | 8922154 | 1 | 10_8922154 | ENSG00000234752 | LINC02676 | 7558 | Downstream | -4.5004533 | 6.78E-06 | 0.01765593 |
| 22 | 48994717 | 48994717 | 1 | 22_48994717 | ENSG00000286381 | AL078622.1 | 52766 | Downstream | -4.5003944 | 6.78E-06 | 0.01765757 |
| 15 | 52380944 | 52380944 | 1 | 15_52380944 | ENSG00000197535 | MYO5A | 0 | INTRON | 4.5003684 | 6.78E-06 | 0.01765757 |
| 2 | 209478592 | 209478592 | 1 | 2_209478592 | ENSG00000078018 | MAP2 | 0 | INTRON | 4.50029004 | 6.79E-06 | 0.01766138 |
| 11 | 69797151 | 69797151 | 1 | 11_69797151 | ENSG00000186895 | FGF3 | 12816 | Downstream | -4.5002416 | 6.79E-06 | 0.0176627 |
| 9 | 78182732 | 78182732 | 1 | 9_78182732 | ENSG00000228781 | AL353705.1 | 2039 | Upstream | 4.5001496 | 6.79E-06 | 0.01766603 |
| 8 | 58071006 | 58071006 | 1 | 8_58071006 | ENSG00000169122 | FAM110B | 0 | INTRON | 4.5001246 | 6.79E-06 | 0.01766603 |
| 1 | 194719331 | 194719331 | 1 | 1_194719331 | ENSG00000228167 | AL353072.1 | 95 | Downstream | 4.50007565 | 6.79E-06 | 0.01766603 |
| 17 | 8611495 | 8611495 | 1 | 17_8611495 | ENSG00000133026 | MYH10 | 0 | INTRON | 4.50007162 | 6.79E-06 | 0.01766603 |
| 18 | 28682566 | 28682566 | 1 | 18_28682566 | ENSG00000265994 | AC090365.1 | 0 | INTRON | -4.5000237 | 6.79E-06 | 0.01766732 |
| 5 | 85459761 | 85459761 | 1 | 5_85459761 | ENSG00000243859 | RPL5P17 | 4672 | Upstream | 4.49990183 | 6.80E-06 | 0.01767433 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 | 129930778 | 129930778 | 1 | 7_129930778 | ENSG00000186591 | UBE2H | 0 | INTRON | 4.4998722 | 6.80E-06 | 0.01767433 |
| 15 | 94475281 | 94475281 | 1 | 15_94475281 | ENSG00000287950 | AC009432.2 | 0 | INTRON | -4.4998217 | 6.80E-06 | 0.01767433 |
| 1 | 107770901 | 107770901 | 1 | 1_107770901 | ENSG00000134215 | VAV3 | 0 | INTRON | 4.49978504 | 6.80E-06 | 0.01767433 |
| 3 | 162263744 | 162263744 | 1 | 3_162263744 | ENSG00000241874 | TOMM22P6 | 222796 | Downstream | 4.49977083 | 6.80E-06 | 0.01767433 |
| 13 | 102990089 | 102990089 | 1 | 13_102990089 | ENSG00000125255 | SLC10A2 | 53908 | Downstream | -4.4997445 | 6.80E-06 | 0.01767433 |
| 6 | 39021984 | 39021984 | 1 | 6_39021984 | ENSG00000124721 | DNAH8 | 0 | INTRON | 4.49961672 | 6.81E-06 | 0.01767877 |
| 9 | 129592705 | 129592705 | 1 | 9_129592705 | ENSG00000227619 | AL391056.1 | 8149 | Downstream | 4.49960141 | 6.81E-06 | 0.01767877 |
| 12 | 28538605 | 28538605 | 1 | 12_28538605 | ENSG00000123106 | CCDC91 | 0 | INTRON | -4.4995914 | 6.81E-06 | 0.01767877 |
| 13 | 54572544 | 54572544 | 1 | 13_54572544 | ENSG00000287460 | AL442636.1 | 0 | INTRON | 4.49956126 | 6.81E-06 | 0.01767877 |
| 9 | 10741771 | 10741771 | 1 | 9_10741771 | ENSG00000227138 | AL161788.1 | 35585 | Upstream | 4.49945234 | 6.81E-06 | 0.01768513 |
| 22 | 38536461 | 38536461 | 1 | 22_38536461 | ENSG00000100206 | DMC1 | 0 | INTRON | 4.49939657 | 6.81E-06 | 0.01768657 |
| 1 | 204112607 | 204112607 | 1 | 1_204112607 | ENSG00000143842 | SOX13 | 0 | INTRON | 4.49937021 | 6.82E-06 | 0.01768657 |
| 10 | 27543627 | 27543627 | 1 | 10_27543627 | ENSG00000099246 | RAB18 | 1390 | Downstream | 4.4993188 | 6.82E-06 | 0.01768815 |
| X | 97516169 | 97516169 | 1 | X_97516169 | ENSG00000147202 | DIAPH2 | 0 | INTRON | 4.49917384 | 6.82E-06 | 0.01769633 |
| 5 | 52043764 | 52043764 | 1 | 5_52043764 | ENSG00000248789 | LINC02118 | 0 | EXON | -4.499149 | 6.82E-06 | 0.01769633 |
| 6 | 130116621 | 130116621 | 1 | 6_130116621 | ENSG00000198945 | L3MBTL3 | 0 | INTRON | 4.49912067 | 6.82E-06 | 0.01769633 |
| 5 | 82317278 | 82317278 | 1 | 5_82317278 | ENSG00000205464 | ATP6AP1L | 0 | INTRON | -4.4990909 | 6.82E-06 | 0.01769633 |
| 12 | 74651375 | 74651375 | 1 | 12_74651375 | ENSG00000257323 | AC123904.2 | 5185 | Upstream | -4.4990129 | 6.83E-06 | 0.017698 |
| 1 | 155764642 | 155764642 | 1 | 1_155764642 | ENSG00000116580 | GON4L | 0 | 3UTR | 4.49900597 | 6.83E-06 | 0.017698 |
| 7 | 132673243 | 132673243 | 1 | 7_132673243 | ENSG00000183470 | AC009365.1 | 0 | INTRON | -4.4989022 | 6.83E-06 | 0.01770359 |
| 2 | 101578403 | 101578403 | 1 | 2_101578403 | ENSG00000286101 | AC093894.2 | 10502 | Upstream | -4.4988171 | 6.83E-06 | 0.01770359 |
| 1 | 186539611 | 186539611 | 1 | 1_186539611 | ENSG00000273198 | AL096803.4 | 17307 | Downstream | 4.4987847 | 6.83E-06 | 0.01770359 |
| 16 | 58561117 | 58561117 | 1 | 16_58561117 | ENSG00000125107 | CNOT1 | 0 | INTRON | 4.49875513 | 6.84E-06 | 0.01770359 |
| X | 50164115 | 50164115 | 1 | X_50164115 | ENSG00000202495 | Y_RNA | 7081 | Downstream | 4.49874502 | 6.84E-06 | 0.01770359 |
| 18 | 46782761 | 46782761 | 1 | 18_46782761 | ENSG00000270112 | AC090241.2 | 0 | INTRON | 4.49874463 | 6.84E-06 | 0.01770359 |
| 9 | 10347823 | 10347823 | 1 | 9_10347823 | ENSG00000153707 | PTPRD | 0 | INTRON | 4.49868415 | 6.84E-06 | 0.0177041 |
| 10 | 103373159 | 103373159 | 1 | 10_103373159 | ENSG00000148835 | TAF5 | 0 | INTRON | 4.4986565 | 6.84E-06 | 0.0177041 |
| 20 | 62596761 | 62596761 | 1 | 20_62596761 | ENSG00000273812 | BX640514.2 | 0 | EXON | -4.4986415 | 6.84E-06 | 0.0177041 |
| 12 | 121807921 | 121807921 | 1 | 12_121807921 | ENSG00000139718 | SETD1B | 0 | INTRON | 4.4985301 | 6.84E-06 | 0.01771068 |
| 11 | 120743804 | 120743804 | 1 | 11_120743804 | ENSG00000149403 | GRIK4 | 0 | INTRON | -4.4984171 | 6.85E-06 | 0.01771739 |
| 1 | 185535120 | 185535120 | 1 | 1_185535120 | ENSG00000279401 | AL133383.2 | 14134 | Downstream | 4.49833021 | 6.85E-06 | 0.01772194 |
| X | 53966442 | 53966442 | 1 | X_53966442 | ENSG00000172943 | PHF8 | 0 | INTRON | 4.49826533 | 6.85E-06 | 0.01772466 |
| 2 | 153273566 | 153273566 | 1 | 2_153273566 | ENSG00000227708 | LINC01850 | 64138 | Upstream | 4.49817571 | 6.85E-06 | 0.01772515 |
| 16 | 23133411 | 23133411 | 1 | 16_23133411 | ENSG00000103404 | USP31 | 0 | INTRON | 4.49817359 | 6.85E-06 | 0.01772515 |
| 10 | 75642174 | 75642174 | 1 | 10_75642174 | ENSG00000148655 | LRMDA | 0 | INTRON | -4.4981624 | 6.85E-06 | 0.01772515 |
| 15 | 82316074 | 82316074 | 1 | 15_82316074 | ENSG00000274376 | ADAMTS7P1 | 0 | INTRON | 4.49811104 | 6.86E-06 | 0.01772674 |
| 16 | 34699220 | 34699220 | 1 | 16_34699220 | ENSG00000279165 | AC135776.4 | 242756 | Upstream | -4.4980074 | 6.86E-06 | 0.01773269 |
| 11 | 24916576 | 24916576 | 1 | 11_24916576 | ENSG00000187398 | LUZP2 | 0 | INTRON | 4.49795193 | 6.86E-06 | 0.01773462 |
| 1 | 146420711 | 146420711 | 1 | 1_146420711 | ENSG00000274428 | U1 | 10649 | Downstream | -4.4978248 | 6.87E-06 | 0.01774253 |
| 1 | 238964468 | 238964468 | 1 | 1_238964468 | ENSG00000227854 | AL590135.1 | 88279 | Downstream | 4.49774082 | 6.87E-06 | 0.01774684 |
| 12 | 112717053 | 112717053 | 1 | 12_112717053 | ENSG00000089169 | RPH3A | 0 | INTRON | -4.4976697 | 6.87E-06 | 0.01775008 |
| 3 | 42717069 | 42717069 | 1 | 3_42717069 | ENSG00000244607 | CCDC13 | 0 | INTRON | 4.49763071 | 6.87E-06 | 0.01775064 |
| 8 | 73340073 | 73340073 | 1 | 8_73340073 | ENSG00000250295 | RDH10-AS1 | 0 | INTRON | 4.49756829 | 6.87E-06 | 0.01775315 |
| 6 | 61042396 | 61042396 | 1 | 6_61042396 | ENSG00000287598 | AL512427.2 | 100069 | Downstream | -4.4975245 | 6.87E-06 | 0.01775412 |
| 8 | 143667513 | 143667513 | 1 | 8_143667513 | ENSG00000183309 | ZNF623 | 11095 | Downstream | 4.49743766 | 6.88E-06 | 0.01775867 |
| 3 | 14444205 | 14444205 | 1 | 3_14444205 | ENSG00000131389 | SLC6A6 | 0 | EXON | 4.49739409 | 6.88E-06 | 0.01775961 |
| 18 | 68009325 | 68009325 | 1 | 18_68009325 | ENSG00000264634 | AC100844.1 | 52899 | Downstream | -4.497286 | 6.88E-06 | 0.01776009 |
| 8 | 65900584 | 65900584 | 1 | 8_65900584 | ENSG00000272192 | AC100812.1 | 57253 | Downstream | 4.4972748 | 6.88E-06 | 0.01776009 |
| 3 | 50716514 | 50716514 | 1 | 3_50716514 | ENSG00000088538 | DOCK3 | 0 | INTRON | -4.4972661 | 6.88E-06 | 0.01776009 |
| 8 | 4883143 | 4883143 | 1 | 8_4883143 | ENSG00000183117 | CSMD1 | 0 | INTRON | -4.4972554 | 6.88E-06 | 0.01776009 |
| 6 | 151698887 | 151698887 | 1 | 6_151698887 | ENSG00000091831 | ESR1 | 0 | INTRON | 4.49722708 | 6.88E-06 | 0.01776009 |
| 12 | 91770564 | 91770564 | 1 | 12_91770564 | ENSG00000258125 | AC025254.1 | 89691 | Downstream | 4.4971538 | 6.89E-06 | 0.01776176 |
| 16 | 86749749 | 86749749 | 1 | 16_86749749 | ENSG00000261175 | LINC02188 | 7666 | Downstream | 4.49706477 | 6.89E-06 | 0.01776176 |
| 4 | 113431746 | 113431746 | 1 | 4_113431746 | ENSG00000206820 | RNU1-138P | 11260 | Downstream | -4.4970292 | 6.89E-06 | 0.01776176 |
| 16 | 7218876 | 7218876 | 1 | 16_7218876 | ENSG00000078328 | RBFOX1 | 0 | INTRON | -4.4970069 | 6.89E-06 | 0.01776176 |
| 7 | 45492804 | 45492804 | 1 | 7_45492804 | ENSG00000225537 | AC073325.1 | 0 | INTRON | 4.49700595 | 6.89E-06 | 0.01776176 |
| 7 | 42619249 | 42619249 | 1 | 7_42619249 | ENSG00000238284 | LINC01448 | 42466 | Downstream | 4.49699046 | 6.89E-06 | 0.01776176 |
| 11 | 87724380 | 87724380 | 1 | 11_87724380 | ENSG00000279341 | AP000756.1 | 3147 | Upstream | 4.49698156 | 6.89E-06 | 0.01776176 |
| 9 | 119527003 | 119527003 | 1 | 9_119527003 | ENSG00000260970 | AC006288.1 | 2878 | Downstream | -4.4969178 | 6.89E-06 | 0.01776439 |
| 2 | 138685966 | 138685966 | 1 | 2_138685966 | ENSG00000144227 | NXPH2 | 0 | INTRON | -4.4967839 | 6.90E-06 | 0.01777054 |
| 5 | 137332209 | 137332209 | 1 | 5_137332209 | ENSG00000152377 | SPOCK1 | 0 | INTRON | 4.49677978 | 6.90E-06 | 0.01777054 |
| 6 | 165789462 | 165789462 | 1 | 6_165789462 | ENSG00000112541 | PDE10A | 0 | INTRON | 4.49670129 | 6.90E-06 | 0.01777441 |
| 2 | 76825726 | 76825726 | 1 | 2_76825726 | ENSG00000176204 | LRRTM4 | 0 | INTRON | 4.49665285 | 6.90E-06 | 0.01777576 |
| 10 | 114712584 | 114712584 | 1 | 10_114712584 | ENSG00000099204 | ABLIM1 | 0 | INTRON | 4.4966078 | 6.90E-06 | 0.01777581 |
| 12 | 40948594 | 40948594 | 1 | 12_40948594 | ENSG00000018236 | CNTN1 | 0 | INTRON | 4.49655599 | 6.91E-06 | 0.01777581 |
| 1 | 117677646 | 117677646 | 1 | 1_117677646 | ENSG00000212266 | AL390877.1 | 10974 | Downstream | 4.49654683 | 6.91E-06 | 0.01777581 |
| 2 | 134579669 | 134579669 | 1 | 2_134579669 | ENSG00000152128 | TMEM163 | 0 | INTRON | -4.4965236 | 6.91E-06 | 0.01777581 |
| 14 | 23448265 | 23448265 | 1 | 14_23448265 | ENSG00000092054 | MYH7 | 12605 | Upstream | -4.4964347 | 6.91E-06 | 0.01778055 |
| 9 | 61344035 | 61344035 | 1 | 9_61344035 | ENSG00000283378 | CNTNAP3C | 0 | INTRON | -4.4962687 | 6.92E-06 | 0.01778529 |
| 17 | 61357222 | 61357222 | 1 | 17_61357222 | ENSG00000141376 | BCAS3 | 0 | INTRON | -4.4962653 | 6.92E-06 | 0.01778529 |
| 13 | 102523530 | 102523530 | 1 | 13_102523530 | ENSG00000261057 | LINC00555 | 65841 | Downstream | 4.49624497 | 6.92E-06 | 0.01778529 |
| 18 | 76628092 | 76628092 | 1 | 18_76628092 | ENSG00000266256 | LINC00683 | 0 | INTRON | -4.4962352 | 6.92E-06 | 0.01778529 |
| 2 | 186309532 | 186309532 | 1 | 2_186309532 | ENSG00000237877 | LINC01473 | 0 | INTRON | 4.49618998 | 6.92E-06 | 0.01778529 |
| 10 | 110863287 | 110863287 | 1 | 10_110863287 | ENSG00000232470 | AL136368.1 | 6455 | Upstream | 4.49618509 | 6.92E-06 | 0.01778529 |
| 6 | 79073385 | 79073385 | 1 | 6_79073385 | ENSG00000146247 | PHIP | 0 | INTRON | 4.49591485 | 6.93E-06 | 0.0178052 |
| 10 | 10489056 | 10489056 | 1 | 10_10489056 | ENSG00000270111 | CELF2-DT | 26695 | Upstream | -4.4957782 | 6.93E-06 | 0.0178126 |
| 17 | 73565909 | 73565909 | 1 | 17_73565909 | ENSG00000069188 | SDK2 | 0 | INTRON | -4.4957521 | 6.93E-06 | 0.0178126 |
| 10 | 74461229 | 74461229 | 1 | 10_74461229 | ENSG00000156110 | ADK | 0 | INTRON | 4.49573014 | 6.93E-06 | 0.0178126 |
| 16 | 78157013 | 78157013 | 1 | 16_78157013 | ENSG00000186153 | WWOX | 0 | INTRON | 4.49560989 | 6.94E-06 | 0.01781998 |
| 7 | 37759794 | 37759794 | 1 | 7_37759794 | ENSG00000187037 | GPR141 | 0 | INTRON | 4.49550613 | 6.94E-06 | 0.01782598 |
| 2 | 70328518 | 70328518 | 1 | 2_70328518 | ENSG00000235289 | BRD7P6 | 24491 | Upstream | -4.495427 | 6.94E-06 | 0.01782739 |
| 6 | 139353949 | 139353949 | 1 | 6_139353949 | ENSG00000226571 | AL592429.2 | 0 | INTRON | 4.49541109 | 6.94E-06 | 0.01782739 |
| 9 | 133262386 | 133262386 | 1 | 9_133262386 | ENSG00000175164 | ABO | 0 | INTRON | -4.495393 | 6.94E-06 | 0.01782739 |
| 16 | 60429221 | 60429221 | 1 | 16_60429221 | ENSG00000261436 | AC009081.2 | 0 | INTRON | 4.49519314 | 6.95E-06 | 0.01783729 |
| 8 | 142270350 | 142270350 | 1 | 8_142270350 | ENSG00000171045 | TSNARE1 | 0 | INTRON | 4.49517958 | 6.95E-06 | 0.01783729 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
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| 3 | 55172641 | 55172641 | 1 | 3_55172641 | ENSG00000239991 | AC092059.1 | 0 | INTRON | 4.4951785 | 6.95E-06 | 0.01783729 |
| 8 | 5040961 | 5040961 | 1 | 8_5040961 | ENSG00000253262 | AC019176.1 | 31683 | Downstream | 4.49511202 | 6.95E-06 | 0.01784018 |
| 1 | 2979308 | 2979308 | 1 | 1_2979308 | ENSG00000284745 | AL589702.1 | 10601 | Upstream | -4.495068 | 6.95E-06 | 0.01784118 |
| 11 | 51618172 | 51618172 | 1 | 11_51618172 | ENSG00000214883 | AC024405.1 | 1195856 | Downstream | -4.4948507 | 6.96E-06 | 0.01785669 |
| 5 | 32204531 | 32204531 | 1 | 5_32204531 | ENSG00000230829 | AC025181.1 | 17400 | Upstream | -4.4948189 | 6.96E-06 | 0.01785669 |
| 12 | 79238210 | 79238210 | 1 | 12_79238210 | ENSG00000067715 | SYT1 | 0 | INTRON | -4.4947223 | 6.97E-06 | 0.01786186 |
| Y | 11102736 | 11102736 | 1 | Y_11102736 | ENSG00000271365 | AC140113.3 | 4328 | Downstream | -4.4946932 | 6.97E-06 | 0.01786186 |
| 8 | 37382141 | 37382141 | 1 | 8_37382141 | ENSG00000253746 | AC091182.2 | 23297 | Downstream | 4.49464695 | 6.97E-06 | 0.01786305 |
| 14 | 70861792 | 70861792 | 1 | 14_70861792 | ENSG00000258431 | AC004825.1 | 2363 | Upstream | 4.49457898 | 6.97E-06 | 0.01786606 |
| 6 | 126942871 | 126942871 | 1 | 6_126942871 | ENSG00000286215 | AL356534.1 | 0 | INTRON | 4.49448547 | 6.97E-06 | 0.01786888 |
| 9 | 131047637 | 131047637 | 1 | 9_131047637 | ENSG00000050555 | LAMC3 | 0 | INTRON | -4.4944814 | 6.97E-06 | 0.01786888 |
| 21 | 32213607 | 32213607 | 1 | 21_32213607 | ENSG00000230323 | LINC00159 | 15794 | Upstream | 4.49444747 | 6.98E-06 | 0.01786903 |
| 8 | 12737325 | 12737325 | 1 | 8_12737325 | ENSG00000154359 | LONRF1 | 0 | EXON | -4.4944149 | 6.98E-06 | 0.01786908 |
| 7 | 151790942 | 151790942 | 1 | 7_151790942 | ENSG00000106617 | PRKAG2 | 0 | 5UTR | 4.49429279 | 6.98E-06 | 0.01787505 |
| 9 | 110206140 | 110206140 | 1 | 9_110206140 | ENSG00000188959 | C9orf152 | 0 | INTRON | 4.49424396 | 6.98E-06 | 0.01787505 |
| 15 | 82894467 | 82894467 | 1 | 15_82894467 | ENSG00000103942 | HOMER2 | 0 | INTRON | 4.49421946 | 6.98E-06 | 0.01787505 |
| 20 | 21188959 | 21188959 | 1 | 20_21188959 | ENSG00000088970 | KIZ | 0 | INTRON | -4.4942157 | 6.98E-06 | 0.01787505 |
| 6 | 87064955 | 87064955 | 1 | 6_87064955 | ENSG00000217776 | AL138827.1 | 5200 | Downstream | 4.49415266 | 6.98E-06 | 0.01787541 |
| 4 | 22487484 | 22487484 | 1 | 4_22487484 | ENSG00000152990 | ADGRA3 | 0 | INTRON | 4.49414743 | 6.98E-06 | 0.01787541 |
| 6 | 153843757 | 153843757 | 1 | 6_153843757 | ENSG00000217085 | HMGB3P19 | 94675 | Downstream | -4.4939747 | 6.99E-06 | 0.01788723 |
| 7 | 91187543 | 91187543 | 1 | 7_91187543 | ENSG00000058091 | CDK14 | 0 | INTRON | 4.49389604 | 6.99E-06 | 0.01789115 |
| 9 | 74085927 | 74085927 | 1 | 9_74085927 | ENSG00000223368 | AL513124.1 | 212630 | Upstream | -4.4938105 | 7.00E-06 | 0.0178935 |
| 20 | 18742240 | 18742240 | 1 | 20_18742240 | ENSG00000125821 | DTD1 | 0 | INTRON | -4.4938041 | 7.00E-06 | 0.0178935 |
| 4 | 98651997 | 98651997 | 1 | 4_98651997 | ENSG00000168785 | TSPAN5 | 0 | INTRON | -4.4937315 | 7.00E-06 | 0.01789691 |
| 10 | 130315375 | 130315375 | 1 | 10_130315375 | ENSG00000236303 | LINC02646 | 0 | INTRON | 4.49368989 | 7.00E-06 | 0.01789724 |
| 7 | 26020483 | 26020483 | 1 | 7_26020483 | ENSG00000199085 | MIR148A | 70497 | Upstream | 4.49365966 | 7.00E-06 | 0.01789724 |
| 16 | 33124516 | 33124516 | 1 | 16_33124516 | ENSG00000261599 | HERC2P8 | 0 | INTRON | 4.49363163 | 7.00E-06 | 0.01789724 |
| 7 | 150030561 | 150030561 | 1 | 7_150030561 | ENSG00000241449 | AC092666.1 | 3091 | Upstream | -4.4935569 | 7.00E-06 | 0.01790084 |
| 15 | 100951034 | 100951034 | 1 | 15_100951034 | ENSG00000154237 | LRRK1 | 0 | INTRON | 4.49349705 | 7.01E-06 | 0.01790318 |
| 12 | 56946727 | 56946727 | 1 | 12_56946727 | ENSG00000139547 | RDH16 | 4703 | Downstream | -4.4933942 | 7.01E-06 | 0.01790915 |
| 1 | 242096193 | 242096193 | 1 | 1_242096193 | ENSG00000180287 | PLD5 | 0 | INTRON | -4.4933561 | 7.01E-06 | 0.01790967 |
| 2 | 78675902 | 78675902 | 1 | 2_78675902 | ENSG00000234877 | AC092660.1 | 76496 | Downstream | -4.4932528 | 7.01E-06 | 0.01791344 |
| 7 | 27594009 | 27594009 | 1 | 7_27594009 | ENSG00000106049 | HIBADH | 0 | INTRON | 4.49324737 | 7.01E-06 | 0.01791344 |
| 6 | 103668374 | 103668374 | 1 | 6_103668374 | ENSG00000202283 | AL591387.1 | 85106 | Downstream | -4.4931039 | 7.02E-06 | 0.01792283 |
| 19 | 17151077 | 17151077 | 1 | 19_17151077 | ENSG00000099331 | MYO9B | 0 | INTRON | 4.49297879 | 7.02E-06 | 0.0179296 |
| 10 | 8374717 | 8374717 | 1 | 10_8374717 | ENSG00000226990 | AC025946.1 | 26142 | Upstream | 4.49294608 | 7.02E-06 | 0.0179296 |
| 1 | 73472947 | 73472947 | 1 | 1_73472947 | ENSG00000233973 | LINC01360 | 117694 | Downstream | 4.49290635 | 7.03E-06 | 0.0179296 |
| 4 | 33572536 | 33572536 | 1 | 4_33572536 | ENSG00000288321 | AC079772.1 | 0 | INTRON | 4.49289571 | 7.03E-06 | 0.0179296 |
| 5 | 181377892 | 181377892 | 1 | 5_181377892 | ENSG00000251035 | WBP1LP4 | 802 | Downstream | -4.4927718 | 7.03E-06 | 0.01793154 |
| 15 | 26557050 | 26557050 | 1 | 15_26557050 | ENSG00000166206 | GABRB3 | 0 | INTRON | -4.4927602 | 7.03E-06 | 0.01793154 |
| 8 | 71232274 | 71232274 | 1 | 8_71232274 | ENSG00000104313 | EYA1 | 0 | INTRON | 4.49275492 | 7.03E-06 | 0.01793154 |
| 3 | 59158610 | 59158610 | 1 | 3_59158610 | ENSG00000243295 | AC126121.3 | 0 | INTRON | 4.4927405 | 7.03E-06 | 0.01793154 |
| 20 | 39717776 | 39717776 | 1 | 20_39717776 | ENSG00000229976 | AL118523.1 | 39425 | Upstream | 4.49268307 | 7.03E-06 | 0.01793154 |
| 11 | 47965587 | 47965587 | 1 | 11_47965587 | ENSG00000149177 | PTPRJ | 14970 | Upstream | -4.4926812 | 7.03E-06 | 0.01793154 |
| 1 | 240319801 | 240319801 | 1 | 1_240319801 | ENSG00000155816 | FMN2 | 0 | INTRON | 4.49259697 | 7.04E-06 | 0.01793482 |
| 8 | 3172329 | 3172329 | 1 | 8_3172329 | ENSG00000183117 | CSMD1 | 0 | INTRON | -4.4925428 | 7.04E-06 | 0.01793482 |
| 2 | 149896772 | 149896772 | 1 | 2_149896772 | ENSG00000231969 | AC007364.1 | 0 | INTRON | -4.4925268 | 7.04E-06 | 0.01793482 |
| 12 | 21570467 | 21570467 | 1 | 12_21570467 | ENSG00000111713 | GYS2 | 0 | INTRON | -4.4925147 | 7.04E-06 | 0.01793482 |
| 2 | 18793852 | 18793852 | 1 | 2_18793852 | ENSG00000224626 | AC106053.1 | 6100 | Downstream | -4.4924274 | 7.04E-06 | 0.01793584 |
| 13 | 47243180 | 47243180 | 1 | 13_47243180 | ENSG00000234590 | GNG5P5 | 63901 | Upstream | -4.492385 | 7.04E-06 | 0.01793584 |
| 16 | 57436065 | 57436065 | 1 | 16_57436065 | ENSG00000005194 | CIAPIN1 | 0 | INTRON | 4.4923755 | 7.04E-06 | 0.01793584 |
| 14 | 60196894 | 60196894 | 1 | 14_60196894 | ENSG00000242135 | RPL17P2 | 15567 | Downstream | 4.49237515 | 7.04E-06 | 0.01793584 |
| 15 | 37360639 | 37360639 | 1 | 15_37360639 | ENSG00000259434 | AC068875.1 | 3380 | Downstream | 4.49215217 | 7.05E-06 | 0.01794756 |
| 12 | 31884841 | 31884841 | 1 | 12_31884841 | ENSG00000255760 | LINC02422 | 0 | INTRON | 4.49214822 | 7.05E-06 | 0.01794756 |
| 6 | 42837517 | 42837517 | 1 | 6_42837517 | ENSG00000112624 | BICRAL | 0 | INTRON | 4.49213699 | 7.05E-06 | 0.01794756 |
| X | 149651331 | 149651331 | 1 | X_149651331 | ENSG00000229322 | AC244197.1 | 1207 | Upstream | -4.4921086 | 7.05E-06 | 0.01794756 |
| 3 | 195758291 | 195758291 | 1 | 3_195758291 | ENSG00000145113 | MUC4 | 0 | INTRON | 4.49204107 | 7.05E-06 | 0.01794917 |
| 2 | 116703794 | 116703794 | 1 | 2_116703794 | ENSG00000271667 | AC104408.1 | 16407 | Upstream | 4.49202579 | 7.05E-06 | 0.01794917 |
| 18 | 55243859 | 55243859 | 1 | 18_55243859 | ENSG00000196628 | TCF4 | 0 | INTRON | 4.49189871 | 7.06E-06 | 0.01795721 |
| 7 | 61030942 | 61030942 | 1 | 7_61030942 | ENSG00000233918 | AC128676.1 | 1244418 | Downstream | -4.4918507 | 7.06E-06 | 0.01795857 |
| 2 | 91537280 | 91537280 | 1 | 2_91537280 | ENSG00000230964 | AC233266.1 | 41197 | Upstream | -4.4917317 | 7.06E-06 | 0.01796593 |
| 5 | 153565297 | 153565297 | 1 | 5_153565297 | ENSG00000155511 | GRIA1 | 0 | INTRON | 4.49163398 | 7.07E-06 | 0.01797117 |
| 3 | 173921776 | 173921776 | 1 | 3_173921776 | ENSG00000169760 | NLGN1 | 0 | INTRON | 4.4915653 | 7.07E-06 | 0.01797117 |
| 13 | 61369715 | 61369715 | 1 | 13_61369715 | ENSG00000280165 | PCDH20 | 39969 | Downstream | 4.49156176 | 7.07E-06 | 0.01797117 |
| 4 | 83163282 | 83163282 | 1 | 4_83163282 | ENSG00000145287 | PLAC8 | 26207 | Upstream | 4.49152671 | 7.07E-06 | 0.01797117 |
| 20 | 26456559 | 26456559 | 1 | 20_26456559 | ENSG00000227195 | MIR663AHG | 205013 | Upstream | -4.4914773 | 7.07E-06 | 0.01797117 |
| 4 | 156954820 | 156954820 | 1 | 4_156954820 | ENSG00000145431 | PDGFC | 0 | INTRON | 4.49146496 | 7.07E-06 | 0.01797117 |
| 22 | 43540901 | 43540901 | 1 | 22_43540901 | ENSG00000223843 | EFCAB6-AS1 | 0 | INTRON | 4.49144072 | 7.07E-06 | 0.01797117 |
| 4 | 17284414 | 17284414 | 1 | 4_17284414 | ENSG00000206780 | SNORA75B | 36331 | Downstream | 4.49141515 | 7.08E-06 | 0.01797117 |
| 12 | 12498913 | 12498913 | 1 | 12_12498913 | ENSG00000111266 | DUSP16 | 0 | INTRON | -4.4913052 | 7.08E-06 | 0.01797776 |
| 9 | 12810011 | 12810011 | 1 | 9_12810011 | ENSG00000235448 | LURAP1L-AS1 | 0 | EXON | 4.49124932 | 7.08E-06 | 0.01797934 |
| 1 | 103586193 | 103586193 | 1 | 1_103586193 | ENSG00000240038 | AMY2B | 6659 | Downstream | -4.4912229 | 7.08E-06 | 0.01797934 |
| 21 | 40323546 | 40323546 | 1 | 21_40323546 | ENSG00000171587 | DSCAM | 0 | INTRON | -4.4911182 | 7.09E-06 | 0.0179855 |
| 8 | 141657754 | 141657754 | 1 | 8_141657754 | ENSG00000287677 | AC025839.1 | 72494 | Downstream | 4.49106416 | 7.09E-06 | 0.01798554 |
| 3 | 78596062 | 78596062 | 1 | 3_78596062 | ENSG00000169855 | ROBO1 | 1176 | Downstream | -4.4910542 | 7.09E-06 | 0.01798554 |
| 22 | 31736175 | 31736175 | 1 | 22_31736175 | ENSG00000183530 | PRR14L | 0 | INTRON | 4.49089884 | 7.09E-06 | 0.01799309 |
| 5 | 68031652 | 68031652 | 1 | 5_68031652 | ENSG00000253801 | AC010376.1 | 55508 | Downstream | 4.49088706 | 7.09E-06 | 0.01799309 |
| 5 | 132469880 | 132469880 | 1 | 5_132469880 | ENSG00000234290 | AC116366.1 | 0 | EXON | 4.49086385 | 7.09E-06 | 0.01799309 |
| 4 | 146689038 | 146689038 | 1 | 4_146689038 | ENSG00000137473 | TTC29 | 17599 | Downstream | 4.49080728 | 7.10E-06 | 0.01799309 |
| 3 | 95310903 | 95310903 | 1 | 3_95310903 | ENSG00000244048 | RPS18P6 | 138526 | Downstream | -4.4908061 | 7.10E-06 | 0.01799309 |
| 11 | 1417399 | 1417399 | 1 | 11_1417399 | ENSG00000174672 | BRSK2 | 0 | INTRON | 4.49074159 | 7.10E-06 | 0.01799559 |
| X | 118934295 | 118934295 | 1 | X_118934295 | ENSG00000231270 | AL772284.1 | 3857 | Upstream | -4.4907131 | 7.10E-06 | 0.01799559 |
| 10 | 10727504 | 10727504 | 1 | 10_10727504 | ENSG00000228997 | AL136452.1 | 48718 | Downstream | -4.490491 | 7.11E-06 | 0.01801168 |
| 1 | 11287117 | 11287117 | 1 | 1_11287117 | ENSG00000120942 | UBIAD1 | 0 | 3UTR | 4.49044309 | 7.11E-06 | 0.01801198 |
| 9 | 23324982 | 23324982 | 1 | 9_23324982 | ENSG00000284418 | AL391117.1 | 0 | INTRON | -4.4904023 | 7.11E-06 | 0.01801198 |

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| 16 | 78641670 | 78641670 | 1 | 16_78641670 | ENSG00000186153 | WWOX | 0 | INTRON | -4.4903923 | 7.11E-06 | 0.01801198 |
| 6 | 134353591 | 134353591 | 1 | 6_134353591 | ENSG00000236700 | LINC01010 | 0 | INTRON | -4.4903499 | 7.11E-06 | 0.01801288 |
| 22 | 33208107 | 33208107 | 1 | 22_33208107 | ENSG00000133424 | LARGE1 | 0 | INTRON | 4.49031821 | 7.11E-06 | 0.01801288 |
| 17 | 79584685 | 79584685 | 1 | 17_79584685 | ENSG00000263278 | AC233701.1 | 13346 | Downstream | -4.4902601 | 7.11E-06 | 0.01801511 |
| 18 | 3956380 | 3956380 | 1 | 18_3956380 | ENSG00000170579 | DLGAP1 | 0 | INTRON | 4.49010884 | 7.12E-06 | 0.01802404 |
| 20 | 22631496 | 22631496 | 1 | 20_22631496 | ENSG00000237396 | LNCNEF | 23979 | Upstream | 4.49007012 | 7.12E-06 | 0.01802404 |
| 8 | 55180916 | 55180916 | 1 | 8_55180916 | ENSG00000206579 | XKR4 | 0 | INTRON | 4.49003159 | 7.12E-06 | 0.01802404 |
| 10 | 133625463 | 133625463 | 1 | 10_133625463 | ENSG00000225899 | FRG2B | 0 | EXON | -4.4899885 | 7.12E-06 | 0.01802404 |
| 11 | 117395131 | 117395131 | 1 | 11_117395131 | ENSG00000110274 | CEP164 | 0 | EXON | 4.48997706 | 7.12E-06 | 0.01802404 |
| 18 | 71992624 | 71992624 | 1 | 18_71992624 | ENSG00000265995 | AC069114.1 | 48047 | Upstream | 4.4899644 | 7.12E-06 | 0.01802404 |
| 16 | 36137442 | 36137442 | 1 | 16_36137442 | ENSG00000261084 | PPP1R1AP2 | 224926 | Downstream | -4.489914 | 7.13E-06 | 0.01802563 |
| 2 | 13572319 | 13572319 | 1 | 2_13572319 | ENSG00000229370 | AC073062.1 | 0 | INTRON | -4.4898629 | 7.13E-06 | 0.01802714 |
| 14 | 81250659 | 81250659 | 1 | 14_81250659 | ENSG00000205579 | DYNLL1P1 | 4096 | Upstream | -4.4898178 | 7.13E-06 | 0.01802714 |
| 11 | 11458754 | 11458754 | 1 | 11_11458754 | ENSG00000110328 | GALNT18 | 0 | INTRON | 4.48978594 | 7.13E-06 | 0.01802714 |
| 9 | 130513096 | 130513096 | 1 | 9_130513096 | ENSG00000130707 | ASS1 | 11822 | Downstream | -4.4897646 | 7.13E-06 | 0.01802714 |
| 1 | 117214032 | 117214032 | 1 | 1_117214032 | ENSG00000134258 | VTCN1 | 3072 | Upstream | 4.48966474 | 7.13E-06 | 0.01802714 |
| 7 | 81305254 | 81305254 | 1 | 7_81305254 | ENSG00000223514 | AC004866.1 | 29851 | Upstream | -4.4896625 | 7.13E-06 | 0.01802714 |
| 16 | 85451343 | 85451343 | 1 | 16_85451343 | ENSG00000131149 | GSE1 | 0 | INTRON | 4.48965418 | 7.13E-06 | 0.01802714 |
| 17 | 49164557 | 49164557 | 1 | 17_49164557 | ENSG00000167080 | B4GALNT2 | 0 | INTRON | -4.4896136 | 7.14E-06 | 0.01802714 |
| 9 | 21563181 | 21563181 | 1 | 9_21563181 | ENSG00000171889 | MIR31HG | 3281 | Upstream | 4.48958392 | 7.14E-06 | 0.01802714 |
| 1 | 242424563 | 242424563 | 1 | 1_242424563 | ENSG00000180287 | PLD5 | 0 | INTRON | -4.4895606 | 7.14E-06 | 0.01802714 |
| 11 | 56984405 | 56984405 | 1 | 11_56984405 | ENSG00000181273 | OR5AK2 | 4466 | Upstream | 4.48952122 | 7.14E-06 | 0.01802714 |
| 2 | 79979136 | 79979136 | 1 | 2_79979136 | ENSG00000066032 | CTNNA2 | 0 | INTRON | 4.4895164 | 7.14E-06 | 0.01802714 |
| 18 | 30467034 | 30467034 | 1 | 18_30467034 | ENSG00000286605 | AC115100.1 | 52961 | Downstream | 4.48945971 | 7.14E-06 | 0.01802792 |
| 17 | 51237071 | 51237071 | 1 | 17_51237071 | ENSG00000011258 | MBTD1 | 0 | INTRON | 4.48944404 | 7.14E-06 | 0.01802792 |
| 10 | 91955253 | 91955253 | 1 | 10_91955253 | ENSG00000095564 | BTAF1 | 0 | INTRON | 4.48926665 | 7.15E-06 | 0.01804026 |
| 4 | 111495147 | 111495147 | 1 | 4_111495147 | ENSG00000241722 | AC083795.1 | 56706 | Upstream | 4.48913756 | 7.15E-06 | 0.01804602 |
| 6 | 2908059 | 2908059 | 1 | 6_2908059 | ENSG00000232999 | AL133351.3 | 2553 | Downstream | 4.48913546 | 7.15E-06 | 0.01804602 |
| 2 | 204825886 | 204825886 | 1 | 2_204825886 | ENSG00000116117 | PARD3B | 0 | INTRON | 4.48900897 | 7.16E-06 | 0.0180534 |
| 4 | 5599627 | 5599627 | 1 | 4_5599627 | ENSG00000173040 | EVC2 | 0 | INTRON | -4.4889852 | 7.16E-06 | 0.0180534 |
| 2 | 69682284 | 69682284 | 1 | 2_69682284 | ENSG00000196975 | ANXA4 | 0 | INTRON | -4.4889413 | 7.16E-06 | 0.01805443 |
| 2 | 81143031 | 81143031 | 1 | 2_81143031 | ENSG00000234429 | AC105342.1 | 51305 | Downstream | -4.4888673 | 7.16E-06 | 0.01805751 |
| 19 | 57637606 | 57637606 | 1 | 19_57637606 | ENSG00000121417 | ZNF211 | 0 | INTRON | 4.48880101 | 7.16E-06 | 0.01805751 |
| 8 | 30968291 | 30968291 | 1 | 8_30968291 | ENSG00000253793 | AC008066.1 | 15167 | Downstream | 4.48873049 | 7.16E-06 | 0.01805751 |
| 11 | 54551983 | 54551983 | 1 | 11_54551983 | ENSG00000237610 | OR4C50P | 39496 | Upstream | -4.4887267 | 7.17E-06 | 0.01805751 |
| 19 | 4037825 | 4037825 | 1 | 19_4037825 | ENSG00000105229 | PIAS4 | 0 | EXON | -4.4887212 | 7.17E-06 | 0.01805751 |
| 5 | 155306546 | 155306546 | 1 | 5_155306546 | ENSG00000271477 | AC010591.1 | 90744 | Upstream | 4.48871561 | 7.17E-06 | 0.01805751 |
| 14 | 81044796 | 81044796 | 1 | 14_81044796 | ENSG00000284959 | AC007262.2 | 0 | INTRON | 4.48846339 | 7.17E-06 | 0.01807622 |
| 9 | 83102645 | 83102645 | 1 | 9_83102645 | ENSG00000286451 | AL499602.1 | 33502 | Downstream | 4.48840291 | 7.18E-06 | 0.01807683 |
| 8 | 125625184 | 125625184 | 1 | 8_125625184 | ENSG00000286122 | AC016074.2 | 23142 | Upstream | 4.48839318 | 7.18E-06 | 0.01807683 |
| 1 | 51303771 | 51303771 | 1 | 1_51303771 | ENSG00000085831 | TTC39A | 0 | INTRON | -4.488303 | 7.18E-06 | 0.0180818 |
| 11 | 70435188 | 70435188 | 1 | 11_70435188 | ENSG00000085733 | CTTN | 0 | 3UTR | 4.4881995 | 7.18E-06 | 0.01808791 |
| 19 | 31327244 | 31327244 | 1 | 19_31327244 | ENSG00000121297 | TSHZ3 | 0 | INTRON | 4.48813668 | 7.18E-06 | 0.0180905 |
| 11 | 32688121 | 32688121 | 1 | 11_32688121 | ENSG00000186714 | CCDC73 | 0 | INTRON | 4.48810596 | 7.19E-06 | 0.0180905 |
| 4 | 86359553 | 86359553 | 1 | 4_86359553 | ENSG00000109339 | MAPK10 | 0 | INTRON | 4.48798233 | 7.19E-06 | 0.01809595 |
| 9 | 137450329 | 137450329 | 1 | 9_137450329 | ENSG00000165802 | NSMF | 0 | INTRON | 4.48797873 | 7.19E-06 | 0.01809595 |
| 12 | 109136046 | 109136046 | 1 | 12_109136046 | ENSG00000076555 | ACACB | 0 | INTRON | 4.48786134 | 7.19E-06 | 0.01810202 |
| 18 | 69071780 | 69071780 | 1 | 18_69071780 | ENSG00000150636 | CCDC102B | 16591 | Downstream | 4.48784414 | 7.19E-06 | 0.01810202 |
| 4 | 60056669 | 60056669 | 1 | 4_60056669 | ENSG00000283043 | AC097655.1 | 18083 | Downstream | -4.4877108 | 7.20E-06 | 0.01811067 |
| 2 | 190074511 | 190074511 | 1 | 2_190074511 | ENSG00000187699 | C2orf88 | 0 | INTRON | 4.48767074 | 7.20E-06 | 0.0181114 |
| 1 | 174867120 | 174867120 | 1 | 1_174867120 | ENSG00000152061 | RABGAP1L | 0 | INTRON | 4.48753282 | 7.21E-06 | 0.01812045 |
| 1 | 103986751 | 103986751 | 1 | 1_103986751 | ENSG00000225191 | AL136455.1 | 58945 | Downstream | 4.48743769 | 7.21E-06 | 0.01812586 |
| 16 | 52781836 | 52781836 | 1 | 16_52781836 | ENSG00000261261 | AC026462.4 | 104089 | Downstream | 4.48737389 | 7.21E-06 | 0.01812861 |
| 1 | 245725962 | 245725962 | 1 | 1_245725962 | ENSG00000162849 | KIF26B | 16530 | Downstream | 4.48726326 | 7.21E-06 | 0.01812981 |
| 5 | 176563629 | 176563629 | 1 | 5_176563629 | ENSG00000074276 | CDHR2 | 0 | INTRON | -4.4872132 | 7.22E-06 | 0.01812981 |
| 22 | 38267014 | 38267014 | 1 | 22_38267014 | ENSG00000198792 | TMEM184B | 0 | INTRON | -4.4871986 | 7.22E-06 | 0.01812981 |
| 18 | 75752962 | 75752962 | 1 | 18_75752962 | ENSG00000261194 | LINC01898 | 40111 | Upstream | 4.48719258 | 7.22E-06 | 0.01812981 |
| 17 | 22688829 | 22688829 | 1 | 17_22688829 | ENSG00000264262 | AC131274.1 | 0 | INTRON | 4.48714534 | 7.22E-06 | 0.01812981 |
| 16 | 15379423 | 15379423 | 1 | 16_15379423 | ENSG00000183793 | NPIPA5 | 0 | INTRON | 4.48713807 | 7.22E-06 | 0.01812981 |
| 2 | 79421857 | 79421857 | 1 | 2_79421857 | ENSG00000066032 | CTNNA2 | 0 | INTRON | 4.48711639 | 7.22E-06 | 0.01812981 |
| 13 | 51140724 | 51140724 | 1 | 13_51140724 | ENSG00000226792 | C13orf42 | 0 | INTRON | 4.48710803 | 7.22E-06 | 0.01812981 |
| 15 | 60129875 | 60129875 | 1 | 15_60129875 | ENSG00000259223 | AC009654.1 | 11555 | Upstream | 4.48706759 | 7.22E-06 | 0.0181303 |
| 7 | 119497841 | 119497841 | 1 | 7_119497841 | ENSG00000225546 | LINC02476 | 0 | INTRON | 4.48701478 | 7.22E-06 | 0.0181303 |
| 21 | 10577469 | 10577469 | 1 | 21_10577469 | ENSG00000274391 | TPTE | 0 | EXON | -4.4869835 | 7.22E-06 | 0.0181303 |
| 5 | 105071666 | 105071666 | 1 | 5_105071666 | ENSG00000253584 | AC091987.1 | 0 | INTRON | 4.48693331 | 7.23E-06 | 0.0181303 |
| 5 | 160679537 | 160679537 | 1 | 5_160679537 | ENSG00000118322 | ATP10B | 0 | INTRON | 4.48693232 | 7.23E-06 | 0.0181303 |
| 8 | 40764160 | 40764160 | 1 | 8_40764160 | ENSG00000165061 | ZMAT4 | 0 | INTRON | 4.48687913 | 7.23E-06 | 0.0181303 |
| 5 | 1043447 | 1043447 | 1 | 5_1043447 | ENSG00000145506 | NKD2 | 4504 | Downstream | 4.48676754 | 7.23E-06 | 0.0181303 |
| 8 | 106691381 | 106691381 | 1 | 8_106691381 | ENSG00000164830 | OXR1 | 0 | INTRON | -4.4867262 | 7.23E-06 | 0.0181303 |
| 8 | 107497528 | 107497528 | 1 | 8_107497528 | ENSG00000154188 | ANGPT1 | 0 | EXON | 4.48671777 | 7.23E-06 | 0.0181303 |
| 10 | 14619485 | 14619485 | 1 | 10_14619485 | ENSG00000065809 | FAM107B | 0 | INTRON | 4.48670762 | 7.23E-06 | 0.0181303 |
| 1 | 28448281 | 28448281 | 1 | 1_28448281 | ENSG00000204138 | PHACTR4 | 0 | INTRON | 4.48670305 | 7.23E-06 | 0.0181303 |
| 7 | 119066152 | 119066152 | 1 | 7_119066152 | ENSG00000270516 | AC079791.1 | 112024 | Downstream | -4.4867017 | 7.23E-06 | 0.0181303 |
| 6 | 44534406 | 44534406 | 1 | 6_44534406 | ENSG00000237530 | AL136140.1 | 6958 | Downstream | 4.48669377 | 7.23E-06 | 0.0181303 |
| 2 | 206074893 | 206074893 | 1 | 2_206074893 | ENSG00000114933 | INO80D | 0 | INTRON | 4.48664492 | 7.24E-06 | 0.01813178 |
| 4 | 179347833 | 179347833 | 1 | 4_179347833 | ENSG00000250993 | AC020551.1 | 41300 | Downstream | 4.48658229 | 7.24E-06 | 0.01813444 |
| 1 | 46557478 | 46557478 | 1 | 1_46557478 | ENSG00000079277 | MKNK1 | 0 | 3UTR | 4.48654154 | 7.24E-06 | 0.01813524 |
| 17 | 83197301 | 83197301 | 1 | 17_83197301 | ENSG00000262898 | AC139099.2 | 0 | INTRON | 4.48650336 | 7.24E-06 | 0.01813581 |
| 7 | 15659376 | 15659376 | 1 | 7_15659376 | ENSG00000106511 | MEOX2 | 0 | INTRON | 4.48639946 | 7.24E-06 | 0.01814199 |
| 6 | 113140656 | 113140656 | 1 | 6_113140656 | ENSG00000287728 | AL360015.1 | 0 | EXON | 4.4861999 | 7.25E-06 | 0.0181563 |
| 12 | 47783195 | 47783195 | 1 | 12_47783195 | ENSG00000061273 | HDAC7 | 0 | 3UTR | 4.48613194 | 7.25E-06 | 0.01815942 |
| 17 | 26862475 | 26862475 | 1 | 17_26862475 | ENSG00000263433 | AC069061.1 | 119218 | Upstream | -4.4859607 | 7.26E-06 | 0.01817134 |
| 6 | 81083966 | 81083966 | 1 | 6_81083966 | ENSG00000112773 | TENT5A | 407472 | Downstream | 4.48584802 | 7.26E-06 | 0.01817827 |
| 6 | 9399626 | 9399626 | 1 | 6_9399626 | ENSG00000285219 | HULC | 105493 | Downstream | -4.4857451 | 7.27E-06 | 0.01818438 |
| 20 | 5773969 | 5773969 | 1 | 20_5773969 | ENSG00000171984 | SHLD1 | 0 | INTRON | -4.4856861 | 7.27E-06 | 0.01818522 |

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| 10 | 104037869 | 104037869 | 1 | 10_104037869 | ENSG00000065618 | COL17A1 | 0 | INTRON | -4.4855449 | 7.27E-06 | 0.01819343 |
| 7 | 147638334 | 147638334 | 1 | 7_147638334 | ENSG00000174469 | CNTNAP2 | 0 | INTRON | -4.4854089 | 7.28E-06 | 0.01820237 |
| 11 | 130101327 | 130101327 | 1 | 11_130101327 | ENSG00000084234 | APLP2 | 0 | INTRON | 4.48534356 | 7.28E-06 | 0.01820527 |
| 1 | 121062129 | 121062129 | 1 | 1_121062129 | ENSG00000275296 | AC241377.1 | 2776 | Upstream | -4.4852626 | 7.28E-06 | 0.0182089 |
| 13 | 83893042 | 83893042 | 1 | 13_83893042 | ENSG00000285680 | AL355481.1 | 0 | EXON | 4.48523837 | 7.28E-06 | 0.0182089 |
| 17 | 79525880 | 79525880 | 1 | 17_79525880 | ENSG00000167281 | RBFOX3 | 9732 | Upstream | 4.48510891 | 7.29E-06 | 0.01821728 |
| 7 | 130991558 | 130991558 | 1 | 7_130991558 | ENSG00000231721 | LINC-PINT | 0 | INTRON | -4.4850418 | 7.29E-06 | 0.01821806 |
| 16 | 7325264 | 7325264 | 1 | 16_7325264 | ENSG00000078328 | RBFOX1 | 0 | INTRON | -4.4850372 | 7.29E-06 | 0.01821806 |
| 5 | 29104998 | 29104998 | 1 | 5_29104998 | ENSG00000248687 | AC024589.1 | 0 | EXON | -4.4849779 | 7.29E-06 | 0.01821841 |
| 9 | 117702671 | 117702671 | 1 | 9_117702671 | ENSG00000285082 | AL160272.2 | 1485 | Upstream | 4.4849704 | 7.29E-06 | 0.01821841 |
| 5 | 66785563 | 66785563 | 1 | 5_66785563 | ENSG00000069020 | MAST4 | 0 | INTRON | 4.48488621 | 7.30E-06 | 0.01822293 |
| 18 | 21164410 | 21164410 | 1 | 18_21164410 | ENSG00000263748 | EXOGP1 | 18092 | Downstream | 4.48479052 | 7.30E-06 | 0.01822582 |
| 8 | 47600196 | 47600196 | 1 | 8_47600196 | ENSG00000164808 | SPIDR | 0 | INTRON | 4.48478989 | 7.30E-06 | 0.01822582 |
| 16 | 53964911 | 53964911 | 1 | 16_53964911 | ENSG00000140718 | FTO | 0 | INTRON | 4.48473206 | 7.30E-06 | 0.01822808 |
| 12 | 59142489 | 59142489 | 1 | 12_59142489 | ENSG00000286351 | AC046129.1 | 11614 | Downstream | 4.48462632 | 7.30E-06 | 0.01823028 |
| 10 | 76297595 | 76297595 | 1 | 10_76297595 | ENSG00000148655 | LRMDA | 0 | INTRON | 4.48461899 | 7.30E-06 | 0.01823028 |
| 14 | 39767580 | 39767580 | 1 | 14_39767580 | ENSG00000258526 | AL049828.1 | 0 | INTRON | -4.4846125 | 7.30E-06 | 0.01823028 |
| 3 | 11756168 | 11756168 | 1 | 3_11756168 | ENSG00000144560 | VGLL4 | 0 | INTRON | 4.48454263 | 7.31E-06 | 0.01823358 |
| 6 | 150312569 | 150312569 | 1 | 6_150312569 | ENSG00000201628 | RNU4-7P | 14053 | Downstream | -4.484436 | 7.31E-06 | 0.01824003 |
| 15 | 45454598 | 45454598 | 1 | 15_45454598 | ENSG00000259354 | AC025580.2 | 0 | INTRON | -4.4842803 | 7.32E-06 | 0.01824798 |
| 14 | 26573080 | 26573080 | 1 | 14_26573080 | ENSG00000139910 | NOVA1 | 0 | INTRON | 4.48426236 | 7.32E-06 | 0.01824798 |
| 3 | 175695457 | 175695457 | 1 | 3_175695457 | ENSG00000177694 | NAALADL2 | 0 | INTRON | 4.48424924 | 7.32E-06 | 0.01824798 |
| 12 | 41732548 | 41732548 | 1 | 12_41732548 | ENSG00000257784 | LINC02400 | 31595 | Upstream | 4.48420493 | 7.32E-06 | 0.0182491 |
| 2 | 76138720 | 76138720 | 1 | 2_76138720 | ENSG00000287474 | AC110614.1 | 0 | INTRON | -4.4840755 | 7.32E-06 | 0.01825625 |
| X | 124144394 | 124144394 | 1 | X_124144394 | ENSG00000101972 | STAG2 | 0 | INTRON | -4.4840589 | 7.32E-06 | 0.01825625 |
| 16 | 16527951 | 16527951 | 1 | 16_16527951 | ENSG00000260126 | AC136431.1 | 0 | INTRON | 4.48400893 | 7.33E-06 | 0.01825785 |
| 2 | 151516853 | 151516853 | 1 | 2_151516853 | ENSG00000183091 | NEB | 0 | INTRON | 4.48373571 | 7.33E-06 | 0.01827704 |
| 16 | 60683354 | 60683354 | 1 | 16_60683354 | ENSG00000259844 | GNPATP | 26705 | Upstream | -4.4837224 | 7.34E-06 | 0.01827704 |
| 16 | 9622952 | 9622952 | 1 | 16_9622952 | ENSG00000283003 | AC007221.1 | 8053 | Downstream | 4.48356514 | 7.34E-06 | 0.01828785 |
| 1 | 43654881 | 43654881 | 1 | 1_43654881 | ENSG00000284989 | AL451062.3 | 0 | INTRON | -4.4835315 | 7.34E-06 | 0.01828806 |
| 1 | 154377374 | 154377374 | 1 | 1_154377374 | ENSG00000237920 | AL162591.1 | 0 | INTRON | -4.4834588 | 7.34E-06 | 0.01829132 |
| 8 | 44084897 | 44084897 | 1 | 8_44084897 | ENSG00000253198 | AC139365.1 | 410306 | Upstream | -4.483431 | 7.35E-06 | 0.01829132 |
| 4 | 161969670 | 161969670 | 1 | 4_161969670 | ENSG00000168843 | FSTL5 | 0 | INTRON | -4.4833535 | 7.35E-06 | 0.01829286 |
| 9 | 88322365 | 88322365 | 1 | 9_88322365 | ENSG00000226327 | RPSAP49 | 2088 | Upstream | 4.48335058 | 7.35E-06 | 0.01829286 |
| 18 | 71989020 | 71989020 | 1 | 18_71989020 | ENSG00000265995 | AC069114.1 | 44443 | Upstream | -4.4832785 | 7.35E-06 | 0.01829636 |
| 6 | 49743129 | 49743129 | 1 | 6_49743129 | ENSG00000235122 | AL121974.1 | 0 | INTRON | -4.4831892 | 7.35E-06 | 0.01829641 |
| 10 | 92613087 | 92613087 | 1 | 10_92613087 | ENSG00000138160 | KIF11 | 0 | EXON | -4.4831863 | 7.35E-06 | 0.01829641 |
| 14 | 83635644 | 83635644 | 1 | 14_83635644 | ENSG00000238561 | RNU6ATAC28P | 114739 | Upstream | 4.48318157 | 7.35E-06 | 0.01829641 |
| 8 | 38552516 | 38552516 | 1 | 8_38552516 | ENSG00000253361 | AC069120.1 | 0 | EXON | -4.4831418 | 7.36E-06 | 0.01829641 |
| 6 | 64545818 | 64545818 | 1 | 6_64545818 | ENSG00000188107 | EYS | 0 | INTRON | 4.48312207 | 7.36E-06 | 0.01829641 |
| 20 | 4974335 | 4974335 | 1 | 20_4974335 | ENSG00000089057 | SLC23A2 | 0 | INTRON | -4.4828616 | 7.36E-06 | 0.01831339 |
| 10 | 33361448 | 33361448 | 1 | 10_33361448 | ENSG00000273012 | AL353600.1 | 19543 | Downstream | 4.48282841 | 7.37E-06 | 0.01831339 |
| 4 | 165386914 | 165386914 | 1 | 4_165386914 | ENSG00000109472 | CPE | 0 | INTRON | 4.4828037 | 7.37E-06 | 0.01831339 |
| 11 | 134175002 | 134175002 | 1 | 11_134175002 | ENSG00000151503 | NCAPD3 | 0 | INTRON | -4.4827824 | 7.37E-06 | 0.01831339 |
| 7 | 99216804 | 99216804 | 1 | 7_99216804 | ENSG00000185467 | KPNA7 | 9298 | Upstream | 4.48276835 | 7.37E-06 | 0.01831339 |
| 13 | 81359510 | 81359510 | 1 | 13_81359510 | ENSG00000229309 | AL353633.1 | 57103 | Downstream | -4.4827205 | 7.37E-06 | 0.01831412 |
| 9 | 88834813 | 88834813 | 1 | 9_88834813 | ENSG00000286414 | AL390791.1 | 31097 | Upstream | -4.4826971 | 7.37E-06 | 0.01831412 |
| 4 | 961583 | 961583 | 1 | 4_961583 | ENSG00000145214 | DGKQ | 0 | INTRON | 4.48262232 | 7.37E-06 | 0.01831412 |
| 6 | 157354789 | 157354789 | 1 | 6_157354789 | ENSG00000213078 | AL390955.1 | 11200 | Downstream | -4.4826112 | 7.37E-06 | 0.01831412 |
| 11 | 95867223 | 95867223 | 1 | 11_95867223 | ENSG00000087053 | MTMR2 | 0 | INTRON | -4.482604 | 7.37E-06 | 0.01831412 |
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| 1 | 218226317 | 218226317 | 1 | 1_218226317 | ENSG00000067533 | RRP15 | 58975 | Upstream | 4.48232579 | 7.38E-06 | 0.01833267 |
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| 14 | 103111712 | 103111712 | 1 | 14_103111712 | ENSG00000205436 | EXOC3L4 | 1153 | Downstream | 4.4821056 | 7.39E-06 | 0.01834625 |
| 1 | 2104474 | 2104474 | 1 | 1_2104474 | ENSG00000067606 | PRKCZ | 0 | INTRON | 4.48197241 | 7.40E-06 | 0.01835238 |
| 14 | 88803794 | 88803794 | 1 | 14_88803794 | ENSG00000165521 | EML5 | 11042 | Upstream | -4.4819681 | 7.40E-06 | 0.01835238 |
| 11 | 62174133 | 62174133 | 1 | 11_62174133 | ENSG00000236607 | EEF1DP8 | 4305 | Downstream | -4.481941 | 7.40E-06 | 0.01835238 |
| 20 | 54801944 | 54801944 | 1 | 20_54801944 | ENSG00000252089 | RNU4ATAC7P | 57743 | Downstream | -4.4818828 | 7.40E-06 | 0.01835471 |
| 7 | 54011351 | 54011351 | 1 | 7_54011351 | ENSG00000238131 | LINC02854 | 63547 | Upstream | 4.48177382 | 7.40E-06 | 0.01836141 |
| 8 | 143187453 | 143187453 | 1 | 8_143187453 | ENSG00000277494 | GPIHBP1 | 25764 | Upstream | 4.48168222 | 7.41E-06 | 0.01836265 |
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| 6 | 149779026 | 149779026 | 1 | 6_149779026 | ENSG00000120265 | PCMT1 | 0 | INTRON | 4.48166611 | 7.41E-06 | 0.01836265 |
| 18 | 57096735 | 57096735 | 1 | 18_57096735 | ENSG00000258609 | LINC-ROR | 24616 | Upstream | 4.48159566 | 7.41E-06 | 0.01836604 |
| 8 | 62930500 | 62930500 | 1 | 8_62930500 | ENSG00000185942 | NKAIN3 | 0 | INTRON | 4.48148462 | 7.41E-06 | 0.01837292 |
| 8 | 47641506 | 47641506 | 1 | 8_47641506 | ENSG00000164808 | SPIDR | 0 | INTRON | 4.48143836 | 7.41E-06 | 0.01837423 |
| 8 | 41116589 | 41116589 | 1 | 8_41116589 | ENSG00000206867 | RNU6-356P | 83591 | Downstream | 4.48133731 | 7.42E-06 | 0.01838025 |
| 6 | 100613799 | 100613799 | 1 | 6_100613799 | ENSG00000112249 | ASCC3 | 0 | INTRON | 4.4812272 | 7.42E-06 | 0.01838542 |
| 18 | 70741619 | 70741619 | 1 | 18_70741619 | ENSG00000263417 | GTSCR1 | 90875 | Upstream | -4.4811847 | 7.42E-06 | 0.01838542 |
| 18 | 41009614 | 41009614 | 1 | 18_41009614 | ENSG00000286328 | AC079052.1 | 331704 | Upstream | 4.48118412 | 7.42E-06 | 0.01838542 |
| 15 | 25293362 | 25293362 | 1 | 15_25293362 | ENSG00000224078 | SNHG14 | 0 | INTRON | -4.4811077 | 7.43E-06 | 0.01838933 |
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| 7 | 117970671 | 117970671 | 1 | 7_117970671 | ENSG00000234826 | AC003084.1 | 28186 | Downstream | 4.48101966 | 7.43E-06 | 0.01839101 |
| 7 | 154589501 | 154589501 | 1 | 7_154589501 | ENSG00000130226 | DPP6 | 0 | INTRON | -4.480995 | 7.43E-06 | 0.01839101 |
| 2 | 8585774 | 8585774 | 1 | 2_8585774 | ENSG00000236008 | LINC01814 | 0 | INTRON | 4.48081761 | 7.44E-06 | 0.01840363 |
| 12 | 119736041 | 119736041 | 1 | 12_119736041 | ENSG00000122966 | CIT | 0 | INTRON | -4.480763 | 7.44E-06 | 0.01840566 |
| 11 | 93273449 | 93273449 | 1 | 11_93273449 | ENSG00000279684 | AP003969.2 | 13179 | Downstream | -4.4806433 | 7.44E-06 | 0.01841183 |
| 3 | 120876252 | 120876252 | 1 | 3_120876252 | ENSG00000286827 | AC072026.2 | 0 | INTRON | -4.4806261 | 7.44E-06 | 0.01841183 |
| 7 | 36065629 | 36065629 | 1 | 7_36065629 | ENSG00000285573 | AC083864.4 | 0 | EXON | 4.48059838 | 7.44E-06 | 0.01841183 |
| 19 | 4040045 | 4040045 | 1 | 19_4040045 | ENSG00000105229 | PIAS4 | 659 | Downstream | -4.4805157 | 7.45E-06 | 0.01841629 |
| 18 | 54979041 | 54979041 | 1 | 18_54979041 | ENSG00000166510 | CCDC68 | 19580 | Upstream | -4.4803613 | 7.45E-06 | 0.01842694 |
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| 3 | 52419056 | 52419056 | 1 | 3_52419056 | ENSG00000010318 | PHF7 | 0 | INTRON | 4.48018515 | 7.46E-06 | 0.01843588 |
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| 13 | 34381798 | 34381798 | 1 | 13_34381798 | ENSG00000271850 | LINC02343 | 0 | INTRON | 4.4800062 | 7.46E-06 | 0.01844251 |

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| 13 | 40470296 | 40470296 | 1 | 13_40470296 | ENSG00000215483 | LINC00598 | 0 | INTRON | -4.4799984 | 7.46E-06 | 0.01844251 |
| X | 119531520 | 119531520 | 1 | X_119531520 | ENSG00000018610 | CXorf56 | 6628 | Downstream | 4.47997997 | 7.47E-06 | 0.01844251 |
| 16 | 47271845 | 47271845 | 1 | 16_47271845 | ENSG00000129636 | ITFG1 | 0 | INTRON | 4.47994226 | 7.47E-06 | 0.01844251 |
| 13 | 87940412 | 87940412 | 1 | 13_87940412 | ENSG00000232204 | TET1P1 | 47940 | Upstream | -4.479918 | 7.47E-06 | 0.01844251 |
| 12 | 3428144 | 3428144 | 1 | 12_3428144 | ENSG00000111218 | PRMT8 | 0 | INTRON | 4.47990207 | 7.47E-06 | 0.01844251 |
| 2 | 5243869 | 5243869 | 1 | 2_5243869 | ENSG00000228585 | AC073143.1 | 69870 | Downstream | -4.4798527 | 7.47E-06 | 0.0184441 |
| 21 | 38309548 | 38309548 | 1 | 21_38309548 | ENSG00000157551 | KCNJ15 | 2191 | Downstream | -4.4797919 | 7.47E-06 | 0.01844596 |
| 13 | 36865659 | 36865659 | 1 | 13_36865659 | ENSG00000120693 | SMAD9 | 0 | EXON | 4.4797692 | 7.47E-06 | 0.01844596 |
| 8 | 99219177 | 99219177 | 1 | 8_99219177 | ENSG00000132549 | VPS13B | 0 | INTRON | 4.47953694 | 7.48E-06 | 0.01846336 |
| 17 | 45871225 | 45871225 | 1 | 17_45871225 | ENSG00000264589 | MAPT-AS1 | 0 | INTRON | 4.47943807 | 7.48E-06 | 0.01846698 |
| 15 | 77204010 | 77204010 | 1 | 15_77204010 | ENSG00000173517 | PEAK1 | 0 | INTRON | 4.47943324 | 7.48E-06 | 0.01846698 |
| 7 | 63580653 | 63580653 | 1 | 7_63580653 | ENSG00000223566 | TNRC18P2 | 0 | INTRON | 4.47937811 | 7.49E-06 | 0.0184682 |
| 14 | 35891457 | 35891457 | 1 | 14_35891457 | ENSG00000100916 | BRMS1L | 0 | INTRON | 4.47934016 | 7.49E-06 | 0.0184682 |
| 12 | 13877837 | 13877837 | 1 | 12_13877837 | ENSG00000273079 | GRIN2B | 0 | INTRON | 4.4793263 | 7.49E-06 | 0.0184682 |
| 3 | 87694913 | 87694913 | 1 | 3_87694913 | ENSG00000239572 | AC108749.1 | 0 | INTRON | -4.4792784 | 7.49E-06 | 0.01846966 |
| 3 | 174145453 | 174145453 | 1 | 3_174145453 | ENSG00000169760 | NLGN1 | 0 | INTRON | 4.47916459 | 7.49E-06 | 0.01847684 |
| 18 | 76511275 | 76511275 | 1 | 18_76511275 | ENSG00000275763 | C18orf65 | 13187 | Downstream | 4.47909968 | 7.50E-06 | 0.01847978 |
| X | 40357314 | 40357314 | 1 | X_40357314 | ENSG00000214045 | AC091807.1 | 1868 | Downstream | -4.4790615 | 7.50E-06 | 0.01848035 |
| 17 | 38123409 | 38123409 | 1 | 17_38123409 | ENSG00000274615 | AC233968.1 | 0 | INTRON | 4.47903119 | 7.50E-06 | 0.01848035 |
| 6 | 41680527 | 41680527 | 1 | 6_41680527 | ENSG00000112561 | TFEB | 3450 | Downstream | 4.47899905 | 7.50E-06 | 0.01848046 |
| 10 | 5210901 | 5210901 | 1 | 10_5210901 | ENSG00000198610 | AKR1C4 | 0 | INTRON | -4.4789522 | 7.50E-06 | 0.01848183 |
| 5 | 5567464 | 5567464 | 1 | 5_5567464 | ENSG00000164151 | ICE1 | 77244 | Downstream | -4.4788887 | 7.50E-06 | 0.01848466 |
| 4 | 188243403 | 188243403 | 1 | 4_188243403 | ENSG00000248370 | LINC02434 | 82246 | Downstream | -4.4787989 | 7.51E-06 | 0.01848976 |
| 4 | 164654375 | 164654375 | 1 | 4_164654375 | ENSG00000223037 | RNU6-284P | 33538 | Downstream | -4.4787517 | 7.51E-06 | 0.01849117 |
| X | 72257954 | 72257954 | 1 | X_72257954 | ENSG00000198034 | RPS4X | 0 | INTRON | 4.47862125 | 7.51E-06 | 0.01849979 |
| 9 | 96436174 | 96436174 | 1 | 9_96436174 | ENSG00000130956 | HABP4 | 13994 | Upstream | 4.4784889 | 7.52E-06 | 0.01850859 |
| 5 | 43160370 | 43160370 | 1 | 5_43160370 | ENSG00000172262 | ZNF131 | 0 | INTRON | 4.47843344 | 7.52E-06 | 0.01851072 |
| 3 | 125661688 | 125661688 | 1 | 3_125661688 | ENSG00000243072 | AF186996.3 | 17884 | Upstream | 4.47836796 | 7.52E-06 | 0.01851371 |
| X | 56782950 | 56782950 | 1 | X_56782950 | ENSG00000204272 | NBDY | 0 | INTRON | 4.47826663 | 7.53E-06 | 0.01851982 |
| 1 | 243636616 | 243636616 | 1 | 1_243636616 | ENSG00000117020 | AKT3 | 0 | INTRON | 4.47818394 | 7.53E-06 | 0.01852432 |
| 11 | 77211335 | 77211335 | 1 | 11_77211335 | ENSG00000137474 | MYO7A | 0 | 3UTR | -4.4781282 | 7.53E-06 | 0.01852647 |
| 3 | 80367209 | 80367209 | 1 | 3_80367209 | ENSG00000242586 | AC108740.1 | 74871 | Upstream | 4.4780094 | 7.53E-06 | 0.01853411 |
| 13 | 25738523 | 25738523 | 1 | 13_25738523 | ENSG00000132932 | ATP8A2 | 0 | INTRON | 4.4778385 | 7.54E-06 | 0.01854626 |
| 16 | 49914710 | 49914710 | 1 | 16_49914710 | ENSG00000261751 | AC007603.1 | 6019 | Downstream | 4.47773646 | 7.54E-06 | 0.01855245 |
| 5 | 99818222 | 99818222 | 1 | 5_99818222 | ENSG00000250391 | AC092284.1 | 130072 | Downstream | 4.47766276 | 7.55E-06 | 0.01855546 |
| 14 | 74312575 | 74312575 | 1 | 14_74312575 | ENSG00000133980 | VRTN | 0 | INTRON | -4.4776401 | 7.55E-06 | 0.01855546 |
| 2 | 229157361 | 229157361 | 1 | 2_229157361 | ENSG00000153823 | PID1 | 0 | INTRON | -4.4771556 | 7.56E-06 | 0.01859251 |
| 1 | 37891698 | 37891698 | 1 | 1_37891698 | ENSG00000204084 | INPP5B | 0 | INTRON | -4.4771427 | 7.56E-06 | 0.01859251 |
| 2 | 44713341 | 44713341 | 1 | 2_44713341 | ENSG00000143919 | CAMKMT | 0 | INTRON | -4.4771138 | 7.57E-06 | 0.01859251 |
| 2 | 240009896 | 240009896 | 1 | 2_240009896 | ENSG00000130414 | NDUFA10 | 0 | INTRON | -4.477038 | 7.57E-06 | 0.01859251 |
| 15 | 78863724 | 78863724 | 1 | 15_78863724 | ENSG00000243711 | RPL21P116 | 0 | EXON | -4.4770302 | 7.57E-06 | 0.01859251 |
| 9 | 17798198 | 17798198 | 1 | 9_17798198 | ENSG00000107295 | SH3GL2 | 1074 | Downstream | 4.47702512 | 7.57E-06 | 0.01859251 |
| 16 | 46402696 | 46402696 | 1 | 16_46402696 | ENSG00000261239 | ANKRD26P1 | 66644 | Downstream | -4.4769982 | 7.57E-06 | 0.01859251 |
| 11 | 5440289 | 5440289 | 1 | 11_5440289 | ENSG00000213931 | HBE1 | 0 | INTRON | -4.4767764 | 7.58E-06 | 0.01860914 |
| 1 | 78652167 | 78652167 | 1 | 1_78652167 | ENSG00000137965 | IFI44 | 0 | INTRON | 4.47671789 | 7.58E-06 | 0.01861155 |
| 21 | 18757191 | 18757191 | 1 | 21_18757191 | ENSG00000224141 | MIR548XHG | 0 | INTRON | -4.4766568 | 7.58E-06 | 0.01861419 |
| 6 | 120896217 | 120896217 | 1 | 6_120896217 | ENSG00000287992 | AL357513.1 | 50742 | Downstream | 4.47657303 | 7.59E-06 | 0.01861881 |
| 11 | 36320136 | 36320136 | 1 | 11_36320136 | ENSG00000135362 | PRR5L | 0 | INTRON | -4.4765177 | 7.59E-06 | 0.01861926 |
| 11 | 116477145 | 116477145 | 1 | 11_116477145 | ENSG00000236437 | LINC02151 | 19753 | Downstream | -4.4765062 | 7.59E-06 | 0.01861926 |
| 1 | 1195564 | 1195564 | 1 | 1_1195564 | ENSG00000162571 | TTLL10 | 0 | INTRON | -4.4764691 | 7.59E-06 | 0.01861981 |
| 21 | 27996991 | 27996991 | 1 | 21_27996991 | ENSG00000234083 | AJ006995.1 | 11696 | Downstream | 4.47631662 | 7.59E-06 | 0.01862352 |
| 22 | 19099079 | 19099079 | 1 | 22_19099079 | ENSG00000070413 | DGCR2 | 0 | INTRON | 4.47628443 | 7.60E-06 | 0.01862352 |
| 19 | 35346368 | 35346368 | 1 | 19_35346368 | ENSG00000012124 | CD22 | 0 | INTRON | 4.47628162 | 7.60E-06 | 0.01862352 |
| 12 | 500749 | 500749 | 1 | 12_500749 | ENSG00000139044 | B4GALNT3 | 0 | INTRON | -4.4762691 | 7.60E-06 | 0.01862352 |
| 11 | 106979193 | 106979193 | 1 | 11_106979193 | ENSG00000152402 | GUCY1A2 | 0 | INTRON | 4.47624808 | 7.60E-06 | 0.01862352 |
| 2 | 139896699 | 139896699 | 1 | 2_139896699 | ENSG00000223554 | AC078851.1 | 70822 | Upstream | 4.4762418 | 7.60E-06 | 0.01862352 |
| 7 | 27945392 | 27945392 | 1 | 7_27945392 | ENSG00000153814 | JAZF1 | 0 | INTRON | 4.47617918 | 7.60E-06 | 0.0186263 |
| 4 | 122604649 | 122604649 | 1 | 4_122604649 | ENSG00000138684 | IL21 | 5458 | Downstream | 4.47611459 | 7.60E-06 | 0.01862828 |
| 13 | 67667360 | 67667360 | 1 | 13_67667360 | ENSG00000287876 | AL512452.1 | 0 | INTRON | 4.47607312 | 7.60E-06 | 0.01862828 |
| 1 | 55953088 | 55953088 | 1 | 1_55953088 | ENSG00000234810 | AL603840.1 | 0 | INTRON | 4.47606414 | 7.60E-06 | 0.01862828 |
| 4 | 63623545 | 63623545 | 1 | 4_63623545 | ENSG00000250775 | AC093730.1 | 93784 | Upstream | 4.47597803 | 7.61E-06 | 0.01863311 |
| 14 | 69624364 | 69624364 | 1 | 14_69624364 | ENSG00000100647 | SUSD6 | 0 | INTRON | -4.4756804 | 7.62E-06 | 0.0186564 |
| 2 | 85295420 | 85295420 | 1 | 2_85295420 | ENSG00000152284 | TCF7L1 | 0 | INTRON | 4.47557902 | 7.62E-06 | 0.01866118 |
| 1 | 185628217 | 185628217 | 1 | 1_185628217 | ENSG00000228309 | LINC01350 | 0 | INTRON | 4.47556426 | 7.62E-06 | 0.01866118 |
| 3 | 84405693 | 84405693 | 1 | 3_84405693 | ENSG00000242641 | LINC00971 | 232711 | Downstream | 4.47544942 | 7.63E-06 | 0.01866671 |
| 13 | 99599247 | 99599247 | 1 | 13_99599247 | ENSG00000125246 | CLYBL | 7421 | Upstream | 4.47540814 | 7.63E-06 | 0.01866671 |
| 6 | 70569051 | 70569051 | 1 | 6_70569051 | ENSG00000154079 | SDHAF4 | 0 | INTRON | 4.47535622 | 7.63E-06 | 0.01866671 |
| 9 | 134302899 | 134302899 | 1 | 9_134302899 | ENSG00000279929 | AL354796.1 | 2486 | Downstream | 4.47531243 | 7.63E-06 | 0.01866671 |
| 1 | 171602445 | 171602445 | 1 | 1_171602445 | ENSG00000283683 | MYOCOS | 0 | INTRON | 4.47529739 | 7.63E-06 | 0.01866671 |
| 10 | 32469048 | 32469048 | 1 | 10_32469048 | ENSG00000216937 | CCDC7 | 0 | INTRON | 4.4752513 | 7.63E-06 | 0.01866671 |
| 3 | 22552277 | 22552277 | 1 | 3_22552277 | ENSG00000234723 | AC092421.1 | 117923 | Downstream | 4.47524685 | 7.63E-06 | 0.01866671 |
| 3 | 196806190 | 196806190 | 1 | 3_196806190 | ENSG00000180370 | PAK2 | 0 | INTRON | 4.47523197 | 7.63E-06 | 0.01866671 |
| 1 | 239637287 | 239637287 | 1 | 1_239637287 | ENSG00000133019 | CHRM3 | 0 | INTRON | -4.4752113 | 7.63E-06 | 0.01866671 |
| 7 | 45804850 | 45804850 | 1 | 7_45804850 | ENSG00000272556 | GTF2IP13 | 0 | INTRON | -4.4751504 | 7.64E-06 | 0.01866671 |
| 2 | 145392704 | 145392704 | 1 | 2_145392704 | ENSG00000214064 | RPL6P5 | 54647 | Downstream | -4.4751432 | 7.64E-06 | 0.01866671 |
| 8 | 42403908 | 42403908 | 1 | 8_42403908 | ENSG00000078668 | VDAC3 | 0 | INTRON | 4.47513229 | 7.64E-06 | 0.01866671 |
| 12 | 11373618 | 11373618 | 1 | 12_11373618 | ENSG00000251655 | PRB1 | 0 | INTRON | -4.4749226 | 7.64E-06 | 0.01867692 |
| 5 | 28357945 | 28357945 | 1 | 5_28357945 | ENSG00000249785 | LINC02103 | 70138 | Upstream | -4.4748498 | 7.65E-06 | 0.01867692 |
| 16 | 69192771 | 69192771 | 1 | 16_69192771 | ENSG00000168807 | SNTB2 | 0 | INTRON | 4.47483966 | 7.65E-06 | 0.01867692 |
| 17 | 69061558 | 69061558 | 1 | 17_69061558 | ENSG00000154258 | ABCA9 | 609 | Upstream | 4.47483871 | 7.65E-06 | 0.01867692 |
| 3 | 24216401 | 24216401 | 1 | 3_24216401 | ENSG00000151090 | THRB | 0 | INTRON | -4.4748273 | 7.65E-06 | 0.01867692 |
| 5 | 4825640 | 4825640 | 1 | 5_4825640 | ENSG00000248973 | AC106799.2 | 0 | INTRON | -4.4747894 | 7.65E-06 | 0.01867692 |
| 4 | 15721572 | 15721572 | 1 | 4_15721572 | ENSG00000109743 | BST1 | 0 | INTRON | -4.4747787 | 7.65E-06 | 0.01867692 |
| 19 | 15155240 | 15155240 | 1 | 19_15155240 | ENSG00000074181 | NOTCH3 | 3797 | Downstream | -4.4747701 | 7.65E-06 | 0.01867692 |
| 4 | 88729773 | 88729773 | 1 | 4_88729773 | ENSG00000248019 | FAM13A-AS1 | 0 | EXON | -4.4746986 | 7.65E-06 | 0.01868048 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 110512491 | 110512491 | 1 | 2_110512491 | ENSG00000183054 | RGPD6 | 1320 | Downstream | 4.47464337 | 7.65E-06 | 0.01868263 |
| 19 | 1011811 | 1011811 | 1 | 19_1011811 | ENSG00000182087 | TMEM259 | 0 | INTRON | -4.4744059 | 7.66E-06 | 0.0186961 |
| 4 | 87320479 | 87320479 | 1 | 4_87320479 | ENSG00000255723 | AC108516.2 | 0 | INTRON | 4.4744056 | 7.66E-06 | 0.0186961 |
| X | 63364023 | 63364023 | 1 | X_63364023 | ENSG00000235437 | LINC01278 | 0 | INTRON | 4.47436701 | 7.66E-06 | 0.0186961 |
| 8 | 69954018 | 69954018 | 1 | 8_69954018 | ENSG00000247570 | SDCBPP2 | 9370 | Downstream | -4.4743668 | 7.66E-06 | 0.0186961 |
| 5 | 30040896 | 30040896 | 1 | 5_30040896 | ENSG00000280305 | AC018765.1 | 57782 | Downstream | -4.4742226 | 7.67E-06 | 0.01870604 |
| 17 | 29432754 | 29432754 | 1 | 17_29432754 | ENSG00000160551 | TAOK1 | 0 | INTRON | 4.47415679 | 7.67E-06 | 0.01870912 |
| 17 | 38370944 | 38370944 | 1 | 17_38370944 | ENSG00000274211 | SOCS7 | 0 | INTRON | 4.47412115 | 7.67E-06 | 0.01870956 |
| 1 | 156220033 | 156220033 | 1 | 1_156220033 | ENSG00000160783 | PMF1 | 0 | INTRON | 4.47400908 | 7.68E-06 | 0.01871669 |
| 14 | 95579112 | 95579112 | 1 | 14_95579112 | ENSG00000258390 | LINC02318 | 0 | INTRON | -4.4739576 | 7.68E-06 | 0.01871852 |
| 12 | 94250483 | 94250483 | 1 | 12_94250483 | ENSG00000136040 | PLXNC1 | 0 | INTRON | -4.4739215 | 7.68E-06 | 0.01871899 |
| 17 | 492958 | 492958 | 1 | 17_492958 | ENSG00000263015 | AC015853.2 | 10212 | Upstream | 4.47386551 | 7.68E-06 | 0.01872122 |
| 10 | 32499707 | 32499707 | 1 | 10_32499707 | ENSG00000216937 | CCDC7 | 0 | INTRON | 4.47380378 | 7.68E-06 | 0.01872395 |
| 1 | 160414028 | 160414028 | 1 | 1_160414028 | ENSG00000162738 | VANGL2 | 0 | INTRON | 4.47353901 | 7.69E-06 | 0.01874153 |
| 5 | 111480987 | 111480987 | 1 | 5_111480987 | ENSG00000152495 | CAMK4 | 0 | INTRON | -4.4735175 | 7.69E-06 | 0.01874153 |
| 9 | 68758215 | 68758215 | 1 | 9_68758215 | ENSG00000107242 | PIP5K1B | 0 | INTRON | 4.47351144 | 7.69E-06 | 0.01874153 |
| 11 | 116686925 | 116686925 | 1 | 11_116686925 | ENSG00000237937 | LINC02702 | 28630 | Downstream | -4.4734698 | 7.70E-06 | 0.0187425 |
| 2 | 158561656 | 158561656 | 1 | 2_158561656 | ENSG00000144283 | PKP4 | 0 | INTRON | 4.47340897 | 7.70E-06 | 0.01874352 |
| 14 | 20552449 | 20552449 | 1 | 14_20552449 | ENSG00000188655 | RNASE9 | 3643 | Downstream | 4.47339698 | 7.70E-06 | 0.01874352 |
| 5 | 97252302 | 97252302 | 1 | 5_97252302 | ENSG00000251513 | LIX1-AS1 | 0 | INTRON | 4.47333298 | 7.70E-06 | 0.01874645 |
| 7 | 132746208 | 132746208 | 1 | 7_132746208 | ENSG00000201009 | AC009365.2 | 6814 | Upstream | 4.47322788 | 7.70E-06 | 0.01875298 |
| 20 | 10010393 | 10010393 | 1 | 20_10010393 | ENSG00000227906 | SNAP25-AS1 | 0 | EXON | -4.4731664 | 7.71E-06 | 0.0187533 |
| X | 53521654 | 53521654 | 1 | X_53521654 | ENSG00000086758 | HUWE1 | 10441 | Downstream | -4.4731631 | 7.71E-06 | 0.0187533 |
| 5 | 5073798 | 5073798 | 1 | 5_5073798 | ENSG00000250529 | LINC02121 | 0 | INTRON | -4.4730789 | 7.71E-06 | 0.01875801 |
| 4 | 138807263 | 138807263 | 1 | 4_138807263 | ENSG00000250501 | AC093766.1 | 3696 | Downstream | 4.47295373 | 7.71E-06 | 0.01876631 |
| 7 | 158923040 | 158923040 | 1 | 7_158923040 | ENSG00000126870 | WDR60 | 0 | INTRON | 4.47289947 | 7.72E-06 | 0.0187684 |
| 5 | 174117069 | 174117069 | 1 | 5_174117069 | ENSG00000170091 | NSG2 | 0 | INTRON | -4.4727358 | 7.72E-06 | 0.01878009 |
| 3 | 71409788 | 71409788 | 1 | 3_71409788 | ENSG00000114861 | FOXP1 | 0 | INTRON | -4.4724672 | 7.73E-06 | 0.01879935 |
| 5 | 100575497 | 100575497 | 1 | 5_100575497 | ENSG00000174132 | FAM174A | 0 | INTRON | -4.4724352 | 7.73E-06 | 0.01879935 |
| 7 | 148372195 | 148372195 | 1 | 7_148372195 | ENSG00000174469 | CNTNAP2 | 0 | INTRON | 4.47242498 | 7.73E-06 | 0.01879935 |
| 12 | 103609949 | 103609949 | 1 | 12_103609949 | ENSG00000136011 | STAB2 | 0 | INTRON | 4.47220264 | 7.74E-06 | 0.01881623 |
| 10 | 58720700 | 58720700 | 1 | 10_58720700 | ENSG00000122870 | BICC1 | 0 | INTRON | 4.47207932 | 7.75E-06 | 0.0188244 |
| 12 | 110787954 | 110787954 | 1 | 12_110787954 | ENSG00000279925 | AC144522.1 | 41748 | Downstream | 4.47200987 | 7.75E-06 | 0.01882782 |
| 2 | 195793797 | 195793797 | 1 | 2_195793797 | ENSG00000118997 | DNAH7 | 0 | INTRON | 4.4719306 | 7.75E-06 | 0.01882866 |
| 4 | 96139668 | 96139668 | 1 | 4_96139668 | ENSG00000201744 | RNU6-34P | 12628 | Downstream | 4.47191122 | 7.75E-06 | 0.01882866 |
| 20 | 20997724 | 20997724 | 1 | 20_20997724 | ENSG00000234104 | AL133465.1 | 25162 | Downstream | 4.47190656 | 7.75E-06 | 0.01882866 |
| 12 | 13524020 | 13524020 | 1 | 12_13524020 | ENSG00000273079 | GRIN2B | 0 | INTRON | 4.47187834 | 7.75E-06 | 0.01882866 |
| 4 | 113601080 | 113601080 | 1 | 4_113601080 | ENSG00000145349 | CAMK2D | 0 | INTRON | -4.4718255 | 7.76E-06 | 0.01883062 |
| 13 | 49053038 | 49053038 | 1 | 13_49053038 | ENSG00000102531 | FNDC3A | 0 | INTRON | -4.4717251 | 7.76E-06 | 0.01883458 |
| 1 | 40902918 | 40902918 | 1 | 1_40902918 | ENSG00000229528 | AC119677.1 | 26248 | Downstream | -4.4716745 | 7.76E-06 | 0.01883458 |
| 8 | 143862430 | 143862430 | 1 | 8_143862430 | ENSG00000261150 | EPPK1 | 0 | EXON | -4.4716331 | 7.76E-06 | 0.01883458 |
| 11 | 79388862 | 79388862 | 1 | 11_79388862 | ENSG00000149256 | TENM4 | 0 | INTRON | 4.47163298 | 7.76E-06 | 0.01883458 |
| 11 | 696997 | 696997 | 1 | 11_696997 | ENSG00000177106 | EPS8L2 | 0 | INTRON | 4.47161392 | 7.76E-06 | 0.01883458 |
| X | 20031698 | 20031698 | 1 | X_20031698 | ENSG00000184368 | MAP7D2 | 0 | INTRON | 4.47155226 | 7.77E-06 | 0.01883458 |
| X | 9985749 | 9985749 | 1 | X_9985749 | ENSG00000234469 | CLDN34 | 17397 | Downstream | -4.4715448 | 7.77E-06 | 0.01883458 |
| X | 135112047 | 135112047 | 1 | X_135112047 | ENSG00000228372 | SMIM10L2B-AS1 | 0 | INTRON | -4.4714939 | 7.77E-06 | 0.01883458 |
| 5 | 154833994 | 154833994 | 1 | 5_154833994 | ENSG00000170271 | FAXDC2 | 0 | INTRON | 4.4714915 | 7.77E-06 | 0.01883458 |
| 8 | 35572842 | 35572842 | 1 | 8_35572842 | ENSG00000156687 | UNC5D | 0 | INTRON | 4.47147566 | 7.77E-06 | 0.01883458 |
| 21 | 18754320 | 18754320 | 1 | 21_18754320 | ENSG00000224141 | MIR548XHG | 0 | INTRON | -4.4714056 | 7.77E-06 | 0.01883802 |
| 6 | 5944976 | 5944976 | 1 | 6_5944976 | ENSG00000239472 | RN7SL221P | 26132 | Upstream | -4.4713757 | 7.77E-06 | 0.01883802 |
| 1 | 6460294 | 6460294 | 1 | 1_6460294 | ENSG00000187017 | ESPN | 0 | 3UTR | 4.47132597 | 7.77E-06 | 0.01883972 |
| 17 | 6901102 | 6901102 | 1 | 17_6901102 | ENSG00000262943 | ALOX12P2 | 0 | EXON | 4.47113095 | 7.78E-06 | 0.01885423 |
| 10 | 17890228 | 17890228 | 1 | 10_17890228 | ENSG00000260314 | MRC1 | 0 | INTRON | 4.47104876 | 7.78E-06 | 0.0188552 |
| 2 | 230841443 | 230841443 | 1 | 2_230841443 | ENSG00000270891 | AC012507.2 | 4058 | Downstream | -4.4710318 | 7.78E-06 | 0.0188552 |
| 4 | 1014968 | 1014968 | 1 | 4_1014968 | ENSG00000127418 | FGFRL1 | 0 | INTRON | -4.4710286 | 7.78E-06 | 0.0188552 |
| 12 | 61314792 | 61314792 | 1 | 12_61314792 | ENSG00000257308 | AC090017.1 | 81855 | Upstream | 4.47089759 | 7.79E-06 | 0.01886296 |
| 4 | 134465077 | 134465077 | 1 | 4_134465077 | ENSG00000251291 | LINC02462 | 0 | INTRON | -4.4708797 | 7.79E-06 | 0.01886296 |
| 7 | 1756627 | 1756627 | 1 | 7_1756627 | ENSG00000225968 | ELFN1 | 8673 | Downstream | 4.47078357 | 7.79E-06 | 0.01886876 |
| 3 | 161290287 | 161290287 | 1 | 3_161290287 | ENSG00000240138 | EEF1GP4 | 34625 | Downstream | 4.47070863 | 7.80E-06 | 0.01886928 |
| 1 | 216672945 | 216672945 | 1 | 1_216672945 | ENSG00000196482 | ESRRG | 0 | INTRON | -4.4706987 | 7.80E-06 | 0.01886928 |
| 22 | 37407826 | 37407826 | 1 | 22_37407826 | ENSG00000166897 | ELFN2 | 0 | INTRON | 4.47067378 | 7.80E-06 | 0.01886928 |
| 2 | 29122644 | 29122644 | 1 | 2_29122644 | ENSG00000115295 | CLIP4 | 0 | INTRON | 4.47065594 | 7.80E-06 | 0.01886928 |
| 19 | 19720485 | 19720485 | 1 | 19_19720485 | ENSG00000105708 | ZNF14 | 0 | INTRON | -4.4706111 | 7.80E-06 | 0.01886999 |
| 3 | 129332202 | 129332202 | 1 | 3_129332202 | ENSG00000270492 | AC137695.1 | 2383 | Upstream | 4.47058705 | 7.80E-06 | 0.01886999 |
| 2 | 109898750 | 109898750 | 1 | 2_109898750 | ENSG00000284337 | AC013271.1 | 0 | EXON | -4.4705341 | 7.80E-06 | 0.01887198 |
| 1 | 186861022 | 186861022 | 1 | 1_186861022 | ENSG00000116711 | PLA2G4A | 0 | INTRON | -4.4704112 | 7.81E-06 | 0.01887625 |
| 5 | 95606332 | 95606332 | 1 | 5_95606332 | ENSG00000164291 | ARSK | 1230 | Downstream | 4.47040769 | 7.81E-06 | 0.01887625 |
| 18 | 14818204 | 14818204 | 1 | 18_14818204 | ENSG00000265737 | AP006565.1 | 0 | INTRON | 4.47039453 | 7.81E-06 | 0.01887625 |
| 2 | 202702490 | 202702490 | 1 | 2_202702490 | ENSG00000138439 | FAM117B | 0 | INTRON | -4.4703494 | 7.81E-06 | 0.01887756 |
| 12 | 4669486 | 4669486 | 1 | 12_4669486 | ENSG00000139180 | NDUFA9 | 0 | INTRON | 4.47024656 | 7.81E-06 | 0.01888395 |
| 5 | 155996505 | 155996505 | 1 | 5_155996505 | ENSG00000170624 | SGCD | 0 | INTRON | -4.4701972 | 7.81E-06 | 0.01888563 |
| 10 | 103781765 | 103781765 | 1 | 10_103781765 | ENSG00000107957 | SH3PXD2A | 0 | INTRON | 4.47008667 | 7.82E-06 | 0.01888812 |
| 19 | 54335441 | 54335441 | 1 | 19_54335441 | ENSG00000275210 | AC245884.11 | 0 | INTRON | 4.47006401 | 7.82E-06 | 0.01888812 |
| 9 | 25935987 | 25935987 | 1 | 9_25935987 | ENSG00000270683 | FAM71BP1 | 1924 | Upstream | 4.47004702 | 7.82E-06 | 0.01888812 |
| 6 | 153008216 | 153008216 | 1 | 6_153008216 | ENSG00000091844 | RGS17 | 0 | 3UTR | -4.4700357 | 7.82E-06 | 0.01888812 |
| 3 | 81385192 | 81385192 | 1 | 3_81385192 | ENSG00000287053 | AC107302.2 | 17001 | Downstream | 4.47001711 | 7.82E-06 | 0.01888812 |
| 2 | 225363712 | 225363712 | 1 | 2_225363712 | ENSG00000144460 | NYAP2 | 35997 | Upstream | 4.4699258 | 7.82E-06 | 0.01889169 |
| 9 | 88359730 | 88359730 | 1 | 9_88359730 | ENSG00000287769 | AL353748.3 | 25171 | Downstream | 4.46989161 | 7.83E-06 | 0.01889169 |
| 5 | 54842812 | 54842812 | 1 | 5_54842812 | ENSG00000232517 | AC112198.2 | 0 | INTRON | 4.46985098 | 7.83E-06 | 0.01889169 |
| 7 | 79073459 | 79073459 | 1 | 7_79073459 | ENSG00000187391 | MAGI2 | 0 | INTRON | -4.4698383 | 7.83E-06 | 0.01889169 |
| 7 | 132345878 | 132345878 | 1 | 7_132345878 | ENSG00000221866 | PLXNA4 | 0 | INTRON | 4.46982506 | 7.83E-06 | 0.01889169 |
| 11 | 17745739 | 17745739 | 1 | 11_17745739 | ENSG00000129159 | KCNC1 | 0 | INTRON | -4.4697662 | 7.83E-06 | 0.0188942 |
| 17 | 36897691 | 36897691 | 1 | 17_36897691 | ENSG00000277268 | LHX1-DT | 0 | INTRON | -4.4696728 | 7.83E-06 | 0.01889944 |
| 17 | 49239610 | 49239610 | 1 | 17_49239610 | ENSG00000177369 | AC004797.1 | 0 | INTRON | 4.46964635 | 7.83E-06 | 0.01889944 |
| 9 | 96530651 | 96530651 | 1 | 9_96530651 | ENSG00000081377 | CDC14B | 0 | INTRON | -4.4695764 | 7.84E-06 | 0.01890078 |

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| 10 | 112526993 | 112526993 | 1 | 10_112526993 | ENSG00000151532 | VTI1A | 0 | INTRON | -4.4695597 | 7.84E-06 | 0.01890078 |
| 9 | 2527283 | 2527283 | 1 | 9_2527283 | ENSG00000236404 | VLDLR-AS1 | 0 | INTRON | -4.4695402 | 7.84E-06 | 0.01890078 |
| 6 | 160949916 | 160949916 | 1 | 6_160949916 | ENSG00000231863 | AL139393.1 | 0 | INTRON | 4.46946746 | 7.84E-06 | 0.01890453 |
| 3 | 37071952 | 37071952 | 1 | 3_37071952 | ENSG00000093167 | LRRFIP2 | 0 | INTRON | 4.46939504 | 7.84E-06 | 0.01890596 |
| 8 | 31804589 | 31804589 | 1 | 8_31804589 | ENSG00000157168 | NRG1 | 0 | INTRON | 4.46936169 | 7.85E-06 | 0.01890596 |
| 9 | 63022938 | 63022938 | 1 | 9_63022938 | ENSG00000244081 | AL591379.2 | 2658 | Upstream | -4.4693548 | 7.85E-06 | 0.01890596 |
| 6 | 3200155 | 3200155 | 1 | 6_3200155 | ENSG00000230269 | LINC02525 | 4371 | Upstream | -4.4693301 | 7.85E-06 | 0.01890596 |
| 15 | 30712411 | 30712411 | 1 | 15_30712411 | ENSG00000285035 | AC091057.5 | 0 | INTRON | 4.46928392 | 7.85E-06 | 0.01890736 |
| 11 | 76085377 | 76085377 | 1 | 11_76085377 | ENSG00000198382 | UVRAG | 0 | INTRON | -4.4692252 | 7.85E-06 | 0.01890987 |
| 2 | 36219464 | 36219464 | 1 | 2_36219464 | ENSG00000233752 | AC009414.1 | 79923 | Downstream | -4.4691342 | 7.85E-06 | 0.01891525 |
| 4 | 47896029 | 47896029 | 1 | 4_47896029 | ENSG00000170448 | NFXL1 | 0 | INTRON | 4.46907912 | 7.86E-06 | 0.01891579 |
| 7 | 9083675 | 9083675 | 1 | 7_9083675 | ENSG00000278254 | AC004852.2 | 0 | EXON | 4.46905734 | 7.86E-06 | 0.01891579 |
| 3 | 93767933 | 93767933 | 1 | 3_93767933 | ENSG00000251727 | RNU6-488P | 75830 | Upstream | -4.4690372 | 7.86E-06 | 0.01891579 |
| 18 | 44500112 | 44500112 | 1 | 18_44500112 | ENSG00000267337 | LINC01478 | 0 | INTRON | 4.46892606 | 7.86E-06 | 0.01892294 |
| 10 | 87134325 | 87134325 | 1 | 10_87134325 | ENSG00000122376 | SHLD2 | 0 | INTRON | 4.46882578 | 7.87E-06 | 0.01892914 |
| 2 | 217995921 | 217995921 | 1 | 2_217995921 | ENSG00000079308 | TNS1 | 0 | INTRON | 4.46876667 | 7.87E-06 | 0.01893169 |
| Y | 9258023 | 9258023 | 1 | Y_9258023 | ENSG00000232924 | ELOCP4 | 26776 | Downstream | -4.4686686 | 7.87E-06 | 0.01893279 |
| 7 | 103080716 | 103080716 | 1 | 7_103080716 | ENSG00000170632 | ARMC10 | 0 | INTRON | 4.46864814 | 7.87E-06 | 0.01893279 |
| 1 | 155732374 | 155732374 | 1 | 1_155732374 | ENSG00000132676 | DAP3 | 0 | INTRON | -4.4686431 | 7.87E-06 | 0.01893279 |
| 2 | 203930694 | 203930694 | 1 | 2_203930694 | ENSG00000163600 | ICOS | 6053 | Upstream | 4.46863321 | 7.87E-06 | 0.01893279 |
| 10 | 98492458 | 98492458 | 1 | 10_98492458 | ENSG00000172987 | HPSE2 | 0 | INTRON | 4.46848752 | 7.88E-06 | 0.01894056 |
| 2 | 100812851 | 100812851 | 1 | 2_100812851 | ENSG00000170485 | NPAS2 | 7287 | Upstream | 4.46843856 | 7.88E-06 | 0.01894056 |
| 9 | 70635785 | 70635785 | 1 | 9_70635785 | ENSG00000083067 | TRPM3 | 0 | INTRON | 4.46841863 | 7.88E-06 | 0.01894056 |
| 18 | 7624054 | 7624054 | 1 | 18_7624054 | ENSG00000173482 | PTPRM | 0 | INTRON | -4.4684024 | 7.88E-06 | 0.01894056 |
| 12 | 106680975 | 106680975 | 1 | 12_106680975 | ENSG00000257711 | AC079385.2 | 0 | EXON | 4.46837393 | 7.88E-06 | 0.01894056 |
| 22 | 35135253 | 35135253 | 1 | 22_35135253 | ENSG00000233080 | LINC01399 | 0 | INTRON | 4.46836409 | 7.88E-06 | 0.01894056 |
| 3 | 58788516 | 58788516 | 1 | 3_58788516 | ENSG00000163689 | C3orf67 | 0 | INTRON | 4.46827789 | 7.89E-06 | 0.01894552 |
| 1 | 4952583 | 4952583 | 1 | 1_4952583 | ENSG00000284739 | BX005132.1 | 11370 | Downstream | 4.4680916 | 7.89E-06 | 0.01895791 |
| 9 | 137016308 | 137016308 | 1 | 9_137016308 | ENSG00000107331 | ABCA2 | 0 | 3UTR | 4.46807759 | 7.89E-06 | 0.01895791 |
| 10 | 12975266 | 12975266 | 1 | 10_12975266 | ENSG00000151468 | CCDC3 | 0 | INTRON | -4.4679287 | 7.90E-06 | 0.01896823 |
| 12 | 51156710 | 51156710 | 1 | 12_51156710 | ENSG00000135457 | TFCP2 | 0 | INTRON | 4.46790074 | 7.90E-06 | 0.01896823 |
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| 8 | 62530924 | 62530924 | 1 | 8_62530924 | ENSG00000185942 | NKAIN3 | 0 | INTRON | 4.4678318 | 7.90E-06 | 0.01896899 |
| 3 | 186864066 | 186864066 | 1 | 3_186864066 | ENSG00000181092 | ADIPOQ | 5603 | Downstream | 4.4677318 | 7.91E-06 | 0.01897355 |
| 7 | 139841108 | 139841108 | 1 | 7_139841108 | ENSG00000059377 | TBXAS1 | 0 | INTRON | 4.4677076 | 7.91E-06 | 0.01897355 |
| 17 | 16671402 | 16671402 | 1 | 17_16671402 | ENSG00000264359 | NEK4P2 | 4284 | Upstream | -4.4676571 | 7.91E-06 | 0.01897355 |
| 7 | 20916760 | 20916760 | 1 | 7_20916760 | ENSG00000232790 | LINC01162 | 0 | INTRON | 4.46763408 | 7.91E-06 | 0.01897355 |
| 2 | 114704401 | 114704401 | 1 | 2_114704401 | ENSG00000175497 | DPP10 | 0 | INTRON | 4.46762944 | 7.91E-06 | 0.01897355 |
| 2 | 53086634 | 53086634 | 1 | 2_53086634 | ENSG00000228033 | AC010967.1 | 125182 | Upstream | -4.4675152 | 7.91E-06 | 0.018981 |
| 2 | 80240064 | 80240064 | 1 | 2_80240064 | ENSG00000066032 | CTNNA2 | 0 | INTRON | 4.46745518 | 7.92E-06 | 0.01898336 |
| 3 | 46048474 | 46048474 | 1 | 3_46048474 | ENSG00000173578 | XCR1 | 20732 | Upstream | -4.4674284 | 7.92E-06 | 0.01898336 |
| 6 | 123604768 | 123604768 | 1 | 6_123604768 | ENSG00000285941 | AL133257.1 | 0 | INTRON | -4.4673407 | 7.92E-06 | 0.01898846 |
| 7 | 110871430 | 110871430 | 1 | 7_110871430 | ENSG00000184903 | IMMP2L | 0 | INTRON | 4.46722223 | 7.92E-06 | 0.01899534 |
| 14 | 52395133 | 52395133 | 1 | 14_52395133 | ENSG00000087301 | TXNDC16 | 35462 | Downstream | 4.46720284 | 7.92E-06 | 0.01899534 |
| 1 | 63145214 | 63145214 | 1 | 1_63145214 | ENSG00000203605 | AC096543.1 | 0 | INTRON | 4.46702009 | 7.93E-06 | 0.01900679 |
| 7 | 57387410 | 57387410 | 1 | 7_57387410 | ENSG00000280225 | AC237221.2 | 14770 | Downstream | 4.46698539 | 7.93E-06 | 0.01900679 |
| 17 | 17588391 | 17588391 | 1 | 17_17588391 | ENSG00000133027 | PEMT | 0 | INTRON | 4.46697778 | 7.93E-06 | 0.01900679 |
| 7 | 76406048 | 76406048 | 1 | 7_76406048 | ENSG00000146700 | SSC4D | 0 | INTRON | -4.4669534 | 7.93E-06 | 0.01900679 |
| 18 | 25307026 | 25307026 | 1 | 18_25307026 | ENSG00000198795 | ZNF521 | 0 | INTRON | 4.46684761 | 7.94E-06 | 0.01901113 |
| 9 | 72480390 | 72480390 | 1 | 9_72480390 | ENSG00000225947 | AL596448.1 | 9314 | Downstream | 4.46684427 | 7.94E-06 | 0.01901113 |
| 11 | 57021985 | 57021985 | 1 | 11_57021985 | ENSG00000255083 | OR5AK1P | 2964 | Downstream | -4.4667343 | 7.94E-06 | 0.01901669 |
| X | 134472864 | 134472864 | 1 | X_134472864 | ENSG00000165704 | HPRT1 | 0 | INTRON | 4.46672142 | 7.94E-06 | 0.01901669 |
| 5 | 18578756 | 18578756 | 1 | 5_18578756 | ENSG00000241552 | RN7SL58P | 31151 | Downstream | 4.46667007 | 7.94E-06 | 0.01901858 |
| 5 | 95866590 | 95866590 | 1 | 5_95866590 | ENSG00000250362 | AC008592.1 | 0 | INTRON | 4.46659964 | 7.95E-06 | 0.0190198 |
| 5 | 32296491 | 32296491 | 1 | 5_32296491 | ENSG00000150712 | MTMR12 | 0 | INTRON | 4.46659504 | 7.95E-06 | 0.0190198 |
| 22 | 20552983 | 20552983 | 1 | 22_20552983 | ENSG00000099917 | MED15 | 0 | INTRON | 4.46656596 | 7.95E-06 | 0.0190198 |
| 15 | 55047901 | 55047901 | 1 | 15_55047901 | ENSG00000260937 | AC025272.1 | 8821 | Upstream | -4.4665224 | 7.95E-06 | 0.019021 |
| 2 | 118784179 | 118784179 | 1 | 2_118784179 | ENSG00000258910 | LINC01956 | 0 | INTRON | 4.4663267 | 7.96E-06 | 0.01903462 |
| 2 | 69287953 | 69287953 | 1 | 2_69287953 | ENSG00000198380 | GFPT1 | 31815 | Downstream | 4.46630896 | 7.96E-06 | 0.01903462 |
| 22 | 41764892 | 41764892 | 1 | 22_41764892 | ENSG00000167077 | MEI1 | 0 | INTRON | 4.4662742 | 7.96E-06 | 0.01903504 |
| 8 | 23510991 | 23510991 | 1 | 8_23510991 | ENSG00000287166 | AC104561.4 | 16094 | Downstream | 4.46619094 | 7.96E-06 | 0.01903977 |
| 5 | 35560152 | 35560152 | 1 | 5_35560152 | ENSG00000152582 | SPEF2 | 57691 | Upstream | -4.4660469 | 7.97E-06 | 0.01904991 |
| 22 | 11794834 | 11794834 | 1 | 22_11794834 | ENSG00000286406 | AC138776.1 | 32688 | Upstream | 4.46592865 | 7.97E-06 | 0.01905776 |
| 17 | 389273 | 389273 | 1 | 17_389273 | ENSG00000181031 | RPH3AL | 3019 | Upstream | -4.4658014 | 7.98E-06 | 0.0190642 |
| 10 | 38230420 | 38230420 | 1 | 10_38230420 | ENSG00000283930 | AL117339.5 | 0 | INTRON | 4.46579622 | 7.98E-06 | 0.0190642 |
| 4 | 74007924 | 74007924 | 1 | 4_74007924 | ENSG00000287037 | AC097709.1 | 242 | Downstream | 4.46576082 | 7.98E-06 | 0.01906433 |
| 4 | 6006174 | 6006174 | 1 | 4_6006174 | ENSG00000181215 | C4orf50 | 0 | INTRON | 4.46571442 | 7.98E-06 | 0.01906433 |
| 11 | 74088048 | 74088048 | 1 | 11_74088048 | ENSG00000168014 | C2CD3 | 0 | INTRON | -4.4657045 | 7.98E-06 | 0.01906433 |
| 2 | 32310420 | 32310420 | 1 | 2_32310420 | ENSG00000119820 | YIPF4 | 0 | 3UTR | -4.4655611 | 7.99E-06 | 0.01907443 |
| 7 | 16005839 | 16005839 | 1 | 7_16005839 | ENSG00000214960 | CRPPA | 81685 | Downstream | 4.46551447 | 7.99E-06 | 0.01907591 |
| 5 | 69903376 | 69903376 | 1 | 5_69903376 | ENSG00000198237 | AC131392.1 | 0 | INTRON | 4.46532801 | 7.99E-06 | 0.01908788 |
| 13 | 93823105 | 93823105 | 1 | 13_93823105 | ENSG00000183098 | GPC6 | 0 | INTRON | 4.46532006 | 7.99E-06 | 0.01908788 |
| 14 | 65313301 | 65313301 | 1 | 14_65313301 | ENSG00000258760 | AL355076.2 | 0 | INTRON | -4.4651792 | 8.00E-06 | 0.01909649 |
| 8 | 59325709 | 59325709 | 1 | 8_59325709 | ENSG00000201763 | RNA5SP267 | 130175 | Upstream | -4.4651635 | 8.00E-06 | 0.01909649 |
| 4 | 73417934 | 73417934 | 1 | 4_73417934 | ENSG00000163631 | ALB | 0 | INTRON | -4.4651165 | 8.00E-06 | 0.019098 |
| 10 | 19382111 | 19382111 | 1 | 10_19382111 | ENSG00000204740 | MALRD1 | 0 | INTRON | -4.4650855 | 8.00E-06 | 0.01909809 |
| 8 | 78531153 | 78531153 | 1 | 8_78531153 | ENSG00000254266 | PKIA-AS1 | 0 | INTRON | -4.4650506 | 8.00E-06 | 0.01909852 |
| 5 | 65534656 | 65534656 | 1 | 5_65534656 | ENSG00000123219 | CENPK | 0 | INTRON | -4.4649843 | 8.01E-06 | 0.01909853 |
| 15 | 23315397 | 23315397 | 1 | 15_23315397 | ENSG00000274471 | AC242376.2 | 831 | Downstream | 4.46492453 | 8.01E-06 | 0.01909853 |
| 7 | 4847908 | 4847908 | 1 | 7_4847908 | ENSG00000157927 | RADIL | 0 | INTRON | 4.46490253 | 8.01E-06 | 0.01909853 |
| 10 | 21767332 | 21767332 | 1 | 10_21767332 | ENSG00000136770 | DNAJC1 | 0 | INTRON | 4.46481508 | 8.01E-06 | 0.01909853 |
| 11 | 7213689 | 7213689 | 1 | 11_7213689 | ENSG00000255179 | AC027804.1 | 9243 | Upstream | 4.46481075 | 8.01E-06 | 0.01909853 |
| 21 | 41511658 | 41511658 | 1 | 21_41511658 | ENSG00000184012 | TMPRSS2 | 0 | INTRON | 4.46480432 | 8.01E-06 | 0.01909853 |
| 17 | 82089218 | 82089218 | 1 | 17_82089218 | ENSG00000169710 | FASN | 0 | INTRON | -4.4647575 | 8.02E-06 | 0.01909853 |
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| 17 | 29791136 | 29791136 | 1 | 17_29791136 | ENSG00000141298 | SSH2 | 0 | INTRON | -4.46463 | 8.02E-06 | 0.01909853 |
| 1 | 185746227 | 185746227 | 1 | 1_185746227 | ENSG00000143341 | HMCN1 | 0 | INTRON | 4.46461795 | 8.02E-06 | 0.01909853 |
| 12 | 102485543 | 102485543 | 1 | 12_102485543 | ENSG00000017427 | IGF1 | 3799 | Upstream | -4.4646175 | 8.02E-06 | 0.01909853 |
| 6 | 154532218 | 154532218 | 1 | 6_154532218 | ENSG00000287260 | AL357075.4 | 9911 | Downstream | -4.4645635 | 8.02E-06 | 0.01909853 |
| 18 | 77329911 | 77329911 | 1 | 18_77329911 | ENSG00000166573 | GALR1 | 52015 | Downstream | -4.4645617 | 8.02E-06 | 0.01909853 |
| 1 | 114559379 | 114559379 | 1 | 1_114559379 | ENSG00000116752 | BCAS2 | 8177 | Downstream | -4.4645551 | 8.02E-06 | 0.01909853 |
| 15 | 61049353 | 61049353 | 1 | 15_61049353 | ENSG00000069667 | RORA | 0 | INTRON | -4.4645279 | 8.02E-06 | 0.01909853 |
| 4 | 85082213 | 85082213 | 1 | 4_85082213 | ENSG00000201901 | RN7SKP48 | 18282 | Upstream | 4.46452246 | 8.02E-06 | 0.01909853 |
| 11 | 398064 | 398064 | 1 | 11_398064 | ENSG00000184363 | PKP3 | 0 | INTRON | 4.46451084 | 8.03E-06 | 0.01909853 |
| 6 | 44212265 | 44212265 | 1 | 6_44212265 | ENSG00000265439 | RN7SL811P | 2202 | Downstream | 4.46440438 | 8.03E-06 | 0.01909928 |
| 12 | 10618860 | 10618860 | 1 | 12_10618860 | ENSG00000060140 | STYK1 | 62 | Downstream | -4.4644042 | 8.03E-06 | 0.01909928 |
| 13 | 58426314 | 58426314 | 1 | 13_58426314 | ENSG00000276208 | AL161423.1 | 48540 | Downstream | -4.4643692 | 8.03E-06 | 0.01909928 |
| 9 | 74513934 | 74513934 | 1 | 9_74513934 | ENSG00000198963 | RORB | 0 | INTRON | 4.46435927 | 8.03E-06 | 0.01909928 |
| 4 | 28914465 | 28914465 | 1 | 4_28914465 | ENSG00000250190 | LINC02364 | 82032 | Upstream | 4.46435271 | 8.03E-06 | 0.01909928 |
| 3 | 85637768 | 85637768 | 1 | 3_85637768 | ENSG00000175161 | CADM2 | 0 | INTRON | 4.46426143 | 8.03E-06 | 0.01910304 |
| 2 | 241186637 | 241186637 | 1 | 2_241186637 | ENSG00000146205 | ANO7 | 1871 | Upstream | 4.46422512 | 8.04E-06 | 0.01910304 |
| 11 | 102465166 | 102465166 | 1 | 11_102465166 | ENSG00000152558 | TMEM123 | 0 | INTRON | 4.46422082 | 8.04E-06 | 0.01910304 |
| 2 | 107733485 | 107733485 | 1 | 2_107733485 | ENSG00000286769 | AC064869.1 | 0 | INTRON | 4.46414996 | 8.04E-06 | 0.01910669 |
| 8 | 46668210 | 46668210 | 1 | 8_46668210 | ENSG00000254070 | AC104576.1 | 3628 | Upstream | 4.46411096 | 8.04E-06 | 0.0191075 |
| 6 | 78332947 | 78332947 | 1 | 6_78332947 | ENSG00000230309 | AL121718.1 | 271519 | Downstream | -4.4639747 | 8.05E-06 | 0.01910903 |
| 2 | 32491207 | 32491207 | 1 | 2_32491207 | ENSG00000115760 | BIRC6 | 0 | INTRON | -4.4639594 | 8.05E-06 | 0.01910903 |
| 20 | 62977451 | 62977451 | 1 | 20_62977451 | ENSG00000101194 | SLC17A9 | 7866 | Downstream | 4.46395023 | 8.05E-06 | 0.01910903 |
| 21 | 33758352 | 33758352 | 1 | 21_33758352 | ENSG00000205726 | ITSN1 | 0 | INTRON | -4.4639121 | 8.05E-06 | 0.01910903 |
| 2 | 242127886 | 242127886 | 1 | 2_242127886 | ENSG00000220804 | LINC01881 | 0 | INTRON | 4.46389037 | 8.05E-06 | 0.01910903 |
| 22 | 50461789 | 50461789 | 1 | 22_50461789 | ENSG00000100241 | SBF1 | 0 | INTRON | -4.4638879 | 8.05E-06 | 0.01910903 |
| 5 | 115281323 | 115281323 | 1 | 5_115281323 | ENSG00000164221 | CCDC112 | 0 | INTRON | 4.46388458 | 8.05E-06 | 0.01910903 |
| 16 | 27562874 | 27562874 | 1 | 16_27562874 | ENSG00000047578 | KIAA0556 | 0 | INTRON | -4.463828 | 8.05E-06 | 0.01911141 |
| 6 | 26762459 | 26762459 | 1 | 6_26762459 | ENSG00000261584 | AL513548.1 | 74495 | Downstream | 4.46376988 | 8.05E-06 | 0.01911208 |
| 7 | 106311844 | 106311844 | 1 | 7_106311844 | ENSG00000243438 | LARP1BP2 | 3380 | Upstream | -4.4637415 | 8.05E-06 | 0.01911208 |
| 2 | 40477551 | 40477551 | 1 | 2_40477551 | ENSG00000183023 | SLC8A1 | 0 | INTRON | 4.46373086 | 8.05E-06 | 0.01911208 |
| 3 | 7694856 | 7694856 | 1 | 3_7694856 | ENSG00000196277 | GRM7 | 0 | INTRON | 4.46364808 | 8.06E-06 | 0.01911554 |
| 22 | 40285685 | 40285685 | 1 | 22_40285685 | ENSG00000100354 | TNRC6B | 0 | EXON | 4.46363237 | 8.06E-06 | 0.01911554 |
| 2 | 85900112 | 85900112 | 1 | 2_85900112 | ENSG00000115525 | ST3GAL5 | 0 | INTRON | -4.4635457 | 8.06E-06 | 0.01912061 |
| 17 | 44627821 | 44627821 | 1 | 17_44627821 | ENSG00000267384 | SMCO4P1 | 17589 | Upstream | -4.463506 | 8.06E-06 | 0.01912149 |
| 10 | 25212359 | 25212359 | 1 | 10_25212359 | ENSG00000151025 | GPR158 | 0 | INTRON | 4.46336228 | 8.07E-06 | 0.01913075 |
| X | 48347133 | 48347133 | 1 | X_48347133 | ENSG00000165584 | SSX3 | 0 | INTRON | 4.46333433 | 8.07E-06 | 0.01913075 |
| 10 | 24455132 | 24455132 | 1 | 10_24455132 | ENSG00000120549 | KIAA1217 | 0 | INTRON | 4.46331281 | 8.07E-06 | 0.01913075 |
| 1 | 153364023 | 153364023 | 1 | 1_153364023 | ENSG00000163220 | S100A9 | 3000 | Downstream | 4.46309052 | 8.08E-06 | 0.01914795 |
| 5 | 135142413 | 135142413 | 1 | 5_135142413 | ENSG00000224186 | C5orf66 | 0 | INTRON | 4.46305286 | 8.08E-06 | 0.01914865 |
| 11 | 81701516 | 81701516 | 1 | 11_81701516 | ENSG00000245832 | MIR4300HG | 119755 | Downstream | -4.4630178 | 8.08E-06 | 0.01914912 |
| 15 | 98506855 | 98506855 | 1 | 15_98506855 | ENSG00000283597 | FAM169B | 0 | INTRON | 4.46293404 | 8.08E-06 | 0.01915175 |
| 4 | 82597812 | 82597812 | 1 | 4_82597812 | ENSG00000231782 | LINC00575 | 13161 | Downstream | -4.4628999 | 8.09E-06 | 0.01915175 |
| 2 | 142212602 | 142212602 | 1 | 2_142212602 | ENSG00000244125 | AC078882.1 | 74772 | Upstream | 4.46288834 | 8.09E-06 | 0.01915175 |
| 9 | 63565154 | 63565154 | 1 | 9_63565154 | ENSG00000233555 | AL591438.1 | 16099 | Downstream | -4.4628691 | 8.09E-06 | 0.01915175 |
| 9 | 115509938 | 115509938 | 1 | 9_115509938 | ENSG00000228714 | AL691420.1 | 0 | INTRON | -4.4627496 | 8.09E-06 | 0.01915977 |
| 11 | 75756236 | 75756236 | 1 | 11_75756236 | ENSG00000247867 | AP001922.1 | 2218 | Downstream | 4.46269357 | 8.09E-06 | 0.0191617 |
| 3 | 161644961 | 161644961 | 1 | 3_161644961 | ENSG00000288087 | AC112770.1 | 0 | INTRON | -4.4626684 | 8.09E-06 | 0.0191617 |
| 9 | 4348635 | 4348635 | 1 | 9_4348635 | ENSG00000107249 | GLIS3 | 243 | Upstream | -4.4625852 | 8.10E-06 | 0.01916648 |
| 3 | 181436454 | 181436454 | 1 | 3_181436454 | ENSG00000241231 | AC068308.1 | 0 | INTRON | 4.46249317 | 8.10E-06 | 0.01916898 |
| 3 | 21687484 | 21687484 | 1 | 3_21687484 | ENSG00000151789 | ZNF385D | 0 | INTRON | -4.4624892 | 8.10E-06 | 0.01916898 |
| 6 | 3982401 | 3982401 | 1 | 6_3982401 | ENSG00000279926 | AL138831.3 | 271 | Upstream | -4.462438 | 8.10E-06 | 0.01916898 |
| 7 | 135049220 | 135049220 | 1 | 7_135049220 | ENSG00000146856 | AGBL3 | 0 | INTRON | 4.46242624 | 8.10E-06 | 0.01916898 |
| 2 | 235445505 | 235445505 | 1 | 2_235445505 | ENSG00000157985 | AGAP1 | 48537 | Upstream | -4.4623936 | 8.10E-06 | 0.01916898 |
| 18 | 30983107 | 30983107 | 1 | 18_30983107 | ENSG00000251702 | RNU6-857P | 998 | Upstream | 4.46237437 | 8.11E-06 | 0.01916898 |
| 1 | 234974968 | 234974968 | 1 | 1_234974968 | ENSG00000258082 | AL391832.3 | 4678 | Downstream | -4.4623488 | 8.11E-06 | 0.01916898 |
| 2 | 2427629 | 2427629 | 1 | 2_2427629 | ENSG00000186487 | MYT1L | 95965 | Upstream | -4.4622879 | 8.11E-06 | 0.01917176 |
| 3 | 5746147 | 5746147 | 1 | 3_5746147 | ENSG00000229642 | AC087857.1 | 216694 | Upstream | 4.46223374 | 8.11E-06 | 0.01917394 |
| 9 | 75290212 | 75290212 | 1 | 9_75290212 | ENSG00000212316 | RNU6-1228P | 92035 | Downstream | 4.46213384 | 8.11E-06 | 0.0191781 |
| 9 | 118775847 | 118775847 | 1 | 9_118775847 | ENSG00000231166 | TUBB4BP6 | 11502 | Downstream | 4.46211499 | 8.12E-06 | 0.0191781 |
| 18 | 5170946 | 5170946 | 1 | 18_5170946 | ENSG00000266153 | AP005380.1 | 0 | EXON | -4.462098 | 8.12E-06 | 0.0191781 |
| X | 146395042 | 146395042 | 1 | X_146395042 | ENSG00000201594 | RNA5SP517 | 32413 | Downstream | 4.46205284 | 8.12E-06 | 0.01917949 |
| 8 | 72762113 | 72762113 | 1 | 8_72762113 | ENSG00000182674 | KCNB2 | 0 | INTRON | -4.4619372 | 8.12E-06 | 0.01918478 |
| 4 | 121284903 | 121284903 | 1 | 4_121284903 | ENSG00000186867 | QRFPR | 43738 | Downstream | -4.4619343 | 8.12E-06 | 0.01918478 |
| 7 | 92548978 | 92548978 | 1 | 7_92548978 | ENSG00000278819 | AC005156.1 | 0 | INTRON | 4.46187792 | 8.12E-06 | 0.01918553 |
| 3 | 181772743 | 181772743 | 1 | 3_181772743 | ENSG00000242808 | SOX2-OT | 0 | INTRON | 4.46186637 | 8.12E-06 | 0.01918553 |
| X | 17177298 | 17177298 | 1 | X_17177298 | ENSG00000169891 | REPS2 | 24026 | Downstream | -4.4618121 | 8.13E-06 | 0.01918652 |
| 11 | 109484115 | 109484115 | 1 | 11_109484115 | ENSG00000255028 | AP003049.2 | 0 | INTRON | -4.4617959 | 8.13E-06 | 0.01918652 |
| 15 | 51145535 | 51145535 | 1 | 15_51145535 | ENSG00000259240 | MIR4713HG | 0 | INTRON | 4.46174747 | 8.13E-06 | 0.01918693 |
| 7 | 69694117 | 69694117 | 1 | 7_69694117 | ENSG00000158321 | AUTS2 | 0 | INTRON | 4.46173185 | 8.13E-06 | 0.01918693 |
| 15 | 31036616 | 31036616 | 1 | 15_31036616 | ENSG00000259720 | AC009562.1 | 0 | EXON | 4.46159853 | 8.14E-06 | 0.01919378 |
| 13 | 38261619 | 38261619 | 1 | 13_38261619 | ENSG00000223685 | LINC00571 | 0 | INTRON | 4.46151253 | 8.14E-06 | 0.01919378 |
| 22 | 50728273 | 50728273 | 1 | 22_50728273 | ENSG00000251322 | SHANK3 | 0 | INTRON | 4.46150324 | 8.14E-06 | 0.01919378 |
| 17 | 2273290 | 2273290 | 1 | 17_2273290 | ENSG00000070366 | SMG6 | 0 | INTRON | 4.4614831 | 8.14E-06 | 0.01919378 |
| 12 | 32121882 | 32121882 | 1 | 12_32121882 | ENSG00000151746 | BICD1 | 0 | INTRON | -4.4614747 | 8.14E-06 | 0.01919378 |
| 5 | 177343550 | 177343550 | 1 | 5_177343550 | ENSG00000169223 | LMAN2 | 0 | INTRON | -4.461452 | 8.14E-06 | 0.01919378 |
| 18 | 3553682 | 3553682 | 1 | 18_3553682 | ENSG00000170579 | DLGAP1 | 0 | INTRON | 4.46139915 | 8.14E-06 | 0.01919378 |
| 17 | 45249442 | 45249442 | 1 | 17_45249442 | ENSG00000233483 | AC008105.2 | 0 | INTRON | 4.46137214 | 8.14E-06 | 0.01919378 |
| 3 | 144088557 | 144088557 | 1 | 3_144088557 | ENSG00000181744 | DIPK2A | 39838 | Downstream | 4.46136877 | 8.14E-06 | 0.01919378 |
| 11 | 39367741 | 39367741 | 1 | 11_39367741 | ENSG00000201591 | RNU6-99P | 106528 | Downstream | 4.46135841 | 8.14E-06 | 0.01919378 |
| 21 | 25456915 | 25456915 | 1 | 21_25456915 | ENSG00000185433 | LINC00158 | 25214 | Upstream | 4.46130051 | 8.15E-06 | 0.01919542 |
| 3 | 178155838 | 178155838 | 1 | 3_178155838 | ENSG00000286003 | AC110992.1 | 0 | INTRON | -4.4612807 | 8.15E-06 | 0.01919542 |
| 17 | 52175991 | 52175991 | 1 | 17_52175991 | ENSG00000154975 | CA10 | 15974 | Upstream | -4.4612507 | 8.15E-06 | 0.01919546 |
| 8 | 19782383 | 19782383 | 1 | 8_19782383 | ENSG00000147408 | CSGALNACT1 | 24354 | Upstream | 4.46097994 | 8.16E-06 | 0.01921195 |
| 20 | 63346188 | 63346188 | 1 | 20_63346188 | ENSG00000101204 | CHRNA4 | 0 | 3UTR | 4.4609638 | 8.16E-06 | 0.01921195 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
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| 3 | 44279226 | 44279226 | 1 | 3_44279226 | ENSG00000173769 | TOPAZ1 | 0 | INTRON | 4.46094611 | 8.16E-06 | 0.01921195 |
| 12 | 14145361 | 14145361 | 1 | 12_14145361 | ENSG00000256346 | AC092470.1 | 24384 | Upstream | 4.46089467 | 8.16E-06 | 0.01921195 |
| 7 | 102007510 | 102007510 | 1 | 7_102007510 | ENSG00000257923 | CUX1 | 0 | INTRON | -4.4608857 | 8.16E-06 | 0.01921195 |
| 6 | 42054884 | 42054884 | 1 | 6_42054884 | ENSG00000137413 | TAF8 | 0 | INTRON | 4.46083667 | 8.16E-06 | 0.01921195 |
| 3 | 83495299 | 83495299 | 1 | 3_83495299 | ENSG00000288004 | AC023503.1 | 57571 | Downstream | -4.4608334 | 8.16E-06 | 0.01921195 |
| 4 | 15083228 | 15083228 | 1 | 4_15083228 | ENSG00000249252 | AC098829.1 | 0 | INTRON | 4.4608088 | 8.17E-06 | 0.01921195 |
| X | 90133463 | 90133463 | 1 | X_90133463 | ENSG00000226081 | USP12PX | 19757 | Downstream | 4.46078868 | 8.17E-06 | 0.01921195 |
| 8 | 32584461 | 32584461 | 1 | 8_32584461 | ENSG00000157168 | NRG1 | 0 | INTRON | 4.46077022 | 8.17E-06 | 0.01921195 |
| 13 | 101501556 | 101501556 | 1 | 13_101501556 | ENSG00000198542 | ITGBL1 | 0 | INTRON | -4.4606061 | 8.17E-06 | 0.01922364 |
| 3 | 12667109 | 12667109 | 1 | 3_12667109 | ENSG00000132155 | RAF1 | 2883 | Upstream | 4.46058061 | 8.17E-06 | 0.01922364 |
| 7 | 110600533 | 110600533 | 1 | 7_110600533 | ENSG00000287186 | AC073326.2 | 8329 | Downstream | -4.4605095 | 8.18E-06 | 0.01922448 |
| 12 | 53824307 | 53824307 | 1 | 12_53824307 | ENSG00000286069 | AC076968.2 | 0 | INTRON | -4.460499 | 8.18E-06 | 0.01922448 |
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| 12 | 64243548 | 64243548 | 1 | 12_64243548 | ENSG00000243024 | AC012158.1 | 0 | INTRON | -4.4604528 | 8.18E-06 | 0.01922448 |
| 3 | 107005230 | 107005230 | 1 | 3_107005230 | ENSG00000242759 | LINC00882 | 0 | INTRON | 4.46042293 | 8.18E-06 | 0.0192245 |
| 7 | 79443128 | 79443128 | 1 | 7_79443128 | ENSG00000187391 | MAGI2 | 0 | INTRON | -4.4603734 | 8.18E-06 | 0.01922531 |
| 1 | 46119862 | 46119862 | 1 | 1_46119862 | ENSG00000278139 | AL358075.4 | 0 | INTRON | 4.46035477 | 8.18E-06 | 0.01922531 |
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| 1 | 223081109 | 223081109 | 1 | 1_223081109 | ENSG00000287338 | AL929091.1 | 10762 | Downstream | -4.4602388 | 8.19E-06 | 0.0192304 |
| 5 | 27941421 | 27941421 | 1 | 5_27941421 | ENSG00000250079 | AC093300.1 | 271937 | Downstream | 4.46014261 | 8.19E-06 | 0.01923524 |
| 6 | 135908245 | 135908245 | 1 | 6_135908245 | ENSG00000171408 | PDE7B | 0 | INTRON | 4.46012576 | 8.19E-06 | 0.01923524 |
| 16 | 22836635 | 22836635 | 1 | 16_22836635 | ENSG00000122254 | HS3ST2 | 0 | INTRON | -4.4600405 | 8.19E-06 | 0.01924024 |
| 3 | 188661695 | 188661695 | 1 | 3_188661695 | ENSG00000145012 | LPP | 0 | INTRON | 4.45953292 | 8.21E-06 | 0.01928244 |
| 20 | 17377092 | 17377092 | 1 | 20_17377092 | ENSG00000125851 | PCSK2 | 0 | INTRON | -4.4595117 | 8.21E-06 | 0.01928244 |
| 3 | 59832322 | 59832322 | 1 | 3_59832322 | ENSG00000189283 | FHIT | 0 | INTRON | 4.45947364 | 8.22E-06 | 0.01928247 |
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| 2 | 130615524 | 130615524 | 1 | 2_130615524 | ENSG00000222038 | POTEJ | 0 | INTRON | 4.45942274 | 8.22E-06 | 0.01928247 |
| 5 | 68894880 | 68894880 | 1 | 5_68894880 | ENSG00000249335 | AC093523.1 | 0 | INTRON | 4.45938702 | 8.22E-06 | 0.01928302 |
| 4 | 183698379 | 183698379 | 1 | 4_183698379 | ENSG00000168538 | TRAPPC11 | 0 | INTRON | 4.45914151 | 8.23E-06 | 0.01929928 |
| 21 | 20758735 | 20758735 | 1 | 21_20758735 | ENSG00000224924 | LINC00320 | 0 | INTRON | -4.4591399 | 8.23E-06 | 0.01929928 |
| 16 | 15497783 | 15497783 | 1 | 16_15497783 | ENSG00000261130 | AC140504.1 | 0 | INTRON | 4.45911774 | 8.23E-06 | 0.01929928 |
| 11 | 110021504 | 110021504 | 1 | 11_110021504 | ENSG00000137710 | RDX | 0 | INTRON | 4.45908063 | 8.23E-06 | 0.01929996 |
| 20 | 63156331 | 63156331 | 1 | 20_63156331 | ENSG00000286628 | AL096828.5 | 4244 | Upstream | 4.45900118 | 8.23E-06 | 0.01930446 |
| 21 | 30461729 | 30461729 | 1 | 21_30461729 | ENSG00000184351 | KRTAP19-1 | 17976 | Downstream | 4.45893084 | 8.24E-06 | 0.01930586 |
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| 6 | 34181090 | 34181090 | 1 | 6_34181090 | ENSG00000271231 | KRT18P9 | 8689 | Upstream | 4.45885527 | 8.24E-06 | 0.01930711 |
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| 8 | 16526143 | 16526143 | 1 | 8_16526143 | ENSG00000038945 | MSR1 | 0 | INTRON | 4.45881455 | 8.24E-06 | 0.01930711 |
| 17 | 69753343 | 69753343 | 1 | 17_69753343 | ENSG00000227517 | LINC01483 | 0 | INTRON | 4.45877126 | 8.24E-06 | 0.01930711 |
| 6 | 149129596 | 149129596 | 1 | 6_149129596 | ENSG00000219487 | AL603766.1 | 16924 | Upstream | 4.45874758 | 8.24E-06 | 0.01930711 |
| 1 | 186890053 | 186890053 | 1 | 1_186890053 | ENSG00000116711 | PLA2G4A | 0 | INTRON | -4.4587091 | 8.25E-06 | 0.01930711 |
| 20 | 17765520 | 17765520 | 1 | 20_17765520 | ENSG00000125888 | BANF2 | 29649 | Downstream | -4.4586822 | 8.25E-06 | 0.01930711 |
| 8 | 102902165 | 102902165 | 1 | 8_102902165 | ENSG00000253320 | AZIN1-AS1 | 0 | INTRON | -4.4586642 | 8.25E-06 | 0.01930711 |
| 3 | 124642144 | 124642144 | 1 | 3_124642144 | ENSG00000160145 | KALRN | 0 | INTRON | 4.45864704 | 8.25E-06 | 0.01930711 |
| 4 | 45986037 | 45986037 | 1 | 4_45986037 | ENSG00000222257 | RN7SKP199 | 9081 | Upstream | -4.4585579 | 8.25E-06 | 0.01931248 |
| 20 | 60637942 | 60637942 | 1 | 20_60637942 | ENSG00000228340 | MIR646HG | 0 | INTRON | 4.4584758 | 8.25E-06 | 0.01931722 |
| 9 | 92565954 | 92565954 | 1 | 9_92565954 | ENSG00000188312 | CENPP | 0 | INTRON | -4.4582474 | 8.26E-06 | 0.01933026 |
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| 5 | 115250045 | 115250045 | 1 | 5_115250045 | ENSG00000164219 | PGGT1B | 0 | INTRON | 4.45824267 | 8.26E-06 | 0.01933026 |
| 19 | 54254649 | 54254649 | 1 | 19_54254649 | ENSG00000105609 | LILRB5 | 0 | EXON | 4.45807808 | 8.27E-06 | 0.01934245 |
| 12 | 33664272 | 33664272 | 1 | 12_33664272 | ENSG00000270807 | AC024153.1 | 53580 | Upstream | -4.4580028 | 8.27E-06 | 0.01934658 |
| 16 | 4300582 | 4300582 | 1 | 16_4300582 | ENSG00000126603 | GLIS2 | 14178 | Upstream | 4.4579243 | 8.28E-06 | 0.01935101 |
| 14 | 33718093 | 33718093 | 1 | 14_33718093 | ENSG00000151322 | NPAS3 | 0 | INTRON | -4.4578648 | 8.28E-06 | 0.01935372 |
| 10 | 870924 | 870924 | 1 | 10_870924 | ENSG00000107929 | LARP4B | 0 | INTRON | 4.45776479 | 8.28E-06 | 0.0193551 |
| 14 | 23177447 | 23177447 | 1 | 14_23177447 | ENSG00000092068 | SLC7A8 | 0 | INTRON | -4.4577605 | 8.28E-06 | 0.0193551 |
| 8 | 144815875 | 144815875 | 1 | 8_144815875 | ENSG00000197363 | ZNF517 | 4706 | Downstream | 4.45771991 | 8.28E-06 | 0.0193551 |
| 10 | 34245429 | 34245429 | 1 | 10_34245429 | ENSG00000148498 | PARD3 | 0 | INTRON | -4.4577039 | 8.28E-06 | 0.0193551 |
| 7 | 71025584 | 71025584 | 1 | 7_71025584 | ENSG00000185274 | GALNT17 | 106559 | Upstream | 4.45767756 | 8.29E-06 | 0.0193551 |
| 11 | 61738834 | 61738834 | 1 | 11_61738834 | ENSG00000134780 | DAGLA | 0 | INTRON | -4.4576728 | 8.29E-06 | 0.0193551 |
| 11 | 4204951 | 4204951 | 1 | 11_4204951 | ENSG00000254480 | LINC02749 | 2288 | Downstream | 4.45760573 | 8.29E-06 | 0.01935682 |
| 2 | 109270673 | 109270673 | 1 | 2_109270673 | ENSG00000172985 | SH3RF3 | 0 | INTRON | 4.45759484 | 8.29E-06 | 0.01935682 |
| 8 | 132523703 | 132523703 | 1 | 8_132523703 | ENSG00000253521 | HPYR1 | 0 | INTRON | -4.4574988 | 8.29E-06 | 0.01936097 |
| 13 | 59693658 | 59693658 | 1 | 13_59693658 | ENSG00000139734 | DIAPH3 | 0 | INTRON | 4.45749009 | 8.29E-06 | 0.01936097 |
| 20 | 33592578 | 33592578 | 1 | 20_33592578 | ENSG00000078699 | CBFA2T2 | 0 | INTRON | 4.45726033 | 8.30E-06 | 0.01936637 |
| 3 | 185289904 | 185289904 | 1 | 3_185289904 | ENSG00000073803 | MAP3K13 | 0 | INTRON | -4.4572414 | 8.30E-06 | 0.01936637 |
| 6 | 31540888 | 31540888 | 1 | 6_31540888 | ENSG00000198563 | DDX39B | 0 | EXON | 4.45722753 | 8.30E-06 | 0.01936637 |
| 3 | 49538944 | 49538944 | 1 | 3_49538944 | ENSG00000173402 | DAG1 | 3326 | Downstream | 4.45721049 | 8.30E-06 | 0.01936637 |
| 12 | 113410187 | 113410187 | 1 | 12_113410187 | ENSG00000135094 | SDS | 0 | INTRON | -4.4571703 | 8.30E-06 | 0.01936637 |
| 7 | 19311282 | 19311282 | 1 | 7_19311282 | ENSG00000223838 | AC007091.1 | 42248 | Upstream | -4.4571536 | 8.31E-06 | 0.01936637 |
| 2 | 54398969 | 54398969 | 1 | 2_54398969 | ENSG00000177994 | C2orf73 | 15227 | Downstream | 4.45712691 | 8.31E-06 | 0.01936637 |
| X | 71262672 | 71262672 | 1 | X_71262672 | ENSG00000147130 | ZMYM3 | 7526 | Upstream | 4.45712496 | 8.31E-06 | 0.01936637 |
| 7 | 74111515 | 74111515 | 1 | 7_74111515 | ENSG00000106683 | LIMK1 | 0 | INTRON | -4.4570853 | 8.31E-06 | 0.01936637 |
| 4 | 147478537 | 147478537 | 1 | 4_147478537 | ENSG00000151617 | EDNRA | 2379 | Upstream | 4.45705737 | 8.31E-06 | 0.01936637 |
| 1 | 219300009 | 219300009 | 1 | 1_219300009 | ENSG00000287676 | AC096642.2 | 2341 | Downstream | 4.45704192 | 8.31E-06 | 0.01936637 |
| 9 | 854565 | 854565 | 1 | 9_854565 | ENSG00000137090 | DMRT1 | 0 | INTRON | 4.45703614 | 8.31E-06 | 0.01936637 |
| 2 | 209976969 | 209976969 | 1 | 2_209976969 | ENSG00000144406 | UNC80 | 0 | EXON | 4.45701322 | 8.31E-06 | 0.01936637 |
| 8 | 24263557 | 24263557 | 1 | 8_24263557 | ENSG00000042980 | ADAM28 | 30511 | Upstream | 4.45698452 | 8.31E-06 | 0.01936637 |
| 19 | 33807243 | 33807243 | 1 | 19_33807243 | ENSG00000153885 | KCTD15 | 0 | INTRON | -4.4569442 | 8.31E-06 | 0.01936637 |
| 17 | 2760249 | 2760249 | 1 | 17_2760249 | ENSG00000132359 | RAP1GAP2 | 0 | INTRON | -4.4569358 | 8.31E-06 | 0.01936637 |
| 1 | 204382636 | 204382636 | 1 | 1_204382636 | ENSG00000226330 | AL606489.1 | 0 | INTRON | -4.4568497 | 8.32E-06 | 0.01936637 |
| 13 | 21015352 | 21015352 | 1 | 13_21015352 | ENSG00000233851 | LATS2-AS1 | 0 | INTRON | 4.456849 | 8.32E-06 | 0.01936637 |
| 7 | 15106045 | 15106045 | 1 | 7_15106045 | ENSG00000227489 | AC006458.1 | 37394 | Downstream | 4.45684703 | 8.32E-06 | 0.01936637 |
| 12 | 94724616 | 94724616 | 1 | 12_94724616 | ENSG00000057704 | TMCC3 | 74059 | Upstream | -4.4568425 | 8.32E-06 | 0.01936637 |
| 8 | 110819734 | 110819734 | 1 | 8_110819734 | ENSG00000253994 | NDUFB9P3 | 9840 | Upstream | 4.45677385 | 8.32E-06 | 0.01936761 |
| 2 | 127756799 | 127756799 | 1 | 2_127756799 | ENSG00000136709 | WDR33 | 0 | INTRON | -4.4567305 | 8.32E-06 | 0.01936761 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 113090824 | 113090824 | 1 | 1_113090824 | ENSG00000198799 | LRIG2 | 0 | INTRON | -4.4567123 | 8.32E-06 | 0.01936761 |
| 7 | 47670106 | 47670106 | 1 | 7_47670106 | ENSG00000221845 | C7orf65 | 8458 | Downstream | -4.4566982 | 8.32E-06 | 0.01936761 |
| 15 | 61811210 | 61811210 | 1 | 15_61811210 | ENSG00000259564 | AC009554.1 | 23471 | Upstream | 4.45668213 | 8.32E-06 | 0.01936761 |
| 12 | 115080365 | 115080365 | 1 | 12_115080365 | ENSG00000257958 | AC008125.1 | 212 | Downstream | 4.45664033 | 8.33E-06 | 0.01936874 |
| 21 | 29906104 | 29906104 | 1 | 21_29906104 | ENSG00000171189 | GRIK1 | 0 | INTRON | 4.4565883 | 8.33E-06 | 0.01937079 |
| X | 8173530 | 8173530 | 1 | X_8173530 | ENSG00000285679 | AC079142.1 | 0 | INTRON | -4.4565482 | 8.33E-06 | 0.01937114 |
| 6 | 74046827 | 74046827 | 1 | 6_74046827 | ENSG00000223786 | AL357507.1 | 22623 | Upstream | 4.45652582 | 8.33E-06 | 0.01937114 |
| 16 | 67751653 | 67751653 | 1 | 16_67751653 | ENSG00000141084 | RANBP10 | 0 | INTRON | 4.45647007 | 8.33E-06 | 0.01937157 |
| 15 | 57691692 | 57691692 | 1 | 15_57691692 | ENSG00000137878 | GCOM1 | 0 | EXON | 4.45646247 | 8.33E-06 | 0.01937157 |
| 1 | 39394349 | 39394349 | 1 | 1_39394349 | ENSG00000127603 | MACF1 | 0 | INTRON | 4.45638213 | 8.34E-06 | 0.01937618 |
| 1 | 61515710 | 61515710 | 1 | 1_61515710 | ENSG00000284808 | AC099791.3 | 0 | INTRON | 4.45629902 | 8.34E-06 | 0.01938104 |
| 2 | 79659794 | 79659794 | 1 | 2_79659794 | ENSG00000066032 | CTNNA2 | 0 | INTRON | 4.45622397 | 8.34E-06 | 0.01938517 |
| 5 | 28255564 | 28255564 | 1 | 5_28255564 | ENSG00000249785 | LINC02103 | 30399 | Downstream | -4.4561324 | 8.35E-06 | 0.01939077 |
| 8 | 40756316 | 40756316 | 1 | 8_40756316 | ENSG00000165061 | ZMAT4 | 0 | INTRON | -4.4560507 | 8.35E-06 | 0.01939077 |
| 5 | 5811274 | 5811274 | 1 | 5_5811274 | ENSG00000286986 | AC026736.1 | 116532 | Downstream | 4.45604535 | 8.35E-06 | 0.01939077 |
| 1 | 152885868 | 152885868 | 1 | 1_152885868 | ENSG00000163206 | SMCP | 821 | Downstream | 4.45604489 | 8.35E-06 | 0.01939077 |
| 11 | 33130345 | 33130345 | 1 | 11_33130345 | ENSG00000176102 | CSTF3 | 0 | INTRON | -4.4558784 | 8.36E-06 | 0.01940067 |
| 16 | 26887535 | 26887535 | 1 | 16_26887535 | ENSG00000260580 | AC009035.1 | 158409 | Downstream | 4.45586345 | 8.36E-06 | 0.01940067 |
| 14 | 95938233 | 95938233 | 1 | 14_95938233 | ENSG00000250366 | TUNAR | 12662 | Downstream | -4.4558476 | 8.36E-06 | 0.01940067 |
| 5 | 45221923 | 45221923 | 1 | 5_45221923 | ENSG00000287540 | AC116350.1 | 4362 | Upstream | 4.45577713 | 8.36E-06 | 0.01940393 |
| 19 | 10945349 | 10945349 | 1 | 19_10945349 | ENSG00000142444 | TIMM29 | 11814 | Downstream | 4.45575299 | 8.36E-06 | 0.01940393 |
| 7 | 4080942 | 4080942 | 1 | 7_4080942 | ENSG00000146555 | SDK1 | 0 | INTRON | 4.45565269 | 8.36E-06 | 0.01940899 |
| 4 | 87368185 | 87368185 | 1 | 4_87368185 | ENSG00000198189 | HSD17B11 | 0 | INTRON | -4.4556302 | 8.36E-06 | 0.01940899 |
| X | 46562755 | 46562755 | 1 | X_46562755 | ENSG00000270499 | MKI67P1 | 6 | Upstream | -4.4556093 | 8.37E-06 | 0.01940899 |
| 7 | 134044388 | 134044388 | 1 | 7_134044388 | ENSG00000131558 | EXOC4 | 0 | INTRON | 4.45551723 | 8.37E-06 | 0.0194142 |
| 9 | 31685674 | 31685674 | 1 | 9_31685674 | ENSG00000235148 | HMGB3P23 | 40514 | Upstream | -4.4554933 | 8.37E-06 | 0.0194142 |
| 11 | 33113036 | 33113036 | 1 | 11_33113036 | ENSG00000176102 | CSTF3 | 0 | INTRON | 4.45541078 | 8.37E-06 | 0.01941745 |
| 7 | 2247099 | 2247099 | 1 | 7_2247099 | ENSG00000106268 | NUDT1 | 0 | INTRON | 4.45539882 | 8.37E-06 | 0.01941745 |
| 2 | 73686085 | 73686085 | 1 | 2_73686085 | ENSG00000163016 | ALMS1P1 | 0 | INTRON | 4.45532166 | 8.38E-06 | 0.01942179 |
| 14 | 82480752 | 82480752 | 1 | 14_82480752 | ENSG00000276782 | Metazoa_SRP | 50596 | Downstream | 4.45526889 | 8.38E-06 | 0.01942393 |
| 10 | 21583892 | 21583892 | 1 | 10_21583892 | ENSG00000078403 | MLLT10 | 0 | INTRON | 4.45523003 | 8.38E-06 | 0.01942397 |
| 3 | 137085347 | 137085347 | 1 | 3_137085347 | ENSG00000174564 | IL20RB | 74262 | Downstream | -4.45521 | 8.38E-06 | 0.01942397 |
| 12 | 17538499 | 17538499 | 1 | 12_17538499 | ENSG00000256994 | LINC02378 | 0 | INTRON | -4.4551803 | 8.38E-06 | 0.01942401 |
| 2 | 193456219 | 193456219 | 1 | 2_193456219 | ENSG00000235218 | AC092638.2 | 178605 | Upstream | -4.4550402 | 8.39E-06 | 0.01943288 |
| 17 | 30940390 | 30940390 | 1 | 17_30940390 | ENSG00000184060 | ADAP2 | 0 | INTRON | 4.45502393 | 8.39E-06 | 0.01943288 |
| 12 | 2434248 | 2434248 | 1 | 12_2434248 | ENSG00000151067 | CACNA1C | 0 | INTRON | -4.4549101 | 8.39E-06 | 0.01943376 |
| 14 | 73532692 | 73532692 | 1 | 14_73532692 | ENSG00000187105 | HEATR4 | 0 | INTRON | 4.45486994 | 8.39E-06 | 0.01943376 |
| 6 | 134356582 | 134356582 | 1 | 6_134356582 | ENSG00000236700 | LINC01010 | 0 | INTRON | 4.45486497 | 8.39E-06 | 0.01943376 |
| 12 | 125070168 | 125070168 | 1 | 12_125070168 | ENSG00000081760 | AACS | 0 | INTRON | -4.4548599 | 8.39E-06 | 0.01943376 |
| 14 | 57573106 | 57573106 | 1 | 14_57573106 | ENSG00000151812 | SLC35F4 | 0 | INTRON | 4.45484035 | 8.40E-06 | 0.01943376 |
| 14 | 50197561 | 50197561 | 1 | 14_50197561 | ENSG00000100485 | SOS2 | 0 | INTRON | -4.4547972 | 8.40E-06 | 0.01943376 |
| 1 | 183973225 | 183973225 | 1 | 1_183973225 | ENSG00000198756 | COLGALT2 | 0 | INTRON | 4.45476565 | 8.40E-06 | 0.01943376 |
| 13 | 96497110 | 96497110 | 1 | 13_96497110 | ENSG00000185352 | HS6ST3 | 0 | INTRON | 4.45475301 | 8.40E-06 | 0.01943376 |
| 1 | 204782598 | 204782598 | 1 | 1_204782598 | ENSG00000287197 | AC096675.1 | 40065 | Downstream | -4.4547514 | 8.40E-06 | 0.01943376 |
| 7 | 146619714 | 146619714 | 1 | 7_146619714 | ENSG00000174469 | CNTNAP2 | 0 | INTRON | -4.454443 | 8.41E-06 | 0.01945907 |
| Y | 3629671 | 3629671 | 1 | Y_3629671 | ENSG00000176679 | TGIF2LY | 49630 | Downstream | -4.4543484 | 8.41E-06 | 0.01946249 |
| X | 113942677 | 113942677 | 1 | X_113942677 | ENSG00000241743 | XACT | 0 | INTRON | -4.454347 | 8.41E-06 | 0.01946249 |
| 11 | 63876631 | 63876631 | 1 | 11_63876631 | ENSG00000072518 | MARK2 | 0 | INTRON | 4.45428962 | 8.42E-06 | 0.01946473 |
| 5 | 131141778 | 131141778 | 1 | 5_131141778 | ENSG00000169567 | HINT1 | 17248 | Downstream | -4.454264 | 8.42E-06 | 0.01946473 |
| 3 | 188035119 | 188035119 | 1 | 3_188035119 | ENSG00000225058 | AC092941.1 | 31129 | Upstream | 4.45421684 | 8.42E-06 | 0.01946581 |
| 6 | 140740889 | 140740889 | 1 | 6_140740889 | ENSG00000285875 | AL035446.2 | 0 | INTRON | -4.4541826 | 8.42E-06 | 0.01946581 |
| 1 | 5666366 | 5666366 | 1 | 1_5666366 | ENSG00000236948 | AL365255.1 | 0 | INTRON | 4.45414714 | 8.42E-06 | 0.01946581 |
| 2 | 68663530 | 68663530 | 1 | 2_68663530 | ENSG00000169618 | PROKR1 | 5283 | Downstream | 4.45412875 | 8.42E-06 | 0.01946581 |
| 2 | 64946042 | 64946042 | 1 | 2_64946042 | ENSG00000237638 | LINC02245 | 0 | EXON | 4.45406453 | 8.43E-06 | 0.01946581 |
| 16 | 77218667 | 77218667 | 1 | 16_77218667 | ENSG00000261063 | AC009139.2 | 0 | INTRON | 4.45405738 | 8.43E-06 | 0.01946581 |
| 7 | 126938881 | 126938881 | 1 | 7_126938881 | ENSG00000179603 | GRM8 | 0 | INTRON | 4.45404738 | 8.43E-06 | 0.01946581 |
| 2 | 139684264 | 139684264 | 1 | 2_139684264 | ENSG00000235232 | MRPS18BP2 | 14959 | Downstream | 4.45401892 | 8.43E-06 | 0.01946581 |
| 1 | 186003779 | 186003779 | 1 | 1_186003779 | ENSG00000143341 | HMCN1 | 0 | EXON | 4.4538922 | 8.43E-06 | 0.01947466 |
| 1 | 32091039 | 32091039 | 1 | 1_32091039 | ENSG00000121775 | TMEM39B | 0 | INTRON | 4.45385532 | 8.43E-06 | 0.01947537 |
| 6 | 36124243 | 36124243 | 1 | 6_36124243 | ENSG00000156711 | MAPK13 | 3565 | Upstream | -4.4537811 | 8.44E-06 | 0.01947946 |
| 19 | 49637375 | 49637375 | 1 | 19_49637375 | ENSG00000126458 | RRAS | 0 | INTRON | 4.45362365 | 8.44E-06 | 0.01948877 |
| 1 | 243207135 | 243207135 | 1 | 1_243207135 | ENSG00000143702 | CEP170 | 0 | INTRON | 4.45359976 | 8.44E-06 | 0.01948877 |
| 4 | 77606673 | 77606673 | 1 | 4_77606673 | ENSG00000156234 | CXCL13 | 0 | INTRON | 4.4535913 | 8.44E-06 | 0.01948877 |
| 1 | 62554210 | 62554210 | 1 | 1_62554210 | ENSG00000116641 | DOCK7 | 0 | INTRON | -4.4535077 | 8.45E-06 | 0.01949371 |
| 4 | 49640785 | 49640785 | 1 | 4_49640785 | ENSG00000249337 | SNX18P25 | 51256 | Downstream | -4.4533943 | 8.45E-06 | 0.01950079 |
| 16 | 52189199 | 52189199 | 1 | 16_52189199 | ENSG00000260975 | AC007333.2 | 8812 | Downstream | 4.45337162 | 8.45E-06 | 0.01950079 |
| 17 | 46316215 | 46316215 | 1 | 17_46316215 | ENSG00000228696 | ARL17B | 0 | INTRON | 4.45324868 | 8.46E-06 | 0.01950932 |
| 1 | 79589047 | 79589047 | 1 | 1_79589047 | ENSG00000232676 | ADH5P2 | 66844 | Downstream | 4.45314564 | 8.46E-06 | 0.01950977 |
| 1 | 113652568 | 113652568 | 1 | 1_113652568 | ENSG00000081026 | MAGI3 | 0 | INTRON | -4.4531287 | 8.46E-06 | 0.01950977 |
| 11 | 15935852 | 15935852 | 1 | 11_15935852 | ENSG00000254661 | LINC02682 | 4901 | Downstream | -4.4531251 | 8.46E-06 | 0.01950977 |
| 2 | 226942538 | 226942538 | 1 | 2_226942538 | ENSG00000144468 | RHBDD1 | 0 | INTRON | -4.4531088 | 8.46E-06 | 0.01950977 |
| 8 | 143863408 | 143863408 | 1 | 8_143863408 | ENSG00000261150 | EPPK1 | 0 | EXON | -4.4530983 | 8.46E-06 | 0.01950977 |
| 5 | 120470622 | 120470622 | 1 | 5_120470622 | ENSG00000184838 | PRR16 | 0 | INTRON | -4.4530391 | 8.47E-06 | 0.01951251 |
| 2 | 87758231 | 87758231 | 1 | 2_87758231 | ENSG00000125551 | PLGLB2 | 0 | 3UTR | 4.45296791 | 8.47E-06 | 0.01951589 |
| 1 | 203428674 | 203428674 | 1 | 1_203428674 | ENSG00000271588 | LARP7P1 | 28093 | Upstream | -4.4529351 | 8.47E-06 | 0.01951589 |
| 6 | 50423598 | 50423598 | 1 | 6_50423598 | ENSG00000286405 | AL132799.1 | 7723 | Downstream | -4.4529147 | 8.47E-06 | 0.01951589 |
| 6 | 127558089 | 127558089 | 1 | 6_127558089 | ENSG00000184530 | C6orf58 | 0 | INTRON | -4.4528602 | 8.47E-06 | 0.0195163 |
| 3 | 30265920 | 30265920 | 1 | 3_30265920 | ENSG00000287774 | AC025614.2 | 26627 | Upstream | -4.452846 | 8.47E-06 | 0.0195163 |
| 10 | 77791366 | 77791366 | 1 | 10_77791366 | ENSG00000151208 | DLG5 | 0 | 3UTR | 4.45282305 | 8.47E-06 | 0.0195163 |
| 11 | 3780249 | 3780249 | 1 | 11_3780249 | ENSG00000110713 | NUP98 | 0 | INTRON | -4.4526299 | 8.48E-06 | 0.01952756 |
| 7 | 157206285 | 157206285 | 1 | 7_157206285 | ENSG00000009335 | UBE3C | 0 | INTRON | 4.45257225 | 8.48E-06 | 0.01952756 |
| 17 | 605626 | 605626 | 1 | 17_605626 | ENSG00000141252 | VPS53 | 0 | INTRON | -4.4525487 | 8.49E-06 | 0.01952756 |
| 17 | 61193485 | 61193485 | 1 | 17_61193485 | ENSG00000141376 | BCAS3 | 0 | INTRON | -4.452544 | 8.49E-06 | 0.01952756 |
| 9 | 119262361 | 119262361 | 1 | 9_119262361 | ENSG00000078725 | BRINP1 | 0 | INTRON | 4.45254337 | 8.49E-06 | 0.01952756 |
| 7 | 80719370 | 80719370 | 1 | 7_80719370 | ENSG00000075223 | SEMA3C | 23167 | Downstream | -4.452525 | 8.49E-06 | 0.01952756 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
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| 11 | 14828583 | 14828583 | 1 | 11_14828583 | ENSG00000152270 | PDE3B | 0 | INTRON | -4.452454 | 8.49E-06 | 0.01952938 |
| 2 | 21754810 | 21754810 | 1 | 2_21754810 | ENSG00000233005 | AC018742.1 | 0 | INTRON | -4.452447 | 8.49E-06 | 0.01952938 |
| 10 | 133340455 | 133340455 | 1 | 10_133340455 | ENSG00000283496 | ZNF511-PRAP1 | 0 | INTRON | -4.4523363 | 8.49E-06 | 0.01953597 |
| 15 | 32437681 | 32437681 | 1 | 15_32437681 | ENSG00000261708 | DNM1P32 | 0 | EXON | -4.452305 | 8.50E-06 | 0.01953597 |
| 2 | 122674031 | 122674031 | 1 | 2_122674031 | ENSG00000286481 | AC011246.1 | 0 | INTRON | 4.45226555 | 8.50E-06 | 0.01953597 |
| 18 | 40830946 | 40830946 | 1 | 18_40830946 | ENSG00000286328 | AC079052.1 | 510372 | Upstream | 4.45225847 | 8.50E-06 | 0.01953597 |
| 22 | 17872859 | 17872859 | 1 | 22_17872859 | ENSG00000243156 | MICAL3 | 0 | INTRON | 4.45218454 | 8.50E-06 | 0.01954006 |
| 15 | 94352688 | 94352688 | 1 | 15_94352688 | ENSG00000140563 | MCTP2 | 0 | INTRON | 4.45204078 | 8.51E-06 | 0.01955051 |
| 15 | 86121827 | 86121827 | 1 | 15_86121827 | ENSG00000273540 | AGBL1 | 0 | INTRON | -4.4519448 | 8.51E-06 | 0.01955661 |
| 19 | 2752412 | 2752412 | 1 | 19_2752412 | ENSG00000104969 | SGTA | 2302 | Downstream | 4.45186368 | 8.51E-06 | 0.01956136 |
| 11 | 89325217 | 89325217 | 1 | 11_89325217 | ENSG00000086991 | NOX4 | 0 | 3UTR | -4.4517596 | 8.52E-06 | 0.01956574 |
| 2 | 215522748 | 215522748 | 1 | 2_215522748 | ENSG00000234938 | AC012668.2 | 7698 | Downstream | -4.4517576 | 8.52E-06 | 0.01956574 |
| 2 | 43897251 | 43897251 | 1 | 2_43897251 | ENSG00000138095 | LRPPRC | 0 | INTRON | -4.4516693 | 8.52E-06 | 0.01956918 |
| 15 | 22857564 | 22857564 | 1 | 15_22857564 | ENSG00000140157 | NIPA2 | 0 | INTRON | -4.4516339 | 8.52E-06 | 0.01956918 |
| 6 | 7365931 | 7365931 | 1 | 6_7365931 | ENSG00000164304 | CAGE1 | 0 | INTRON | -4.4516329 | 8.52E-06 | 0.01956918 |
| 2 | 112236084 | 112236084 | 1 | 2_112236084 | ENSG00000144161 | ZC3H8 | 0 | INTRON | 4.45159969 | 8.52E-06 | 0.01956957 |
| 3 | 22388063 | 22388063 | 1 | 3_22388063 | ENSG00000132967 | HMGB1P5 | 5134 | Downstream | -4.4515369 | 8.53E-06 | 0.01957265 |
| 4 | 124271666 | 124271666 | 1 | 4_124271666 | ENSG00000249837 | AC121154.1 | 19622 | Upstream | 4.45126766 | 8.54E-06 | 0.01959457 |
| 5 | 98449227 | 98449227 | 1 | 5_98449227 | ENSG00000249448 | MTCO1P24 | 37435 | Upstream | 4.45122509 | 8.54E-06 | 0.01959581 |
| 16 | 858535 | 858535 | 1 | 16_858535 | ENSG00000287855 | AL023882.1 | 0 | INTRON | 4.45118415 | 8.54E-06 | 0.01959691 |
| 6 | 45898954 | 45898954 | 1 | 6_45898954 | ENSG00000112782 | CLIC5 | 0 | 3UTR | -4.4511177 | 8.54E-06 | 0.0195984 |
| 4 | 111103607 | 111103607 | 1 | 4_111103607 | ENSG00000251312 | AC004062.1 | 39380 | Downstream | 4.45107396 | 8.54E-06 | 0.0195984 |
| 4 | 58948373 | 58948373 | 1 | 4_58948373 | ENSG00000251339 | AC017091.1 | 0 | INTRON | -4.4510681 | 8.54E-06 | 0.0195984 |
| 9 | 6493158 | 6493158 | 1 | 9_6493158 | ENSG00000147854 | UHRF2 | 0 | INTRON | 4.45105199 | 8.55E-06 | 0.0195984 |
| 8 | 50726389 | 50726389 | 1 | 8_50726389 | ENSG00000147481 | SNTG1 | 0 | INTRON | -4.4509859 | 8.55E-06 | 0.01959878 |
| 10 | 2063236 | 2063236 | 1 | 10_2063236 | ENSG00000226694 | AL441943.1 | 8608 | Upstream | -4.4509837 | 8.55E-06 | 0.01959878 |
| 15 | 48213534 | 48213534 | 1 | 15_48213534 | ENSG00000074803 | SLC12A1 | 0 | INTRON | -4.4509349 | 8.55E-06 | 0.01959878 |
| 4 | 151581153 | 151581153 | 1 | 4_151581153 | ENSG00000164142 | FAM160A1 | 0 | INTRON | 4.4509295 | 8.55E-06 | 0.01959878 |
| 6 | 62010576 | 62010576 | 1 | 6_62010576 | ENSG00000112232 | KHDRBS2 | 0 | INTRON | 4.45090313 | 8.55E-06 | 0.01959878 |
| 4 | 122494238 | 122494238 | 1 | 4_122494238 | ENSG00000109471 | IL2 | 37513 | Upstream | 4.4508581 | 8.55E-06 | 0.01960025 |
| 2 | 94610131 | 94610131 | 1 | 2_94610131 | ENSG00000259916 | AL845331.2 | 5558 | Downstream | -4.4507518 | 8.56E-06 | 0.01960732 |
| 6 | 66785206 | 66785206 | 1 | 6_66785206 | ENSG00000238949 | RNU7-66P | 56302 | Upstream | 4.45062899 | 8.56E-06 | 0.01961431 |
| 17 | 29419731 | 29419731 | 1 | 17_29419731 | ENSG00000160551 | TAOK1 | 0 | INTRON | 4.45061743 | 8.56E-06 | 0.01961431 |
| 20 | 17472335 | 17472335 | 1 | 20_17472335 | ENSG00000125851 | PCSK2 | 0 | INTRON | -4.4505792 | 8.56E-06 | 0.01961516 |
| 4 | 76111699 | 76111699 | 1 | 4_76111699 | ENSG00000156219 | ART3 | 0 | INTRON | -4.4505247 | 8.57E-06 | 0.01961555 |
| X | 37506590 | 37506590 | 1 | X_37506590 | ENSG00000250349 | AF241726.2 | 0 | INTRON | 4.4504974 | 8.57E-06 | 0.01961555 |
| X | 48098136 | 48098136 | 1 | X_48098136 | ENSG00000171483 | SSX6P | 9855 | Upstream | -4.4504602 | 8.57E-06 | 0.01961555 |
| 11 | 47588655 | 47588655 | 1 | 11_47588655 | ENSG00000196666 | FAM180B | 0 | 3UTR | -4.4504594 | 8.57E-06 | 0.01961555 |
| 5 | 13201409 | 13201409 | 1 | 5_13201409 | ENSG00000248145 | AC016553.1 | 10732 | Downstream | 4.45023834 | 8.58E-06 | 0.01963311 |
| 4 | 18080030 | 18080030 | 1 | 4_18080030 | ENSG00000178177 | LCORL | 58154 | Upstream | 4.45011827 | 8.58E-06 | 0.01964144 |
| 5 | 106999542 | 106999542 | 1 | 5_106999542 | ENSG00000251027 | LINC01950 | 0 | INTRON | -4.4500742 | 8.58E-06 | 0.01964259 |
| 15 | 99805089 | 99805089 | 1 | 15_99805089 | ENSG00000182397 | DNM1P46 | 0 | INTRON | -4.450048 | 8.59E-06 | 0.01964259 |
| 7 | 124223474 | 124223474 | 1 | 7_124223474 | ENSG00000242593 | AC006148.1 | 0 | INTRON | 4.44999683 | 8.59E-06 | 0.01964414 |
| 12 | 70346214 | 70346214 | 1 | 12_70346214 | ENSG00000111596 | CNOT2 | 0 | 3UTR | 4.44996627 | 8.59E-06 | 0.01964414 |
| 1 | 216732469 | 216732469 | 1 | 1_216732469 | ENSG00000196482 | ESRRG | 0 | INTRON | 4.44993984 | 8.59E-06 | 0.01964414 |
| 3 | 122172219 | 122172219 | 1 | 3_122172219 | ENSG00000287977 | AC068630.1 | 185 | Downstream | -4.4498978 | 8.59E-06 | 0.01964414 |
| 10 | 12152376 | 12152376 | 1 | 10_12152376 | ENSG00000065665 | SEC61A2 | 0 | INTRON | 4.44988669 | 8.59E-06 | 0.01964414 |
| 1 | 176181828 | 176181828 | 1 | 1_176181828 | ENSG00000143207 | COP1 | 0 | INTRON | -4.449833 | 8.59E-06 | 0.01964641 |
| 15 | 90138292 | 90138292 | 1 | 15_90138292 | ENSG00000259685 | IDH2-DT | 276 | Downstream | 4.44978311 | 8.60E-06 | 0.01964834 |
| 2 | 29505959 | 29505959 | 1 | 2_29505959 | ENSG00000171094 | ALK | 0 | INTRON | 4.44969542 | 8.60E-06 | 0.01965372 |
| 4 | 109440721 | 109440721 | 1 | 4_109440721 | ENSG00000138802 | SEC24B | 0 | INTRON | 4.44964599 | 8.60E-06 | 0.0196556 |
| X | 22791735 | 22791735 | 1 | X_22791735 | ENSG00000233067 | PTCHD1-AS | 0 | INTRON | -4.4493774 | 8.61E-06 | 0.01967755 |
| 10 | 9909421 | 9909421 | 1 | 10_9909421 | ENSG00000228636 | LINC02663 | 31361 | Upstream | 4.44933881 | 8.61E-06 | 0.01967845 |
| 20 | 61989202 | 61989202 | 1 | 20_61989202 | ENSG00000130699 | TAF4 | 0 | INTRON | 4.44927513 | 8.62E-06 | 0.01968164 |
| 1 | 191164984 | 191164984 | 1 | 1_191164984 | ENSG00000261642 | AL713866.1 | 10350 | Downstream | 4.44909445 | 8.62E-06 | 0.01969556 |
| 1 | 5829858 | 5829858 | 1 | 1_5829858 | ENSG00000264101 | MIR4689 | 32813 | Downstream | 4.44905991 | 8.62E-06 | 0.01969608 |
| 17 | 34257364 | 34257364 | 1 | 17_34257364 | ENSG00000108691 | CCL2 | 161 | Downstream | 4.4490263 | 8.63E-06 | 0.01969652 |
| 8 | 2589416 | 2589416 | 1 | 8_2589416 | ENSG00000277526 | AC245123.1 | 0 | INTRON | 4.44894965 | 8.63E-06 | 0.01969663 |
| 8 | 20386424 | 20386424 | 1 | 8_20386424 | ENSG00000253164 | AC023403.1 | 13655 | Downstream | 4.44894286 | 8.63E-06 | 0.01969663 |
| 8 | 28570606 | 28570606 | 1 | 8_28570606 | ENSG00000104290 | FZD3 | 0 | 3UTR | -4.4489386 | 8.63E-06 | 0.01969663 |
| 10 | 24434181 | 24434181 | 1 | 10_24434181 | ENSG00000120549 | KIAA1217 | 0 | INTRON | 4.44885251 | 8.63E-06 | 0.01970152 |
| 17 | 62225656 | 62225656 | 1 | 17_62225656 | ENSG00000266365 | AC053481.3 | 5813 | Downstream | 4.44880301 | 8.64E-06 | 0.01970152 |
| 7 | 110729104 | 110729104 | 1 | 7_110729104 | ENSG00000184903 | IMMP2L | 0 | INTRON | -4.4487989 | 8.64E-06 | 0.01970152 |
| 3 | 185139534 | 185139534 | 1 | 3_185139534 | ENSG00000187068 | C3orf70 | 0 | INTRON | -4.4485606 | 8.64E-06 | 0.01971836 |
| 19 | 43791627 | 43791627 | 1 | 19_43791627 | ENSG00000159871 | LYPD5 | 0 | INTRON | 4.4485264 | 8.65E-06 | 0.01971836 |
| X | 1902019 | 1902019 | 1 | X_1902019 | ENSG00000234622 | AL683807.2 | 133243 | Downstream | -4.4485179 | 8.65E-06 | 0.01971836 |
| 2 | 3109637 | 3109637 | 1 | 2_3109637 | ENSG00000234423 | LINC01250 | 0 | INTRON | 4.44850014 | 8.65E-06 | 0.01971836 |
| X | 68581328 | 68581328 | 1 | X_68581328 | ENSG00000236735 | RPL31P63 | 18770 | Upstream | -4.4484698 | 8.65E-06 | 0.01971851 |
| 9 | 73556549 | 73556549 | 1 | 9_73556549 | ENSG00000286840 | AL451127.2 | 8218 | Upstream | -4.4483742 | 8.65E-06 | 0.01972464 |
| 6 | 155307377 | 155307377 | 1 | 6_155307377 | ENSG00000029639 | TFB1M | 0 | INTRON | -4.4482893 | 8.66E-06 | 0.01972969 |
| 13 | 39248763 | 39248763 | 1 | 13_39248763 | ENSG00000183722 | LHFPL6 | 0 | INTRON | -4.4482616 | 8.66E-06 | 0.01972969 |
| 10 | 84505101 | 84505101 | 1 | 10_84505101 | ENSG00000107771 | CCSER2 | 0 | INTRON | 4.44822095 | 8.66E-06 | 0.01973078 |
| 16 | 61216755 | 61216755 | 1 | 16_61216755 | ENSG00000224631 | RPS27AP16 | 160791 | Upstream | -4.448085 | 8.66E-06 | 0.01974063 |
| 14 | 97810319 | 97810319 | 1 | 14_97810319 | ENSG00000258379 | AL355097.1 | 21063 | Upstream | -4.4478766 | 8.67E-06 | 0.01975485 |
| 3 | 171667962 | 171667962 | 1 | 3_171667962 | ENSG00000075651 | PLD1 | 0 | INTRON | 4.44787272 | 8.67E-06 | 0.01975485 |
| 5 | 73247803 | 73247803 | 1 | 5_73247803 | ENSG00000249743 | AC116345.1 | 0 | INTRON | 4.44783466 | 8.67E-06 | 0.01975571 |
| 16 | 69422153 | 69422153 | 1 | 16_69422153 | ENSG00000103018 | CYB5B | 2371 | Upstream | -4.4477295 | 8.68E-06 | 0.01975957 |
| 11 | 20000920 | 20000920 | 1 | 11_20000920 | ENSG00000166833 | NAV2 | 0 | INTRON | 4.44772105 | 8.68E-06 | 0.01975957 |
| 12 | 11070686 | 11070686 | 1 | 12_11070686 | ENSG00000231887 | PRH1 | 0 | INTRON | -4.4476549 | 8.68E-06 | 0.01975957 |
| 10 | 7190364 | 7190364 | 1 | 10_7190364 | ENSG00000198879 | SFMBT2 | 0 | INTRON | -4.4476439 | 8.68E-06 | 0.01975957 |
| 3 | 8334147 | 8334147 | 1 | 3_8334147 | ENSG00000227110 | LMCD1-AS1 | 0 | INTRON | -4.4476266 | 8.68E-06 | 0.01975957 |
| 8 | 13012835 | 13012835 | 1 | 8_13012835 | ENSG00000250305 | TRMT9B | 0 | EXON | 4.44762014 | 8.68E-06 | 0.01975957 |
| 7 | 17357369 | 17357369 | 1 | 7_17357369 | ENSG00000283321 | AC019117.3 | 0 | INTRON | 4.44750376 | 8.69E-06 | 0.01976763 |
| 14 | 49922417 | 49922417 | 1 | 14_49922417 | ENSG00000214900 | LINC01588 | 5153 | Downstream | 4.44744036 | 8.69E-06 | 0.01977082 |
| 7 | 150354767 | 150354767 | 1 | 7_150354767 | ENSG00000240449 | AC005586.1 | 9009 | Downstream | 4.44734172 | 8.69E-06 | 0.01977565 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 22 | 36550147 | 36550147 | 1 | 22_36550147 | ENSG00000229971 | AL022313.3 | 2017 | Upstream | 4.44731015 | 8.70E-06 | 0.01977565 |
| 7 | 150077746 | 150077746 | 1 | 7_150077746 | ENSG00000241449 | AC092666.1 | 1091 | Downstream | -4.4472863 | 8.70E-06 | 0.01977565 |
| 6 | 93882473 | 93882473 | 1 | 6_93882473 | ENSG00000252249 | AL391336.2 | 3244 | Downstream | 4.44726663 | 8.70E-06 | 0.01977565 |
| 2 | 146931378 | 146931378 | 1 | 2_146931378 | ENSG00000227902 | AC062032.1 | 33160 | Downstream | 4.44722667 | 8.70E-06 | 0.01977565 |
| 9 | 76330687 | 76330687 | 1 | 9_76330687 | ENSG00000099139 | PCSK5 | 0 | INTRON | 4.44721561 | 8.70E-06 | 0.01977565 |
| 2 | 145610182 | 145610182 | 1 | 2_145610182 | ENSG00000286225 | AC079163.2 | 0 | INTRON | 4.44709755 | 8.70E-06 | 0.01978387 |
| 3 | 108829164 | 108829164 | 1 | 3_108829164 | ENSG00000163519 | TRAT1 | 0 | INTRON | 4.44701902 | 8.71E-06 | 0.01978846 |
| 7 | 73548925 | 73548925 | 1 | 7_73548925 | ENSG00000106635 | BCL7B | 0 | INTRON | -4.446832 | 8.71E-06 | 0.01980305 |
| 1 | 16945414 | 16945414 | 1 | 1_16945414 | ENSG00000058453 | CROCC | 0 | INTRON | -4.4466524 | 8.72E-06 | 0.01980959 |
| 7 | 143219049 | 143219049 | 1 | 7_143219049 | ENSG00000268170 | AC073342.2 | 1418 | Downstream | 4.44664865 | 8.72E-06 | 0.01980959 |
| X | 100610554 | 100610554 | 1 | X_100610554 | ENSG00000000005 | TNMD | 10669 | Downstream | 4.44664834 | 8.72E-06 | 0.01980959 |
| 4 | 147483595 | 147483595 | 1 | 4_147483595 | ENSG00000151617 | EDNRA | 0 | INTRON | 4.44664621 | 8.72E-06 | 0.01980959 |
| 18 | 1707075 | 1707075 | 1 | 18_1707075 | ENSG00000266602 | AP005262.2 | 0 | EXON | 4.44656774 | 8.73E-06 | 0.01981073 |
| 1 | 74518655 | 74518655 | 1 | 1_74518655 | ENSG00000259030 | FPGT-TNNI3K | 0 | INTRON | -4.4465671 | 8.73E-06 | 0.01981073 |
| 2 | 175418154 | 175418154 | 1 | 2_175418154 | ENSG00000229066 | AC093459.1 | 0 | INTRON | -4.4465339 | 8.73E-06 | 0.01981073 |
| X | 22135090 | 22135090 | 1 | X_22135090 | ENSG00000102174 | PHEX | 0 | INTRON | 4.44649954 | 8.73E-06 | 0.01981073 |
| 11 | 41594049 | 41594049 | 1 | 11_41594049 | ENSG00000255388 | LINC02741 | 0 | INTRON | -4.4464905 | 8.73E-06 | 0.01981073 |
| 19 | 13057196 | 13057196 | 1 | 19_13057196 | ENSG00000008441 | NFIX | 0 | INTRON | 4.44634317 | 8.73E-06 | 0.01981578 |
| 3 | 136204805 | 136204805 | 1 | 3_136204805 | ENSG00000244740 | AC092991.1 | 734 | Downstream | 4.44634313 | 8.73E-06 | 0.01981578 |
| 1 | 200346135 | 200346135 | 1 | 1_200346135 | ENSG00000203721 | LINC00862 | 0 | INTRON | 4.44633033 | 8.73E-06 | 0.01981578 |
| 16 | 47983339 | 47983339 | 1 | 16_47983339 | ENSG00000260450 | LINC02134 | 11646 | Downstream | -4.4462963 | 8.74E-06 | 0.01981578 |
| 12 | 129944360 | 129944360 | 1 | 12_129944360 | ENSG00000151952 | TMEM132D | 40335 | Upstream | 4.44629235 | 8.74E-06 | 0.01981578 |
| 5 | 132288254 | 132288254 | 1 | 5_132288254 | ENSG00000072682 | P4HA2 | 0 | INTRON | 4.44624827 | 8.74E-06 | 0.01981721 |
| 7 | 72909789 | 72909789 | 1 | 7_72909789 | ENSG00000196313 | POM121 | 0 | INTRON | 4.4462096 | 8.74E-06 | 0.01981813 |
| 14 | 63703429 | 63703429 | 1 | 14_63703429 | ENSG00000126821 | SGPP1 | 0 | INTRON | 4.44615565 | 8.74E-06 | 0.01982046 |
| 1 | 191162734 | 191162734 | 1 | 1_191162734 | ENSG00000261642 | AL713866.1 | 8100 | Downstream | 4.4461103 | 8.74E-06 | 0.01982201 |
| 1 | 241805815 | 241805815 | 1 | 1_241805815 | ENSG00000162843 | WDR64 | 3682 | Downstream | -4.4459474 | 8.75E-06 | 0.01983439 |
| 9 | 101228816 | 101228816 | 1 | 9_101228816 | ENSG00000148123 | PLPPR1 | 0 | INTRON | -4.4458351 | 8.76E-06 | 0.01984212 |
| 12 | 96561195 | 96561195 | 1 | 12_96561195 | ENSG00000188596 | CFAP54 | 0 | INTRON | 4.44578222 | 8.76E-06 | 0.01984435 |
| 9 | 103408892 | 103408892 | 1 | 9_103408892 | ENSG00000226566 | AL390962.1 | 0 | INTRON | 4.44574424 | 8.76E-06 | 0.01984522 |
| 5 | 100779780 | 100779780 | 1 | 5_100779780 | ENSG00000113532 | ST8SIA4 | 27152 | Downstream | -4.4456627 | 8.76E-06 | 0.0198501 |
| 6 | 164069222 | 164069222 | 1 | 6_164069222 | ENSG00000260422 | Z97205.2 | 14800 | Downstream | 4.44557581 | 8.77E-06 | 0.01985336 |
| 1 | 74492858 | 74492858 | 1 | 1_74492858 | ENSG00000162621 | LRRC53 | 0 | INTRON | 4.44554412 | 8.77E-06 | 0.01985336 |
| 14 | 100406995 | 100406995 | 1 | 14_100406995 | ENSG00000258620 | AL135838.1 | 0 | EXON | -4.4455416 | 8.77E-06 | 0.01985336 |
| 22 | 41872628 | 41872628 | 1 | 22_41872628 | ENSG00000198911 | SREBF2 | 0 | INTRON | 4.44550306 | 8.77E-06 | 0.01985428 |
| 11 | 127188697 | 127188697 | 1 | 11_127188697 | ENSG00000272642 | AP003121.1 | 187 | Upstream | -4.4454294 | 8.77E-06 | 0.01985844 |
| 19 | 44762108 | 44762108 | 1 | 19_44762108 | ENSG00000069399 | BCL3 | 2064 | Downstream | -4.4453888 | 8.77E-06 | 0.01985954 |
| 7 | 86015489 | 86015489 | 1 | 7_86015489 | ENSG00000236610 | SOCS5P1 | 201295 | Downstream | 4.44523336 | 8.78E-06 | 0.01986869 |
| 20 | 61680112 | 61680112 | 1 | 20_61680112 | ENSG00000179242 | CDH4 | 0 | INTRON | -4.4452326 | 8.78E-06 | 0.01986869 |
| 4 | 154245224 | 154245224 | 1 | 4_154245224 | ENSG00000280241 | AC079298.3 | 0 | INTRON | -4.4451881 | 8.78E-06 | 0.0198689 |
| 9 | 64041921 | 64041921 | 1 | 9_64041921 | ENSG00000204790 | AL163540.1 | 37766 | Upstream | -4.4451655 | 8.78E-06 | 0.0198689 |
| 10 | 19035151 | 19035151 | 1 | 10_19035151 | ENSG00000204740 | MALRD1 | 13649 | Upstream | 4.44514467 | 8.78E-06 | 0.0198689 |
| 1 | 16379922 | 16379922 | 1 | 1_16379922 | ENSG00000055070 | SZRD1 | 0 | INTRON | -4.4450417 | 8.79E-06 | 0.01987578 |
| 6 | 108144543 | 108144543 | 1 | 6_108144543 | ENSG00000081087 | OSTM1 | 0 | INTRON | 4.44482461 | 8.80E-06 | 0.01989321 |
| 4 | 32438561 | 32438561 | 1 | 4_32438561 | ENSG00000251329 | LINC02353 | 85341 | Downstream | -4.4447314 | 8.80E-06 | 0.01989476 |
| 16 | 29857197 | 29857197 | 1 | 16_29857197 | ENSG00000103502 | CDIPT | 1159 | Downstream | 4.44469859 | 8.80E-06 | 0.01989476 |
| 15 | 30593903 | 30593903 | 1 | 15_30593903 | ENSG00000260128 | ULK4P2 | 0 | INTRON | -4.4446678 | 8.80E-06 | 0.01989476 |
| 8 | 80409133 | 80409133 | 1 | 8_80409133 | ENSG00000253238 | AC034114.2 | 0 | INTRON | 4.44465532 | 8.80E-06 | 0.01989476 |
| 7 | 109836514 | 109836514 | 1 | 7_109836514 | ENSG00000271368 | AC073387.2 | 72157 | Downstream | -4.4446438 | 8.80E-06 | 0.01989476 |
| 2 | 186134172 | 186134172 | 1 | 2_186134172 | ENSG00000237877 | LINC01473 | 0 | INTRON | 4.44463129 | 8.80E-06 | 0.01989476 |
| 1 | 186722511 | 186722511 | 1 | 1_186722511 | ENSG00000273129 | PACERR | 41065 | Downstream | -4.4446079 | 8.81E-06 | 0.01989476 |
| 8 | 76916348 | 76916348 | 1 | 8_76916348 | ENSG00000253416 | AC023200.1 | 2949 | Downstream | 4.44449359 | 8.81E-06 | 0.01990084 |
| 11 | 36136145 | 36136145 | 1 | 11_36136145 | ENSG00000179241 | LDLRAD3 | 0 | INTRON | -4.4444851 | 8.81E-06 | 0.01990084 |
| 10 | 60879535 | 60879535 | 1 | 10_60879535 | ENSG00000072422 | RHOBTB1 | 0 | INTRON | 4.44443607 | 8.81E-06 | 0.01990274 |
| X | 114270864 | 114270864 | 1 | X_114270864 | ENSG00000230502 | AL953862.1 | 118123 | Downstream | 4.44434609 | 8.82E-06 | 0.0199052 |
| 9 | 130803559 | 130803559 | 1 | 9_130803559 | ENSG00000097007 | ABL1 | 0 | INTRON | 4.44433375 | 8.82E-06 | 0.0199052 |
| 11 | 33832075 | 33832075 | 1 | 11_33832075 | ENSG00000255133 | LINC02721 | 9697 | Upstream | 4.44430938 | 8.82E-06 | 0.0199052 |
| 6 | 135566833 | 135566833 | 1 | 6_135566833 | ENSG00000231028 | LINC00271 | 0 | INTRON | 4.44429538 | 8.82E-06 | 0.0199052 |
| 18 | 64055632 | 64055632 | 1 | 18_64055632 | ENSG00000267134 | LINC01924 | 0 | INTRON | 4.44416858 | 8.82E-06 | 0.0199143 |
| 2 | 234829332 | 234829332 | 1 | 2_234829332 | ENSG00000235726 | AC010148.1 | 0 | INTRON | 4.44412518 | 8.83E-06 | 0.01991568 |
| 18 | 61364870 | 61364870 | 1 | 18_61364870 | ENSG00000101542 | CDH20 | 0 | INTRON | -4.4439928 | 8.83E-06 | 0.0199253 |
| 19 | 18949231 | 18949231 | 1 | 19_18949231 | ENSG00000269019 | HOMER3-AS1 | 1779 | Downstream | 4.44382444 | 8.84E-06 | 0.01993826 |
| 6 | 3074971 | 3074971 | 1 | 6_3074971 | ENSG00000137275 | RIPK1 | 0 | INTRON | 4.44375356 | 8.84E-06 | 0.01993856 |
| 18 | 44849168 | 44849168 | 1 | 18_44849168 | ENSG00000152217 | SETBP1 | 0 | INTRON | -4.4437431 | 8.84E-06 | 0.01993856 |
| 2 | 144485870 | 144485870 | 1 | 2_144485870 | ENSG00000169554 | ZEB2 | 0 | INTRON | 4.44371458 | 8.84E-06 | 0.01993856 |
| 1 | 20713674 | 20713674 | 1 | 1_20713674 | ENSG00000117245 | KIF17 | 0 | INTRON | -4.4437072 | 8.84E-06 | 0.01993856 |
| 14 | 23187199 | 23187199 | 1 | 14_23187199 | ENSG00000215277 | RNF212B | 0 | INTRON | 4.44367437 | 8.84E-06 | 0.01993896 |
| 10 | 73908844 | 73908844 | 1 | 10_73908844 | ENSG00000122861 | PLAU | 332 | Upstream | 4.44364117 | 8.84E-06 | 0.0199394 |
| 3 | 164667361 | 164667361 | 1 | 3_164667361 | ENSG00000241636 | LINC01323 | 3516 | Downstream | 4.44358929 | 8.85E-06 | 0.01994157 |
| 4 | 185619533 | 185619533 | 1 | 4_185619533 | ENSG00000154556 | SORBS2 | 0 | INTRON | -4.4435305 | 8.85E-06 | 0.01994211 |
| 3 | 189340180 | 189340180 | 1 | 3_189340180 | ENSG00000188001 | TPRG1 | 14876 | Downstream | -4.4435265 | 8.85E-06 | 0.01994211 |
| 3 | 114878269 | 114878269 | 1 | 3_114878269 | ENSG00000181722 | ZBTB20 | 0 | INTRON | -4.4434111 | 8.85E-06 | 0.01995016 |
| 12 | 13609430 | 13609430 | 1 | 12_13609430 | ENSG00000287928 | AC007535.1 | 0 | INTRON | -4.4433616 | 8.86E-06 | 0.01995095 |
| 5 | 3074029 | 3074029 | 1 | 5_3074029 | ENSG00000249808 | AC091832.1 | 103805 | Upstream | -4.4433457 | 8.86E-06 | 0.01995095 |
| 19 | 7659818 | 7659818 | 1 | 19_7659818 | ENSG00000269228 | RPS27AP19 | 5898 | Upstream | 4.44323081 | 8.86E-06 | 0.01995897 |
| 17 | 80920593 | 80920593 | 1 | 17_80920593 | ENSG00000141564 | RPTOR | 0 | INTRON | -4.4430193 | 8.87E-06 | 0.01997597 |
| 2 | 223918555 | 223918555 | 1 | 2_223918555 | ENSG00000286239 | AC093884.1 | 0 | INTRON | 4.44287091 | 8.88E-06 | 0.01998711 |
| 7 | 54360315 | 54360315 | 1 | 7_54360315 | ENSG00000231427 | LINC01445 | 0 | INTRON | -4.4427871 | 8.88E-06 | 0.01999181 |
| 20 | 55740213 | 55740213 | 1 | 20_55740213 | ENSG00000287478 | AL109829.1 | 0 | INTRON | -4.4427634 | 8.88E-06 | 0.01999181 |
| 3 | 105476036 | 105476036 | 1 | 3_105476036 | ENSG00000170017 | ALCAM | 0 | INTRON | -4.4426565 | 8.89E-06 | 0.01999383 |
| 9 | 837409 | 837409 | 1 | 9_837409 | ENSG00000137090 | DMRT1 | 4280 | Upstream | -4.4426164 | 8.89E-06 | 0.01999383 |
| 18 | 56477051 | 56477051 | 1 | 18_56477051 | ENSG00000091164 | TXNL1 | 120157 | Downstream | 4.44259319 | 8.89E-06 | 0.01999383 |
| 8 | 102155781 | 102155781 | 1 | 8_102155781 | ENSG00000254492 | AP001328.1 | 1056 | Downstream | 4.44258518 | 8.89E-06 | 0.01999383 |
| 12 | 67920733 | 67920733 | 1 | 12_67920733 | ENSG00000255772 | LINC01479 | 8501 | Upstream | -4.4425751 | 8.89E-06 | 0.01999383 |
| 2 | 70239738 | 70239738 | 1 | 2_70239738 | ENSG00000115998 | C2orf42 | 0 | INTRON | 4.44257099 | 8.89E-06 | 0.01999383 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
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| 7 | 110458908 | 110458908 | 1 | 7_110458908 | ENSG00000226965 | AC073114.1 | 0 | INTRON | 4.44253693 | 8.89E-06 | 0.01999436 |
| 14 | 74463580 | 74463580 | 1 | 14_74463580 | ENSG00000270000 | AC005479.2 | 8349 | Downstream | 4.44238647 | 8.90E-06 | 0.0200057 |
| 2 | 50351487 | 50351487 | 1 | 2_50351487 | ENSG00000179915 | NRXN1 | 0 | INTRON | 4.44225139 | 8.90E-06 | 0.02001291 |
| 9 | 26170566 | 26170566 | 1 | 9_26170566 | ENSG00000276759 | AL353753.1 | 52158 | Downstream | 4.4422453 | 8.90E-06 | 0.02001291 |
| 4 | 82512472 | 82512472 | 1 | 4_82512472 | ENSG00000249242 | TMEM150C | 0 | INTRON | 4.44222367 | 8.90E-06 | 0.02001291 |
| 17 | 40240104 | 40240104 | 1 | 17_40240104 | ENSG00000171475 | WIPF2 | 0 | INTRON | -4.442195 | 8.90E-06 | 0.02001294 |
| 7 | 102607928 | 102607928 | 1 | 7_102607928 | ENSG00000105808 | RASA4 | 0 | INTRON | 4.44210808 | 8.91E-06 | 0.02001838 |
| 9 | 23264082 | 23264082 | 1 | 9_23264082 | ENSG00000284418 | AL391117.1 | 0 | INTRON | -4.4420463 | 8.91E-06 | 0.02002149 |
| 11 | 122871283 | 122871283 | 1 | 11_122871283 | ENSG00000109943 | CRTAM | 0 | EXON | -4.4420144 | 8.91E-06 | 0.02002182 |
| 3 | 189795591 | 189795591 | 1 | 3_189795591 | ENSG00000073282 | TP63 | 0 | INTRON | -4.4419784 | 8.91E-06 | 0.02002252 |
| 19 | 36165407 | 36165407 | 1 | 19_36165407 | ENSG00000267005 | AC002984.1 | 7998 | Downstream | 4.44189612 | 8.92E-06 | 0.02002559 |
| 15 | 99449917 | 99449917 | 1 | 15_99449917 | ENSG00000259341 | AC015660.1 | 14757 | Upstream | 4.44188863 | 8.92E-06 | 0.02002559 |
| 21 | 36999975 | 36999975 | 1 | 21_36999975 | ENSG00000215734 | MRPL20P1 | 4900 | Downstream | 4.44179912 | 8.92E-06 | 0.0200274 |
| 1 | 99452411 | 99452411 | 1 | 1_99452411 | ENSG00000233983 | AL365220.1 | 11966 | Upstream | -4.441791 | 8.92E-06 | 0.0200274 |
| 19 | 32193018 | 32193018 | 1 | 19_32193018 | ENSG00000286041 | AC074139.1 | 8514 | Upstream | -4.4417679 | 8.92E-06 | 0.0200274 |
| 12 | 101469188 | 101469188 | 1 | 12_101469188 | ENSG00000202249 | RNU5E-5P | 2368 | Downstream | -4.4417556 | 8.92E-06 | 0.0200274 |
| 13 | 105061735 | 105061735 | 1 | 13_105061735 | ENSG00000225823 | RPL7P45 | 246666 | Downstream | 4.441682 | 8.93E-06 | 0.02003136 |
| X | 154073615 | 154073615 | 1 | X_154073615 | ENSG00000169057 | MECP2 | 0 | INTRON | -4.4416236 | 8.93E-06 | 0.02003136 |
| 17 | 73271945 | 73271945 | 1 | 17_73271945 | ENSG00000187959 | CPSF4L | 9593 | Upstream | -4.4416093 | 8.93E-06 | 0.02003136 |
| 14 | 42484262 | 42484262 | 1 | 14_42484262 | ENSG00000258850 | AL450442.1 | 0 | INTRON | 4.4415996 | 8.93E-06 | 0.02003136 |
| 3 | 125155185 | 125155185 | 1 | 3_125155185 | ENSG00000221955 | SLC12A8 | 0 | INTRON | 4.44154838 | 8.93E-06 | 0.02003349 |
| 12 | 65557063 | 65557063 | 1 | 12_65557063 | ENSG00000255866 | AC090023.1 | 0 | EXON | 4.44144693 | 8.94E-06 | 0.02003943 |
| 3 | 137973265 | 137973265 | 1 | 3_137973265 | ENSG00000066405 | CLDN18 | 25469 | Upstream | -4.4414279 | 8.94E-06 | 0.02003943 |
| 5 | 2292113 | 2292113 | 1 | 5_2292113 | ENSG00000275733 | AC092266.1 | 30090 | Downstream | 4.4412938 | 8.94E-06 | 0.02004739 |
| 8 | 108075933 | 108075933 | 1 | 8_108075933 | ENSG00000147655 | RSPO2 | 0 | INTRON | -4.4412482 | 8.94E-06 | 0.02004739 |
| 2 | 12683592 | 12683592 | 1 | 2_12683592 | ENSG00000224184 | MIR3681HG | 0 | INTRON | 4.44121367 | 8.95E-06 | 0.02004739 |
| 8 | 79191277 | 79191277 | 1 | 8_79191277 | ENSG00000253659 | AC138646.1 | 68124 | Upstream | -4.4411938 | 8.95E-06 | 0.02004739 |
| 4 | 1518169 | 1518169 | 1 | 4_1518169 | ENSG00000272783 | AC147067.2 | 32114 | Upstream | 4.44112275 | 8.95E-06 | 0.02004739 |
| 8 | 119512967 | 119512967 | 1 | 8_119512967 | ENSG00000254037 | AC021733.3 | 32192 | Upstream | -4.4411205 | 8.95E-06 | 0.02004739 |
| 15 | 63540455 | 63540455 | 1 | 15_63540455 | ENSG00000140455 | USP3 | 0 | INTRON | 4.44111825 | 8.95E-06 | 0.02004739 |
| 20 | 61283363 | 61283363 | 1 | 20_61283363 | ENSG00000179242 | CDH4 | 0 | INTRON | 4.4411158 | 8.95E-06 | 0.02004739 |
| 6 | 2637546 | 2637546 | 1 | 6_2637546 | ENSG00000228718 | LINC02521 | 0 | INTRON | 4.44105402 | 8.95E-06 | 0.0200505 |
| 3 | 51463326 | 51463326 | 1 | 3_51463326 | ENSG00000145041 | DCAF1 | 0 | INTRON | 4.44101152 | 8.95E-06 | 0.02005141 |
| 2 | 224948477 | 224948477 | 1 | 2_224948477 | ENSG00000135905 | DOCK10 | 0 | INTRON | 4.44098769 | 8.95E-06 | 0.02005141 |
| 14 | 92133703 | 92133703 | 1 | 14_92133703 | ENSG00000165934 | CPSF2 | 0 | INTRON | 4.44084312 | 8.96E-06 | 0.02006224 |
| 4 | 134433250 | 134433250 | 1 | 4_134433250 | ENSG00000251291 | LINC02462 | 0 | INTRON | -4.4406916 | 8.97E-06 | 0.02007357 |
| 4 | 163155053 | 163155053 | 1 | 4_163155053 | ENSG00000145414 | NAF1 | 0 | INTRON | 4.44066505 | 8.97E-06 | 0.02007357 |
| 6 | 87142703 | 87142703 | 1 | 6_87142703 | ENSG00000272008 | AL139274.2 | 8455 | Downstream | -4.4405237 | 8.97E-06 | 0.02008206 |
| 15 | 65847439 | 65847439 | 1 | 15_65847439 | ENSG00000103769 | RAB11A | 0 | INTRON | 4.44051742 | 8.97E-06 | 0.02008206 |
| 7 | 74427038 | 74427038 | 1 | 7_74427038 | ENSG00000106665 | CLIP2 | 21095 | Downstream | -4.4403569 | 8.98E-06 | 0.02009441 |
| 15 | 56510963 | 56510963 | 1 | 15_56510963 | ENSG00000260392 | AC090518.1 | 31988 | Downstream | 4.44024952 | 8.99E-06 | 0.02009526 |
| 19 | 58414072 | 58414072 | 1 | 19_58414072 | ENSG00000171574 | ZNF584 | 0 | INTRON | -4.4402484 | 8.99E-06 | 0.02009526 |
| 15 | 42514943 | 42514943 | 1 | 15_42514943 | ENSG00000092531 | SNAP23 | 0 | INTRON | 4.44024437 | 8.99E-06 | 0.02009526 |
| 12 | 96050288 | 96050288 | 1 | 12_96050288 | ENSG00000111144 | LTA4H | 6768 | Upstream | 4.44020323 | 8.99E-06 | 0.02009526 |
| 13 | 30530303 | 30530303 | 1 | 13_30530303 | ENSG00000189403 | HMGB1 | 0 | INTRON | -4.4401794 | 8.99E-06 | 0.02009526 |
| 2 | 199635427 | 199635427 | 1 | 2_199635427 | ENSG00000238217 | LINC01877 | 0 | INTRON | -4.440178 | 8.99E-06 | 0.02009526 |
| 1 | 2055473 | 2055473 | 1 | 1_2055473 | ENSG00000067606 | PRKCZ | 0 | 5UTR | 4.44011036 | 8.99E-06 | 0.02009894 |
| 8 | 51533640 | 51533640 | 1 | 8_51533640 | ENSG00000147485 | PXDNL | 0 | INTRON | 4.43993703 | 9.00E-06 | 0.02011249 |
| 10 | 73099358 | 73099358 | 1 | 10_73099358 | ENSG00000272630 | AL731563.3 | 0 | EXON | -4.4397925 | 9.00E-06 | 0.02012067 |
| X | 50639632 | 50639632 | 1 | X_50639632 | ENSG00000158352 | SHROOM4 | 0 | INTRON | -4.4397719 | 9.01E-06 | 0.02012067 |
| 3 | 32343060 | 32343060 | 1 | 3_32343060 | ENSG00000170293 | CMTM8 | 0 | INTRON | -4.4397648 | 9.01E-06 | 0.02012067 |
| 2 | 169639073 | 169639073 | 1 | 2_169639073 | ENSG00000138398 | PPIG | 0 | 3UTR | 4.43971201 | 9.01E-06 | 0.02012296 |
| 7 | 5031831 | 5031831 | 1 | 7_5031831 | ENSG00000275328 | SPDYE19P | 0 | EXON | -4.4394521 | 9.02E-06 | 0.02014463 |
| 5 | 119431470 | 119431470 | 1 | 5_119431470 | ENSG00000202092 | RNA5SP190 | 14245 | Upstream | 4.43940452 | 9.02E-06 | 0.02014644 |
| 2 | 327513 | 327513 | 1 | 2_327513 | ENSG00000233684 | LINC01865 | 0 | INTRON | 4.43929709 | 9.03E-06 | 0.02015385 |
| 17 | 77324921 | 77324921 | 1 | 17_77324921 | ENSG00000184640 | SEPTIN9 | 0 | INTRON | -4.4391509 | 9.03E-06 | 0.0201649 |
| 6 | 44239839 | 44239839 | 1 | 6_44239839 | ENSG00000112759 | SLC29A1 | 5688 | Downstream | 4.43912129 | 9.03E-06 | 0.02016503 |
| 12 | 95374566 | 95374566 | 1 | 12_95374566 | ENSG00000257943 | AC084879.1 | 0 | INTRON | -4.4390641 | 9.04E-06 | 0.02016668 |
| 1 | 55181623 | 55181623 | 1 | 1_55181623 | ENSG00000162402 | USP24 | 0 | INTRON | -4.4390375 | 9.04E-06 | 0.02016668 |
| 5 | 86031881 | 86031881 | 1 | 5_86031881 | ENSG00000250359 | PTP4A1P4 | 55644 | Upstream | 4.43900049 | 9.04E-06 | 0.02016668 |
| 4 | 49538800 | 49538800 | 1 | 4_49538800 | ENSG00000268967 | AC119751.7 | 9763 | Downstream | -4.4389907 | 9.04E-06 | 0.02016668 |
| 14 | 34804154 | 34804154 | 1 | 14_34804154 | ENSG00000198604 | BAZ1A | 0 | INTRON | 4.43887043 | 9.04E-06 | 0.02016943 |
| 15 | 93838760 | 93838760 | 1 | 15_93838760 | ENSG00000258476 | LINC02207 | 0 | INTRON | 4.43881937 | 9.05E-06 | 0.02016943 |
| 13 | 25473229 | 25473229 | 1 | 13_25473229 | ENSG00000132932 | ATP8A2 | 0 | INTRON | 4.43881327 | 9.05E-06 | 0.02016943 |
| 10 | 25926984 | 25926984 | 1 | 10_25926984 | ENSG00000226304 | AL358612.1 | 0 | INTRON | 4.43878321 | 9.05E-06 | 0.02016943 |
| 4 | 81667527 | 81667527 | 1 | 4_81667527 | ENSG00000138670 | RASGEF1B | 0 | INTRON | -4.4387818 | 9.05E-06 | 0.02016943 |
| 7 | 122423891 | 122423891 | 1 | 7_122423891 | ENSG00000081803 | CADPS2 | 0 | INTRON | 4.43876768 | 9.05E-06 | 0.02016943 |
| 6 | 169944881 | 169944881 | 1 | 6_169944881 | ENSG00000236173 | AL049612.1 | 134779 | Upstream | -4.4387639 | 9.05E-06 | 0.02016943 |
| 2 | 200195541 | 200195541 | 1 | 2_200195541 | ENSG00000287027 | AC004464.1 | 95516 | Downstream | -4.4387292 | 9.05E-06 | 0.02017003 |
| 3 | 197073270 | 197073270 | 1 | 3_197073270 | ENSG00000075711 | DLG1 | 0 | INTRON | 4.43865517 | 9.05E-06 | 0.02017031 |
| 5 | 143465764 | 143465764 | 1 | 5_143465764 | ENSG00000249429 | AC016598.1 | 24090 | Downstream | -4.4386094 | 9.05E-06 | 0.02017031 |
| 11 | 64095852 | 64095852 | 1 | 11_64095852 | ENSG00000133315 | MACROD1 | 0 | INTRON | 4.43857544 | 9.06E-06 | 0.02017031 |
| 5 | 71061282 | 71061282 | 1 | 5_71061282 | ENSG00000145736 | GTF2H2 | 0 | EXON | -4.4385308 | 9.06E-06 | 0.02017031 |
| 14 | 29517847 | 29517847 | 1 | 14_29517847 | ENSG00000286040 | AL158058.2 | 17387 | Upstream | -4.4385253 | 9.06E-06 | 0.02017031 |
| 16 | 25655856 | 25655856 | 1 | 16_25655856 | ENSG00000182601 | HS3ST4 | 36102 | Upstream | -4.4385058 | 9.06E-06 | 0.02017031 |
| 6 | 101841344 | 101841344 | 1 | 6_101841344 | ENSG00000164418 | GRIK2 | 0 | INTRON | 4.43848598 | 9.06E-06 | 0.02017031 |
| 9 | 2840895 | 2840895 | 1 | 9_2840895 | ENSG00000080608 | PUM3 | 0 | INTRON | -4.4384828 | 9.06E-06 | 0.02017031 |
| 1 | 77555192 | 77555192 | 1 | 1_77555192 | ENSG00000154027 | AK5 | 0 | INTRON | 4.43847262 | 9.06E-06 | 0.02017031 |
| 10 | 117283279 | 117283279 | 1 | 10_117283279 | ENSG00000165650 | PDZD8 | 0 | EXON | 4.43835435 | 9.06E-06 | 0.02017615 |
| 12 | 24245641 | 24245641 | 1 | 12_24245641 | ENSG00000134532 | SOX5 | 0 | INTRON | -4.438354 | 9.06E-06 | 0.02017615 |
| 1 | 51230132 | 51230132 | 1 | 1_51230132 | ENSG00000203356 | LINC01562 | 0 | INTRON | 4.43828227 | 9.07E-06 | 0.02017878 |
| 8 | 60458507 | 60458507 | 1 | 8_60458507 | ENSG00000251396 | LINC01301 | 0 | INTRON | 4.438269 | 9.07E-06 | 0.02017878 |
| 11 | 67534335 | 67534335 | 1 | 11_67534335 | ENSG00000283257 | AP001184.1 | 4563 | Upstream | -4.4382363 | 9.07E-06 | 0.02017878 |
| 6 | 154200131 | 154200131 | 1 | 6_154200131 | ENSG00000112038 | OPRM1 | 0 | INTRON | -4.4381582 | 9.07E-06 | 0.02017878 |
| X | 77978917 | 77978917 | 1 | X_77978917 | ENSG00000165240 | ATP7A | 0 | INTRON | 4.43814829 | 9.07E-06 | 0.02017878 |

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| 9 | 104395260 | 104395260 | 1 | 9_104395260 | ENSG00000203396 | AL512646.1 | 65864 | Upstream | 4.43812887 | 9.07E-06 | 0.02017878 |
| 8 | 24352546 | 24352546 | 1 | 8_24352546 | ENSG00000042980 | ADAM28 | 0 | INTRON | -4.4379838 | 9.08E-06 | 0.02018975 |
| 8 | 75865910 | 75865910 | 1 | 8_75865910 | ENSG00000287352 | AC011029.1 | 296208 | Downstream | -4.4378797 | 9.08E-06 | 0.02019215 |
| 14 | 68609933 | 68609933 | 1 | 14_68609933 | ENSG00000182185 | RAD51B | 0 | INTRON | -4.4378683 | 9.09E-06 | 0.02019215 |
| 6 | 100591793 | 100591793 | 1 | 6_100591793 | ENSG00000112249 | ASCC3 | 0 | INTRON | -4.4378261 | 9.09E-06 | 0.02019215 |
| 1 | 13532262 | 13532262 | 1 | 1_13532262 | ENSG00000259961 | AL354712.1 | 15992 | Downstream | 4.4378221 | 9.09E-06 | 0.02019215 |
| 1 | 173217505 | 173217505 | 1 | 1_173217505 | ENSG00000117586 | TNFSF4 | 10174 | Upstream | -4.4377952 | 9.09E-06 | 0.02019215 |
| 5 | 18460882 | 18460882 | 1 | 5_18460882 | ENSG00000241552 | RN7SL58P | 86429 | Upstream | 4.43778941 | 9.09E-06 | 0.02019215 |
| 15 | 88522657 | 88522657 | 1 | 15_88522657 | ENSG00000140543 | DET1 | 0 | INTRON | 4.43756845 | 9.10E-06 | 0.02020995 |
| 6 | 10600988 | 10600988 | 1 | 6_10600988 | ENSG00000111846 | GCNT2 | 0 | INTRON | 4.43747742 | 9.10E-06 | 0.02020995 |
| 3 | 20380780 | 20380780 | 1 | 3_20380780 | ENSG00000231304 | SGO1-AS1 | 0 | INTRON | -4.4374535 | 9.10E-06 | 0.02020995 |
| 22 | 36967133 | 36967133 | 1 | 22_36967133 | ENSG00000215403 | Z82180.1 | 0 | INTRON | 4.437453 | 9.10E-06 | 0.02020995 |
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| 5 | 42812142 | 42812142 | 1 | 5_42812142 | ENSG00000250722 | SELENOP | 0 | INTRON | 4.43741528 | 9.10E-06 | 0.02020995 |
| 21 | 36662416 | 36662416 | 1 | 21_36662416 | ENSG00000231324 | AP000696.1 | 25383 | Upstream | -4.437403 | 9.11E-06 | 0.02020995 |
| 7 | 145890435 | 145890435 | 1 | 7_145890435 | ENSG00000280144 | AC073308.1 | 159626 | Upstream | 4.43735693 | 9.11E-06 | 0.02021164 |
| 14 | 25285075 | 25285075 | 1 | 14_25285075 | ENSG00000257179 | HMGN2P6 | 17739 | Upstream | -4.4372177 | 9.11E-06 | 0.02022208 |
| 6 | 139348063 | 139348063 | 1 | 6_139348063 | ENSG00000226571 | AL592429.2 | 0 | INTRON | -4.4371086 | 9.12E-06 | 0.02022968 |
| 10 | 32013543 | 32013543 | 1 | 10_32013543 | ENSG00000170759 | KIF5B | 0 | INTRON | 4.43705525 | 9.12E-06 | 0.02023206 |
| 4 | 11660719 | 11660719 | 1 | 4_11660719 | ENSG00000249631 | AC005699.1 | 0 | INTRON | 4.43693032 | 9.13E-06 | 0.02024116 |
| X | 41110903 | 41110903 | 1 | X_41110903 | ENSG00000124486 | USP9X | 0 | INTRON | -4.4367803 | 9.13E-06 | 0.02025263 |
| 10 | 25580122 | 25580122 | 1 | 10_25580122 | ENSG00000151025 | GPR158 | 0 | INTRON | -4.4367033 | 9.13E-06 | 0.02025723 |
| 17 | 56303662 | 56303662 | 1 | 17_56303662 | ENSG00000153930 | ANKFN1 | 0 | INTRON | 4.43658543 | 9.14E-06 | 0.02026321 |
| 14 | 70361209 | 70361209 | 1 | 14_70361209 | ENSG00000258644 | SYNJ2BP-COX16 | 0 | INTRON | 4.43656369 | 9.14E-06 | 0.02026321 |
| 2 | 111926110 | 111926110 | 1 | 2_111926110 | ENSG00000153208 | MERTK | 0 | INTRON | -4.4365254 | 9.14E-06 | 0.02026321 |
| 10 | 23847354 | 23847354 | 1 | 10_23847354 | ENSG00000120549 | KIAA1217 | 0 | INTRON | 4.43650086 | 9.14E-06 | 0.02026321 |
| 18 | 73626852 | 73626852 | 1 | 18_73626852 | ENSG00000265380 | AC079070.1 | 84476 | Downstream | 4.43649946 | 9.14E-06 | 0.02026321 |
| 1 | 148090427 | 148090427 | 1 | 1_148090427 | ENSG00000229828 | PDE4DIPP1 | 0 | EXON | 4.43641227 | 9.15E-06 | 0.0202679 |
| 22 | 41848336 | 41848336 | 1 | 22_41848336 | ENSG00000198911 | SREBF2 | 0 | INTRON | 4.43637174 | 9.15E-06 | 0.0202679 |
| 13 | 29823172 | 29823172 | 1 | 13_29823172 | ENSG00000122042 | UBL3 | 0 | INTRON | 4.43636544 | 9.15E-06 | 0.0202679 |
| 8 | 72025336 | 72025336 | 1 | 8_72025336 | ENSG00000235531 | MSC-AS1 | 0 | INTRON | -4.4363269 | 9.15E-06 | 0.02026809 |
| 19 | 57021150 | 57021150 | 1 | 19_57021150 | ENSG00000268483 | RPL7AP69 | 44183 | Upstream | 4.43630737 | 9.15E-06 | 0.02026809 |
| 1 | 156268265 | 156268265 | 1 | 1_156268265 | ENSG00000198952 | SMG5 | 0 | INTRON | -4.4362615 | 9.15E-06 | 0.02026977 |
| 3 | 71148094 | 71148094 | 1 | 3_71148094 | ENSG00000114861 | FOXP1 | 0 | INTRON | 4.43614247 | 9.16E-06 | 0.02027595 |
| 16 | 2184043 | 2184043 | 1 | 16_2184043 | ENSG00000167971 | CASKIN1 | 0 | INTRON | 4.43613978 | 9.16E-06 | 0.02027595 |
| 7 | 67641962 | 67641962 | 1 | 7_67641962 | ENSG00000237466 | MTCO3P41 | 13613 | Downstream | 4.43576219 | 9.17E-06 | 0.02030687 |
| 3 | 149948098 | 149948098 | 1 | 3_149948098 | ENSG00000082996 | RNF13 | 0 | INTRON | 4.43568846 | 9.18E-06 | 0.02030687 |
| 4 | 108676619 | 108676619 | 1 | 4_108676619 | ENSG00000286136 | AC107071.1 | 0 | INTRON | 4.43567748 | 9.18E-06 | 0.02030687 |
| 18 | 64312130 | 64312130 | 1 | 18_64312130 | ENSG00000267134 | LINC01924 | 0 | INTRON | -4.4356757 | 9.18E-06 | 0.02030687 |
| 9 | 105450125 | 105450125 | 1 | 9_105450125 | ENSG00000106701 | FSD1L | 0 | INTRON | 4.4356715 | 9.18E-06 | 0.02030687 |
| 9 | 61906466 | 61906466 | 1 | 9_61906466 | ENSG00000229697 | FAM242E | 0 | EXON | -4.4356384 | 9.18E-06 | 0.02030735 |
| 21 | 18106343 | 18106343 | 1 | 21_18106343 | ENSG00000154645 | CHODL | 0 | INTRON | -4.4355895 | 9.18E-06 | 0.02030932 |
| 8 | 7242897 | 7242897 | 1 | 8_7242897 | ENSG00000177306 | OR7E125P | 3828 | Downstream | -4.4355187 | 9.19E-06 | 0.02031335 |
| X | 55153836 | 55153836 | 1 | X_55153836 | ENSG00000182518 | FAM104B | 0 | INTRON | 4.4354412 | 9.19E-06 | 0.02031802 |
| X | 103573393 | 103573393 | 1 | X_103573393 | ENSG00000287619 | AL021308.1 | 115 | Upstream | 4.4354 | 9.19E-06 | 0.02031927 |
| X | 77319716 | 77319716 | 1 | X_77319716 | ENSG00000234404 | SPRYD7P1 | 54495 | Upstream | 4.43528798 | 9.19E-06 | 0.0203272 |
| 8 | 96310353 | 96310353 | 1 | 8_96310353 | ENSG00000156471 | PTDSS1 | 0 | INTRON | -4.4352598 | 9.20E-06 | 0.02032721 |
| X | 44556716 | 44556716 | 1 | X_44556716 | ENSG00000069509 | FUNDC1 | 13857 | Upstream | 4.43522335 | 9.20E-06 | 0.02032802 |
| 17 | 12912609 | 12912609 | 1 | 17_12912609 | ENSG00000006740 | ARHGAP44 | 0 | INTRON | 4.43518264 | 9.20E-06 | 0.02032922 |
| 4 | 98956759 | 98956759 | 1 | 4_98956759 | ENSG00000214886 | FAM177A1P1 | 0 | EXON | 4.43514031 | 9.20E-06 | 0.02033057 |
| 4 | 70710408 | 70710408 | 1 | 4_70710408 | ENSG00000018189 | RUFY3 | 0 | INTRON | -4.4350183 | 9.21E-06 | 0.02033581 |
| 9 | 8549175 | 8549175 | 1 | 9_8549175 | ENSG00000153707 | PTPRD | 0 | INTRON | 4.43500121 | 9.21E-06 | 0.02033581 |
| 7 | 91977881 | 91977881 | 1 | 7_91977881 | ENSG00000127914 | AKAP9 | 0 | INTRON | -4.4350009 | 9.21E-06 | 0.02033581 |
| 9 | 83627698 | 83627698 | 1 | 9_83627698 | ENSG00000148057 | IDNK | 0 | INTRON | 4.43491726 | 9.21E-06 | 0.02034107 |
| 8 | 122395807 | 122395807 | 1 | 8_122395807 | ENSG00000255364 | SMILR | 18524 | Downstream | -4.4348755 | 9.21E-06 | 0.02034165 |
| 16 | 47454403 | 47454403 | 1 | 16_47454403 | ENSG00000129636 | ITFG1 | 0 | INTRON | 4.43481731 | 9.22E-06 | 0.02034165 |
| 17 | 42976441 | 42976441 | 1 | 17_42976441 | ENSG00000108825 | PTGES3L-AARSD1 | 0 | INTRON | 4.43480457 | 9.22E-06 | 0.02034165 |
| 7 | 148808119 | 148808119 | 1 | 7_148808119 | ENSG00000106462 | EZH2 | 0 | INTRON | 4.43476845 | 9.22E-06 | 0.02034165 |
| 14 | 79818926 | 79818926 | 1 | 14_79818926 | ENSG00000021645 | NRXN3 | 0 | INTRON | -4.4347475 | 9.22E-06 | 0.02034165 |
| 12 | 18325535 | 18325535 | 1 | 12_18325535 | ENSG00000139144 | PIK3C2G | 0 | INTRON | -4.4347346 | 9.22E-06 | 0.02034165 |
| 1 | 237295821 | 237295821 | 1 | 1_237295821 | ENSG00000198626 | RYR2 | 0 | INTRON | -4.4347154 | 9.22E-06 | 0.02034165 |
| 6 | 3021853 | 3021853 | 1 | 6_3021853 | ENSG00000124588 | NQO2 | 0 | 3UTR | 4.43467476 | 9.22E-06 | 0.02034246 |
| 22 | 20730963 | 20730963 | 1 | 22_20730963 | ENSG00000241973 | PI4KA | 0 | INTRON | -4.434651 | 9.22E-06 | 0.02034246 |
| 7 | 47634612 | 47634612 | 1 | 7_47634612 | ENSG00000236078 | LINC01447 | 4719 | Downstream | -4.4345196 | 9.23E-06 | 0.02035223 |
| 8 | 91816448 | 91816448 | 1 | 8_91816448 | ENSG00000253901 | AC103409.1 | 0 | INTRON | 4.43449093 | 9.23E-06 | 0.0203523 |
| 20 | 5181947 | 5181947 | 1 | 20_5181947 | ENSG00000101290 | CDS2 | 0 | INTRON | -4.4343945 | 9.23E-06 | 0.02035878 |
| 5 | 112666234 | 112666234 | 1 | 5_112666234 | ENSG00000250358 | LINC02200 | 23751 | Downstream | 4.43436303 | 9.23E-06 | 0.02035911 |
| 18 | 55389820 | 55389820 | 1 | 18_55389820 | ENSG00000196628 | TCF4 | 0 | INTRON | 4.43430594 | 9.24E-06 | 0.02036057 |
| 17 | 56191859 | 56191859 | 1 | 17_56191859 | ENSG00000153930 | ANKFN1 | 0 | INTRON | -4.4342918 | 9.24E-06 | 0.02036057 |
| 17 | 19731781 | 19731781 | 1 | 17_19731781 | ENSG00000264785 | AC005722.4 | 5900 | Upstream | -4.434186 | 9.24E-06 | 0.02036785 |
| 1 | 144956737 | 144956737 | 1 | 1_144956737 | ENSG00000196369 | SRGAP2B | 0 | INTRON | 4.43415498 | 9.24E-06 | 0.02036785 |
| 12 | 118027528 | 118027528 | 1 | 12_118027528 | ENSG00000111445 | RFC5 | 0 | INTRON | -4.4341079 | 9.25E-06 | 0.02036785 |
| 5 | 181317850 | 181317850 | 1 | 5_181317850 | ENSG00000238035 | AC138035.1 | 0 | INTRON | 4.43407913 | 9.25E-06 | 0.02036785 |
| 7 | 82776277 | 82776277 | 1 | 7_82776277 | ENSG00000186472 | PCLO | 0 | INTRON | 4.43405561 | 9.25E-06 | 0.02036785 |
| 6 | 104480633 | 104480633 | 1 | 6_104480633 | ENSG00000287616 | AL357522.1 | 6461 | Downstream | 4.43404736 | 9.25E-06 | 0.02036785 |
| 10 | 74275787 | 74275787 | 1 | 10_74275787 | ENSG00000156110 | ADK | 0 | INTRON | 4.43393538 | 9.25E-06 | 0.0203758 |
| 19 | 53564348 | 53564348 | 1 | 19_53564348 | ENSG00000130844 | ZNF331 | 0 | INTRON | 4.43387237 | 9.26E-06 | 0.0203771 |
| 3 | 104362115 | 104362115 | 1 | 3_104362115 | ENSG00000243635 | AC091804.1 | 140584 | Upstream | 4.43386589 | 9.26E-06 | 0.0203771 |
| 9 | 133373009 | 133373009 | 1 | 9_133373009 | ENSG00000148248 | SURF4 | 0 | INTRON | 4.43365596 | 9.26E-06 | 0.02039106 |
| 11 | 55395811 | 55395811 | 1 | 11_55395811 | ENSG00000254891 | OR4A9P | 6339 | Downstream | -4.4336548 | 9.26E-06 | 0.02039106 |
| 3 | 60706289 | 60706289 | 1 | 3_60706289 | ENSG00000189283 | FHIT | 0 | INTRON | -4.4336346 | 9.27E-06 | 0.02039106 |
| 8 | 35401526 | 35401526 | 1 | 8_35401526 | ENSG00000156687 | UNC5D | 0 | INTRON | 4.43348206 | 9.27E-06 | 0.02040286 |
| 11 | 62479368 | 62479368 | 1 | 11_62479368 | ENSG00000124942 | AHNAK | 0 | INTRON | 4.43339543 | 9.28E-06 | 0.02040843 |
| 1 | 224236818 | 224236818 | 1 | 1_224236818 | ENSG00000143748 | NVL | 0 | INTRON | -4.4333555 | 9.28E-06 | 0.02040957 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 16 | 65427519 | 65427519 | 1 | 16_65427519 | ENSG00000261742 | LINC00922 | 0 | INTRON | -4.4332009 | 9.28E-06 | 0.02042008 |
| 14 | 32626608 | 32626608 | 1 | 14_32626608 | ENSG00000151320 | AKAP6 | 0 | INTRON | 4.43318885 | 9.28E-06 | 0.02042008 |
| 14 | 45395422 | 45395422 | 1 | 14_45395422 | ENSG00000257900 | AL162632.1 | 6136 | Downstream | 4.43314233 | 9.29E-06 | 0.02042185 |
| 1 | 118785103 | 118785103 | 1 | 1_118785103 | ENSG00000229911 | AL139148.1 | 71425 | Downstream | 4.43309407 | 9.29E-06 | 0.0204229 |
| 6 | 136205046 | 136205046 | 1 | 6_136205046 | ENSG00000237596 | AL138828.1 | 0 | INTRON | 4.43304758 | 9.29E-06 | 0.0204229 |
| 7 | 126387837 | 126387837 | 1 | 7_126387837 | ENSG00000241921 | AC000372.1 | 0 | INTRON | -4.4330346 | 9.29E-06 | 0.0204229 |
| 1 | 183624459 | 183624459 | 1 | 1_183624459 | ENSG00000162704 | ARPC5 | 0 | 3UTR | 4.43301989 | 9.29E-06 | 0.0204229 |
| 6 | 131765839 | 131765839 | 1 | 6_131765839 | ENSG00000216917 | AC005587.1 | 14881 | Downstream | -4.4329763 | 9.29E-06 | 0.02042439 |
| 13 | 99868644 | 99868644 | 1 | 13_99868644 | ENSG00000286757 | AL137139.2 | 0 | INTRON | 4.43291734 | 9.30E-06 | 0.02042734 |
| 9 | 29337014 | 29337014 | 1 | 9_29337014 | ENSG00000277646 | AL353684.1 | 18062 | Downstream | -4.4327581 | 9.30E-06 | 0.0204398 |
| 10 | 471405 | 471405 | 1 | 10_471405 | ENSG00000151240 | DIP2C | 0 | INTRON | 4.43270263 | 9.31E-06 | 0.02044242 |
| 12 | 82866599 | 82866599 | 1 | 12_82866599 | ENSG00000179104 | TMTC2 | 0 | INTRON | 4.43259735 | 9.31E-06 | 0.02044977 |
| 8 | 41550448 | 41550448 | 1 | 8_41550448 | ENSG00000253133 | AC009630.1 | 0 | INTRON | 4.43256895 | 9.31E-06 | 0.02044982 |
| 13 | 70759428 | 70759428 | 1 | 13_70759428 | ENSG00000226554 | MTCL1P1 | 164235 | Upstream | 4.43246992 | 9.32E-06 | 0.02045492 |
| 3 | 171900980 | 171900980 | 1 | 3_171900980 | ENSG00000186329 | TMEM212 | 0 | INTRON | 4.43241866 | 9.32E-06 | 0.02045492 |
| 5 | 155253668 | 155253668 | 1 | 5_155253668 | ENSG00000287963 | AC010476.2 | 54416 | Downstream | 4.43241314 | 9.32E-06 | 0.02045492 |
| 18 | 40408738 | 40408738 | 1 | 18_40408738 | ENSG00000286844 | AC068688.1 | 161371 | Downstream | 4.43240405 | 9.32E-06 | 0.02045492 |
| 14 | 94388801 | 94388801 | 1 | 14_94388801 | ENSG00000197249 | SERPINA1 | 0 | 5UTR | -4.4323442 | 9.32E-06 | 0.02045593 |
| 16 | 18661001 | 18661001 | 1 | 16_18661001 | ENSG00000256340 | ABCC6P1 | 62673 | Downstream | 4.43233771 | 9.32E-06 | 0.02045593 |
| 5 | 140396984 | 140396984 | 1 | 5_140396984 | ENSG00000249637 | AC008438.1 | 0 | INTRON | -4.4323076 | 9.32E-06 | 0.02045615 |
| X | 57915912 | 57915912 | 1 | X_57915912 | ENSG00000198205 | ZXDA | 5092 | Upstream | 4.43225294 | 9.33E-06 | 0.02045735 |
| 13 | 84377105 | 84377105 | 1 | 13_84377105 | ENSG00000288016 | AL162493.1 | 0 | INTRON | 4.43219422 | 9.33E-06 | 0.02045735 |
| 2 | 38728493 | 38728493 | 1 | 2_38728493 | ENSG00000143891 | GALM | 0 | INTRON | 4.43216748 | 9.33E-06 | 0.02045735 |
| 3 | 126729989 | 126729989 | 1 | 3_126729989 | ENSG00000159685 | CHCHD6 | 0 | INTRON | 4.43216399 | 9.33E-06 | 0.02045735 |
| 5 | 83086208 | 83086208 | 1 | 5_83086208 | ENSG00000152422 | XRCC4 | 0 | INTRON | -4.4321561 | 9.33E-06 | 0.02045735 |
| 11 | 46736657 | 46736657 | 1 | 11_46736657 | ENSG00000180210 | F2 | 0 | INTRON | 4.43209487 | 9.33E-06 | 0.02046052 |
| 11 | 76222298 | 76222298 | 1 | 11_76222298 | ENSG00000255362 | LINC02761 | 6273 | Upstream | 4.43203324 | 9.33E-06 | 0.02046374 |
| 1 | 104948225 | 104948225 | 1 | 1_104948225 | ENSG00000285981 | AL591888.1 | 50180 | Downstream | -4.4319765 | 9.34E-06 | 0.02046485 |
| 18 | 56085832 | 56085832 | 1 | 18_56085832 | ENSG00000267057 | LINC01905 | 0 | INTRON | 4.43196595 | 9.34E-06 | 0.02046485 |
| 2 | 103561290 | 103561290 | 1 | 2_103561290 | ENSG00000221849 | AC018880.1 | 32029 | Downstream | 4.43190218 | 9.34E-06 | 0.02046643 |
| 2 | 230579852 | 230579852 | 1 | 2_230579852 | ENSG00000235419 | AC010149.1 | 0 | INTRON | 4.43189377 | 9.34E-06 | 0.02046643 |
| 13 | 67280438 | 67280438 | 1 | 13_67280438 | ENSG00000214263 | RPSAP53 | 12732 | Upstream | 4.43182082 | 9.34E-06 | 0.02046875 |
| 15 | 76977757 | 76977757 | 1 | 15_76977757 | ENSG00000243365 | RN7SL278P | 547 | Upstream | 4.43181389 | 9.34E-06 | 0.02046875 |
| 8 | 58927291 | 58927291 | 1 | 8_58927291 | ENSG00000198846 | TOX | 0 | INTRON | -4.4317819 | 9.35E-06 | 0.02046915 |
| 11 | 18143182 | 18143182 | 1 | 11_18143182 | ENSG00000285562 | AC090099.2 | 0 | EXON | 4.43169844 | 9.35E-06 | 0.02047157 |
| 4 | 154703241 | 154703241 | 1 | 4_154703241 | ENSG00000121207 | LRAT | 0 | INTRON | 4.4316908 | 9.35E-06 | 0.02047157 |
| 8 | 138973594 | 138973594 | 1 | 8_138973594 | ENSG00000169436 | COL22A1 | 59553 | Upstream | -4.4316732 | 9.35E-06 | 0.02047157 |
| 9 | 86541307 | 86541307 | 1 | 9_86541307 | ENSG00000235819 | AL158828.1 | 52700 | Downstream | -4.4315736 | 9.35E-06 | 0.02047839 |
| 6 | 22082691 | 22082691 | 1 | 6_22082691 | ENSG00000272168 | CASC15 | 0 | INTRON | -4.4313465 | 9.36E-06 | 0.02049734 |
| 6 | 38281357 | 38281357 | 1 | 6_38281357 | ENSG00000183826 | BTBD9 | 0 | INTRON | 4.43119967 | 9.37E-06 | 0.02050867 |
| 5 | 23427119 | 23427119 | 1 | 5_23427119 | ENSG00000164256 | PRDM9 | 16466 | Upstream | -4.43112 | 9.37E-06 | 0.02050877 |
| 7 | 12012111 | 12012111 | 1 | 7_12012111 | ENSG00000005108 | THSD7A | 179913 | Upstream | 4.43111616 | 9.37E-06 | 0.02050877 |
| 16 | 65860236 | 65860236 | 1 | 16_65860236 | ENSG00000260695 | AC022164.1 | 875 | Downstream | -4.4310666 | 9.38E-06 | 0.02050877 |
| 9 | 121858276 | 121858276 | 1 | 9_121858276 | ENSG00000175764 | TTLL11 | 0 | INTRON | -4.4310347 | 9.38E-06 | 0.02050877 |
| 1 | 38604284 | 38604284 | 1 | 1_38604284 | ENSG00000238063 | LINC01685 | 87764 | Downstream | 4.4310325 | 9.38E-06 | 0.02050877 |
| 14 | 105558181 | 105558181 | 1 | 14_105558181 | ENSG00000234402 | ELK2BP | 8487 | Upstream | -4.4310323 | 9.38E-06 | 0.02050877 |
| 4 | 93625637 | 93625637 | 1 | 4_93625637 | ENSG00000152208 | GRID2 | 0 | INTRON | 4.43098931 | 9.38E-06 | 0.02051022 |
| 11 | 103972136 | 103972136 | 1 | 11_103972136 | ENSG00000170962 | PDGFD | 0 | INTRON | 4.43095005 | 9.38E-06 | 0.02051132 |
| 17 | 34808264 | 34808264 | 1 | 17_34808264 | ENSG00000264622 | AC022903.1 | 29606 | Downstream | 4.43081316 | 9.39E-06 | 0.02052171 |
| 2 | 102106548 | 102106548 | 1 | 2_102106548 | ENSG00000115594 | IL1R1 | 0 | INTRON | -4.43075 | 9.39E-06 | 0.02052329 |
| 12 | 54984837 | 54984837 | 1 | 12_54984837 | ENSG00000135426 | TESPA1 | 75 | Upstream | 4.43074113 | 9.39E-06 | 0.02052329 |
| 14 | 41001646 | 41001646 | 1 | 14_41001646 | ENSG00000251363 | LINC02315 | 0 | INTRON | 4.43068677 | 9.39E-06 | 0.02052583 |
| 17 | 41660447 | 41660447 | 1 | 17_41660447 | ENSG00000278954 | AC130686.1 | 5118 | Upstream | 4.43062251 | 9.40E-06 | 0.02052931 |
| 3 | 65696054 | 65696054 | 1 | 3_65696054 | ENSG00000151276 | MAGI1 | 0 | INTRON | -4.430575 | 9.40E-06 | 0.0205312 |
| 18 | 1682240 | 1682240 | 1 | 18_1682240 | ENSG00000266602 | AP005262.2 | 0 | INTRON | 4.43041637 | 9.41E-06 | 0.02053677 |
| 11 | 293271 | 293271 | 1 | 11_293271 | ENSG00000142102 | PGGHG | 0 | EXON | -4.4304117 | 9.41E-06 | 0.02053677 |
| 3 | 28053453 | 28053453 | 1 | 3_28053453 | ENSG00000235493 | LINC01967 | 0 | INTRON | -4.430411 | 9.41E-06 | 0.02053677 |
| 16 | 24714945 | 24714945 | 1 | 16_24714945 | ENSG00000090905 | TNRC6A | 0 | INTRON | -4.4304058 | 9.41E-06 | 0.02053677 |
| 19 | 5659297 | 5659297 | 1 | 19_5659297 | ENSG00000160633 | SAFB | 0 | INTRON | -4.4302864 | 9.41E-06 | 0.02054374 |
| 20 | 40948081 | 40948081 | 1 | 20_40948081 | ENSG00000222612 | RNU2-52P | 76123 | Upstream | -4.4302625 | 9.41E-06 | 0.02054374 |
| 3 | 129218465 | 129218465 | 1 | 3_129218465 | ENSG00000241673 | RPS27P12 | 115 | Upstream | -4.4301872 | 9.42E-06 | 0.02054374 |
| X | 9914562 | 9914562 | 1 | X_9914562 | ENSG00000146950 | SHROOM2 | 0 | INTRON | 4.43015257 | 9.42E-06 | 0.02054374 |
| 4 | 158863546 | 158863546 | 1 | 4_158863546 | ENSG00000052795 | FNIP2 | 0 | INTRON | -4.4301388 | 9.42E-06 | 0.02054374 |
| 14 | 20491398 | 20491398 | 1 | 14_20491398 | ENSG00000182545 | RNASE10 | 14138 | Upstream | -4.4301023 | 9.42E-06 | 0.02054374 |
| 15 | 52925276 | 52925276 | 1 | 15_52925276 | ENSG00000259612 | EEF1A1P22 | 11862 | Downstream | 4.43009731 | 9.42E-06 | 0.02054374 |
| 13 | 76095202 | 76095202 | 1 | 13_76095202 | ENSG00000243274 | RN7SL571P | 39728 | Upstream | -4.4300733 | 9.42E-06 | 0.02054374 |
| 11 | 10661704 | 10661704 | 1 | 11_10661704 | ENSG00000072952 | MRVI1 | 0 | INTRON | 4.43005404 | 9.42E-06 | 0.02054374 |
| 12 | 86695565 | 86695565 | 1 | 12_86695565 | ENSG00000258185 | AC010196.1 | 0 | INTRON | 4.43005271 | 9.42E-06 | 0.02054374 |
| 2 | 162050640 | 162050640 | 1 | 2_162050640 | ENSG00000197635 | DPP4 | 0 | INTRON | -4.4299566 | 9.43E-06 | 0.02054374 |
| 14 | 104831763 | 104831763 | 1 | 14_104831763 | ENSG00000239365 | RPS26P49 | 592 | Upstream | 4.42993707 | 9.43E-06 | 0.02054374 |
| 5 | 112676967 | 112676967 | 1 | 5_112676967 | ENSG00000134982 | APC | 30530 | Upstream | -4.4299085 | 9.43E-06 | 0.02054374 |
| 12 | 33133876 | 33133876 | 1 | 12_33133876 | ENSG00000257435 | AC087311.2 | 140122 | Downstream | 4.42989838 | 9.43E-06 | 0.02054374 |
| 8 | 115270044 | 115270044 | 1 | 8_115270044 | ENSG00000104447 | TRPS1 | 138451 | Downstream | -4.4298766 | 9.43E-06 | 0.02054374 |
| 17 | 6782410 | 6782410 | 1 | 17_6782410 | ENSG00000177294 | FBXO39 | 0 | INTRON | 4.42985518 | 9.43E-06 | 0.02054374 |
| 6 | 147869081 | 147869081 | 1 | 6_147869081 | ENSG00000227681 | AL033504.1 | 0 | INTRON | 4.42983593 | 9.43E-06 | 0.02054374 |
| 18 | 51875612 | 51875612 | 1 | 18_51875612 | ENSG00000215457 | RPS8P3 | 29984 | Upstream | -4.4298351 | 9.43E-06 | 0.02054374 |
| 5 | 118594170 | 118594170 | 1 | 5_118594170 | ENSG00000286745 | AC114311.1 | 0 | INTRON | -4.4297928 | 9.43E-06 | 0.02054388 |
| 7 | 97588433 | 97588433 | 1 | 7_97588433 | ENSG00000199475 | RN7SKP104 | 10499 | Downstream | -4.4297346 | 9.43E-06 | 0.02054388 |
| 13 | 65243469 | 65243469 | 1 | 13_65243469 | ENSG00000214266 | STARP1 | 66385 | Downstream | 4.42972794 | 9.44E-06 | 0.02054388 |
| 9 | 126311441 | 126311441 | 1 | 9_126311441 | ENSG00000228392 | AL162391.1 | 12848 | Upstream | 4.42971847 | 9.44E-06 | 0.02054388 |
| 10 | 38073588 | 38073588 | 1 | 10_38073588 | ENSG00000275675 | AL161931.1 | 4894 | Upstream | 4.42969561 | 9.44E-06 | 0.02054388 |
| 18 | 42981961 | 42981961 | 1 | 18_42981961 | ENSG00000152214 | RIT2 | 0 | INTRON | -4.4296283 | 9.44E-06 | 0.02054766 |
| 14 | 97283578 | 97283578 | 1 | 14_97283578 | ENSG00000285584 | AL158800.1 | 65800 | Downstream | 4.42953541 | 9.44E-06 | 0.02055389 |
| 5 | 81955899 | 81955899 | 1 | 5_81955899 | ENSG00000152348 | ATG10 | 16123 | Upstream | 4.4293251 | 9.45E-06 | 0.02057131 |
| 14 | 98010972 | 98010972 | 1 | 14_98010972 | ENSG00000246223 | LINC01550 | 32848 | Upstream | 4.42928972 | 9.45E-06 | 0.02057205 |

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| 3 | 95122215 | 95122215 | 1 | 3_95122215 | ENSG00000239589 | LINC00879 | 0 | INTRON | 4.42918308 | 9.46E-06 | 0.02057877 |
| 10 | 33593966 | 33593966 | 1 | 10_33593966 | ENSG00000226412 | LINC02628 | 0 | INTRON | 4.42914374 | 9.46E-06 | 0.02057877 |
| 1 | 31794802 | 31794802 | 1 | 1_31794802 | ENSG00000134668 | SPOCD1 | 0 | EXON | 4.42913655 | 9.46E-06 | 0.02057877 |
| 1 | 248781292 | 248781292 | 1 | 1_248781292 | ENSG00000229663 | DPY19L4P1 | 7500 | Upstream | 4.42883116 | 9.47E-06 | 0.02060268 |
| 7 | 95966651 | 95966651 | 1 | 7_95966651 | ENSG00000158560 | DYNC1I1 | 0 | INTRON | -4.4288173 | 9.48E-06 | 0.02060268 |
| 6 | 51643755 | 51643755 | 1 | 6_51643755 | ENSG00000170927 | PKHD1 | 0 | INTRON | 4.42880342 | 9.48E-06 | 0.02060268 |
| 6 | 60427125 | 60427125 | 1 | 6_60427125 | ENSG00000283453 | AC244258.1 | 0 | INTRON | 4.42870513 | 9.48E-06 | 0.02060644 |
| 1 | 53436186 | 53436186 | 1 | 1_53436186 | ENSG00000236253 | SLC25A3P1 | 0 | INTRON | 4.42870176 | 9.48E-06 | 0.02060644 |
| 4 | 190174336 | 190174336 | 1 | 4_190174336 | ENSG00000260596 | DUX4 | 0 | EXON | 4.42865653 | 9.48E-06 | 0.02060644 |
| 2 | 55597546 | 55597546 | 1 | 2_55597546 | ENSG00000275052 | PPP4R3B | 0 | INTRON | 4.42865379 | 9.48E-06 | 0.02060644 |
| 12 | 3803172 | 3803172 | 1 | 12_3803172 | ENSG00000111224 | PARP11 | 0 | INTRON | 4.42858787 | 9.49E-06 | 0.02061011 |
| 10 | 44240292 | 44240292 | 1 | 10_44240292 | ENSG00000237590 | AL137026.2 | 19309 | Downstream | -4.4285341 | 9.49E-06 | 0.02061011 |
| 4 | 89335507 | 89335507 | 1 | 4_89335507 | ENSG00000185477 | GPRIN3 | 27707 | Upstream | -4.4285049 | 9.49E-06 | 0.02061011 |
| 13 | 67454385 | 67454385 | 1 | 13_67454385 | ENSG00000230040 | LINC00364 | 74391 | Downstream | 4.42849431 | 9.49E-06 | 0.02061011 |
| X | 572899 | 572899 | 1 | X_572899 | ENSG00000229232 | KRT18P53 | 27547 | Upstream | 4.42847399 | 9.49E-06 | 0.02061011 |
| 5 | 154617358 | 154617358 | 1 | 5_154617358 | ENSG00000264760 | MIR3141 | 21286 | Upstream | 4.4284501 | 9.49E-06 | 0.02061011 |
| 22 | 31612272 | 31612272 | 1 | 22_31612272 | ENSG00000198089 | SFI1 | 0 | EXON | 4.42831216 | 9.50E-06 | 0.02061834 |
| 12 | 117555224 | 117555224 | 1 | 12_117555224 | ENSG00000171435 | KSR2 | 0 | EXON | 4.42830897 | 9.50E-06 | 0.02061834 |
| 14 | 88196171 | 88196171 | 1 | 14_88196171 | ENSG00000100433 | KCNK10 | 0 | INTRON | -4.4282498 | 9.50E-06 | 0.02061898 |
| 3 | 107063742 | 107063742 | 1 | 3_107063742 | ENSG00000242759 | LINC00882 | 0 | INTRON | 4.42824726 | 9.50E-06 | 0.02061898 |
| 10 | 2468752 | 2468752 | 1 | 10_2468752 | ENSG00000234170 | LINC02645 | 0 | INTRON | 4.4281912 | 9.50E-06 | 0.020621 |
| 21 | 37573404 | 37573404 | 1 | 21_37573404 | ENSG00000286717 | AP001407.1 | 20572 | Upstream | -4.4281529 | 9.50E-06 | 0.020621 |
| 10 | 86759399 | 86759399 | 1 | 10_86759399 | ENSG00000107779 | BMPR1A | 0 | INTRON | 4.42814359 | 9.50E-06 | 0.020621 |
| 12 | 121767248 | 121767248 | 1 | 12_121767248 | ENSG00000188735 | TMEM120B | 0 | INTRON | 4.42804681 | 9.51E-06 | 0.02062762 |
| 8 | 136317318 | 136317318 | 1 | 8_136317318 | ENSG00000254101 | LINC02055 | 0 | INTRON | 4.42797872 | 9.51E-06 | 0.0206315 |
| 15 | 39324774 | 39324774 | 1 | 15_39324774 | ENSG00000259345 | AC013652.1 | 0 | INTRON | -4.4279227 | 9.51E-06 | 0.02063423 |
| 3 | 174484352 | 174484352 | 1 | 3_174484352 | ENSG00000177694 | NAALADL2 | 0 | INTRON | -4.4278322 | 9.52E-06 | 0.02064026 |
| 6 | 73885847 | 73885847 | 1 | 6_73885847 | ENSG00000156535 | CD109 | 57531 | Downstream | 4.42779585 | 9.52E-06 | 0.0206411 |
| 1 | 2754105 | 2754105 | 1 | 1_2754105 | ENSG00000215912 | TTC34 | 0 | INTRON | -4.4277135 | 9.52E-06 | 0.02064636 |
| 5 | 14668995 | 14668995 | 1 | 5_14668995 | ENSG00000154124 | OTULIN | 0 | INTRON | 4.4276324 | 9.53E-06 | 0.02065148 |
| 10 | 53187167 | 53187167 | 1 | 10_53187167 | ENSG00000226296 | AC036101.1 | 103904 | Downstream | -4.4276019 | 9.53E-06 | 0.02065177 |
| 2 | 73521474 | 73521474 | 1 | 2_73521474 | ENSG00000116127 | ALMS1 | 0 | INTRON | 4.42749665 | 9.53E-06 | 0.02065922 |
| 19 | 32784217 | 32784217 | 1 | 19_32784217 | ENSG00000173809 | TDRD12 | 0 | INTRON | -4.4274577 | 9.54E-06 | 0.02065973 |
| 9 | 106866715 | 106866715 | 1 | 9_106866715 | ENSG00000148143 | ZNF462 | 0 | INTRON | 4.4274363 | 9.54E-06 | 0.02065973 |
| 1 | 235643091 | 235643091 | 1 | 1_235643091 | ENSG00000168243 | GNG4 | 0 | INTRON | -4.4271464 | 9.55E-06 | 0.02068294 |
| 6 | 47734508 | 47734508 | 1 | 6_47734508 | ENSG00000226594 | AL356421.2 | 0 | INTRON | -4.4271392 | 9.55E-06 | 0.02068294 |
| 15 | 26561929 | 26561929 | 1 | 15_26561929 | ENSG00000166206 | GABRB3 | 0 | INTRON | -4.4270983 | 9.55E-06 | 0.02068422 |
| 2 | 16599686 | 16599686 | 1 | 2_16599686 | ENSG00000197872 | FAM49A | 0 | INTRON | -4.4270499 | 9.55E-06 | 0.02068622 |
| 8 | 71809256 | 71809256 | 1 | 8_71809256 | ENSG00000200191 | U8 | 6237 | Downstream | 4.42698779 | 9.56E-06 | 0.02068955 |
| 19 | 24055371 | 24055371 | 1 | 19_24055371 | ENSG00000268362 | AC092279.1 | 0 | INTRON | -4.4269306 | 9.56E-06 | 0.02069134 |
| 10 | 124173410 | 124173410 | 1 | 10_124173410 | ENSG00000182022 | CHST15 | 79812 | Upstream | -4.4269143 | 9.56E-06 | 0.02069134 |
| 4 | 60224823 | 60224823 | 1 | 4_60224823 | ENSG00000283043 | AC097655.1 | 186237 | Downstream | -4.4268716 | 9.56E-06 | 0.0206928 |
| 4 | 51700775 | 51700775 | 1 | 4_51700775 | ENSG00000109184 | DCUN1D4 | 142224 | Upstream | 4.42672929 | 9.57E-06 | 0.02070381 |
| 7 | 49877032 | 49877032 | 1 | 7_49877032 | ENSG00000188730 | VWC2 | 0 | INTRON | 4.42667724 | 9.57E-06 | 0.02070602 |
| 11 | 91303249 | 91303249 | 1 | 11_91303249 | ENSG00000255187 | LINC02748 | 68861 | Downstream | 4.42663858 | 9.57E-06 | 0.02070602 |
| 9 | 95308444 | 95308444 | 1 | 9_95308444 | ENSG00000158169 | FANCC | 0 | INTRON | 4.42662264 | 9.57E-06 | 0.02070602 |
| 6 | 123884479 | 123884479 | 1 | 6_123884479 | ENSG00000188580 | NKAIN2 | 0 | INTRON | 4.42659654 | 9.57E-06 | 0.02070602 |
| 20 | 9022099 | 9022099 | 1 | 20_9022099 | ENSG00000275222 | Metazoa_SRP | 22999 | Downstream | 4.42655669 | 9.57E-06 | 0.02070721 |
| 8 | 56194430 | 56194430 | 1 | 8_56194430 | ENSG00000181690 | PLAG1 | 0 | INTRON | 4.42652516 | 9.58E-06 | 0.0207076 |
| 9 | 120441235 | 120441235 | 1 | 9_120441235 | ENSG00000136861 | CDK5RAP2 | 0 | INTRON | -4.4264725 | 9.58E-06 | 0.02071003 |
| 1 | 20858869 | 20858869 | 1 | 1_20858869 | ENSG00000075151 | EIF4G3 | 0 | INTRON | -4.4263056 | 9.59E-06 | 0.02072341 |
| 11 | 40599434 | 40599434 | 1 | 11_40599434 | ENSG00000148948 | LRRC4C | 0 | INTRON | -4.4261503 | 9.59E-06 | 0.02073452 |
| 16 | 28776533 | 28776533 | 1 | 16_28776533 | ENSG00000278528 | AC145285.7 | 0 | INTRON | -4.4261352 | 9.59E-06 | 0.02073452 |
| 11 | 77694034 | 77694034 | 1 | 11_77694034 | ENSG00000048649 | RSF1 | 0 | INTRON | 4.42606456 | 9.60E-06 | 0.02073762 |
| 2 | 45578184 | 45578184 | 1 | 2_45578184 | ENSG00000068784 | SRBD1 | 0 | INTRON | -4.426048 | 9.60E-06 | 0.02073762 |
| 5 | 77715037 | 77715037 | 1 | 5_77715037 | ENSG00000171530 | TBCA | 0 | INTRON | -4.4259522 | 9.60E-06 | 0.02074291 |
| 18 | 10620795 | 10620795 | 1 | 18_10620795 | ENSG00000266604 | LINC01887 | 0 | INTRON | 4.42593823 | 9.60E-06 | 0.02074291 |
| 16 | 60793098 | 60793098 | 1 | 16_60793098 | ENSG00000261178 | AC009169.1 | 132634 | Downstream | 4.42590699 | 9.60E-06 | 0.02074327 |
| 3 | 173668875 | 173668875 | 1 | 3_173668875 | ENSG00000169760 | NLGN1 | 0 | INTRON | 4.4258449 | 9.61E-06 | 0.02074509 |
| 12 | 6957756 | 6957756 | 1 | 12_6957756 | ENSG00000111679 | PTPN6 | 0 | EXON | 4.42581814 | 9.61E-06 | 0.02074509 |
| 8 | 8584160 | 8584160 | 1 | 8_8584160 | ENSG00000263616 | RN7SL178P | 1505 | Upstream | -4.4258059 | 9.61E-06 | 0.02074509 |
| 2 | 62245714 | 62245714 | 1 | 2_62245714 | ENSG00000239958 | RN7SL51P | 16672 | Downstream | 4.42575189 | 9.61E-06 | 0.02074765 |
| 14 | 64433922 | 64433922 | 1 | 14_64433922 | ENSG00000100714 | MTHFD1 | 0 | INTRON | 4.42561213 | 9.62E-06 | 0.02075846 |
| 2 | 152061843 | 152061843 | 1 | 2_152061843 | ENSG00000182389 | CACNB4 | 0 | INTRON | -4.4255509 | 9.62E-06 | 0.02075972 |
| 4 | 24113952 | 24113952 | 1 | 4_24113952 | ENSG00000109819 | PPARGC1A | 209863 | Upstream | 4.42554428 | 9.62E-06 | 0.02075972 |
| 7 | 157393990 | 157393990 | 1 | 7_157393990 | ENSG00000105993 | DNAJB6 | 0 | INTRON | -4.4254561 | 9.62E-06 | 0.0207616 |
| 11 | 63700190 | 63700190 | 1 | 11_63700190 | ENSG00000133318 | RTN3 | 0 | INTRON | -4.4254299 | 9.63E-06 | 0.0207616 |
| 9 | 98942055 | 98942055 | 1 | 9_98942055 | ENSG00000204291 | COL15A1 | 1123 | Upstream | 4.42541455 | 9.63E-06 | 0.0207616 |
| 9 | 72294941 | 72294941 | 1 | 9_72294941 | ENSG00000252428 | RNA5SP285 | 4778 | Downstream | 4.4254104 | 9.63E-06 | 0.0207616 |
| 7 | 34195088 | 34195088 | 1 | 7_34195088 | ENSG00000236212 | AC009262.1 | 14376 | Upstream | 4.42538288 | 9.63E-06 | 0.0207616 |
| 5 | 28203485 | 28203485 | 1 | 5_28203485 | ENSG00000250079 | AC093300.1 | 9873 | Downstream | 4.42536048 | 9.63E-06 | 0.0207616 |
| 12 | 32854566 | 32854566 | 1 | 12_32854566 | ENSG00000057294 | PKP2 | 0 | INTRON | 4.42529315 | 9.63E-06 | 0.02076389 |
| 4 | 26948500 | 26948500 | 1 | 4_26948500 | ENSG00000109689 | STIM2 | 0 | INTRON | -4.4252771 | 9.63E-06 | 0.02076389 |
| 10 | 54690439 | 54690439 | 1 | 10_54690439 | ENSG00000150275 | PCDH15 | 0 | INTRON | 4.4252466 | 9.63E-06 | 0.02076389 |
| 20 | 48316167 | 48316167 | 1 | 20_48316167 | ENSG00000286063 | AL121888.1 | 8644 | Downstream | -4.4252273 | 9.63E-06 | 0.02076389 |
| 6 | 17265208 | 17265208 | 1 | 6_17265208 | ENSG00000287559 | AL136305.1 | 0 | INTRON | -4.4251908 | 9.64E-06 | 0.02076477 |
| 17 | 45188621 | 45188621 | 1 | 17_45188621 | ENSG00000267121 | AC008105.3 | 2309 | Downstream | 4.42512981 | 9.64E-06 | 0.02076577 |
| 18 | 41392026 | 41392026 | 1 | 18_41392026 | ENSG00000286328 | AC079052.1 | 0 | INTRON | -4.4251115 | 9.64E-06 | 0.02076577 |
| 6 | 46841906 | 46841906 | 1 | 6_46841906 | ENSG00000112818 | MEP1A | 2124 | Downstream | -4.4250984 | 9.64E-06 | 0.02076577 |
| 4 | 136289477 | 136289477 | 1 | 4_136289477 | ENSG00000251567 | AC018680.1 | 0 | INTRON | 4.42504643 | 9.64E-06 | 0.02076727 |
| 5 | 3130384 | 3130384 | 1 | 5_3130384 | ENSG00000249808 | AC091832.1 | 47450 | Upstream | 4.42501102 | 9.64E-06 | 0.02076727 |
| 7 | 68931710 | 68931710 | 1 | 7_68931710 | ENSG00000233689 | AC104688.1 | 94722 | Upstream | 4.42500079 | 9.64E-06 | 0.02076727 |
| 13 | 71757364 | 71757364 | 1 | 13_71757364 | ENSG00000276644 | DACH1 | 0 | INTRON | -4.424956 | 9.65E-06 | 0.02076895 |
| 8 | 134094070 | 134094070 | 1 | 8_134094070 | ENSG00000288067 | AC105180.2 | 96312 | Downstream | -4.4248223 | 9.65E-06 | 0.02077919 |
| 10 | 123481816 | 123481816 | 1 | 10_123481816 | ENSG00000230131 | LINC02641 | 0 | INTRON | 4.42478622 | 9.65E-06 | 0.02078004 |

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| 9 | 31078631 | 31078631 | 1 | 9_31078631 | ENSG00000223421 | AL354854.1 | 86986 | Downstream | -4.4246774 | 9.66E-06 | 0.02078525 |
| 2 | 223235325 | 223235325 | 1 | 2_223235325 | ENSG00000243125 | RN7SL807P | 13172 | Downstream | 4.42460077 | 9.66E-06 | 0.02078827 |
| 1 | 2570088 | 2570088 | 1 | 1_2570088 | ENSG00000225931 | AL139246.2 | 200 | Downstream | -4.424583 | 9.66E-06 | 0.02078827 |
| 7 | 110417542 | 110417542 | 1 | 7_110417542 | ENSG00000226965 | AC073114.1 | 0 | INTRON | -4.424558 | 9.66E-06 | 0.02078827 |
| 17 | 2532313 | 2532313 | 1 | 17_2532313 | ENSG00000127804 | METTL16 | 20422 | Upstream | 4.42452073 | 9.67E-06 | 0.02078827 |
| 7 | 108657765 | 108657765 | 1 | 7_108657765 | ENSG00000225647 | AC005487.1 | 18416 | Downstream | 4.42450672 | 9.67E-06 | 0.02078827 |
| 9 | 114283432 | 114283432 | 1 | 9_114283432 | ENSG00000196739 | COL27A1 | 0 | INTRON | 4.42447294 | 9.67E-06 | 0.02078827 |
| 16 | 36193450 | 36193450 | 1 | 16_36193450 | ENSG00000261084 | PPP1R1AP2 | 280934 | Downstream | -4.4244551 | 9.67E-06 | 0.02078827 |
| 11 | 19984424 | 19984424 | 1 | 11_19984424 | ENSG00000166833 | NAV2 | 0 | INTRON | -4.4243798 | 9.67E-06 | 0.02079079 |
| 1 | 164356673 | 164356673 | 1 | 1_164356673 | ENSG00000213070 | HMGB3P6 | 93 | Upstream | 4.42437432 | 9.67E-06 | 0.02079079 |
| 9 | 14759986 | 14759986 | 1 | 9_14759986 | ENSG00000164946 | FREM1 | 0 | INTRON | 4.42423559 | 9.68E-06 | 0.02080153 |
| 2 | 131947840 | 131947840 | 1 | 2_131947840 | ENSG00000244337 | AJ239322.2 | 10436 | Upstream | -4.4242045 | 9.68E-06 | 0.02080189 |
| 16 | 49285103 | 49285103 | 1 | 16_49285103 | ENSG00000279249 | AC007614.1 | 0 | EXON | 4.42417523 | 9.68E-06 | 0.02080209 |
| 1 | 215148709 | 215148709 | 1 | 1_215148709 | ENSG00000082482 | KCNK2 | 0 | INTRON | 4.42406789 | 9.69E-06 | 0.0208098 |
| 18 | 1727356 | 1727356 | 1 | 18_1727356 | ENSG00000266602 | AP005262.2 | 0 | INTRON | -4.4240268 | 9.69E-06 | 0.02081113 |
| 8 | 143863296 | 143863296 | 1 | 8_143863296 | ENSG00000261150 | EPPK1 | 0 | EXON | -4.42397 | 9.69E-06 | 0.02081398 |
| 9 | 12186058 | 12186058 | 1 | 9_12186058 | ENSG00000224935 | AL589678.1 | 26910 | Upstream | 4.4239377 | 9.69E-06 | 0.02081447 |
| 7 | 129417089 | 129417089 | 1 | 7_129417089 | ENSG00000158467 | AHCYL2 | 0 | INTRON | 4.42372344 | 9.70E-06 | 0.0208325 |
| 11 | 99452521 | 99452521 | 1 | 11_99452521 | ENSG00000149972 | CNTN5 | 0 | INTRON | -4.4236311 | 9.71E-06 | 0.02083878 |
| 5 | 164895792 | 164895792 | 1 | 5_164895792 | ENSG00000241956 | AC109466.1 | 0 | INTRON | 4.42354743 | 9.71E-06 | 0.02084423 |
| 16 | 59399828 | 59399828 | 1 | 16_59399828 | ENSG00000200062 | RNU4-58P | 140297 | Upstream | 4.42344386 | 9.71E-06 | 0.02085134 |
| 9 | 124957774 | 124957774 | 1 | 9_124957774 | ENSG00000173611 | SCAI | 0 | INTRON | -4.4233808 | 9.72E-06 | 0.02085134 |
| 17 | 55323410 | 55323410 | 1 | 17_55323410 | ENSG00000108924 | HLF | 0 | 3UTR | 4.42337609 | 9.72E-06 | 0.02085134 |
| 1 | 164400927 | 164400927 | 1 | 1_164400927 | ENSG00000213070 | HMGB3P6 | 43563 | Downstream | 4.42336485 | 9.72E-06 | 0.02085134 |
| 5 | 137614234 | 137614234 | 1 | 5_137614234 | ENSG00000146021 | KLHL3 | 3265 | Downstream | 4.42332098 | 9.72E-06 | 0.02085294 |
| 8 | 134577958 | 134577958 | 1 | 8_134577958 | ENSG00000066827 | ZFAT | 0 | INTRON | 4.42324152 | 9.72E-06 | 0.02085799 |
| 22 | 28096993 | 28096993 | 1 | 22_28096993 | ENSG00000100154 | TTC28 | 0 | INTRON | -4.4231801 | 9.73E-06 | 0.02085954 |
| 3 | 180946993 | 180946993 | 1 | 3_180946993 | ENSG00000114416 | FXR1 | 0 | INTRON | 4.42313036 | 9.73E-06 | 0.02085954 |
| 17 | 4195932 | 4195932 | 1 | 17_4195932 | ENSG00000185722 | ANKFY1 | 0 | INTRON | 4.42312912 | 9.73E-06 | 0.02085954 |
| 5 | 59682501 | 59682501 | 1 | 5_59682501 | ENSG00000113448 | PDE4D | 0 | INTRON | 4.42311656 | 9.73E-06 | 0.02085954 |
| 1 | 178161732 | 178161732 | 1 | 1_178161732 | ENSG00000075391 | RASAL2 | 0 | INTRON | 4.42304308 | 9.73E-06 | 0.02086401 |
| 19 | 22165896 | 22165896 | 1 | 19_22165896 | ENSG00000269345 | VN1R85P | 8869 | Downstream | 4.42298283 | 9.73E-06 | 0.0208672 |
| 11 | 63632658 | 63632658 | 1 | 11_63632658 | ENSG00000270269 | IMMP1LP1 | 0 | EXON | 4.42295178 | 9.74E-06 | 0.02086758 |
| 14 | 52783157 | 52783157 | 1 | 14_52783157 | ENSG00000100522 | GNPNAT1 | 0 | INTRON | 4.42289515 | 9.74E-06 | 0.02087042 |
| 1 | 50659090 | 50659090 | 1 | 1_50659090 | ENSG00000185104 | FAF1 | 0 | INTRON | -4.4228072 | 9.74E-06 | 0.02087629 |
| 13 | 109934032 | 109934032 | 1 | 13_109934032 | ENSG00000201161 | RN7SKP10 | 18612 | Downstream | -4.4227572 | 9.74E-06 | 0.02087652 |
| 1 | 114156995 | 114156995 | 1 | 1_114156995 | ENSG00000134207 | SYT6 | 3076 | Upstream | -4.4227278 | 9.75E-06 | 0.02087652 |
| 1 | 28035730 | 28035730 | 1 | 1_28035730 | ENSG00000158161 | EYA3 | 0 | INTRON | 4.42272325 | 9.75E-06 | 0.02087652 |
| 2 | 231944325 | 231944325 | 1 | 2_231944325 | ENSG00000144535 | DIS3L2 | 16919 | Upstream | 4.42262636 | 9.75E-06 | 0.02088261 |
| 17 | 62485757 | 62485757 | 1 | 17_62485757 | ENSG00000146872 | TLK2 | 0 | INTRON | -4.4226058 | 9.75E-06 | 0.02088261 |
| 15 | 65109431 | 65109431 | 1 | 15_65109431 | ENSG00000246922 | UBAP1L | 0 | INTRON | 4.422562 | 9.75E-06 | 0.02088422 |
| 4 | 179276219 | 179276219 | 1 | 4_179276219 | ENSG00000250993 | AC020551.1 | 112914 | Downstream | -4.4224745 | 9.76E-06 | 0.02088871 |
| 7 | 107702030 | 107702030 | 1 | 7_107702030 | ENSG00000091137 | SLC26A4 | 0 | EXON | -4.4224613 | 9.76E-06 | 0.02088871 |
| 21 | 32030356 | 32030356 | 1 | 21_32030356 | ENSG00000142149 | HUNK | 0 | INTRON | 4.4223815 | 9.76E-06 | 0.0208938 |
| 5 | 131615728 | 131615728 | 1 | 5_131615728 | ENSG00000158987 | RAPGEF6 | 0 | INTRON | 4.42229799 | 9.77E-06 | 0.02089925 |
| 1 | 27409349 | 27409349 | 1 | 1_27409349 | ENSG00000158195 | WASF2 | 0 | INTRON | 4.42223097 | 9.77E-06 | 0.0209031 |
| 2 | 554363 | 554363 | 1 | 2_554363 | ENSG00000233633 | AC093326.1 | 3789 | Upstream | -4.4221442 | 9.77E-06 | 0.02090887 |
| 3 | 153846312 | 153846312 | 1 | 3_153846312 | ENSG00000238755 | LINC02006 | 0 | INTRON | 4.42207931 | 9.78E-06 | 0.02091253 |
| X | 94600869 | 94600869 | 1 | X_94600869 | ENSG00000232293 | PAICSP7 | 35793 | Downstream | 4.42203281 | 9.78E-06 | 0.0209144 |
| 13 | 20253240 | 20253240 | 1 | 13_20253240 | ENSG00000121742 | GJB6 | 20875 | Upstream | 4.42191122 | 9.78E-06 | 0.02092354 |
| 2 | 236445235 | 236445235 | 1 | 2_236445235 | ENSG00000132321 | IQCA1 | 0 | INTRON | -4.4218542 | 9.79E-06 | 0.02092631 |
| 8 | 82390051 | 82390051 | 1 | 8_82390051 | ENSG00000254394 | AC060765.2 | 0 | INTRON | -4.4218284 | 9.79E-06 | 0.02092631 |
| 5 | 40642732 | 40642732 | 1 | 5_40642732 | ENSG00000113638 | TTC33 | 0 | INTRON | 4.42164318 | 9.80E-06 | 0.02094163 |
| 6 | 11542630 | 11542630 | 1 | 6_11542630 | ENSG00000205269 | TMEM170B | 0 | INTRON | 4.42154966 | 9.80E-06 | 0.02094626 |
| 4 | 98233566 | 98233566 | 1 | 4_98233566 | ENSG00000214559 | AC019077.1 | 18121 | Downstream | 4.42149081 | 9.80E-06 | 0.02094626 |
| 1 | 234692312 | 234692312 | 1 | 1_234692312 | ENSG00000230628 | AL160408.3 | 0 | INTRON | 4.42144572 | 9.80E-06 | 0.02094626 |
| 8 | 48353035 | 48353035 | 1 | 8_48353035 | ENSG00000224594 | RPL29P19 | 31554 | Upstream | -4.4214455 | 9.80E-06 | 0.02094626 |
| 15 | 64210161 | 64210161 | 1 | 15_64210161 | ENSG00000169118 | CSNK1G1 | 0 | INTRON | 4.42144009 | 9.80E-06 | 0.02094626 |
| 11 | 122013214 | 122013214 | 1 | 11_122013214 | ENSG00000286023 | AP001924.1 | 0 | INTRON | -4.4214326 | 9.80E-06 | 0.02094626 |
| 11 | 33199986 | 33199986 | 1 | 11_33199986 | ENSG00000200485 | Y_RNA | 3349 | Upstream | -4.4214024 | 9.81E-06 | 0.02094655 |
| 11 | 13048494 | 13048494 | 1 | 11_13048494 | ENSG00000255558 | AC013762.1 | 6120 | Downstream | -4.4213252 | 9.81E-06 | 0.02095076 |
| 10 | 118583102 | 118583102 | 1 | 10_118583102 | ENSG00000119973 | PRLHR | 6894 | Downstream | -4.4213048 | 9.81E-06 | 0.02095076 |
| 12 | 106286585 | 106286585 | 1 | 12_106286585 | ENSG00000136026 | CKAP4 | 0 | INTRON | -4.4212002 | 9.82E-06 | 0.02095828 |
| 9 | 121769793 | 121769793 | 1 | 9_121769793 | ENSG00000136848 | DAB2IP | 0 | INTRON | -4.421129 | 9.82E-06 | 0.02096098 |
| 1 | 71901336 | 71901336 | 1 | 1_71901336 | ENSG00000172260 | NEGR1 | 0 | INTRON | -4.4211182 | 9.82E-06 | 0.02096098 |
| 7 | 1332542 | 1332542 | 1 | 7_1332542 | ENSG00000233082 | AC073094.1 | 63275 | Downstream | 4.42104557 | 9.82E-06 | 0.02096296 |
| 20 | 35914907 | 35914907 | 1 | 20_35914907 | ENSG00000025293 | PHF20 | 0 | INTRON | -4.4210435 | 9.82E-06 | 0.02096296 |
| 17 | 58597542 | 58597542 | 1 | 17_58597542 | ENSG00000121101 | TEX14 | 0 | INTRON | 4.42095705 | 9.83E-06 | 0.02096872 |
| 8 | 106317586 | 106317586 | 1 | 8_106317586 | ENSG00000164830 | OXR1 | 41889 | Upstream | -4.4208613 | 9.83E-06 | 0.02097264 |
| 4 | 68938445 | 68938445 | 1 | 4_68938445 | ENSG00000135220 | UGT2A3 | 0 | INTRON | 4.4208488 | 9.83E-06 | 0.02097264 |
| 6 | 143210753 | 143210753 | 1 | 6_143210753 | ENSG00000146416 | AIG1 | 0 | INTRON | 4.42077352 | 9.83E-06 | 0.02097264 |
| 1 | 230063843 | 230063843 | 1 | 1_230063843 | ENSG00000143641 | GALNT2 | 0 | INTRON | 4.42076275 | 9.84E-06 | 0.02097264 |
| X | 55211332 | 55211332 | 1 | X_55211332 | ENSG00000158639 | PAGE5 | 9022 | Upstream | 4.42074342 | 9.84E-06 | 0.02097264 |
| 8 | 104821609 | 104821609 | 1 | 8_104821609 | ENSG00000169946 | ZFPM2 | 0 | INTRON | 4.42072522 | 9.84E-06 | 0.02097264 |
| 20 | 10426321 | 10426321 | 1 | 20_10426321 | ENSG00000125863 | MKKS | 0 | INTRON | 4.42071184 | 9.84E-06 | 0.02097264 |
| 15 | 57263911 | 57263911 | 1 | 15_57263911 | ENSG00000140262 | TCF12 | 0 | INTRON | -4.4206967 | 9.84E-06 | 0.02097264 |
| 11 | 82465629 | 82465629 | 1 | 11_82465629 | ENSG00000245832 | MIR4300HG | 0 | INTRON | -4.4206705 | 9.84E-06 | 0.02097264 |
| 3 | 117241772 | 117241772 | 1 | 3_117241772 | ENSG00000185565 | LSAMP | 102383 | Upstream | 4.42064593 | 9.84E-06 | 0.02097264 |
| 2 | 74500267 | 74500267 | 1 | 2_74500267 | ENSG00000179528 | LBX2 | 0 | INTRON | 4.42061671 | 9.84E-06 | 0.02097285 |
| 10 | 97855145 | 97855145 | 1 | 10_97855145 | ENSG00000155265 | GOLGA7B | 0 | INTRON | 4.4205468 | 9.85E-06 | 0.02097553 |
| 11 | 101467111 | 101467111 | 1 | 11_101467111 | ENSG00000137672 | TRPC6 | 0 | INTRON | -4.4205349 | 9.85E-06 | 0.02097553 |
| 6 | 140509164 | 140509164 | 1 | 6_140509164 | ENSG00000285875 | AL035446.2 | 66623 | Downstream | -4.420498 | 9.85E-06 | 0.02097649 |
| 1 | 113396754 | 113396754 | 1 | 1_113396754 | ENSG00000081026 | MAGI3 | 0 | INTRON | -4.4204423 | 9.85E-06 | 0.02097927 |
| 12 | 45603624 | 45603624 | 1 | 12_45603624 | ENSG00000257657 | AC079950.1 | 0 | INTRON | 4.42037429 | 9.85E-06 | 0.02098078 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 13 | 34606008 | 34606008 | 1 | 13_34606008 | ENSG00000225179 | LINC00457 | 0 | INTRON | 4.42035699 | 9.85E-06 | 0.02098078 |
| X | 1825094 | 1825094 | 1 | X_1825094 | ENSG00000234622 | AL683807.2 | 56318 | Downstream | 4.42034568 | 9.85E-06 | 0.02098078 |
| 13 | 53525182 | 53525182 | 1 | 13_53525182 | ENSG00000287722 | AL356295.1 | 0 | INTRON | -4.4202894 | 9.86E-06 | 0.02098268 |
| 12 | 2895962 | 2895962 | 1 | 12_2895962 | ENSG00000078246 | TULP3 | 0 | INTRON | 4.42025856 | 9.86E-06 | 0.02098268 |
| 7 | 98660855 | 98660855 | 1 | 7_98660855 | ENSG00000106236 | NPTX2 | 30986 | Downstream | 4.42021348 | 9.86E-06 | 0.02098268 |
| 8 | 41043711 | 41043711 | 1 | 8_41043711 | ENSG00000206867 | RNU6-356P | 10713 | Downstream | -4.4201951 | 9.86E-06 | 0.02098268 |
| 8 | 121380204 | 121380204 | 1 | 8_121380204 | ENSG00000239872 | RPL35AP19 | 0 | EXON | 4.42019095 | 9.86E-06 | 0.02098268 |
| 1 | 39023737 | 39023737 | 1 | 1_39023737 | ENSG00000168653 | NDUFS5 | 2580 | Upstream | 4.42012595 | 9.86E-06 | 0.02098554 |
| 8 | 16891890 | 16891890 | 1 | 8_16891890 | ENSG00000253496 | AC011586.2 | 0 | INTRON | 4.4200846 | 9.87E-06 | 0.02098554 |
| 15 | 70635143 | 70635143 | 1 | 15_70635143 | ENSG00000280515 | SALRNA2 | 105 | Upstream | 4.42008046 | 9.87E-06 | 0.02098554 |
| 11 | 107298159 | 107298159 | 1 | 11_107298159 | ENSG00000261098 | AP000766.1 | 13972 | Downstream | 4.41991172 | 9.87E-06 | 0.0209943 |
| 2 | 118548776 | 118548776 | 1 | 2_118548776 | ENSG00000258910 | LINC01956 | 218188 | Downstream | 4.41987983 | 9.88E-06 | 0.0209943 |
| X | 29478719 | 29478719 | 1 | X_29478719 | ENSG00000169306 | IL1RAPL1 | 0 | INTRON | 4.41986054 | 9.88E-06 | 0.0209943 |
| 16 | 22348950 | 22348950 | 1 | 16_22348950 | ENSG00000140743 | CDR2 | 0 | INTRON | -4.4198525 | 9.88E-06 | 0.0209943 |
| 8 | 71134442 | 71134442 | 1 | 8_71134442 | ENSG00000285579 | AC015687.1 | 0 | INTRON | -4.4198269 | 9.88E-06 | 0.0209943 |
| 3 | 169482868 | 169482868 | 1 | 3_169482868 | ENSG00000085276 | MECOM | 0 | INTRON | 4.41982128 | 9.88E-06 | 0.0209943 |
| 17 | 62540645 | 62540645 | 1 | 17_62540645 | ENSG00000146872 | TLK2 | 0 | INTRON | -4.4198013 | 9.88E-06 | 0.0209943 |
| 18 | 61854862 | 61854862 | 1 | 18_61854862 | ENSG00000176641 | RNF152 | 0 | INTRON | 4.4196811 | 9.88E-06 | 0.02100335 |
| 8 | 102429686 | 102429686 | 1 | 8_102429686 | ENSG00000221387 | RNU6ATAC8P | 8364 | Downstream | 4.41958323 | 9.89E-06 | 0.02101024 |
| 2 | 201121799 | 201121799 | 1 | 2_201121799 | ENSG00000003402 | CFLAR | 0 | INTRON | -4.419519 | 9.89E-06 | 0.02101386 |
| 2 | 205325402 | 205325402 | 1 | 2_205325402 | ENSG00000116117 | PARD3B | 0 | INTRON | -4.4194695 | 9.89E-06 | 0.02101455 |
| 17 | 1188504 | 1188504 | 1 | 17_1188504 | ENSG00000159842 | ABR | 0 | INTRON | -4.4194579 | 9.89E-06 | 0.02101455 |
| 9 | 18300432 | 18300432 | 1 | 9_18300432 | ENSG00000178031 | ADAMTSL1 | 0 | INTRON | -4.4194294 | 9.90E-06 | 0.02101471 |
| 6 | 23785058 | 23785058 | 1 | 6_23785058 | ENSG00000278128 | AL139093.1 | 69080 | Upstream | 4.41929433 | 9.90E-06 | 0.02102522 |
| 1 | 76162483 | 76162483 | 1 | 1_76162483 | ENSG00000184005 | ST6GALNAC3 | 0 | INTRON | -4.4192153 | 9.91E-06 | 0.02102888 |
| 5 | 39526972 | 39526972 | 1 | 5_39526972 | ENSG00000271334 | LINC02104 | 2246 | Downstream | 4.41920277 | 9.91E-06 | 0.02102888 |
| 4 | 138938308 | 138938308 | 1 | 4_138938308 | ENSG00000250195 | AC109927.1 | 0 | INTRON | 4.41908364 | 9.91E-06 | 0.02103785 |
| 11 | 108911781 | 108911781 | 1 | 11_108911781 | ENSG00000178105 | DDX10 | 0 | INTRON | 4.41897699 | 9.92E-06 | 0.0210456 |
| 4 | 105317637 | 105317637 | 1 | 4_105317637 | ENSG00000243383 | RN7SL89P | 23691 | Downstream | 4.41886516 | 9.92E-06 | 0.02105387 |
| 9 | 78695975 | 78695975 | 1 | 9_78695975 | ENSG00000237257 | MTND2P8 | 45744 | Downstream | 4.41873113 | 9.93E-06 | 0.02106181 |
| 7 | 50982251 | 50982251 | 1 | 7_50982251 | ENSG00000228204 | AC004830.2 | 0 | INTRON | 4.41872976 | 9.93E-06 | 0.02106181 |
| 2 | 169524649 | 169524649 | 1 | 2_169524649 | ENSG00000251569 | AC093899.2 | 0 | INTRON | 4.41858703 | 9.93E-06 | 0.0210661 |
| 6 | 89737168 | 89737168 | 1 | 6_89737168 | ENSG00000112159 | MDN1 | 0 | INTRON | -4.4185783 | 9.94E-06 | 0.0210661 |
| 4 | 94829873 | 94829873 | 1 | 4_94829873 | ENSG00000138696 | BMPR1B | 0 | INTRON | 4.41856466 | 9.94E-06 | 0.0210661 |
| 3 | 38372217 | 38372217 | 1 | 3_38372217 | ENSG00000093217 | XYLB | 0 | INTRON | -4.4185591 | 9.94E-06 | 0.0210661 |
| 7 | 134119746 | 134119746 | 1 | 7_134119746 | ENSG00000155530 | LRGUK | 7552 | Upstream | 4.41852985 | 9.94E-06 | 0.0210661 |
| 10 | 70260201 | 70260201 | 1 | 10_70260201 | ENSG00000148734 | NPFFR1 | 0 | INTRON | -4.4185145 | 9.94E-06 | 0.0210661 |
| 21 | 10615929 | 10615929 | 1 | 21_10615929 | ENSG00000273872 | SLC25A15P4 | 2550 | Upstream | -4.4184672 | 9.94E-06 | 0.0210661 |
| 9 | 112385772 | 112385772 | 1 | 9_112385772 | ENSG00000119471 | HSDL2 | 0 | INTRON | 4.41845093 | 9.94E-06 | 0.0210661 |
| 20 | 61981828 | 61981828 | 1 | 20_61981828 | ENSG00000130699 | TAF4 | 0 | INTRON | 4.41844328 | 9.94E-06 | 0.0210661 |
| 6 | 56173704 | 56173704 | 1 | 6_56173704 | ENSG00000124749 | COL21A1 | 0 | INTRON | -4.4183918 | 9.94E-06 | 0.0210685 |
| 5 | 177418561 | 177418561 | 1 | 5_177418561 | ENSG00000198055 | GRK6 | 0 | INTRON | 4.41830562 | 9.95E-06 | 0.02107241 |
| 5 | 133852683 | 133852683 | 1 | 5_133852683 | ENSG00000249073 | WSPAR | 60993 | Upstream | -4.4182979 | 9.95E-06 | 0.02107241 |
| 11 | 9116830 | 9116830 | 1 | 11_9116830 | ENSG00000175356 | SCUBE2 | 0 | INTRON | 4.41824774 | 9.95E-06 | 0.02107467 |
| 4 | 43994623 | 43994623 | 1 | 4_43994623 | ENSG00000250863 | AC114757.1 | 0 | INTRON | 4.41819666 | 9.95E-06 | 0.02107703 |
| 2 | 79226534 | 79226534 | 1 | 2_79226534 | ENSG00000066032 | CTNNA2 | 0 | INTRON | -4.4181466 | 9.96E-06 | 0.02107771 |
| 17 | 46026633 | 46026633 | 1 | 17_46026633 | ENSG00000186868 | MAPT | 0 | 3UTR | 4.41813584 | 9.96E-06 | 0.02107771 |
| X | 130096275 | 130096275 | 1 | X_130096275 | ENSG00000102034 | ELF4 | 0 | INTRON | 4.41810008 | 9.96E-06 | 0.02107857 |
| 15 | 86040903 | 86040903 | 1 | 15_86040903 | ENSG00000260477 | LINC01584 | 37905 | Downstream | 4.4180605 | 9.96E-06 | 0.02107981 |
| 1 | 79196044 | 79196044 | 1 | 1_79196044 | ENSG00000162618 | ADGRL4 | 0 | INTRON | -4.4179524 | 9.96E-06 | 0.02108627 |
| 1 | 22534442 | 22534442 | 1 | 1_22534442 | ENSG00000184677 | ZBTB40 | 3285 | Downstream | -4.4179026 | 9.97E-06 | 0.02108627 |
| 8 | 12040535 | 12040535 | 1 | 8_12040535 | ENSG00000254700 | DEFB131C | 2970 | Downstream | -4.4178933 | 9.97E-06 | 0.02108627 |
| 13 | 87880241 | 87880241 | 1 | 13_87880241 | ENSG00000232204 | TET1P1 | 9930 | Downstream | 4.41787509 | 9.97E-06 | 0.02108627 |
| 17 | 70806130 | 70806130 | 1 | 17_70806130 | ENSG00000271239 | AC007423.1 | 26900 | Upstream | -4.4177925 | 9.97E-06 | 0.02108627 |
| 16 | 82556294 | 82556294 | 1 | 16_82556294 | ENSG00000261285 | AC009117.2 | 0 | INTRON | 4.41777512 | 9.97E-06 | 0.02108627 |
| 6 | 141278738 | 141278738 | 1 | 6_141278738 | ENSG00000286452 | AL355596.2 | 124501 | Upstream | 4.41777213 | 9.97E-06 | 0.02108627 |
| 14 | 29529681 | 29529681 | 1 | 14_29529681 | ENSG00000286040 | AL158058.2 | 29221 | Upstream | 4.41773628 | 9.97E-06 | 0.02108627 |
| 6 | 43565970 | 43565970 | 1 | 6_43565970 | ENSG00000124571 | XPO5 | 0 | INTRON | 4.41773391 | 9.97E-06 | 0.02108627 |
| 8 | 28668400 | 28668400 | 1 | 8_28668400 | ENSG00000012232 | EXTL3 | 0 | INTRON | 4.41772553 | 9.97E-06 | 0.02108627 |
| 1 | 207947642 | 207947642 | 1 | 1_207947642 | ENSG00000284237 | LINC02767 | 11649 | Upstream | 4.41765878 | 9.98E-06 | 0.02109016 |
| 3 | 157468433 | 157468433 | 1 | 3_157468433 | ENSG00000197415 | VEPH1 | 0 | INTRON | 4.41754861 | 9.98E-06 | 0.02109671 |
| 19 | 37285918 | 37285918 | 1 | 19_37285918 | ENSG00000267605 | AC016590.1 | 0 | INTRON | -4.417538 | 9.98E-06 | 0.02109671 |
| 7 | 150170675 | 150170675 | 1 | 7_150170675 | ENSG00000286912 | AC006008.1 | 63518 | Downstream | -4.4174797 | 9.99E-06 | 0.02109824 |
| 21 | 15422914 | 15422914 | 1 | 21_15422914 | ENSG00000229425 | AJ009632.2 | 0 | INTRON | 4.4174685 | 9.99E-06 | 0.02109824 |
| 1 | 123524655 | 123524655 | 1 | 1_123524655 | ENSG00000224857 | LINC01691 | 1944131 | Upstream | -4.4173632 | 9.99E-06 | 0.0211059 |
| 7 | 69544184 | 69544184 | 1 | 7_69544184 | ENSG00000200857 | Y_RNA | 36562 | Upstream | 4.41732823 | 9.99E-06 | 0.02110669 |
| 3 | 84924367 | 84924367 | 1 | 3_84924367 | ENSG00000287273 | AC132660.2 | 16251 | Upstream | -4.4172269 | 1.00E-05 | 0.02111397 |
| 1 | 213361670 | 213361670 | 1 | 1_213361670 | ENSG00000228646 | RPL31P13 | 67037 | Downstream | 4.41712859 | 1.00E-05 | 0.02112095 |
| 3 | 135788783 | 135788783 | 1 | 3_135788783 | ENSG00000242222 | AC092989.1 | 137107 | Upstream | 4.41706763 | 1.00E-05 | 0.02112365 |
| 13 | 48198259 | 48198259 | 1 | 13_48198259 | ENSG00000136156 | ITM2B | 34352 | Upstream | -4.4170464 | 1.00E-05 | 0.02112365 |
| 8 | 59143380 | 59143380 | 1 | 8_59143380 | ENSG00000206853 | AC087698.1 | 5878 | Upstream | 4.41702045 | 1.00E-05 | 0.02112365 |
| 13 | 28936240 | 28936240 | 1 | 13_28936240 | ENSG00000132938 | MTUS2 | 0 | INTRON | 4.41696833 | 1.00E-05 | 0.02112612 |
| 2 | 83710173 | 83710173 | 1 | 2_83710173 | ENSG00000199295 | RNU6-1312P | 52331 | Downstream | 4.41686994 | 1.00E-05 | 0.02113311 |
| 4 | 115027824 | 115027824 | 1 | 4_115027824 | ENSG00000138653 | NDST4 | 0 | INTRON | 4.41683759 | 1.00E-05 | 0.02113365 |
| 1 | 171033735 | 171033735 | 1 | 1_171033735 | ENSG00000231424 | BX284613.2 | 0 | INTRON | -4.4168068 | 1.00E-05 | 0.02113405 |
| 22 | 41127033 | 41127033 | 1 | 22_41127033 | ENSG00000100393 | EP300 | 0 | INTRON | 4.41666728 | 1.00E-05 | 0.02114506 |
| 20 | 3979050 | 3979050 | 1 | 20_3979050 | ENSG00000101236 | RNF24 | 0 | INTRON | 4.41662015 | 1.00E-05 | 0.02114705 |
| 7 | 15817810 | 15817810 | 1 | 7_15817810 | ENSG00000286376 | AC006041.2 | 21440 | Upstream | 4.41638171 | 1.00E-05 | 0.02116453 |
| 3 | 51455941 | 51455941 | 1 | 3_51455941 | ENSG00000145041 | DCAF1 | 0 | INTRON | 4.41636614 | 1.00E-05 | 0.02116453 |
| 16 | 8255397 | 8255397 | 1 | 16_8255397 | ENSG00000260003 | AC018767.2 | 20865 | Downstream | -4.4163611 | 1.00E-05 | 0.02116453 |
| 7 | 42091748 | 42091748 | 1 | 7_42091748 | ENSG00000106571 | GLI3 | 0 | INTRON | -4.4161705 | 1.00E-05 | 0.02118056 |
| 8 | 73542676 | 73542676 | 1 | 8_73542676 | ENSG00000040341 | STAU2 | 0 | INTRON | -4.4159848 | 1.01E-05 | 0.02119613 |
| 6 | 155075973 | 155075973 | 1 | 6_155075973 | ENSG00000146426 | TIAM2 | 0 | INTRON | 4.41592549 | 1.01E-05 | 0.02119725 |
| 16 | 2608487 | 2608487 | 1 | 16_2608487 | ENSG00000215154 | AC141586.1 | 0 | INTRON | 4.41588409 | 1.01E-05 | 0.02119725 |
| 11 | 21944593 | 21944593 | 1 | 11_21944593 | ENSG00000171714 | ANO5 | 0 | INTRON | 4.41585922 | 1.01E-05 | 0.02119725 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 17 | 5530788 | 5530788 | 1 | 17_5530788 | ENSG00000091592 | NLRP1 | 0 | INTRON | 4.41583404 | 1.01E-05 | 0.02119725 |
| 8 | 124504997 | 124504997 | 1 | 8_124504997 | ENSG00000147687 | TATDN1 | 0 | INTRON | 4.41579836 | 1.01E-05 | 0.02119725 |
| 20 | 54241337 | 54241337 | 1 | 20_54241337 | ENSG00000286229 | AL133335.1 | 0 | INTRON | -4.415771 | 1.01E-05 | 0.02119725 |
| 1 | 17963814 | 17963814 | 1 | 1_17963814 | ENSG00000284653 | AL357509.1 | 51897 | Upstream | 4.41576804 | 1.01E-05 | 0.02119725 |
| X | 121015646 | 121015646 | 1 | X_121015646 | ENSG00000233433 | AC006144.1 | 9317 | Downstream | -4.4157273 | 1.01E-05 | 0.02119725 |
| 12 | 25588296 | 25588296 | 1 | 12_25588296 | ENSG00000152936 | LMNTD1 | 0 | INTRON | 4.41571963 | 1.01E-05 | 0.02119725 |
| 10 | 97884744 | 97884744 | 1 | 10_97884744 | ENSG00000095713 | CRTAC1 | 0 | INTRON | -4.4157055 | 1.01E-05 | 0.02119725 |
| X | 114467232 | 114467232 | 1 | X_114467232 | ENSG00000226547 | SSU72P1 | 75976 | Downstream | 4.41554026 | 1.01E-05 | 0.02121083 |
| 3 | 142893960 | 142893960 | 1 | 3_142893960 | ENSG00000163710 | PCOLCE2 | 4754 | Upstream | 4.41547252 | 1.01E-05 | 0.021214 |
| 1 | 84814062 | 84814062 | 1 | 1_84814062 | ENSG00000171517 | LPAR3 | 0 | EXON | 4.41545439 | 1.01E-05 | 0.021214 |
| 8 | 92712760 | 92712760 | 1 | 8_92712760 | ENSG00000248858 | AC104211.1 | 0 | INTRON | 4.41537897 | 1.01E-05 | 0.02121628 |
| 7 | 90314187 | 90314187 | 1 | 7_90314187 | ENSG00000225498 | AC002064.1 | 0 | INTRON | 4.41537638 | 1.01E-05 | 0.02121628 |
| 19 | 8562191 | 8562191 | 1 | 19_8562191 | ENSG00000142347 | MYO1F | 0 | INTRON | 4.41532914 | 1.01E-05 | 0.02121628 |
| 8 | 55511333 | 55511333 | 1 | 8_55511333 | ENSG00000206579 | XKR4 | 0 | INTRON | 4.41532419 | 1.01E-05 | 0.02121628 |
| 6 | 169315596 | 169315596 | 1 | 6_169315596 | ENSG00000224999 | VTA1P1 | 17637 | Upstream | -4.4150994 | 1.01E-05 | 0.0212343 |
| 18 | 55330376 | 55330376 | 1 | 18_55330376 | ENSG00000196628 | TCF4 | 0 | INTRON | 4.41508712 | 1.01E-05 | 0.0212343 |
| 20 | 62575582 | 62575582 | 1 | 20_62575582 | ENSG00000264490 | BX640514.1 | 7 | Upstream | 4.4150388 | 1.01E-05 | 0.02123462 |
| 4 | 42906954 | 42906954 | 1 | 4_42906954 | ENSG00000215203 | GRXCR1 | 0 | INTRON | -4.4150099 | 1.01E-05 | 0.02123462 |
| 10 | 93825826 | 93825826 | 1 | 10_93825826 | ENSG00000108231 | LGI1 | 19554 | Downstream | -4.4150037 | 1.01E-05 | 0.02123462 |
| 3 | 4735094 | 4735094 | 1 | 3_4735094 | ENSG00000150995 | ITPR1 | 0 | INTRON | 4.41495035 | 1.01E-05 | 0.02123723 |
| 18 | 13691090 | 13691090 | 1 | 18_13691090 | ENSG00000177150 | FAM210A | 0 | INTRON | -4.4147883 | 1.01E-05 | 0.02124607 |
| 5 | 25476431 | 25476431 | 1 | 5_25476431 | ENSG00000248605 | AC022140.1 | 30506 | Upstream | 4.41472561 | 1.01E-05 | 0.02124607 |
| 22 | 31038215 | 31038215 | 1 | 22_31038215 | ENSG00000278920 | AC005005.4 | 13414 | Upstream | 4.41472398 | 1.01E-05 | 0.02124607 |
| 13 | 51663174 | 51663174 | 1 | 13_51663174 | ENSG00000139668 | WDFY2 | 0 | INTRON | 4.41471116 | 1.01E-05 | 0.02124607 |
| 15 | 38552102 | 38552102 | 1 | 15_38552102 | ENSG00000172575 | RASGRP1 | 0 | INTRON | -4.4147064 | 1.01E-05 | 0.02124607 |
| 10 | 30195188 | 30195188 | 1 | 10_30195188 | ENSG00000165757 | JCAD | 79694 | Upstream | 4.41469996 | 1.01E-05 | 0.02124607 |
| 4 | 64260649 | 64260649 | 1 | 4_64260649 | ENSG00000205678 | TECRL | 14607 | Downstream | -4.4145841 | 1.01E-05 | 0.02125483 |
| 12 | 2716900 | 2716900 | 1 | 12_2716900 | ENSG00000256150 | ITFG2-AS1 | 0 | INTRON | -4.4144563 | 1.01E-05 | 0.02126477 |
| 11 | 65131943 | 65131943 | 1 | 11_65131943 | ENSG00000162298 | SYVN1 | 0 | INTRON | 4.41442672 | 1.01E-05 | 0.02126505 |
| X | 71991199 | 71991199 | 1 | X_71991199 | ENSG00000204131 | NHSL2 | 0 | INTRON | 4.4143649 | 1.01E-05 | 0.02126644 |
| 8 | 25584993 | 25584993 | 1 | 8_25584993 | ENSG00000253100 | AC009623.1 | 8203 | Upstream | 4.41435915 | 1.01E-05 | 0.02126644 |
| 18 | 77789783 | 77789783 | 1 | 18_77789783 | ENSG00000252260 | RNA5SP461 | 73680 | Downstream | 4.41428354 | 1.01E-05 | 0.02127125 |
| 10 | 83457156 | 83457156 | 1 | 10_83457156 | ENSG00000234931 | MARK2P15 | 142681 | Upstream | -4.414186 | 1.01E-05 | 0.02127764 |
| 12 | 5833111 | 5833111 | 1 | 12_5833111 | ENSG00000047617 | ANO2 | 0 | INTRON | 4.41416515 | 1.01E-05 | 0.02127764 |
| 5 | 96704389 | 96704389 | 1 | 5_96704389 | ENSG00000153113 | CAST | 0 | INTRON | 4.41406744 | 1.01E-05 | 0.02127955 |
| 15 | 53143798 | 53143798 | 1 | 15_53143798 | ENSG00000259237 | LINC02490 | 14100 | Downstream | -4.4140559 | 1.01E-05 | 0.02127955 |
| 12 | 69245476 | 69245476 | 1 | 12_69245476 | ENSG00000111605 | CPSF6 | 0 | INTRON | 4.41403946 | 1.01E-05 | 0.02127955 |
| 19 | 41256877 | 41256877 | 1 | 19_41256877 | ENSG00000167601 | AXL | 0 | INTRON | -4.4140272 | 1.01E-05 | 0.02127955 |
| 22 | 50467712 | 50467712 | 1 | 22_50467712 | ENSG00000100241 | SBF1 | 0 | EXON | 4.41401242 | 1.01E-05 | 0.02127955 |
| 1 | 119287213 | 119287213 | 1 | 1_119287213 | ENSG00000227712 | AL359915.1 | 0 | INTRON | 4.41398293 | 1.01E-05 | 0.02127983 |
| 4 | 136289501 | 136289501 | 1 | 4_136289501 | ENSG00000251567 | AC018680.1 | 0 | INTRON | 4.41380133 | 1.02E-05 | 0.02129326 |
| 13 | 51120375 | 51120375 | 1 | 13_51120375 | ENSG00000226792 | C13orf42 | 0 | INTRON | -4.413793 | 1.02E-05 | 0.02129326 |
| 2 | 90042098 | 90042098 | 1 | 2_90042098 | ENSG00000211625 | IGKV3D-20 | 2619 | Downstream | 4.4137503 | 1.02E-05 | 0.0212942 |
| 10 | 96395232 | 96395232 | 1 | 10_96395232 | ENSG00000095587 | TLL2 | 0 | EXON | -4.4137142 | 1.02E-05 | 0.0212942 |
| 6 | 17557338 | 17557338 | 1 | 6_17557338 | ENSG00000112186 | CAP2 | 0 | 3UTR | 4.41370354 | 1.02E-05 | 0.0212942 |
| 14 | 52822370 | 52822370 | 1 | 14_52822370 | ENSG00000285664 | AL139317.5 | 0 | INTRON | 4.41364115 | 1.02E-05 | 0.02129638 |
| 2 | 141410543 | 141410543 | 1 | 2_141410543 | ENSG00000168702 | LRP1B | 0 | INTRON | -4.4136281 | 1.02E-05 | 0.02129638 |
| 15 | 44636522 | 44636522 | 1 | 15_44636522 | ENSG00000104133 | SPG11 | 0 | INTRON | 4.41356738 | 1.02E-05 | 0.02129974 |
| 10 | 107096253 | 107096253 | 1 | 10_107096253 | ENSG00000108018 | SORCS1 | 0 | INTRON | 4.41351605 | 1.02E-05 | 0.02130217 |
| 7 | 54360418 | 54360418 | 1 | 7_54360418 | ENSG00000231427 | LINC01445 | 0 | INTRON | -4.4134007 | 1.02E-05 | 0.02130873 |
| 14 | 28574461 | 28574461 | 1 | 14_28574461 | ENSG00000258175 | LINC02300 | 17761 | Downstream | -4.4133961 | 1.02E-05 | 0.02130873 |
| 1 | 9737156 | 9737156 | 1 | 1_9737156 | ENSG00000171603 | CLSTN1 | 0 | INTRON | 4.4133599 | 1.02E-05 | 0.02130967 |
| 2 | 28159767 | 28159767 | 1 | 2_28159767 | ENSG00000158019 | BABAM2 | 0 | INTRON | -4.4132926 | 1.02E-05 | 0.02131368 |
| 14 | 69639188 | 69639188 | 1 | 14_69639188 | ENSG00000100647 | SUSD6 | 0 | INTRON | 4.41326153 | 1.02E-05 | 0.02131412 |
| 20 | 61485020 | 61485020 | 1 | 20_61485020 | ENSG00000179242 | CDH4 | 0 | INTRON | 4.41322452 | 1.02E-05 | 0.02131514 |
| 4 | 27291747 | 27291747 | 1 | 4_27291747 | ENSG00000249699 | LINC02261 | 9522 | Downstream | -4.413029 | 1.02E-05 | 0.02132723 |
| 13 | 32715664 | 32715664 | 1 | 13_32715664 | ENSG00000083642 | PDS5B | 0 | INTRON | 4.4129863 | 1.02E-05 | 0.02132723 |
| 3 | 89124300 | 89124300 | 1 | 3_89124300 | ENSG00000044524 | EPHA3 | 0 | INTRON | 4.412977 | 1.02E-05 | 0.02132723 |
| 7 | 30660500 | 30660500 | 1 | 7_30660500 | ENSG00000106113 | CRHR2 | 0 | INTRON | 4.41294933 | 1.02E-05 | 0.02132723 |
| 1 | 225833077 | 225833077 | 1 | 1_225833077 | ENSG00000143819 | EPHX1 | 0 | INTRON | 4.41292964 | 1.02E-05 | 0.02132723 |
| 7 | 78836138 | 78836138 | 1 | 7_78836138 | ENSG00000187391 | MAGI2 | 0 | INTRON | 4.4129167 | 1.02E-05 | 0.02132723 |
| 6 | 143462753 | 143462753 | 1 | 6_143462753 | ENSG00000034693 | PEX3 | 0 | INTRON | -4.4128928 | 1.02E-05 | 0.02132723 |
| 4 | 92577896 | 92577896 | 1 | 4_92577896 | ENSG00000152208 | GRID2 | 0 | INTRON | 4.41288899 | 1.02E-05 | 0.02132723 |
| 17 | 22397460 | 22397460 | 1 | 17_22397460 | ENSG00000276399 | AC209154.1 | 8558 | Upstream | 4.41282869 | 1.02E-05 | 0.02133024 |
| 5 | 44094419 | 44094419 | 1 | 5_44094419 | ENSG00000212561 | RNU6-381P | 27688 | Upstream | -4.4127526 | 1.02E-05 | 0.02133024 |
| 18 | 36114166 | 36114166 | 1 | 18_36114166 | ENSG00000141424 | SLC39A6 | 0 | EXON | 4.41275243 | 1.02E-05 | 0.02133024 |
| 11 | 86009113 | 86009113 | 1 | 11_86009113 | ENSG00000073921 | PICALM | 0 | INTRON | -4.4127496 | 1.02E-05 | 0.02133024 |
| 8 | 70597542 | 70597542 | 1 | 8_70597542 | ENSG00000067167 | TRAM1 | 0 | INTRON | 4.41272548 | 1.02E-05 | 0.02133024 |
| 22 | 33065485 | 33065485 | 1 | 22_33065485 | ENSG00000185666 | SYN3 | 7113 | Upstream | 4.41262139 | 1.02E-05 | 0.02133788 |
| 11 | 64355956 | 64355956 | 1 | 11_64355956 | ENSG00000168071 | CCDC88B | 0 | EXON | -4.4125573 | 1.02E-05 | 0.02134158 |
| 13 | 23613238 | 23613238 | 1 | 13_23613238 | ENSG00000127863 | TNFRSF19 | 0 | INTRON | 4.41250504 | 1.02E-05 | 0.02134411 |
| 11 | 113908300 | 113908300 | 1 | 11_113908300 | ENSG00000149305 | HTR3B | 0 | INTRON | 4.41241265 | 1.02E-05 | 0.02134846 |
| 1 | 13459222 | 13459222 | 1 | 1_13459222 | ENSG00000162494 | LRRC38 | 15750 | Downstream | 4.41240787 | 1.02E-05 | 0.02134846 |
| 8 | 19577387 | 19577387 | 1 | 8_19577387 | ENSG00000147408 | CSGALNACT1 | 0 | INTRON | -4.4122961 | 1.02E-05 | 0.02135686 |
| 1 | 18663050 | 18663050 | 1 | 1_18663050 | ENSG00000009709 | PAX7 | 0 | INTRON | 4.41217617 | 1.02E-05 | 0.02136548 |
| 10 | 52523138 | 52523138 | 1 | 10_52523138 | ENSG00000231131 | LNCAROD | 0 | INTRON | 4.41215566 | 1.02E-05 | 0.02136548 |
| 4 | 7491499 | 7491499 | 1 | 4_7491499 | ENSG00000184985 | SORCS2 | 0 | INTRON | 4.41204898 | 1.02E-05 | 0.02137097 |
| 10 | 13041418 | 13041418 | 1 | 10_13041418 | ENSG00000151468 | CCDC3 | 0 | INTRON | 4.41202931 | 1.02E-05 | 0.02137097 |
| 17 | 67161892 | 67161892 | 1 | 17_67161892 | ENSG00000198265 | HELZ | 0 | INTRON | -4.4120055 | 1.02E-05 | 0.02137097 |
| 18 | 75946077 | 75946077 | 1 | 18_75946077 | ENSG00000275827 | AC021506.2 | 18073 | Downstream | 4.41199384 | 1.02E-05 | 0.02137097 |
| 12 | 130368859 | 130368859 | 1 | 12_130368859 | ENSG00000125207 | PIWIL1 | 0 | INTRON | -4.4119125 | 1.02E-05 | 0.02137638 |
| 17 | 14949973 | 14949973 | 1 | 17_14949973 | ENSG00000238212 | LINC02096 | 0 | INTRON | -4.4118565 | 1.02E-05 | 0.02137687 |
| 15 | 101135200 | 101135200 | 1 | 15_101135200 | ENSG00000259365 | AC019254.2 | 17654 | Downstream | 4.41183436 | 1.02E-05 | 0.02137687 |
| 7 | 69558360 | 69558360 | 1 | 7_69558360 | ENSG00000234215 | CT66 | 36432 | Downstream | -4.411828 | 1.03E-05 | 0.02137687 |
| 20 | 52488590 | 52488590 | 1 | 20_52488590 | ENSG00000232465 | AL049765.1 | 0 | INTRON | -4.411712 | 1.03E-05 | 0.02138382 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
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| 4 | 90456335 | 90456335 | 1 | 4_90456335 | ENSG00000184305 | CCSER1 | 0 | INTRON | 4.41170458 | 1.03E-05 | 0.02138382 |
| 1 | 12889407 | 12889407 | 1 | 1_12889407 | ENSG00000243073 | PRAMEF4 | 3206 | Upstream | -4.4116672 | 1.03E-05 | 0.02138489 |
| 3 | 138110048 | 138110048 | 1 | 3_138110048 | ENSG00000158163 | DZIP1L | 0 | INTRON | 4.41158777 | 1.03E-05 | 0.0213881 |
| 9 | 27412737 | 27412737 | 1 | 9_27412737 | ENSG00000120162 | MOB3B | 0 | INTRON | 4.41158169 | 1.03E-05 | 0.0213881 |
| 14 | 86540357 | 86540357 | 1 | 14_86540357 | ENSG00000258994 | LINC02309 | 139072 | Downstream | 4.41151421 | 1.03E-05 | 0.02139214 |
| 22 | 23250817 | 23250817 | 1 | 22_23250817 | ENSG00000186716 | BCR | 0 | INTRON | 4.41147264 | 1.03E-05 | 0.02139363 |
| 11 | 61309983 | 61309983 | 1 | 11_61309983 | ENSG00000167986 | DDB1 | 0 | INTRON | -4.4114222 | 1.03E-05 | 0.02139379 |
| 5 | 54503923 | 54503923 | 1 | 5_54503923 | ENSG00000178996 | SNX18 | 13835 | Upstream | -4.4114054 | 1.03E-05 | 0.02139379 |
| 14 | 103186936 | 103186936 | 1 | 14_103186936 | ENSG00000251533 | LINC00605 | 284 | Downstream | -4.4113915 | 1.03E-05 | 0.02139379 |
| 2 | 116476633 | 116476633 | 1 | 2_116476633 | ENSG00000271667 | AC104408.1 | 210584 | Downstream | 4.41135585 | 1.03E-05 | 0.0213947 |
| 16 | 81661747 | 81661747 | 1 | 16_81661747 | ENSG00000153815 | CMIP | 0 | INTRON | -4.4113056 | 1.03E-05 | 0.02139705 |
| X | 140770515 | 140770515 | 1 | X_140770515 | ENSG00000203930 | LINC00632 | 0 | INTRON | -4.4112587 | 1.03E-05 | 0.02139737 |
| 13 | 74177471 | 74177471 | 1 | 13_74177471 | ENSG00000235532 | LINC00402 | 53985 | Upstream | -4.4112376 | 1.03E-05 | 0.02139737 |
| 16 | 82268704 | 82268704 | 1 | 16_82268704 | ENSG00000251888 | RN7SKP190 | 75914 | Upstream | -4.4112228 | 1.03E-05 | 0.02139737 |
| 2 | 135923444 | 135923444 | 1 | 2_135923444 | ENSG00000115866 | DARS | 0 | INTRON | -4.4109243 | 1.03E-05 | 0.02142428 |
| 2 | 51735447 | 51735447 | 1 | 2_51735447 | ENSG00000231918 | AC007402.1 | 0 | INTRON | 4.41086369 | 1.03E-05 | 0.02142765 |
| 6 | 118125922 | 118125922 | 1 | 6_118125922 | ENSG00000196376 | SLC35F1 | 0 | INTRON | 4.41075867 | 1.03E-05 | 0.02143543 |
| 12 | 46552925 | 46552925 | 1 | 12_46552925 | ENSG00000257261 | AC008014.1 | 0 | INTRON | -4.4106897 | 1.03E-05 | 0.02143712 |
| 7 | 91239643 | 91239643 | 1 | 7_91239643 | ENSG00000157240 | FZD1 | 24789 | Upstream | -4.4106886 | 1.03E-05 | 0.02143712 |
| 6 | 12296406 | 12296406 | 1 | 6_12296406 | ENSG00000078401 | EDN1 | 0 | 3UTR | 4.41058412 | 1.03E-05 | 0.02144485 |
| 1 | 188531202 | 188531202 | 1 | 1_188531202 | ENSG00000225006 | AL929288.1 | 0 | INTRON | -4.4105147 | 1.03E-05 | 0.02144751 |
| 1 | 49258268 | 49258268 | 1 | 1_49258268 | ENSG00000230114 | AL590432.1 | 0 | INTRON | 4.41050426 | 1.03E-05 | 0.02144751 |
| 15 | 81486830 | 81486830 | 1 | 15_81486830 | ENSG00000259543 | AC060809.1 | 0 | INTRON | 4.41044375 | 1.03E-05 | 0.02145088 |
| 5 | 131270661 | 131270661 | 1 | 5_131270661 | ENSG00000158985 | CDC42SE2 | 0 | INTRON | 4.41032729 | 1.03E-05 | 0.02145732 |
| 1 | 37645220 | 37645220 | 1 | 1_37645220 | ENSG00000169218 | RSPO1 | 10328 | Upstream | -4.4103035 | 1.03E-05 | 0.02145732 |
| 12 | 106748913 | 106748913 | 1 | 12_106748913 | ENSG00000257545 | AC079385.1 | 0 | INTRON | -4.4102972 | 1.03E-05 | 0.02145732 |
| 14 | 91535386 | 91535386 | 1 | 14_91535386 | ENSG00000278342 | AL133373.1 | 19023 | Upstream | 4.41027301 | 1.03E-05 | 0.02145732 |
| 20 | 56770578 | 56770578 | 1 | 20_56770578 | ENSG00000207158 | RNU6-929P | 15402 | Downstream | -4.4101107 | 1.03E-05 | 0.02147079 |
| 18 | 2500417 | 2500417 | 1 | 18_2500417 | ENSG00000286975 | AP005136.4 | 6210 | Downstream | -4.410055 | 1.03E-05 | 0.02147368 |
| 6 | 134359504 | 134359504 | 1 | 6_134359504 | ENSG00000236700 | LINC01010 | 0 | INTRON | 4.40993905 | 1.03E-05 | 0.02148256 |
| 5 | 124845822 | 124845822 | 1 | 5_124845822 | ENSG00000260192 | LINC02240 | 0 | INTRON | 4.40985427 | 1.03E-05 | 0.02148619 |
| 20 | 23034632 | 23034632 | 1 | 20_23034632 | ENSG00000234646 | AL049651.2 | 0 | INTRON | 4.40984966 | 1.03E-05 | 0.02148619 |
| 1 | 236532365 | 236532365 | 1 | 1_236532365 | ENSG00000116977 | LGALS8 | 0 | INTRON | 4.40971055 | 1.04E-05 | 0.02149737 |
| 12 | 18055335 | 18055335 | 1 | 12_18055335 | ENSG00000111404 | RERGL | 25533 | Downstream | 4.40964182 | 1.04E-05 | 0.02150157 |
| 15 | 42104840 | 42104840 | 1 | 15_42104840 | ENSG00000159337 | PLA2G4D | 10278 | Upstream | 4.40931436 | 1.04E-05 | 0.02152754 |
| 14 | 25941065 | 25941065 | 1 | 14_25941065 | ENSG00000285633 | AL132633.1 | 0 | INTRON | -4.4093089 | 1.04E-05 | 0.02152754 |
| 18 | 1173666 | 1173666 | 1 | 18_1173666 | ENSG00000263551 | AP000829.1 | 0 | INTRON | 4.40926407 | 1.04E-05 | 0.02152754 |
| 17 | 9748734 | 9748734 | 1 | 17_9748734 | ENSG00000282882 | AC027045.2 | 15451 | Upstream | 4.40925626 | 1.04E-05 | 0.02152754 |
| 5 | 1486787 | 1486787 | 1 | 5_1486787 | ENSG00000153395 | LPCAT1 | 0 | INTRON | 4.40924748 | 1.04E-05 | 0.02152754 |
| 2 | 241652272 | 241652272 | 1 | 2_241652272 | ENSG00000168397 | ATG4B | 0 | INTRON | -4.4092218 | 1.04E-05 | 0.02152754 |
| 21 | 23078848 | 23078848 | 1 | 21_23078848 | ENSG00000230972 | AP001116.1 | 0 | INTRON | -4.4090873 | 1.04E-05 | 0.02153519 |
| 22 | 33612014 | 33612014 | 1 | 22_33612014 | ENSG00000133424 | LARGE1 | 0 | INTRON | -4.4090702 | 1.04E-05 | 0.02153519 |
| 9 | 13115142 | 13115142 | 1 | 9_13115142 | ENSG00000107186 | MPDZ | 0 | INTRON | 4.40906566 | 1.04E-05 | 0.02153519 |
| 8 | 10937578 | 10937578 | 1 | 8_10937578 | ENSG00000171044 | XKR6 | 0 | INTRON | -4.4090051 | 1.04E-05 | 0.02153858 |
| 2 | 219997064 | 219997064 | 1 | 2_219997064 | ENSG00000225911 | AC009310.1 | 51757 | Downstream | 4.40892168 | 1.04E-05 | 0.02154222 |
| 7 | 115890397 | 115890397 | 1 | 7_115890397 | ENSG00000105967 | TFEC | 44750 | Downstream | -4.4089157 | 1.04E-05 | 0.02154222 |
| 2 | 155769677 | 155769677 | 1 | 2_155769677 | ENSG00000286679 | AC073225.1 | 105009 | Downstream | 4.40885268 | 1.04E-05 | 0.02154339 |
| 6 | 78336501 | 78336501 | 1 | 6_78336501 | ENSG00000230309 | AL121718.1 | 267965 | Downstream | -4.4088469 | 1.04E-05 | 0.02154339 |
| 16 | 56979618 | 56979618 | 1 | 16_56979618 | ENSG00000087237 | CETP | 0 | INTRON | 4.40878866 | 1.04E-05 | 0.02154339 |
| 6 | 54811043 | 54811043 | 1 | 6_54811043 | ENSG00000251946 | RNU6-1023P | 24551 | Downstream | 4.4087267 | 1.04E-05 | 0.02154339 |
| 7 | 74953627 | 74953627 | 1 | 7_74953627 | ENSG00000274070 | CASTOR2 | 11077 | Upstream | 4.40871631 | 1.04E-05 | 0.02154339 |
| 8 | 2965794 | 2965794 | 1 | 8_2965794 | ENSG00000183117 | CSMD1 | 0 | EXON | 4.40870899 | 1.04E-05 | 0.02154339 |
| 4 | 165591121 | 165591121 | 1 | 4_165591121 | ENSG00000248327 | NOL8P1 | 40061 | Upstream | -4.4087021 | 1.04E-05 | 0.02154339 |
| 3 | 130450783 | 130450783 | 1 | 3_130450783 | ENSG00000172752 | COL6A5 | 0 | INTRON | -4.4086076 | 1.04E-05 | 0.02154339 |
| 7 | 111671296 | 111671296 | 1 | 7_111671296 | ENSG00000128512 | DOCK4 | 54813 | Downstream | 4.40859919 | 1.04E-05 | 0.02154339 |
| 1 | 208410575 | 208410575 | 1 | 1_208410575 | ENSG00000286198 | AL606753.2 | 139908 | Upstream | 4.40859712 | 1.04E-05 | 0.02154339 |
| 18 | 67326631 | 67326631 | 1 | 18_67326631 | ENSG00000265936 | AC091042.1 | 48501 | Upstream | 4.40858358 | 1.04E-05 | 0.02154339 |
| 3 | 75641832 | 75641832 | 1 | 3_75641832 | ENSG00000243422 | RPL23AP49 | 0 | INTRON | 4.40855476 | 1.04E-05 | 0.02154339 |
| 7 | 133142738 | 133142738 | 1 | 7_133142738 | ENSG00000237821 | AC083873.1 | 26677 | Downstream | 4.40850708 | 1.04E-05 | 0.02154339 |
| 4 | 171811253 | 171811253 | 1 | 4_171811253 | ENSG00000174473 | GALNTL6 | 1000 | Upstream | 4.40847717 | 1.04E-05 | 0.02154339 |
| 1 | 115754107 | 115754107 | 1 | 1_115754107 | ENSG00000118729 | CASQ2 | 0 | INTRON | 4.40844895 | 1.04E-05 | 0.02154339 |
| 10 | 37808385 | 37808385 | 1 | 10_37808385 | ENSG00000198105 | ZNF248 | 0 | INTRON | -4.4084355 | 1.04E-05 | 0.02154339 |
| X | 104468469 | 104468469 | 1 | X_104468469 | ENSG00000189108 | IL1RAPL2 | 97729 | Upstream | 4.40843378 | 1.04E-05 | 0.02154339 |
| 12 | 110329565 | 110329565 | 1 | 12_110329565 | ENSG00000174437 | ATP2A2 | 0 | EXON | 4.40839712 | 1.04E-05 | 0.02154339 |
| 5 | 76269465 | 76269465 | 1 | 5_76269465 | ENSG00000122012 | SV2C | 0 | INTRON | -4.4083817 | 1.04E-05 | 0.02154339 |
| 2 | 144027995 | 144027995 | 1 | 2_144027995 | ENSG00000121964 | GTDC1 | 0 | INTRON | -4.4083561 | 1.04E-05 | 0.02154339 |
| 20 | 12775360 | 12775360 | 1 | 20_12775360 | ENSG00000233048 | LINC01722 | 89841 | Downstream | -4.4083504 | 1.04E-05 | 0.02154339 |
| 7 | 136270328 | 136270328 | 1 | 7_136270328 | ENSG00000232053 | AC078845.1 | 0 | INTRON | 4.40831581 | 1.04E-05 | 0.02154421 |
| 20 | 35756902 | 35756902 | 1 | 20_35756902 | ENSG00000225357 | RPF2P1 | 3183 | Downstream | -4.4082054 | 1.04E-05 | 0.02154935 |
| 4 | 21202678 | 21202678 | 1 | 4_21202678 | ENSG00000185774 | KCNIP4 | 0 | INTRON | 4.40820037 | 1.04E-05 | 0.02154935 |
| 1 | 79757681 | 79757681 | 1 | 1_79757681 | ENSG00000285409 | AC099671.1 | 210051 | Downstream | -4.4081702 | 1.04E-05 | 0.02154935 |
| 3 | 161794153 | 161794153 | 1 | 3_161794153 | ENSG00000240354 | AC131211.1 | 22755 | Downstream | 4.40815887 | 1.04E-05 | 0.02154935 |
| 7 | 125692356 | 125692356 | 1 | 7_125692356 | ENSG00000224897 | POT1-AS1 | 209390 | Downstream | -4.408073 | 1.04E-05 | 0.02155317 |
| 14 | 56916148 | 56916148 | 1 | 14_56916148 | ENSG00000248550 | OTX2-AS1 | 0 | INTRON | -4.4080501 | 1.04E-05 | 0.02155317 |
| 18 | 53244657 | 53244657 | 1 | 18_53244657 | ENSG00000187323 | DCC | 0 | INTRON | -4.4080415 | 1.04E-05 | 0.02155317 |
| 18 | 7360846 | 7360846 | 1 | 18_7360846 | ENSG00000212626 | AP005270.1 | 59693 | Upstream | 4.40800969 | 1.04E-05 | 0.02155372 |
| 5 | 51441906 | 51441906 | 1 | 5_51441906 | ENSG00000288035 | AC022433.1 | 0 | INTRON | 4.40798037 | 1.04E-05 | 0.02155402 |
| 4 | 13270147 | 13270147 | 1 | 4_13270147 | ENSG00000205940 | HSP90AB2P | 63266 | Upstream | 4.40780571 | 1.04E-05 | 0.02156684 |
| 6 | 141677351 | 141677351 | 1 | 6_141677351 | ENSG00000218351 | RPS3AP23 | 40848 | Upstream | 4.40779263 | 1.04E-05 | 0.02156684 |
| 18 | 32632898 | 32632898 | 1 | 18_32632898 | ENSG00000285095 | AC025887.2 | 0 | INTRON | -4.4077726 | 1.04E-05 | 0.02156684 |
| 16 | 72107623 | 72107623 | 1 | 16_72107623 | ENSG00000140829 | DHX38 | 0 | INTRON | 4.40769141 | 1.04E-05 | 0.02157231 |
| 1 | 240909997 | 240909997 | 1 | 1_240909997 | ENSG00000182901 | RGS7 | 0 | INTRON | -4.407612 | 1.05E-05 | 0.0215776 |
| 19 | 36592550 | 36592550 | 1 | 19_36592550 | ENSG00000186020 | ZNF529 | 0 | INTRON | -4.4074434 | 1.05E-05 | 0.02157913 |
| 14 | 94227139 | 94227139 | 1 | 14_94227139 | ENSG00000119698 | PPP4R4 | 0 | INTRON | 4.40744124 | 1.05E-05 | 0.02157913 |
| 17 | 57094407 | 57094407 | 1 | 17_57094407 | ENSG00000263089 | AC007114.2 | 0 | EXON | -4.4074353 | 1.05E-05 | 0.02157913 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 16 | 14865270 | 14865270 | 1 | 16_14865270 | ENSG00000103512 | NOMO1 | 0 | INTRON | -4.4073908 | 1.05E-05 | 0.02157913 |
| 1 | 8157014 | 8157014 | 1 | 1_8157014 | ENSG00000229305 | AL358876.1 | 32809 | Upstream | 4.40736453 | 1.05E-05 | 0.02157913 |
| 17 | 29485849 | 29485849 | 1 | 17_29485849 | ENSG00000160551 | TAOK1 | 0 | INTRON | 4.40735111 | 1.05E-05 | 0.02157913 |
| 2 | 48132081 | 48132081 | 1 | 2_48132081 | ENSG00000230773 | AC092650.1 | 0 | INTRON | 4.4073368 | 1.05E-05 | 0.02157913 |
| 6 | 115639576 | 115639576 | 1 | 6_115639576 | ENSG00000228777 | LINC02534 | 0 | INTRON | 4.40730444 | 1.05E-05 | 0.02157913 |
| 10 | 42072060 | 42072060 | 1 | 10_42072060 | ENSG00000229485 | KSR1P1 | 77249 | Downstream | -4.4072776 | 1.05E-05 | 0.02157913 |
| 8 | 12538823 | 12538823 | 1 | 8_12538823 | ENSG00000283674 | AC068587.4 | 0 | EXON | -4.4072233 | 1.05E-05 | 0.02157913 |
| 6 | 137982176 | 137982176 | 1 | 6_137982176 | ENSG00000229922 | LINC02528 | 9654 | Downstream | 4.40721531 | 1.05E-05 | 0.02157913 |
| 10 | 26191762 | 26191762 | 1 | 10_26191762 | ENSG00000095777 | MYO3A | 0 | INTRON | -4.4072003 | 1.05E-05 | 0.02157913 |
| 3 | 171824951 | 171824951 | 1 | 3_171824951 | ENSG00000234717 | TMEM212-AS1 | 0 | INTRON | -4.4071999 | 1.05E-05 | 0.02157913 |
| 20 | 2684980 | 2684980 | 1 | 20_2684980 | ENSG00000088881 | EBF4 | 7897 | Upstream | 4.40717479 | 1.05E-05 | 0.02157913 |
| 13 | 42594525 | 42594525 | 1 | 13_42594525 | ENSG00000120659 | TNFSF11 | 0 | INTRON | 4.40716716 | 1.05E-05 | 0.02157913 |
| 16 | 68708098 | 68708098 | 1 | 16_68708098 | ENSG00000062038 | CDH3 | 0 | INTRON | 4.40715514 | 1.05E-05 | 0.02157913 |
| 15 | 32690663 | 32690663 | 1 | 15_32690663 | ENSG00000166922 | SCG5 | 0 | INTRON | 4.40715019 | 1.05E-05 | 0.02157913 |
| 13 | 20974400 | 20974400 | 1 | 13_20974400 | ENSG00000150457 | LATS2 | 0 | 3UTR | 4.4070526 | 1.05E-05 | 0.02158624 |
| 10 | 132245928 | 132245928 | 1 | 10_132245928 | ENSG00000165752 | STK32C | 0 | 5UTR | 4.40695817 | 1.05E-05 | 0.02158956 |
| 15 | 68007755 | 68007755 | 1 | 15_68007755 | ENSG00000260109 | AC135628.1 | 21467 | Downstream | -4.4069457 | 1.05E-05 | 0.02158956 |
| 4 | 28312780 | 28312780 | 1 | 4_28312780 | ENSG00000286321 | AC093791.2 | 24483 | Downstream | -4.4069406 | 1.05E-05 | 0.02158956 |
| 17 | 22338651 | 22338651 | 1 | 17_22338651 | ENSG00000266806 | AC087575.1 | 6241 | Downstream | -4.4068898 | 1.05E-05 | 0.021592 |
| 17 | 62001041 | 62001041 | 1 | 17_62001041 | ENSG00000108510 | MED13 | 0 | INTRON | 4.40683661 | 1.05E-05 | 0.02159469 |
| 15 | 91554228 | 91554228 | 1 | 15_91554228 | ENSG00000258551 | AC104035.1 | 0 | INTRON | -4.4066844 | 1.05E-05 | 0.02160452 |
| 4 | 98551735 | 98551735 | 1 | 4_98551735 | ENSG00000168785 | TSPAN5 | 0 | INTRON | -4.4066662 | 1.05E-05 | 0.02160452 |
| 16 | 4360935 | 4360935 | 1 | 16_4360935 | ENSG00000262246 | CORO7 | 0 | INTRON | -4.4066594 | 1.05E-05 | 0.02160452 |
| 3 | 10276987 | 10276987 | 1 | 3_10276987 | ENSG00000272410 | AC022384.1 | 0 | INTRON | 4.40662529 | 1.05E-05 | 0.02160531 |
| 10 | 22546204 | 22546204 | 1 | 10_22546204 | ENSG00000150867 | PIP4K2A | 0 | INTRON | 4.40659053 | 1.05E-05 | 0.02160616 |
| 4 | 104195200 | 104195200 | 1 | 4_104195200 | ENSG00000251170 | AC004052.1 | 35179 | Upstream | 4.40645885 | 1.05E-05 | 0.02161664 |
| 7 | 5242259 | 5242259 | 1 | 7_5242259 | ENSG00000157954 | WIPI2 | 8419 | Downstream | -4.406433 | 1.05E-05 | 0.02161664 |
| 6 | 170417673 | 170417673 | 1 | 6_170417673 | ENSG00000261003 | AL008628.1 | 0 | EXON | 4.40634315 | 1.05E-05 | 0.02162028 |
| 8 | 92339767 | 92339767 | 1 | 8_92339767 | ENSG00000253118 | AC022695.1 | 12144 | Downstream | 4.40631804 | 1.05E-05 | 0.02162028 |
| 13 | 25081561 | 25081561 | 1 | 13_25081561 | ENSG00000151846 | PABPC3 | 14306 | Upstream | 4.40631801 | 1.05E-05 | 0.02162028 |
| 3 | 193880303 | 193880303 | 1 | 3_193880303 | ENSG00000229155 | LINC02038 | 36279 | Upstream | 4.40624341 | 1.05E-05 | 0.02162261 |
| 12 | 99912508 | 99912508 | 1 | 12_99912508 | ENSG00000185046 | ANKS1B | 0 | INTRON | -4.4062366 | 1.05E-05 | 0.02162261 |
| 17 | 42177291 | 42177291 | 1 | 17_42177291 | ENSG00000089558 | KCNH4 | 0 | INTRON | 4.40620819 | 1.05E-05 | 0.02162261 |
| 1 | 234984826 | 234984826 | 1 | 1_234984826 | ENSG00000258082 | AL391832.3 | 4022 | Upstream | -4.4061898 | 1.05E-05 | 0.02162261 |
| 10 | 99332448 | 99332448 | 1 | 10_99332448 | ENSG00000119946 | CNNM1 | 0 | INTRON | -4.4060334 | 1.05E-05 | 0.02163561 |
| 6 | 93244796 | 93244796 | 1 | 6_93244796 | ENSG00000135333 | EPHA7 | 0 | INTRON | 4.40599183 | 1.05E-05 | 0.02163652 |
| 15 | 86953466 | 86953466 | 1 | 15_86953466 | ENSG00000273540 | AGBL1 | 0 | INTRON | -4.405972 | 1.05E-05 | 0.02163652 |
| 11 | 54339637 | 54339637 | 1 | 11_54339637 | ENSG00000237610 | OR4C50P | 251842 | Upstream | 4.4058556 | 1.05E-05 | 0.02164553 |
| X | 123872636 | 123872636 | 1 | X_123872636 | ENSG00000237331 | XIAP-AS1 | 0 | EXON | 4.40571865 | 1.05E-05 | 0.02165659 |
| 3 | 134010350 | 134010350 | 1 | 3_134010350 | ENSG00000174640 | SLCO2A1 | 0 | INTRON | -4.4056679 | 1.05E-05 | 0.02165906 |
| 6 | 53816098 | 53816098 | 1 | 6_53816098 | ENSG00000137269 | LRRC1 | 0 | INTRON | -4.4055972 | 1.05E-05 | 0.02166321 |
| 3 | 126117041 | 126117041 | 1 | 3_126117041 | ENSG00000144908 | ALDH1L1 | 0 | INTRON | 4.40557397 | 1.06E-05 | 0.02166321 |
| 14 | 59809844 | 59809844 | 1 | 14_59809844 | ENSG00000139970 | RTN1 | 0 | INTRON | 4.40538653 | 1.06E-05 | 0.0216749 |
| 5 | 177065720 | 177065720 | 1 | 5_177065720 | ENSG00000113761 | ZNF346 | 0 | 3UTR | -4.4053661 | 1.06E-05 | 0.0216749 |
| 1 | 63387036 | 63387036 | 1 | 1_63387036 | ENSG00000088035 | ALG6 | 0 | INTRON | -4.4053244 | 1.06E-05 | 0.0216749 |
| 1 | 34924576 | 34924576 | 1 | 1_34924576 | ENSG00000116544 | DLGAP3 | 0 | INTRON | 4.40532109 | 1.06E-05 | 0.0216749 |
| 6 | 6757940 | 6757940 | 1 | 6_6757940 | ENSG00000224532 | AL136361.1 | 335 | Downstream | -4.4053025 | 1.06E-05 | 0.0216749 |
| 20 | 36248053 | 36248053 | 1 | 20_36248053 | ENSG00000131043 | AAR2 | 0 | INTRON | 4.40530017 | 1.06E-05 | 0.0216749 |
| 11 | 96096459 | 96096459 | 1 | 11_96096459 | ENSG00000285921 | AP000779.1 | 0 | INTRON | 4.40516173 | 1.06E-05 | 0.02167828 |
| 1 | 201834959 | 201834959 | 1 | 1_201834959 | ENSG00000198700 | IPO9 | 0 | EXON | 4.40514951 | 1.06E-05 | 0.02167828 |
| 6 | 5948976 | 5948976 | 1 | 6_5948976 | ENSG00000215057 | PKMP5 | 23435 | Upstream | -4.4051217 | 1.06E-05 | 0.02167828 |
| 11 | 85607260 | 85607260 | 1 | 11_85607260 | ENSG00000150672 | DLG2 | 0 | INTRON | 4.40511967 | 1.06E-05 | 0.02167828 |
| 5 | 164734696 | 164734696 | 1 | 5_164734696 | ENSG00000241956 | AC109466.1 | 0 | INTRON | -4.4051192 | 1.06E-05 | 0.02167828 |
| 2 | 191414166 | 191414166 | 1 | 2_191414166 | ENSG00000128641 | MYO1B | 0 | EXON | 4.40510962 | 1.06E-05 | 0.02167828 |
| 6 | 90250216 | 90250216 | 1 | 6_90250216 | ENSG00000112182 | BACH2 | 0 | INTRON | -4.4050676 | 1.06E-05 | 0.02167987 |
| 1 | 8799624 | 8799624 | 1 | 1_8799624 | ENSG00000142599 | RERE | 0 | INTRON | 4.40502632 | 1.06E-05 | 0.02168138 |
| 2 | 204740446 | 204740446 | 1 | 2_204740446 | ENSG00000116117 | PARD3B | 0 | INTRON | -4.4048966 | 1.06E-05 | 0.02169175 |
| 6 | 82282757 | 82282757 | 1 | 6_82282757 | ENSG00000220537 | AL121977.1 | 17783 | Upstream | -4.4048663 | 1.06E-05 | 0.02169217 |
| 15 | 94662824 | 94662824 | 1 | 15_94662824 | ENSG00000259331 | AC009432.1 | 62003 | Downstream | -4.404802 | 1.06E-05 | 0.02169503 |
| X | 2955708 | 2955708 | 1 | X_2955708 | ENSG00000157399 | ARSE | 0 | INTRON | -4.4047855 | 1.06E-05 | 0.02169503 |
| 19 | 3800136 | 3800136 | 1 | 19_3800136 | ENSG00000007264 | MATK | 0 | INTRON | -4.4046554 | 1.06E-05 | 0.02170263 |
| 4 | 33755850 | 33755850 | 1 | 4_33755850 | ENSG00000250954 | AC016687.3 | 19647 | Downstream | 4.40462871 | 1.06E-05 | 0.02170263 |
| X | 3668851 | 3668851 | 1 | X_3668851 | ENSG00000183943 | PRKX | 0 | INTRON | 4.404628 | 1.06E-05 | 0.02170263 |
| 7 | 131614695 | 131614695 | 1 | 7_131614695 | ENSG00000213261 | EEF1B2P6 | 47256 | Downstream | -4.4046052 | 1.06E-05 | 0.02170263 |
| 12 | 13464491 | 13464491 | 1 | 12_13464491 | ENSG00000273079 | GRIN2B | 0 | INTRON | -4.4044524 | 1.06E-05 | 0.02170948 |
| 5 | 154659515 | 154659515 | 1 | 5_154659515 | ENSG00000221552 | MIR1303 | 26260 | Upstream | -4.4044283 | 1.06E-05 | 0.02170948 |
| 8 | 143860613 | 143860613 | 1 | 8_143860613 | ENSG00000261150 | EPPK1 | 0 | EXON | -4.4044264 | 1.06E-05 | 0.02170948 |
| 8 | 34344379 | 34344379 | 1 | 8_34344379 | ENSG00000253108 | AC090993.1 | 0 | INTRON | 4.4044092 | 1.06E-05 | 0.02170948 |
| 7 | 22804518 | 22804518 | 1 | 7_22804518 | ENSG00000196683 | TOMM7 | 8109 | Downstream | 4.4044063 | 1.06E-05 | 0.02170948 |
| 3 | 34154941 | 34154941 | 1 | 3_34154941 | ENSG00000287981 | AC123023.2 | 0 | INTRON | 4.40422969 | 1.06E-05 | 0.02172456 |
| 9 | 16394532 | 16394532 | 1 | 9_16394532 | ENSG00000205549 | C9orf92 | 0 | INTRON | -4.4041649 | 1.06E-05 | 0.02172844 |
| 14 | 57303263 | 57303263 | 1 | 14_57303263 | ENSG00000053770 | AP5M1 | 4521 | Downstream | -4.4040974 | 1.06E-05 | 0.02173259 |
| 3 | 160799721 | 160799721 | 1 | 3_160799721 | ENSG00000163590 | PPM1L | 0 | INTRON | 4.40400369 | 1.06E-05 | 0.02173937 |
| 4 | 77881841 | 77881841 | 1 | 4_77881841 | ENSG00000169288 | MRPL1 | 0 | INTRON | 4.40391975 | 1.06E-05 | 0.02174518 |
| 19 | 24602976 | 24602976 | 1 | 19_24602976 | ENSG00000268442 | AC073534.1 | 439551 | Upstream | 4.40384012 | 1.06E-05 | 0.02174954 |
| 7 | 134018213 | 134018213 | 1 | 7_134018213 | ENSG00000131558 | EXOC4 | 0 | INTRON | 4.40382412 | 1.06E-05 | 0.02174954 |
| 8 | 69374972 | 69374972 | 1 | 8_69374972 | ENSG00000253479 | LINC01603 | 49876 | Downstream | -4.4037323 | 1.06E-05 | 0.02175614 |
| 9 | 120820009 | 120820009 | 1 | 9_120820009 | ENSG00000095261 | PSMD5 | 0 | INTRON | -4.4037054 | 1.06E-05 | 0.02175622 |
| 1 | 218900286 | 218900286 | 1 | 1_218900286 | ENSG00000225561 | LINC01710 | 12470 | Downstream | -4.4035665 | 1.06E-05 | 0.02176463 |
| 7 | 28880326 | 28880326 | 1 | 7_28880326 | ENSG00000146592 | CREB5 | 54432 | Downstream | -4.4035336 | 1.07E-05 | 0.02176463 |
| 7 | 131026899 | 131026899 | 1 | 7_131026899 | ENSG00000231721 | LINC-PINT | 0 | INTRON | 4.40352489 | 1.07E-05 | 0.02176463 |
| 5 | 142007065 | 142007065 | 1 | 5_142007065 | ENSG00000113552 | GNPDA1 | 0 | INTRON | 4.40351493 | 1.07E-05 | 0.02176463 |
| 7 | 126953399 | 126953399 | 1 | 7_126953399 | ENSG00000179603 | GRM8 | 0 | INTRON | -4.4034914 | 1.07E-05 | 0.02176463 |
| 5 | 128330362 | 128330362 | 1 | 5_128330362 | ENSG00000138829 | FBN2 | 0 | INTRON | 4.40342112 | 1.07E-05 | 0.02176606 |
| 14 | 78691911 | 78691911 | 1 | 14_78691911 | ENSG00000021645 | NRXN3 | 0 | INTRON | -4.4034141 | 1.07E-05 | 0.02176606 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | 62091342 | 62091342 | 1 | 4_62091342 | ENSG00000248692 | ADGRL3-AS1 | 0 | INTRON | 4.40339469 | 1.07E-05 | 0.02176606 |
| 14 | 97047065 | 97047065 | 1 | 14_97047065 | ENSG00000288034 | AL049833.4 | 39441 | Upstream | -4.4033731 | 1.07E-05 | 0.02176606 |
| 19 | 12514407 | 12514407 | 1 | 19_12514407 | ENSG00000196826 | AC008758.1 | 0 | INTRON | 4.40330225 | 1.07E-05 | 0.02177055 |
| 5 | 121573508 | 121573508 | 1 | 5_121573508 | ENSG00000244088 | RPL23AP44 | 2339 | Downstream | 4.40312274 | 1.07E-05 | 0.02178597 |
| 12 | 57508479 | 57508479 | 1 | 12_57508479 | ENSG00000166986 | MARS | 0 | INTRON | 4.40309297 | 1.07E-05 | 0.02178634 |
| 7 | 87160296 | 87160296 | 1 | 7_87160296 | ENSG00000135164 | DMTF1 | 0 | INTRON | -4.4030638 | 1.07E-05 | 0.02178666 |
| 4 | 31150653 | 31150653 | 1 | 4_31150653 | ENSG00000169851 | PCDH7 | 3848 | Downstream | -4.4029765 | 1.07E-05 | 0.02179282 |
| 17 | 22519788 | 22519788 | 1 | 17_22519788 | ENSG00000266529 | MTCYBP13 | 0 | EXON | -4.402947 | 1.07E-05 | 0.02179317 |
| 8 | 139760426 | 139760426 | 1 | 8_139760426 | ENSG00000167632 | TRAPPC9 | 0 | INTRON | 4.40286227 | 1.07E-05 | 0.02179729 |
| 16 | 3005838 | 3005838 | 1 | 16_3005838 | ENSG00000272079 | AC004233.2 | 281 | Upstream | -4.4028117 | 1.07E-05 | 0.02179729 |
| 7 | 30912971 | 30912971 | 1 | 7_30912971 | ENSG00000240583 | AQP1 | 0 | INTRON | -4.4028027 | 1.07E-05 | 0.02179729 |
| 7 | 3823456 | 3823456 | 1 | 7_3823456 | ENSG00000146555 | SDK1 | 0 | INTRON | -4.4027959 | 1.07E-05 | 0.02179729 |
| 5 | 99044563 | 99044563 | 1 | 5_99044563 | ENSG00000248489 | LINC02062 | 49550 | Downstream | 4.40277599 | 1.07E-05 | 0.02179729 |
| 4 | 128488119 | 128488119 | 1 | 4_128488119 | ENSG00000251432 | LINC02615 | 0 | INTRON | 4.40271878 | 1.07E-05 | 0.02180043 |
| 1 | 83660879 | 83660879 | 1 | 1_83660879 | ENSG00000233008 | LINC01725 | 0 | INTRON | -4.4026768 | 1.07E-05 | 0.02180203 |
| 11 | 63808232 | 63808232 | 1 | 11_63808232 | ENSG00000168005 | SPINDOC | 5223 | Upstream | 4.402547 | 1.07E-05 | 0.02181247 |
| 1 | 21902011 | 21902011 | 1 | 1_21902011 | ENSG00000142798 | HSPG2 | 0 | INTRON | 4.40238829 | 1.07E-05 | 0.02182443 |
| 9 | 137043244 | 137043244 | 1 | 9_137043244 | ENSG00000107281 | NPDC1 | 0 | EXON | 4.40237064 | 1.07E-05 | 0.02182443 |
| 4 | 66401633 | 66401633 | 1 | 4_66401633 | ENSG00000244099 | RPS23P3 | 29458 | Upstream | -4.4023336 | 1.07E-05 | 0.02182443 |
| 22 | 47158205 | 47158205 | 1 | 22_47158205 | ENSG00000054611 | TBC1D22A | 0 | INTRON | -4.4023201 | 1.07E-05 | 0.02182443 |
| 4 | 98519597 | 98519597 | 1 | 4_98519597 | ENSG00000168785 | TSPAN5 | 0 | INTRON | 4.40228389 | 1.07E-05 | 0.02182443 |
| 3 | 26583386 | 26583386 | 1 | 3_26583386 | ENSG00000225386 | AC099754.1 | 30874 | Downstream | -4.4022254 | 1.07E-05 | 0.02182443 |
| 1 | 171929876 | 171929876 | 1 | 1_171929876 | ENSG00000197959 | DNM3 | 0 | INTRON | -4.4022051 | 1.07E-05 | 0.02182443 |
| 5 | 67654978 | 67654978 | 1 | 5_67654978 | ENSG00000249364 | AC112206.2 | 0 | INTRON | -4.4021997 | 1.07E-05 | 0.02182443 |
| 14 | 105597642 | 105597642 | 1 | 14_105597642 | ENSG00000211891 | IGHE | 48 | Downstream | -4.4021791 | 1.07E-05 | 0.02182443 |
| 19 | 50123653 | 50123653 | 1 | 19_50123653 | ENSG00000287001 | AC010624.5 | 13205 | Downstream | 4.40215968 | 1.07E-05 | 0.02182443 |
| 15 | 66100406 | 66100406 | 1 | 15_66100406 | ENSG00000157890 | MEGF11 | 0 | INTRON | 4.40214247 | 1.07E-05 | 0.02182443 |
| 5 | 165412160 | 165412160 | 1 | 5_165412160 | ENSG00000253693 | AC008415.1 | 0 | INTRON | -4.4020755 | 1.07E-05 | 0.02182856 |
| X | 136851039 | 136851039 | 1 | X_136851039 | ENSG00000147274 | RBMX | 0 | INTRON | 4.40188546 | 1.07E-05 | 0.02184508 |
| 11 | 34164780 | 34164780 | 1 | 11_34164780 | ENSG00000166016 | ABTB2 | 0 | EXON | 4.40179807 | 1.07E-05 | 0.02184742 |
| 6 | 148961394 | 148961394 | 1 | 6_148961394 | ENSG00000111962 | UST | 0 | INTRON | -4.4017557 | 1.07E-05 | 0.02184742 |
| 2 | 34494542 | 34494542 | 1 | 2_34494542 | ENSG00000228262 | LINC01320 | 0 | INTRON | 4.40173016 | 1.07E-05 | 0.02184742 |
| 14 | 62020689 | 62020689 | 1 | 14_62020689 | ENSG00000139973 | SYT16 | 0 | INTRON | 4.40169617 | 1.07E-05 | 0.02184742 |
| 1 | 52755732 | 52755732 | 1 | 1_52755732 | ENSG00000162378 | ZYG11B | 0 | INTRON | -4.401669 | 1.07E-05 | 0.02184742 |
| 15 | 81541643 | 81541643 | 1 | 15_81541643 | ENSG00000259543 | AC060809.1 | 0 | INTRON | 4.40165849 | 1.07E-05 | 0.02184742 |
| 12 | 965082 | 965082 | 1 | 12_965082 | ENSG00000002016 | RAD52 | 0 | INTRON | -4.4016563 | 1.07E-05 | 0.02184742 |
| 10 | 72762675 | 72762675 | 1 | 10_72762675 | ENSG00000156026 | MCU | 0 | INTRON | -4.4016094 | 1.07E-05 | 0.02184742 |
| 4 | 455062 | 455062 | 1 | 4_455062 | ENSG00000182903 | ZNF721 | 0 | INTRON | 4.4015969 | 1.07E-05 | 0.02184742 |
| 12 | 94412875 | 94412875 | 1 | 12_94412875 | ENSG00000173588 | CEP83 | 0 | INTRON | 4.40159457 | 1.07E-05 | 0.02184742 |
| 10 | 93187961 | 93187961 | 1 | 10_93187961 | ENSG00000237417 | XRCC6P1 | 18895 | Downstream | -4.4015769 | 1.07E-05 | 0.02184742 |
| 18 | 79702670 | 79702670 | 1 | 18_79702670 | ENSG00000060069 | CTDP1 | 0 | INTRON | 4.40147089 | 1.08E-05 | 0.02185549 |
| 1 | 39374906 | 39374906 | 1 | 1_39374906 | ENSG00000127603 | MACF1 | 0 | INTRON | -4.4013335 | 1.08E-05 | 0.02186589 |
| 20 | 55063823 | 55063823 | 1 | 20_55063823 | ENSG00000185834 | RPL12P4 | 10820 | Upstream | 4.40131583 | 1.08E-05 | 0.02186589 |
| 22 | 26546140 | 26546140 | 1 | 22_26546140 | ENSG00000128294 | TPST2 | 0 | INTRON | -4.4012657 | 1.08E-05 | 0.02186808 |
| 6 | 92331016 | 92331016 | 1 | 6_92331016 | ENSG00000261038 | AL133457.1 | 56824 | Downstream | 4.40123335 | 1.08E-05 | 0.02186808 |
| 6 | 98796667 | 98796667 | 1 | 6_98796667 | ENSG00000187472 | AL589826.1 | 16162 | Upstream | 4.40119084 | 1.08E-05 | 0.02186808 |
| 9 | 42122034 | 42122034 | 1 | 9_42122034 | ENSG00000154529 | CNTNAP3B | 0 | INTRON | -4.4011905 | 1.08E-05 | 0.02186808 |
| 3 | 68166311 | 68166311 | 1 | 3_68166311 | ENSG00000183662 | TAFA1 | 0 | INTRON | 4.40116293 | 1.08E-05 | 0.02186825 |
| 10 | 1549577 | 1549577 | 1 | 10_1549577 | ENSG00000205696 | ADARB2-AS1 | 0 | INTRON | 4.40105305 | 1.08E-05 | 0.02187672 |
| 2 | 69625131 | 69625131 | 1 | 2_69625131 | ENSG00000115977 | AAK1 | 0 | INTRON | -4.4009882 | 1.08E-05 | 0.02188065 |
| 9 | 118685696 | 118685696 | 1 | 9_118685696 | ENSG00000225050 | AL355592.1 | 2055 | Downstream | -4.4008978 | 1.08E-05 | 0.02188715 |
| 1 | 151469214 | 151469214 | 1 | 1_151469214 | ENSG00000143442 | POGZ | 9720 | Upstream | 4.40083306 | 1.08E-05 | 0.02188976 |
| 7 | 69173229 | 69173229 | 1 | 7_69173229 | ENSG00000286466 | AC069280.2 | 0 | INTRON | 4.40078337 | 1.08E-05 | 0.02188976 |
| 5 | 115987613 | 115987613 | 1 | 5_115987613 | ENSG00000172901 | LVRN | 0 | INTRON | 4.40077634 | 1.08E-05 | 0.02188976 |
| 14 | 35187919 | 35187919 | 1 | 14_35187919 | ENSG00000258790 | AL121594.1 | 0 | INTRON | 4.40076531 | 1.08E-05 | 0.02188976 |
| 9 | 38923180 | 38923180 | 1 | 9_38923180 | ENSG00000287838 | AL953883.1 | 26553 | Upstream | 4.40074108 | 1.08E-05 | 0.02188976 |
| 9 | 134679961 | 134679961 | 1 | 9_134679961 | ENSG00000130635 | COL5A1 | 0 | INTRON | -4.4007167 | 1.08E-05 | 0.02188976 |
| 11 | 1686457 | 1686457 | 1 | 11_1686457 | ENSG00000205865 | FAM99B | 828 | Upstream | 4.40065066 | 1.08E-05 | 0.02189261 |
| 2 | 223215772 | 223215772 | 1 | 2_223215772 | ENSG00000152049 | KCNE4 | 17373 | Downstream | 4.40063666 | 1.08E-05 | 0.02189261 |
| 3 | 23248525 | 23248525 | 1 | 3_23248525 | ENSG00000182247 | UBE2E2 | 0 | INTRON | -4.4005422 | 1.08E-05 | 0.02189685 |
| 8 | 72700662 | 72700662 | 1 | 8_72700662 | ENSG00000182674 | KCNB2 | 0 | INTRON | -4.4005393 | 1.08E-05 | 0.02189685 |
| 18 | 63215320 | 63215320 | 1 | 18_63215320 | ENSG00000171791 | BCL2 | 0 | INTRON | 4.40051707 | 1.08E-05 | 0.02189685 |
| 1 | 182157495 | 182157495 | 1 | 1_182157495 | ENSG00000228918 | LINC01344 | 0 | INTRON | 4.40032522 | 1.08E-05 | 0.02191361 |
| 8 | 41197677 | 41197677 | 1 | 8_41197677 | ENSG00000104332 | SFRP1 | 64284 | Downstream | -4.4002093 | 1.08E-05 | 0.02192271 |
| 3 | 43395859 | 43395859 | 1 | 3_43395859 | ENSG00000160746 | ANO10 | 0 | INTRON | 4.40002273 | 1.08E-05 | 0.02193632 |
| 2 | 105888146 | 105888146 | 1 | 2_105888146 | ENSG00000071051 | NCK2 | 0 | INTRON | 4.40000544 | 1.08E-05 | 0.02193632 |
| 17 | 14462055 | 14462055 | 1 | 17_14462055 | ENSG00000230647 | AC022816.1 | 40583 | Downstream | -4.3999971 | 1.08E-05 | 0.02193632 |
| 5 | 58838240 | 58838240 | 1 | 5_58838240 | ENSG00000152932 | RAB3C | 0 | INTRON | 4.39996792 | 1.08E-05 | 0.02193665 |
| 12 | 63201921 | 63201921 | 1 | 12_63201921 | ENSG00000279444 | AC135584.1 | 47915 | Downstream | -4.3999161 | 1.08E-05 | 0.02193928 |
| 11 | 108781949 | 108781949 | 1 | 11_108781949 | ENSG00000178105 | DDX10 | 0 | INTRON | -4.3998634 | 1.08E-05 | 0.021942 |
| 2 | 159147579 | 159147579 | 1 | 2_159147579 | ENSG00000115183 | TANC1 | 0 | EXON | -4.3998077 | 1.08E-05 | 0.02194501 |
| 15 | 42248711 | 42248711 | 1 | 15_42248711 | ENSG00000103978 | TMEM87A | 0 | INTRON | 4.39975905 | 1.08E-05 | 0.02194733 |
| 17 | 11649075 | 11649075 | 1 | 17_11649075 | ENSG00000007174 | DNAH9 | 0 | INTRON | -4.3996306 | 1.08E-05 | 0.0219558 |
| 12 | 33134339 | 33134339 | 1 | 12_33134339 | ENSG00000257435 | AC087311.2 | 140585 | Downstream | 4.3995618 | 1.08E-05 | 0.0219558 |
| 1 | 25259935 | 25259935 | 1 | 1_25259935 | ENSG00000117616 | RSRP1 | 0 | INTRON | 4.39953058 | 1.08E-05 | 0.0219558 |
| 12 | 120079570 | 120079570 | 1 | 12_120079570 | ENSG00000135127 | BICDL1 | 0 | INTRON | -4.3995185 | 1.08E-05 | 0.0219558 |
| 8 | 133226618 | 133226618 | 1 | 8_133226618 | ENSG00000104415 | CCN4 | 0 | INTRON | -4.3994827 | 1.09E-05 | 0.0219558 |
| 12 | 123858772 | 123858772 | 1 | 12_123858772 | ENSG00000197653 | DNAH10 | 0 | INTRON | -4.3994804 | 1.09E-05 | 0.0219558 |
| 18 | 69467619 | 69467619 | 1 | 18_69467619 | ENSG00000206052 | DOK6 | 0 | INTRON | 4.39947999 | 1.09E-05 | 0.0219558 |
| 11 | 36828244 | 36828244 | 1 | 11_36828244 | ENSG00000254498 | AC104042.1 | 130377 | Downstream | -4.3994688 | 1.09E-05 | 0.0219558 |
| 8 | 139757563 | 139757563 | 1 | 8_139757563 | ENSG00000167632 | TRAPPC9 | 0 | INTRON | 4.39939259 | 1.09E-05 | 0.02196089 |
| 18 | 12730846 | 12730846 | 1 | 18_12730846 | ENSG00000128789 | PSMG2 | 5106 | Downstream | 4.39927704 | 1.09E-05 | 0.02196722 |
| 11 | 46305356 | 46305356 | 1 | 11_46305356 | ENSG00000157613 | CREB3L1 | 0 | INTRON | 4.39926119 | 1.09E-05 | 0.02196722 |
| 3 | 38176387 | 38176387 | 1 | 3_38176387 | ENSG00000172939 | OXSR1 | 0 | INTRON | -4.3992527 | 1.09E-05 | 0.02196722 |
| 1 | 208854527 | 208854527 | 1 | 1_208854527 | ENSG00000236950 | LINC01774 | 117926 | Upstream | 4.39912608 | 1.09E-05 | 0.02197742 |

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| 4 | 113593199 | 113593199 | 1 | 4_113593199 | ENSG00000145349 | CAMK2D | 0 | INTRON | -4.3989424 | 1.09E-05 | 0.02199024 |
| 1 | 104295897 | 104295897 | 1 | 1_104295897 | ENSG00000215869 | AC092506.1 | 69219 | Downstream | 4.39892219 | 1.09E-05 | 0.02199024 |
| 9 | 111985668 | 111985668 | 1 | 9_111985668 | ENSG00000222356 | RNU6-710P | 10966 | Downstream | -4.3988698 | 1.09E-05 | 0.02199076 |
| 1 | 62939558 | 62939558 | 1 | 1_62939558 | ENSG00000237163 | AC099794.2 | 34076 | Downstream | -4.3988655 | 1.09E-05 | 0.02199076 |
| 1 | 150288063 | 150288063 | 1 | 1_150288063 | ENSG00000159208 | CIART | 970 | Downstream | 4.39882427 | 1.09E-05 | 0.02199233 |
| 7 | 64019011 | 64019011 | 1 | 7_64019011 | ENSG00000241149 | AC115220.1 | 2881 | Downstream | -4.3987491 | 1.09E-05 | 0.02199636 |
| 11 | 118573913 | 118573913 | 1 | 11_118573913 | ENSG00000095139 | ARCN1 | 0 | INTRON | 4.39871924 | 1.09E-05 | 0.02199636 |
| 16 | 5118904 | 5118904 | 1 | 16_5118904 | ENSG00000273963 | ENPP7P14 | 0 | INTRON | 4.39868023 | 1.09E-05 | 0.02199636 |
| 2 | 99970553 | 99970553 | 1 | 2_99970553 | ENSG00000144218 | AFF3 | 0 | INTRON | -4.3986765 | 1.09E-05 | 0.02199636 |
| 6 | 52777270 | 52777270 | 1 | 6_52777270 | ENSG00000217228 | GSTA12P | 0 | INTRON | 4.39865563 | 1.09E-05 | 0.02199636 |
| 13 | 82143365 | 82143365 | 1 | 13_82143365 | ENSG00000214182 | PTMAP5 | 452293 | Downstream | -4.3985815 | 1.09E-05 | 0.02199666 |
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| 5 | 167962633 | 167962633 | 1 | 5_167962633 | ENSG00000145934 | TENM2 | 0 | INTRON | -4.3985754 | 1.09E-05 | 0.02199666 |
| 13 | 25682273 | 25682273 | 1 | 13_25682273 | ENSG00000132932 | ATP8A2 | 0 | INTRON | 4.39852232 | 1.09E-05 | 0.02199943 |
| 12 | 105737194 | 105737194 | 1 | 12_105737194 | ENSG00000257859 | CASC18 | 0 | EXON | 4.39843288 | 1.09E-05 | 0.02200324 |
| 19 | 29649282 | 29649282 | 1 | 19_29649282 | ENSG00000166289 | PLEKHF1 | 16176 | Upstream | 4.39842774 | 1.09E-05 | 0.02200324 |
| 1 | 185230903 | 185230903 | 1 | 1_185230903 | ENSG00000116668 | SWT1 | 0 | INTRON | 4.39838855 | 1.09E-05 | 0.02200324 |
| 19 | 15237697 | 15237697 | 1 | 19_15237697 | ENSG00000141867 | BRD4 | 0 | 3UTR | 4.39838171 | 1.09E-05 | 0.02200324 |
| 12 | 79894637 | 79894637 | 1 | 12_79894637 | ENSG00000058272 | PPP1R12A | 0 | INTRON | -4.398186 | 1.09E-05 | 0.02201935 |
| 1 | 155518051 | 155518051 | 1 | 1_155518051 | ENSG00000116539 | ASH1L | 0 | INTRON | 4.39817139 | 1.09E-05 | 0.02201935 |
| 12 | 107563219 | 107563219 | 1 | 12_107563219 | ENSG00000151136 | BTBD11 | 0 | INTRON | 4.39808507 | 1.09E-05 | 0.02202368 |
| 7 | 156446856 | 156446856 | 1 | 7_156446856 | ENSG00000182648 | LINC01006 | 0 | INTRON | 4.39804714 | 1.09E-05 | 0.02202368 |
| 19 | 29312502 | 29312502 | 1 | 19_29312502 | ENSG00000264515 | AC011474.1 | 0 | INTRON | -4.3980327 | 1.09E-05 | 0.02202368 |
| 4 | 159514421 | 159514421 | 1 | 4_159514421 | ENSG00000250180 | AC074344.2 | 113175 | Downstream | -4.3980258 | 1.09E-05 | 0.02202368 |
| 2 | 37086289 | 37086289 | 1 | 2_37086289 | ENSG00000152133 | GPATCH11 | 0 | INTRON | 4.39797825 | 1.09E-05 | 0.02202589 |
| 3 | 73412942 | 73412942 | 1 | 3_73412942 | ENSG00000121440 | PDZRN3 | 0 | INTRON | 4.39793268 | 1.09E-05 | 0.02202791 |
| 3 | 197102472 | 197102472 | 1 | 3_197102472 | ENSG00000075711 | DLG1 | 0 | INTRON | -4.3978284 | 1.09E-05 | 0.02203345 |
| 12 | 43837186 | 43837186 | 1 | 12_43837186 | ENSG00000139173 | TMEM117 | 0 | INTRON | 4.3978266 | 1.09E-05 | 0.02203345 |
| 5 | 56826312 | 56826312 | 1 | 5_56826312 | ENSG00000095015 | MAP3K1 | 0 | INTRON | 4.39772205 | 1.09E-05 | 0.02203838 |
| 12 | 127856803 | 127856803 | 1 | 12_127856803 | ENSG00000255757 | AC087894.1 | 20195 | Downstream | 4.39768983 | 1.09E-05 | 0.02203838 |
| 6 | 79602713 | 79602713 | 1 | 6_79602713 | ENSG00000279659 | AL451064.2 | 27183 | Downstream | -4.3976726 | 1.09E-05 | 0.02203838 |
| 5 | 1870751 | 1870751 | 1 | 5_1870751 | ENSG00000113430 | IRX4 | 6661 | Downstream | 4.39765219 | 1.09E-05 | 0.02203838 |
| 7 | 101364421 | 101364421 | 1 | 7_101364421 | ENSG00000160963 | COL26A1 | 0 | INTRON | 4.39764953 | 1.09E-05 | 0.02203838 |
| 18 | 13185091 | 13185091 | 1 | 18_13185091 | ENSG00000267286 | AP001198.2 | 0 | INTRON | -4.397549 | 1.09E-05 | 0.02204598 |
| X | 143307221 | 143307221 | 1 | X_143307221 | ENSG00000227303 | AC239727.1 | 0 | INTRON | 4.39749632 | 1.10E-05 | 0.02204872 |
| 11 | 87358421 | 87358421 | 1 | 11_87358421 | ENSG00000254582 | PSMA2P1 | 28369 | Upstream | 4.3974631 | 1.10E-05 | 0.0220493 |
| 3 | 85563943 | 85563943 | 1 | 3_85563943 | ENSG00000175161 | CADM2 | 0 | INTRON | -4.3974393 | 1.10E-05 | 0.0220493 |
| 6 | 139089974 | 139089974 | 1 | 6_139089974 | ENSG00000112406 | HECA | 45105 | Upstream | -4.3972857 | 1.10E-05 | 0.02206127 |
| 2 | 23648682 | 23648682 | 1 | 2_23648682 | ENSG00000119771 | KLHL29 | 0 | INTRON | 4.39720975 | 1.10E-05 | 0.02206127 |
| 4 | 53371206 | 53371206 | 1 | 4_53371206 | ENSG00000184178 | SCFD2 | 5140 | Upstream | 4.39719349 | 1.10E-05 | 0.02206127 |
| 3 | 78832461 | 78832461 | 1 | 3_78832461 | ENSG00000169855 | ROBO1 | 0 | INTRON | 4.39715538 | 1.10E-05 | 0.02206127 |
| 22 | 23418977 | 23418977 | 1 | 22_23418977 | ENSG00000234928 | LINC01659 | 14586 | Upstream | 4.39713308 | 1.10E-05 | 0.02206127 |
| 5 | 56150893 | 56150893 | 1 | 5_56150893 | ENSG00000164512 | ANKRD55 | 0 | INTRON | 4.39711186 | 1.10E-05 | 0.02206127 |
| 13 | 42223292 | 42223292 | 1 | 13_42223292 | ENSG00000102780 | DGKH | 0 | INTRON | -4.3971042 | 1.10E-05 | 0.02206127 |
| 3 | 68822718 | 68822718 | 1 | 3_68822718 | ENSG00000163377 | TAFA4 | 0 | INTRON | 4.397098 | 1.10E-05 | 0.02206127 |
| 2 | 193223200 | 193223200 | 1 | 2_193223200 | ENSG00000232658 | AC092638.1 | 33282 | Upstream | -4.3970682 | 1.10E-05 | 0.02206127 |
| 10 | 92193330 | 92193330 | 1 | 10_92193330 | ENSG00000107864 | CPEB3 | 0 | INTRON | 4.39706472 | 1.10E-05 | 0.02206127 |
| 2 | 235487753 | 235487753 | 1 | 2_235487753 | ENSG00000157985 | AGAP1 | 6289 | Upstream | 4.39700991 | 1.10E-05 | 0.0220633 |
| X | 124187425 | 124187425 | 1 | X_124187425 | ENSG00000101972 | STAG2 | 0 | INTRON | -4.3969889 | 1.10E-05 | 0.0220633 |
| 5 | 162665117 | 162665117 | 1 | 5_162665117 | ENSG00000254186 | AC113414.1 | 0 | INTRON | 4.39696416 | 1.10E-05 | 0.0220633 |
| 6 | 71754629 | 71754629 | 1 | 6_71754629 | ENSG00000202069 | RNU4-66P | 102018 | Upstream | 4.39694213 | 1.10E-05 | 0.0220633 |
| 7 | 36302881 | 36302881 | 1 | 7_36302881 | ENSG00000122547 | EEPD1 | 1343 | Downstream | -4.3969143 | 1.10E-05 | 0.02206352 |
| 7 | 9297523 | 9297523 | 1 | 7_9297523 | ENSG00000278254 | AC004852.2 | 107666 | Upstream | 4.39685255 | 1.10E-05 | 0.02206719 |
| 8 | 132837741 | 132837741 | 1 | 8_132837741 | ENSG00000129292 | PHF20L1 | 0 | 3UTR | -4.3967995 | 1.10E-05 | 0.02206997 |
| 2 | 7780482 | 7780482 | 1 | 2_7780482 | ENSG00000229405 | AC092580.1 | 43387 | Upstream | -4.3967699 | 1.10E-05 | 0.02207037 |
| 18 | 8139324 | 8139324 | 1 | 18_8139324 | ENSG00000173482 | PTPRM | 0 | INTRON | 4.39672672 | 1.10E-05 | 0.02207216 |
| 6 | 119326309 | 119326309 | 1 | 6_119326309 | ENSG00000111885 | MAN1A1 | 0 | INTRON | 4.39664866 | 1.10E-05 | 0.02207749 |
| 7 | 58112097 | 58112097 | 1 | 7_58112097 | ENSG00000231484 | AC023141.7 | 275051 | Downstream | -4.3964217 | 1.10E-05 | 0.02209797 |
| 3 | 86986872 | 86986872 | 1 | 3_86986872 | ENSG00000206538 | VGLL3 | 0 | INTRON | 4.39639282 | 1.10E-05 | 0.0220983 |
| 14 | 58273811 | 58273811 | 1 | 14_58273811 | ENSG00000257621 | PSMA3-AS1 | 0 | EXON | 4.39634274 | 1.10E-05 | 0.02210079 |
| 7 | 123018541 | 123018541 | 1 | 7_123018541 | ENSG00000128519 | TAS2R16 | 22841 | Upstream | -4.3962056 | 1.10E-05 | 0.02211123 |
| 2 | 59158619 | 59158619 | 1 | 2_59158619 | ENSG00000285673 | AC007092.1 | 0 | INTRON | 4.39618893 | 1.10E-05 | 0.02211123 |
| 2 | 42497713 | 42497713 | 1 | 2_42497713 | ENSG00000057935 | MTA3 | 0 | INTRON | 4.39615506 | 1.10E-05 | 0.02211207 |
| 13 | 56597410 | 56597410 | 1 | 13_56597410 | ENSG00000201665 | RN7SKP6 | 287873 | Downstream | 4.39602644 | 1.10E-05 | 0.02212256 |
| 6 | 88680441 | 88680441 | 1 | 6_88680441 | ENSG00000111880 | RNGTT | 0 | INTRON | -4.3959756 | 1.10E-05 | 0.02212513 |
| 7 | 63080195 | 63080195 | 1 | 7_63080195 | ENSG00000233782 | ZNF90P3 | 6874 | Downstream | 4.39590172 | 1.10E-05 | 0.0221271 |
| X | 18905905 | 18905905 | 1 | X_18905905 | ENSG00000044446 | PHKA2 | 0 | INTRON | -4.3958865 | 1.10E-05 | 0.0221271 |
| 1 | 92569651 | 92569651 | 1 | 1_92569651 | ENSG00000067208 | EVI5 | 0 | INTRON | -4.3958795 | 1.10E-05 | 0.0221271 |
| 3 | 1555819 | 1555819 | 1 | 3_1555819 | ENSG00000184423 | RPL23AP38 | 39957 | Downstream | -4.3956639 | 1.10E-05 | 0.02214456 |
| 16 | 62991595 | 62991595 | 1 | 16_62991595 | ENSG00000261502 | AC040174.1 | 65190 | Downstream | 4.39565694 | 1.10E-05 | 0.02214456 |
| 14 | 62131977 | 62131977 | 1 | 14_62131977 | ENSG00000186369 | LINC00643 | 1015 | Downstream | -4.3955873 | 1.10E-05 | 0.02214785 |
| 3 | 114480807 | 114480807 | 1 | 3_114480807 | ENSG00000181722 | ZBTB20 | 0 | INTRON | -4.3955735 | 1.10E-05 | 0.02214785 |
| 14 | 72024516 | 72024516 | 1 | 14_72024516 | ENSG00000182732 | RGS6 | 0 | INTRON | -4.395506 | 1.11E-05 | 0.02214892 |
| 2 | 101775137 | 101775137 | 1 | 2_101775137 | ENSG00000071054 | MAP4K4 | 0 | INTRON | -4.3955043 | 1.11E-05 | 0.02214892 |
| 20 | 63868727 | 63868727 | 1 | 20_63868727 | ENSG00000101150 | TPD52L2 | 0 | INTRON | 4.39548623 | 1.11E-05 | 0.02214892 |
| 10 | 119493391 | 119493391 | 1 | 10_119493391 | ENSG00000148908 | RGS10 | 6425 | Downstream | 4.39541006 | 1.11E-05 | 0.02215408 |
| 1 | 196174277 | 196174277 | 1 | 1_196174277 | ENSG00000162687 | KCNT2 | 51501 | Downstream | 4.39537722 | 1.11E-05 | 0.02215476 |
| 16 | 7167435 | 7167435 | 1 | 16_7167435 | ENSG00000078328 | RBFOX1 | 0 | INTRON | 4.39535225 | 1.11E-05 | 0.02215476 |
| 11 | 16509719 | 16509719 | 1 | 11_16509719 | ENSG00000110693 | SOX6 | 0 | INTRON | 4.39528925 | 1.11E-05 | 0.02215825 |
| 1 | 80692395 | 80692395 | 1 | 1_80692395 | ENSG00000234184 | LINC01781 | 45604 | Downstream | 4.39525928 | 1.11E-05 | 0.02215825 |
| 22 | 30276281 | 30276281 | 1 | 22_30276281 | ENSG00000279699 | AC004264.2 | 0 | EXON | -4.3952414 | 1.11E-05 | 0.02215825 |
| 12 | 12295599 | 12295599 | 1 | 12_12295599 | ENSG00000207010 | RNU6-318P | 6270 | Upstream | 4.39504173 | 1.11E-05 | 0.02217601 |
| X | 8526265 | 8526265 | 1 | X_8526265 | ENSG00000011201 | ANOS1 | 2608 | Downstream | 4.39484826 | 1.11E-05 | 0.02219316 |
| 2 | 33721077 | 33721077 | 1 | 2_33721077 | ENSG00000228262 | LINC01320 | 0 | INTRON | -4.3947908 | 1.11E-05 | 0.02219459 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | 77185500 | 77185500 | 1 | 6_77185500 | ENSG00000271945 | AL355612.1 | 87712 | Downstream | 4.39478316 | 1.11E-05 | 0.02219459 |
| 9 | 38362640 | 38362640 | 1 | 9_38362640 | ENSG00000223716 | AL135785.1 | 0 | INTRON | 4.39471604 | 1.11E-05 | 0.02219884 |
| 2 | 43579173 | 43579173 | 1 | 2_43579173 | ENSG00000115970 | THADA | 0 | INTRON | 4.39467383 | 1.11E-05 | 0.02219886 |
| 4 | 115899254 | 115899254 | 1 | 4_115899254 | ENSG00000250363 | KRT18P21 | 21452 | Upstream | -4.3946647 | 1.11E-05 | 0.02219886 |
| 1 | 22922416 | 22922416 | 1 | 1_22922416 | ENSG00000133216 | EPHB2 | 916 | Downstream | -4.3946352 | 1.11E-05 | 0.02219927 |
| 20 | 36871980 | 36871980 | 1 | 20_36871980 | ENSG00000242509 | RN7SL156P | 1578 | Downstream | 4.3944832 | 1.11E-05 | 0.02220415 |
| 3 | 48160935 | 48160935 | 1 | 3_48160935 | ENSG00000164045 | CDC25A | 0 | INTRON | 4.39446786 | 1.11E-05 | 0.02220415 |
| 2 | 156326264 | 156326264 | 1 | 2_156326264 | ENSG00000153234 | NR4A2 | 0 | EXON | 4.39446507 | 1.11E-05 | 0.02220415 |
| 1 | 181390897 | 181390897 | 1 | 1_181390897 | ENSG00000198216 | CACNA1E | 0 | INTRON | 4.39446069 | 1.11E-05 | 0.02220415 |
| 10 | 109905459 | 109905459 | 1 | 10_109905459 | ENSG00000108039 | XPNPEP1 | 0 | INTRON | -4.3944597 | 1.11E-05 | 0.02220415 |
| 6 | 45573253 | 45573253 | 1 | 6_45573253 | ENSG00000124813 | RUNX2 | 0 | INTRON | -4.394337 | 1.11E-05 | 0.02221159 |
| 9 | 103144424 | 103144424 | 1 | 9_103144424 | ENSG00000225564 | LINC01492 | 0 | INTRON | 4.39432211 | 1.11E-05 | 0.02221159 |
| 7 | 63769166 | 63769166 | 1 | 7_63769166 | ENSG00000271466 | CICP24 | 0 | EXON | 4.3942919 | 1.11E-05 | 0.02221159 |
| 2 | 104048407 | 104048407 | 1 | 2_104048407 | ENSG00000256637 | LINC01965 | 0 | INTRON | 4.39426602 | 1.11E-05 | 0.02221159 |
| 13 | 43713656 | 43713656 | 1 | 13_43713656 | ENSG00000120658 | ENOX1 | 0 | INTRON | -4.3942593 | 1.11E-05 | 0.02221159 |
| 2 | 140006918 | 140006918 | 1 | 2_140006918 | ENSG00000240977 | RN7SL283P | 23932 | Downstream | 4.39407568 | 1.11E-05 | 0.02222776 |
| 4 | 53660483 | 53660483 | 1 | 4_53660483 | ENSG00000072201 | LNX1 | 0 | INTRON | 4.39403747 | 1.11E-05 | 0.02222906 |
| X | 24392057 | 24392057 | 1 | X_24392057 | ENSG00000223731 | SUPT20HL1 | 26679 | Downstream | -4.3939943 | 1.11E-05 | 0.02223087 |
| 4 | 68490637 | 68490637 | 1 | 4_68490637 | ENSG00000087128 | TMPRSS11E | 0 | INTRON | 4.39390923 | 1.11E-05 | 0.02223497 |
| 7 | 998725 | 998725 | 1 | 7_998725 | ENSG00000146540 | C7orf50 | 0 | INTRON | -4.3939032 | 1.11E-05 | 0.02223497 |
| 20 | 34963548 | 34963548 | 1 | 20_34963548 | ENSG00000100983 | GSS | 7521 | Upstream | 4.39385685 | 1.11E-05 | 0.0222371 |
| X | 119906839 | 119906839 | 1 | X_119906839 | ENSG00000186471 | AKAP14 | 0 | INTRON | -4.3935757 | 1.12E-05 | 0.02226328 |
| 1 | 218885694 | 218885694 | 1 | 1_218885694 | ENSG00000226693 | NXNP1 | 3044 | Upstream | -4.3935202 | 1.12E-05 | 0.02226636 |
| 5 | 13816659 | 13816659 | 1 | 5_13816659 | ENSG00000039139 | DNAH5 | 0 | INTRON | -4.3934936 | 1.12E-05 | 0.02226647 |
| 6 | 29581575 | 29581575 | 1 | 6_29581575 | ENSG00000204681 | GABBR1 | 0 | INTRON | 4.39343326 | 1.12E-05 | 0.02227004 |
| 16 | 21692321 | 21692321 | 1 | 16_21692321 | ENSG00000155719 | OTOA | 0 | INTRON | -4.3933403 | 1.12E-05 | 0.02227695 |
| 10 | 32762164 | 32762164 | 1 | 10_32762164 | ENSG00000216937 | CCDC7 | 0 | INTRON | -4.3933005 | 1.12E-05 | 0.02227842 |
| 10 | 3728827 | 3728827 | 1 | 10_3728827 | ENSG00000229672 | AL450322.2 | 20138 | Upstream | 4.39327118 | 1.12E-05 | 0.02227882 |
| X | 153611618 | 153611618 | 1 | X_153611618 | ENSG00000260081 | AF274858.1 | 0 | INTRON | -4.3932176 | 1.12E-05 | 0.02227949 |
| 5 | 65359783 | 65359783 | 1 | 5_65359783 | ENSG00000049192 | ADAMTS6 | 0 | INTRON | 4.39319022 | 1.12E-05 | 0.02227949 |
| 5 | 179645138 | 179645138 | 1 | 5_179645138 | ENSG00000204661 | C5orf60 | 92 | Upstream | -4.3931821 | 1.12E-05 | 0.02227949 |
| 9 | 128207454 | 128207454 | 1 | 9_128207454 | ENSG00000106976 | DNM1 | 0 | INTRON | 4.39316274 | 1.12E-05 | 0.02227949 |
| 5 | 117202674 | 117202674 | 1 | 5_117202674 | ENSG00000243758 | RPL35AP15 | 98429 | Downstream | 4.39307032 | 1.12E-05 | 0.02228444 |
| X | 153685517 | 153685517 | 1 | X_153685517 | ENSG00000130822 | PNCK | 0 | INTRON | -4.3930635 | 1.12E-05 | 0.02228444 |
| 5 | 10091229 | 10091229 | 1 | 5_10091229 | ENSG00000280016 | AC091905.4 | 8457 | Downstream | 4.39302149 | 1.12E-05 | 0.02228614 |
| 11 | 13293026 | 13293026 | 1 | 11_13293026 | ENSG00000133794 | ARNTL | 0 | INTRON | 4.39293478 | 1.12E-05 | 0.02229242 |
| 19 | 49578585 | 49578585 | 1 | 19_49578585 | ENSG00000142546 | NOSIP | 0 | INTRON | -4.3929079 | 1.12E-05 | 0.02229256 |
| 6 | 24161423 | 24161423 | 1 | 6_24161423 | ENSG00000251830 | FO393410.1 | 4849 | Upstream | -4.3927722 | 1.12E-05 | 0.02229341 |
| 3 | 52256873 | 52256873 | 1 | 3_52256873 | ENSG00000164091 | WDR82 | 0 | 3UTR | 4.39269341 | 1.12E-05 | 0.02229341 |
| 21 | 32540575 | 32540575 | 1 | 21_32540575 | ENSG00000252045 | AP000272.1 | 2141 | Downstream | 4.39267757 | 1.12E-05 | 0.02229341 |
| 11 | 68874944 | 68874944 | 1 | 11_68874944 | ENSG00000250508 | LINC02701 | 402 | Downstream | 4.39267714 | 1.12E-05 | 0.02229341 |
| 15 | 96194322 | 96194322 | 1 | 15_96194322 | ENSG00000275443 | AC012409.2 | 0 | INTRON | -4.3926627 | 1.12E-05 | 0.02229341 |
| 1 | 45546626 | 45546626 | 1 | 1_45546626 | ENSG00000117448 | AKR1A1 | 3916 | Upstream | -4.3926465 | 1.12E-05 | 0.02229341 |
| 7 | 49288298 | 49288298 | 1 | 7_49288298 | ENSG00000270763 | DDX43P2 | 28452 | Upstream | 4.39264318 | 1.12E-05 | 0.02229341 |
| 10 | 72886125 | 72886125 | 1 | 10_72886125 | ENSG00000156026 | MCU | 0 | 3UTR | 4.39263236 | 1.12E-05 | 0.02229341 |
| 12 | 95262592 | 95262592 | 1 | 12_95262592 | ENSG00000028203 | VEZT | 0 | INTRON | -4.3926277 | 1.12E-05 | 0.02229341 |
| 3 | 73366879 | 73366879 | 1 | 3_73366879 | ENSG00000121440 | PDZRN3 | 15551 | Downstream | -4.3926255 | 1.12E-05 | 0.02229341 |
| 5 | 136234279 | 136234279 | 1 | 5_136234279 | ENSG00000069018 | TRPC7 | 0 | INTRON | 4.3926044 | 1.12E-05 | 0.02229341 |
| 15 | 33380668 | 33380668 | 1 | 15_33380668 | ENSG00000198838 | RYR3 | 0 | INTRON | 4.39259435 | 1.12E-05 | 0.02229341 |
| 19 | 17849854 | 17849854 | 1 | 19_17849854 | ENSG00000105639 | JAK3 | 1783 | Upstream | 4.39243035 | 1.12E-05 | 0.02230529 |
| 16 | 2221536 | 2221536 | 1 | 16_2221536 | ENSG00000167967 | E4F1 | 2043 | Upstream | 4.39241188 | 1.12E-05 | 0.02230529 |
| 11 | 86910440 | 86910440 | 1 | 11_86910440 | ENSG00000280339 | AP001528.2 | 0 | EXON | 4.39240239 | 1.12E-05 | 0.02230529 |
| 3 | 193706248 | 193706248 | 1 | 3_193706248 | ENSG00000198836 | OPA1 | 8437 | Downstream | 4.39235347 | 1.12E-05 | 0.02230614 |
| 13 | 32715738 | 32715738 | 1 | 13_32715738 | ENSG00000083642 | PDS5B | 0 | INTRON | 4.39234094 | 1.12E-05 | 0.02230614 |
| 10 | 5470835 | 5470835 | 1 | 10_5470835 | ENSG00000173848 | NET1 | 11779 | Downstream | -4.3923178 | 1.12E-05 | 0.02230614 |
| 6 | 134811478 | 134811478 | 1 | 6_134811478 | ENSG00000213117 | AL021939.1 | 86395 | Upstream | -4.3921425 | 1.12E-05 | 0.02231977 |
| 21 | 13264181 | 13264181 | 1 | 21_13264181 | ENSG00000280108 | AJ239318.1 | 40970 | Upstream | 4.39211722 | 1.12E-05 | 0.02231977 |
| 14 | 36957335 | 36957335 | 1 | 14_36957335 | ENSG00000183032 | SLC25A21 | 0 | INTRON | -4.3921089 | 1.12E-05 | 0.02231977 |
| X | 126401152 | 126401152 | 1 | X_126401152 | ENSG00000230916 | MTCO1P53 | 70552 | Upstream | -4.3920756 | 1.12E-05 | 0.02232057 |
| 4 | 127878528 | 127878528 | 1 | 4_127878528 | ENSG00000142731 | PLK4 | 2364 | Upstream | 4.39197522 | 1.12E-05 | 0.02232828 |
| 10 | 83433722 | 83433722 | 1 | 10_83433722 | ENSG00000234931 | MARK2P15 | 119247 | Upstream | -4.3919475 | 1.12E-05 | 0.02232852 |
| 19 | 39771708 | 39771708 | 1 | 19_39771708 | ENSG00000213921 | LEUTX | 4886 | Upstream | -4.3919207 | 1.12E-05 | 0.02232866 |
| 4 | 136275353 | 136275353 | 1 | 4_136275353 | ENSG00000251567 | AC018680.1 | 0 | INTRON | -4.3918373 | 1.12E-05 | 0.02233462 |
| 4 | 189416372 | 189416372 | 1 | 4_189416372 | ENSG00000205100 | HSP90AA4P | 56592 | Upstream | 4.39180363 | 1.12E-05 | 0.02233547 |
| 1 | 175627480 | 175627480 | 1 | 1_175627480 | ENSG00000116147 | TNR | 0 | INTRON | 4.39174024 | 1.12E-05 | 0.02233938 |
| 9 | 132430590 | 132430590 | 1 | 9_132430590 | ENSG00000188523 | CFAP77 | 0 | INTRON | 4.39166947 | 1.12E-05 | 0.02234061 |
| 9 | 133480377 | 133480377 | 1 | 9_133480377 | ENSG00000160326 | SLC2A6 | 1250 | Upstream | -4.391656 | 1.12E-05 | 0.02234061 |
| 14 | 77606244 | 77606244 | 1 | 14_77606244 | ENSG00000100596 | SPTLC2 | 0 | INTRON | -4.3916348 | 1.13E-05 | 0.02234061 |
| 9 | 38151341 | 38151341 | 1 | 9_38151341 | ENSG00000200026 | U8 | 3780 | Downstream | 4.39160928 | 1.13E-05 | 0.02234061 |
| 8 | 132557880 | 132557880 | 1 | 8_132557880 | ENSG00000253521 | HPYR1 | 0 | INTRON | -4.3915957 | 1.13E-05 | 0.02234061 |
| 1 | 37889223 | 37889223 | 1 | 1_37889223 | ENSG00000204084 | INPP5B | 0 | INTRON | 4.39157601 | 1.13E-05 | 0.02234061 |
| 14 | 72162653 | 72162653 | 1 | 14_72162653 | ENSG00000182732 | RGS6 | 0 | INTRON | 4.39137332 | 1.13E-05 | 0.02235537 |
| 3 | 114025721 | 114025721 | 1 | 3_114025721 | ENSG00000151576 | QTRT2 | 0 | INTRON | 4.39135838 | 1.13E-05 | 0.02235537 |
| 4 | 48804270 | 48804270 | 1 | 4_48804270 | ENSG00000109180 | OCIAD1 | 941 | Upstream | -4.3913564 | 1.13E-05 | 0.02235537 |
| 5 | 57780943 | 57780943 | 1 | 5_57780943 | ENSG00000249198 | AC106822.1 | 29226 | Upstream | -4.3912889 | 1.13E-05 | 0.02235847 |
| 3 | 140533579 | 140533579 | 1 | 3_140533579 | ENSG00000158258 | CLSTN2 | 0 | INTRON | 4.39127555 | 1.13E-05 | 0.02235847 |
| 20 | 34589748 | 34589748 | 1 | 20_34589748 | ENSG00000101464 | PIGU | 0 | INTRON | -4.391211 | 1.13E-05 | 0.02236163 |
| 1 | 75381213 | 75381213 | 1 | 1_75381213 | ENSG00000137968 | SLC44A5 | 0 | INTRON | 4.39119418 | 1.13E-05 | 0.02236163 |
| 7 | 76094054 | 76094054 | 1 | 7_76094054 | ENSG00000227038 | GTF2IP7 | 0 | INTRON | 4.39114972 | 1.13E-05 | 0.02236299 |
| X | 124133944 | 124133944 | 1 | X_124133944 | ENSG00000101972 | STAG2 | 0 | INTRON | -4.3911302 | 1.13E-05 | 0.02236299 |
| 1 | 82082966 | 82082966 | 1 | 1_82082966 | ENSG00000117114 | ADGRL2 | 90530 | Downstream | -4.3910657 | 1.13E-05 | 0.02236702 |
| 1 | 161465990 | 161465990 | 1 | 1_161465990 | ENSG00000283360 | AL592295.3 | 0 | INTRON | 4.39102466 | 1.13E-05 | 0.02236864 |
| 6 | 20188034 | 20188034 | 1 | 6_20188034 | ENSG00000172197 | MBOAT1 | 0 | INTRON | 4.39097422 | 1.13E-05 | 0.02237035 |
| 8 | 109171678 | 109171678 | 1 | 8_109171678 | ENSG00000174417 | TRHR | 52094 | Downstream | 4.39092274 | 1.13E-05 | 0.02237035 |
| 17 | 58206489 | 58206489 | 1 | 17_58206489 | ENSG00000011143 | MKS1 | 0 | 3UTR | 4.39091949 | 1.13E-05 | 0.02237035 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | 95402545 | 95402545 | 1 | 8_95402545 | ENSG00000253773 | C8orf37-AS1 | 0 | INTRON | -4.3908992 | 1.13E-05 | 0.02237035 |
| 7 | 118754626 | 118754626 | 1 | 7_118754626 | ENSG00000229982 | GTF3AP6 | 125476 | Downstream | 4.39086231 | 1.13E-05 | 0.02237035 |
| 7 | 19880390 | 19880390 | 1 | 7_19880390 | ENSG00000243004 | AC005062.1 | 38590 | Downstream | 4.39085603 | 1.13E-05 | 0.02237035 |
| 19 | 2196000 | 2196000 | 1 | 19_2196000 | ENSG00000104885 | DOT1L | 0 | INTRON | -4.3908005 | 1.13E-05 | 0.02237132 |
| 6 | 46670177 | 46670177 | 1 | 6_46670177 | ENSG00000153291 | SLC25A27 | 0 | EXON | -4.3907961 | 1.13E-05 | 0.02237132 |
| 15 | 74744705 | 74744705 | 1 | 15_74744705 | ENSG00000140505 | CYP1A2 | 4139 | Upstream | 4.39074536 | 1.13E-05 | 0.02237187 |
| 5 | 4207385 | 4207385 | 1 | 5_4207385 | ENSG00000250921 | LINC02063 | 59956 | Downstream | -4.3907116 | 1.13E-05 | 0.02237187 |
| 15 | 101415797 | 101415797 | 1 | 15_101415797 | ENSG00000140479 | PCSK6 | 0 | INTRON | 4.39069323 | 1.13E-05 | 0.02237187 |
| 7 | 141889 | 141889 | 1 | 7_141889 | ENSG00000242474 | AC093627.5 | 0 | INTRON | 4.39068361 | 1.13E-05 | 0.02237187 |
| 3 | 146270749 | 146270749 | 1 | 3_146270749 | ENSG00000114698 | PLSCR4 | 19570 | Upstream | -4.3906642 | 1.13E-05 | 0.02237187 |
| 5 | 180567521 | 180567521 | 1 | 5_180567521 | ENSG00000113300 | CNOT6 | 0 | INTRON | 4.3906344 | 1.13E-05 | 0.02237233 |
| 16 | 29987344 | 29987344 | 1 | 16_29987344 | ENSG00000149930 | TAOK2 | 0 | EXON | -4.3905828 | 1.13E-05 | 0.02237457 |
| 2 | 229806610 | 229806610 | 1 | 2_229806610 | ENSG00000153827 | TRIP12 | 0 | INTRON | 4.39056202 | 1.13E-05 | 0.02237457 |
| 6 | 111828600 | 111828600 | 1 | 6_111828600 | ENSG00000010810 | FYN | 0 | INTRON | -4.3905243 | 1.13E-05 | 0.02237492 |
| 11 | 133415404 | 133415404 | 1 | 11_133415404 | ENSG00000183715 | OPCML | 0 | INTRON | -4.390508 | 1.13E-05 | 0.02237492 |
| 2 | 48395554 | 48395554 | 1 | 2_48395554 | ENSG00000170802 | FOXN2 | 16259 | Downstream | 4.3904356 | 1.13E-05 | 0.02237912 |
| 12 | 52654389 | 52654389 | 1 | 12_52654389 | ENSG00000172867 | KRT2 | 2178 | Upstream | -4.3904167 | 1.13E-05 | 0.02237912 |
| 2 | 203257298 | 203257298 | 1 | 2_203257298 | ENSG00000119004 | CYP20A1 | 0 | INTRON | -4.3903102 | 1.13E-05 | 0.02238748 |
| 1 | 39864584 | 39864584 | 1 | 1_39864584 | ENSG00000043514 | TRIT1 | 0 | INTRON | -4.3902533 | 1.13E-05 | 0.02239074 |
| 1 | 31971326 | 31971326 | 1 | 1_31971326 | ENSG00000284702 | AL136115.3 | 862 | Downstream | 4.39022543 | 1.13E-05 | 0.02239101 |
| 5 | 155000096 | 155000096 | 1 | 5_155000096 | ENSG00000253261 | AC008410.1 | 5651 | Downstream | 4.39013378 | 1.13E-05 | 0.02239784 |
| 15 | 97525510 | 97525510 | 1 | 15_97525510 | ENSG00000259664 | LINC02254 | 2068 | Upstream | -4.3899944 | 1.13E-05 | 0.02240858 |
| 20 | 44737816 | 44737816 | 1 | 20_44737816 | ENSG00000244558 | KCNK15-AS1 | 0 | INTRON | 4.38997905 | 1.13E-05 | 0.02240858 |
| 10 | 13670614 | 13670614 | 1 | 10_13670614 | ENSG00000151474 | FRMD4A | 0 | INTRON | -4.3898504 | 1.13E-05 | 0.02241579 |
| 6 | 144893194 | 144893194 | 1 | 6_144893194 | ENSG00000152818 | UTRN | 40160 | Downstream | 4.3898384 | 1.13E-05 | 0.02241579 |
| 7 | 121551832 | 121551832 | 1 | 7_121551832 | ENSG00000227743 | AC004875.1 | 91501 | Downstream | 4.38983333 | 1.13E-05 | 0.02241579 |
| 15 | 73074303 | 73074303 | 1 | 15_73074303 | ENSG00000067141 | NEO1 | 0 | INTRON | 4.389745 | 1.13E-05 | 0.02242086 |
| 12 | 58297546 | 58297546 | 1 | 12_58297546 | ENSG00000241423 | RPL21P103 | 52681 | Downstream | 4.38973357 | 1.13E-05 | 0.02242086 |
| 11 | 39198495 | 39198495 | 1 | 11_39198495 | ENSG00000240975 | AC021723.1 | 36528 | Downstream | 4.38967661 | 1.14E-05 | 0.02242413 |
| 17 | 50446890 | 50446890 | 1 | 17_50446890 | ENSG00000167107 | ACSF2 | 0 | INTRON | -4.3896495 | 1.14E-05 | 0.02242432 |
| 10 | 60080105 | 60080105 | 1 | 10_60080105 | ENSG00000151150 | ANK3 | 0 | INTRON | -4.3895758 | 1.14E-05 | 0.02242835 |
| 3 | 12275628 | 12275628 | 1 | 3_12275628 | ENSG00000132170 | PPARG | 11739 | Upstream | 4.38953684 | 1.14E-05 | 0.02242835 |
| 5 | 3875612 | 3875612 | 1 | 5_3875612 | ENSG00000248962 | AC025773.1 | 137095 | Downstream | 4.38953477 | 1.14E-05 | 0.02242835 |
| 7 | 38502769 | 38502769 | 1 | 7_38502769 | ENSG00000078053 | AMPH | 0 | INTRON | -4.3895042 | 1.14E-05 | 0.02242846 |
| 17 | 82305345 | 82305345 | 1 | 17_82305345 | ENSG00000173762 | CD7 | 9522 | Downstream | -4.3894832 | 1.14E-05 | 0.02242846 |
| 10 | 125423434 | 125423434 | 1 | 10_125423434 | ENSG00000233135 | RPS27P18 | 50251 | Downstream | -4.3894282 | 1.14E-05 | 0.02243153 |
| 8 | 75384153 | 75384153 | 1 | 8_75384153 | ENSG00000254023 | PKMP4 | 7139 | Downstream | 4.38937758 | 1.14E-05 | 0.02243415 |
| 12 | 65611486 | 65611486 | 1 | 12_65611486 | ENSG00000256268 | LINC02454 | 0 | INTRON | 4.38930943 | 1.14E-05 | 0.02243682 |
| 9 | 110784985 | 110784985 | 1 | 9_110784985 | ENSG00000030304 | MUSK | 0 | EXON | -4.3892764 | 1.14E-05 | 0.02243682 |
| 3 | 55381626 | 55381626 | 1 | 3_55381626 | ENSG00000242775 | AC121764.3 | 19797 | Upstream | 4.38927606 | 1.14E-05 | 0.02243682 |
| 9 | 103144420 | 103144420 | 1 | 9_103144420 | ENSG00000225564 | LINC01492 | 0 | INTRON | 4.38919918 | 1.14E-05 | 0.02244215 |
| 20 | 42816355 | 42816355 | 1 | 20_42816355 | ENSG00000196090 | PTPRT | 0 | INTRON | 4.38911506 | 1.14E-05 | 0.02244503 |
| 5 | 15402902 | 15402902 | 1 | 5_15402902 | ENSG00000248834 | MARK2P5 | 18049 | Downstream | 4.38910207 | 1.14E-05 | 0.02244503 |
| 11 | 75456275 | 75456275 | 1 | 11_75456275 | ENSG00000158555 | GDPD5 | 0 | INTRON | -4.3890375 | 1.14E-05 | 0.02244503 |
| 12 | 17794670 | 17794670 | 1 | 12_17794670 | ENSG00000206662 | Y_RNA | 83624 | Downstream | 4.38903459 | 1.14E-05 | 0.02244503 |
| 20 | 51158077 | 51158077 | 1 | 20_51158077 | ENSG00000228820 | RPSAP1 | 26410 | Upstream | -4.3890278 | 1.14E-05 | 0.02244503 |
| 8 | 120610239 | 120610239 | 1 | 8_120610239 | ENSG00000172164 | SNTB1 | 0 | INTRON | -4.3890111 | 1.14E-05 | 0.02244503 |
| 3 | 107313254 | 107313254 | 1 | 3_107313254 | ENSG00000239828 | AC063944.1 | 0 | INTRON | 4.388982 | 1.14E-05 | 0.02244503 |
| 3 | 60960609 | 60960609 | 1 | 3_60960609 | ENSG00000189283 | FHIT | 0 | INTRON | 4.38896967 | 1.14E-05 | 0.02244503 |
| 4 | 90819308 | 90819308 | 1 | 4_90819308 | ENSG00000184305 | CCSER1 | 0 | INTRON | -4.3888898 | 1.14E-05 | 0.02244916 |
| 1 | 149769488 | 149769488 | 1 | 1_149769488 | ENSG00000150337 | FCGR1A | 13182 | Upstream | 4.38887924 | 1.14E-05 | 0.02244916 |
| X | 73885321 | 73885321 | 1 | X_73885321 | ENSG00000182707 | FXYD6P3 | 9686 | Downstream | 4.38885265 | 1.14E-05 | 0.02244931 |
| X | 87327316 | 87327316 | 1 | X_87327316 | ENSG00000230478 | Z96811.1 | 98266 | Downstream | 4.38873766 | 1.14E-05 | 0.02245858 |
| 15 | 56510849 | 56510849 | 1 | 15_56510849 | ENSG00000260392 | AC090518.1 | 32102 | Downstream | -4.3886728 | 1.14E-05 | 0.02246012 |
| 11 | 46578252 | 46578252 | 1 | 11_46578252 | ENSG00000110497 | AMBRA1 | 0 | INTRON | 4.38867162 | 1.14E-05 | 0.02246012 |
| 7 | 20751387 | 20751387 | 1 | 7_20751387 | ENSG00000004846 | ABCB5 | 0 | INTRON | 4.38864724 | 1.14E-05 | 0.02246012 |
| 18 | 79774960 | 79774960 | 1 | 18_79774960 | ENSG00000266924 | AC021594.1 | 12160 | Upstream | 4.38860992 | 1.14E-05 | 0.02246029 |
| 14 | 63490766 | 63490766 | 1 | 14_63490766 | ENSG00000154001 | PPP2R5E | 0 | INTRON | 4.38859522 | 1.14E-05 | 0.02246029 |
| 4 | 141100951 | 141100951 | 1 | 4_141100951 | ENSG00000170153 | RNF150 | 0 | INTRON | -4.3885143 | 1.14E-05 | 0.02246605 |
| 5 | 14552166 | 14552166 | 1 | 5_14552166 | ENSG00000038382 | TRIO | 20038 | Downstream | -4.38846 | 1.14E-05 | 0.02246736 |
| 18 | 1036227 | 1036227 | 1 | 18_1036227 | ENSG00000263551 | AP000829.1 | 0 | INTRON | -4.3884215 | 1.14E-05 | 0.02246736 |
| 16 | 21821624 | 21821624 | 1 | 16_21821624 | ENSG00000248124 | RRN3P1 | 1214 | Upstream | 4.38840357 | 1.14E-05 | 0.02246736 |
| 16 | 13767143 | 13767143 | 1 | 16_13767143 | ENSG00000262267 | U95743.1 | 0 | EXON | -4.388401 | 1.14E-05 | 0.02246736 |
| 3 | 114582526 | 114582526 | 1 | 3_114582526 | ENSG00000181722 | ZBTB20 | 0 | INTRON | -4.3881322 | 1.14E-05 | 0.02249254 |
| 7 | 82456404 | 82456404 | 1 | 7_82456404 | ENSG00000153956 | CACNA2D1 | 12627 | Upstream | 4.38803581 | 1.14E-05 | 0.0224999 |
| 5 | 118730392 | 118730392 | 1 | 5_118730392 | ENSG00000238904 | RNU7-34P | 27818 | Upstream | 4.38789773 | 1.14E-05 | 0.02251159 |
| 11 | 32561687 | 32561687 | 1 | 11_32561687 | ENSG00000149100 | EIF3M | 22110 | Upstream | 4.38786107 | 1.14E-05 | 0.02251278 |
| 20 | 49325995 | 49325995 | 1 | 20_49325995 | ENSG00000158445 | KCNB1 | 0 | INTRON | 4.38778765 | 1.15E-05 | 0.02251562 |
| 1 | 86468642 | 86468642 | 1 | 1_86468642 | ENSG00000016490 | CLCA1 | 0 | INTRON | -4.3877833 | 1.15E-05 | 0.02251562 |
| 3 | 42573511 | 42573511 | 1 | 3_42573511 | ENSG00000093183 | SEC22C | 0 | 5UTR | 4.38775306 | 1.15E-05 | 0.02251615 |
| 2 | 224261205 | 224261205 | 1 | 2_224261205 | ENSG00000228681 | AC008072.1 | 33724 | Upstream | -4.3877174 | 1.15E-05 | 0.02251724 |
| 15 | 84151138 | 84151138 | 1 | 15_84151138 | ENSG00000280038 | DNM1P41 | 15408 | Downstream | 4.38767039 | 1.15E-05 | 0.0225195 |
| 7 | 46052412 | 46052412 | 1 | 7_46052412 | ENSG00000229628 | AC073115.1 | 51514 | Downstream | 4.38761815 | 1.15E-05 | 0.02252172 |
| 20 | 30831944 | 30831944 | 1 | 20_30831944 | ENSG00000275305 | RNA5SP528 | 15670 | Upstream | 4.38757479 | 1.15E-05 | 0.02252172 |
| 12 | 82158977 | 82158977 | 1 | 12_82158977 | ENSG00000133773 | CCDC59 | 64703 | Downstream | 4.38756588 | 1.15E-05 | 0.02252172 |
| 14 | 61436206 | 61436206 | 1 | 14_61436206 | ENSG00000027075 | PRKCH | 0 | INTRON | -4.3875484 | 1.15E-05 | 0.02252172 |
| 5 | 157127451 | 157127451 | 1 | 5_157127451 | ENSG00000135077 | HAVCR2 | 0 | INTRON | 4.38728854 | 1.15E-05 | 0.02254577 |
| 1 | 87864343 | 87864343 | 1 | 1_87864343 | ENSG00000237505 | PKN2-AS1 | 0 | INTRON | -4.387266 | 1.15E-05 | 0.02254577 |
| 21 | 5117382 | 5117382 | 1 | 21_5117382 | ENSG00000280071 | GATD3B | 0 | INTRON | -4.3872168 | 1.15E-05 | 0.0225459 |
| 9 | 133687920 | 133687920 | 1 | 9_133687920 | ENSG00000123453 | SARDH | 0 | INTRON | -4.3872145 | 1.15E-05 | 0.0225459 |
| 15 | 27957847 | 27957847 | 1 | 15_27957847 | ENSG00000104044 | OCA2 | 0 | INTRON | -4.3871843 | 1.15E-05 | 0.02254643 |
| 20 | 25541135 | 25541135 | 1 | 20_25541135 | ENSG00000101004 | NINL | 0 | INTRON | 4.38694202 | 1.15E-05 | 0.02256895 |
| 1 | 216551639 | 216551639 | 1 | 1_216551639 | ENSG00000196482 | ESRRG | 0 | INTRON | 4.38682984 | 1.15E-05 | 0.02257798 |
| 4 | 63996745 | 63996745 | 1 | 4_63996745 | ENSG00000205678 | TECRL | 278511 | Downstream | -4.3867917 | 1.15E-05 | 0.02257883 |
| 5 | 98888788 | 98888788 | 1 | 5_98888788 | ENSG00000153922 | CHD1 | 0 | INTRON | 4.38674233 | 1.15E-05 | 0.02257883 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
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| 1 | 184509731 | 184509731 | 1 | 1_184509731 | ENSG00000116667 | C1orf21 | 0 | INTRON | 4.38671063 | 1.15E-05 | 0.02257883 |
| 13 | 82102630 | 82102630 | 1 | 13_82102630 | ENSG00000214182 | PTMAP5 | 411558 | Downstream | 4.38669825 | 1.15E-05 | 0.02257883 |
| 8 | 33400882 | 33400882 | 1 | 8_33400882 | ENSG00000172728 | FUT10 | 0 | INTRON | 4.38669613 | 1.15E-05 | 0.02257883 |
| 4 | 99486381 | 99486381 | 1 | 4_99486381 | ENSG00000250300 | AP001960.1 | 0 | INTRON | 4.38657919 | 1.15E-05 | 0.02258837 |
| 13 | 102265339 | 102265339 | 1 | 13_102265339 | ENSG00000102466 | FGF14 | 0 | INTRON | -4.3865415 | 1.15E-05 | 0.02258967 |
| 3 | 67771967 | 67771967 | 1 | 3_67771967 | ENSG00000241316 | SUCLG2-AS1 | 0 | INTRON | 4.38651094 | 1.15E-05 | 0.02259024 |
| 4 | 3524877 | 3524877 | 1 | 4_3524877 | ENSG00000163956 | LRPAP1 | 0 | INTRON | -4.3864627 | 1.15E-05 | 0.02259265 |
| 5 | 90431717 | 90431717 | 1 | 5_90431717 | ENSG00000255647 | AC093510.1 | 21048 | Downstream | 4.38636203 | 1.15E-05 | 0.02259278 |
| 10 | 99355017 | 99355017 | 1 | 10_99355017 | ENSG00000119946 | CNNM1 | 0 | INTRON | -4.3863592 | 1.15E-05 | 0.02259278 |
| 10 | 82323955 | 82323955 | 1 | 10_82323955 | ENSG00000185737 | NRG3 | 0 | INTRON | 4.38632165 | 1.15E-05 | 0.02259278 |
| 9 | 125871164 | 125871164 | 1 | 9_125871164 | ENSG00000167081 | PBX3 | 0 | INTRON | -4.3862938 | 1.15E-05 | 0.02259278 |
| 1 | 214164314 | 214164314 | 1 | 1_214164314 | ENSG00000283518 | LINC02775 | 0 | INTRON | 4.38627669 | 1.15E-05 | 0.02259278 |
| 11 | 95547619 | 95547619 | 1 | 11_95547619 | ENSG00000285842 | AP000820.2 | 23420 | Upstream | 4.38625504 | 1.15E-05 | 0.02259278 |
| 17 | 30541542 | 30541542 | 1 | 17_30541542 | ENSG00000264958 | ALOX12P1 | 0 | INTRON | 4.38625413 | 1.15E-05 | 0.02259278 |
| 1 | 85433553 | 85433553 | 1 | 1_85433553 | ENSG00000153904 | DDAH1 | 0 | INTRON | -4.386236 | 1.15E-05 | 0.02259278 |
| 2 | 231588650 | 231588650 | 1 | 2_231588650 | ENSG00000286399 | AC104634.2 | 308 | Downstream | -4.3862358 | 1.15E-05 | 0.02259278 |
| 20 | 2051133 | 2051133 | 1 | 20_2051133 | ENSG00000233896 | PDYN-AS1 | 21105 | Downstream | -4.3861769 | 1.15E-05 | 0.0225936 |
| 6 | 32275129 | 32275129 | 1 | 6_32275129 | ENSG00000225914 | TSBP1-AS1 | 0 | INTRON | -4.3861401 | 1.15E-05 | 0.0225936 |
| 4 | 148750174 | 148750174 | 1 | 4_148750174 | ENSG00000287292 | AC002460.2 | 0 | INTRON | 4.38611926 | 1.15E-05 | 0.0225936 |
| 1 | 147539405 | 147539405 | 1 | 1_147539405 | ENSG00000116128 | BCL9 | 2095 | Upstream | 4.38611264 | 1.15E-05 | 0.0225936 |
| X | 48727802 | 48727802 | 1 | X_48727802 | ENSG00000232828 | AC231533.1 | 0 | INTRON | 4.38610271 | 1.15E-05 | 0.0225936 |
| 9 | 69154207 | 69154207 | 1 | 9_69154207 | ENSG00000119139 | TJP2 | 0 | INTRON | 4.38607388 | 1.15E-05 | 0.02259399 |
| 3 | 186864070 | 186864070 | 1 | 3_186864070 | ENSG00000181092 | ADIPOQ | 5607 | Downstream | 4.38604029 | 1.15E-05 | 0.02259488 |
| 5 | 123151542 | 123151542 | 1 | 5_123151542 | ENSG00000061455 | PRDM6 | 0 | INTRON | 4.38599225 | 1.15E-05 | 0.02259727 |
| 20 | 42011985 | 42011985 | 1 | 20_42011985 | ENSG00000225458 | AL049812.2 | 0 | INTRON | -4.3859662 | 1.15E-05 | 0.02259737 |
| 10 | 18413063 | 18413063 | 1 | 10_18413063 | ENSG00000165995 | CACNB2 | 0 | INTRON | 4.38591575 | 1.15E-05 | 0.02259887 |
| 2 | 98238770 | 98238770 | 1 | 2_98238770 | ENSG00000168658 | VWA3B | 0 | INTRON | -4.3859017 | 1.16E-05 | 0.02259887 |
| 16 | 63841071 | 63841071 | 1 | 16_63841071 | ENSG00000261014 | LINC02165 | 85187 | Downstream | -4.3858586 | 1.16E-05 | 0.02260074 |
| 14 | 72314183 | 72314183 | 1 | 14_72314183 | ENSG00000182732 | RGS6 | 0 | INTRON | -4.3858207 | 1.16E-05 | 0.02260208 |
| 16 | 59954002 | 59954002 | 1 | 16_59954002 | ENSG00000261807 | LINC02141 | 0 | INTRON | 4.38572444 | 1.16E-05 | 0.02260949 |
| 2 | 44672384 | 44672384 | 1 | 2_44672384 | ENSG00000143919 | CAMKMT | 0 | INTRON | -4.3856477 | 1.16E-05 | 0.02261262 |
| 6 | 41201653 | 41201653 | 1 | 6_41201653 | ENSG00000112195 | TREML2 | 504 | Upstream | -4.3856286 | 1.16E-05 | 0.02261262 |
| 11 | 119349691 | 119349691 | 1 | 11_119349691 | ENSG00000235718 | MFRP | 2986 | Upstream | -4.3856192 | 1.16E-05 | 0.02261262 |
| 1 | 22411282 | 22411282 | 1 | 1_22411282 | ENSG00000184677 | ZBTB40 | 17555 | Upstream | 4.3855757 | 1.16E-05 | 0.02261454 |
| 4 | 150767674 | 150767674 | 1 | 4_150767674 | ENSG00000198589 | LRBA | 0 | INTRON | 4.38551159 | 1.16E-05 | 0.02261616 |
| 7 | 88668075 | 88668075 | 1 | 7_88668075 | ENSG00000233420 | AC002069.2 | 0 | INTRON | 4.38551017 | 1.16E-05 | 0.02261616 |
| 9 | 7393926 | 7393926 | 1 | 9_7393926 | ENSG00000288042 | AL157703.1 | 50370 | Downstream | -4.3854557 | 1.16E-05 | 0.02261664 |
| 3 | 46505081 | 46505081 | 1 | 3_46505081 | ENSG00000163825 | RTP3 | 4131 | Downstream | 4.38545554 | 1.16E-05 | 0.02261664 |
| 21 | 25525899 | 25525899 | 1 | 21_25525899 | ENSG00000229962 | AP000221.1 | 7034 | Upstream | -4.385391 | 1.16E-05 | 0.02262075 |
| 1 | 77724934 | 77724934 | 1 | 1_77724934 | ENSG00000077254 | USP33 | 0 | INTRON | 4.38522729 | 1.16E-05 | 0.02263517 |
| 15 | 48662045 | 48662045 | 1 | 15_48662045 | ENSG00000273925 | AC084757.4 | 485 | Downstream | -4.3851899 | 1.16E-05 | 0.02263612 |
| 1 | 181182388 | 181182388 | 1 | 1_181182388 | ENSG00000237292 | LINC01732 | 180 | Downstream | 4.38516814 | 1.16E-05 | 0.02263612 |
| 2 | 205570849 | 205570849 | 1 | 2_205570849 | ENSG00000116117 | PARD3B | 0 | INTRON | 4.385105 | 1.16E-05 | 0.0226378 |
| 15 | 28587861 | 28587861 | 1 | 15_28587861 | ENSG00000206149 | HERC2P9 | 1630 | Upstream | 4.38510012 | 1.16E-05 | 0.0226378 |
| 1 | 89803558 | 89803558 | 1 | 1_89803558 | ENSG00000271949 | AC093423.3 | 0 | INTRON | -4.3850628 | 1.16E-05 | 0.0226378 |
| X | 65018739 | 65018739 | 1 | X_65018739 | ENSG00000126970 | ZC4H2 | 0 | INTRON | -4.3850521 | 1.16E-05 | 0.0226378 |
| 16 | 24018811 | 24018811 | 1 | 16_24018811 | ENSG00000166501 | PRKCB | 0 | INTRON | -4.3849977 | 1.16E-05 | 0.02264086 |
| 7 | 147984189 | 147984189 | 1 | 7_147984189 | ENSG00000174469 | CNTNAP2 | 0 | INTRON | 4.38495578 | 1.16E-05 | 0.02264188 |
| 8 | 144295758 | 144295758 | 1 | 8_144295758 | ENSG00000185122 | HSF1 | 0 | INTRON | 4.38493794 | 1.16E-05 | 0.02264188 |
| 1 | 16627209 | 16627209 | 1 | 1_16627209 | ENSG00000215908 | CROCCP2 | 0 | EXON | 4.38487091 | 1.16E-05 | 0.02264475 |
| X | 71645517 | 71645517 | 1 | X_71645517 | ENSG00000237265 | BX276092.7 | 17480 | Downstream | 4.38486048 | 1.16E-05 | 0.02264475 |
| 19 | 17551510 | 17551510 | 1 | 19_17551510 | ENSG00000167483 | NIBAN3 | 0 | INTRON | 4.38474754 | 1.16E-05 | 0.0226539 |
| Y | 3293755 | 3293755 | 1 | Y_3293755 | ENSG00000234652 | AGPAT5P1 | 52 | Upstream | 4.38460877 | 1.16E-05 | 0.02266252 |
| 15 | 71635212 | 71635212 | 1 | 15_71635212 | ENSG00000187720 | THSD4 | 0 | INTRON | 4.38457992 | 1.16E-05 | 0.02266252 |
| 18 | 28079834 | 28079834 | 1 | 18_28079834 | ENSG00000170558 | CDH2 | 0 | INTRON | 4.38455106 | 1.16E-05 | 0.02266252 |
| 14 | 81389091 | 81389091 | 1 | 14_81389091 | ENSG00000140022 | STON2 | 0 | INTRON | -4.384507 | 1.16E-05 | 0.02266252 |
| 2 | 147609501 | 147609501 | 1 | 2_147609501 | ENSG00000253083 | RNA5SP106 | 103953 | Downstream | 4.38450259 | 1.16E-05 | 0.02266252 |
| 9 | 19148337 | 19148337 | 1 | 9_19148337 | ENSG00000147872 | PLIN2 | 0 | INTRON | -4.3844836 | 1.16E-05 | 0.02266252 |
| 13 | 102733393 | 102733393 | 1 | 13_102733393 | ENSG00000175820 | CCDC168 | 0 | EXON | -4.3844696 | 1.16E-05 | 0.02266252 |
| 10 | 110997490 | 110997490 | 1 | 10_110997490 | ENSG00000108061 | SHOC2 | 0 | INTRON | 4.38446111 | 1.16E-05 | 0.02266252 |
| 17 | 59012769 | 59012769 | 1 | 17_59012769 | ENSG00000108395 | TRIM37 | 0 | INTRON | 4.38444023 | 1.16E-05 | 0.02266252 |
| 8 | 134653693 | 134653693 | 1 | 8_134653693 | ENSG00000066827 | ZFAT | 0 | INTRON | 4.38433205 | 1.16E-05 | 0.02267118 |
| 9 | 129329517 | 129329517 | 1 | 9_129329517 | ENSG00000268615 | AL353803.5 | 1116 | Downstream | 4.38430059 | 1.16E-05 | 0.02267123 |
| 2 | 230674183 | 230674183 | 1 | 2_230674183 | ENSG00000226125 | LINC01907 | 15881 | Downstream | 4.38428176 | 1.16E-05 | 0.02267123 |
| 3 | 75867380 | 75867380 | 1 | 3_75867380 | ENSG00000185008 | ROBO2 | 39314 | Upstream | -4.3841823 | 1.16E-05 | 0.02267899 |
| 8 | 130147938 | 130147938 | 1 | 8_130147938 | ENSG00000153317 | ASAP1 | 0 | INTRON | 4.38408918 | 1.16E-05 | 0.02268233 |
| 8 | 51492746 | 51492746 | 1 | 8_51492746 | ENSG00000147485 | PXDNL | 0 | INTRON | -4.3840727 | 1.16E-05 | 0.02268233 |
| 5 | 98132281 | 98132281 | 1 | 5_98132281 | ENSG00000248901 | LINC01846 | 0 | INTRON | 4.38403783 | 1.16E-05 | 0.02268233 |
| 3 | 127555006 | 127555006 | 1 | 3_127555006 | ENSG00000282975 | LINC02034 | 14521 | Downstream | 4.38403146 | 1.17E-05 | 0.02268233 |
| 4 | 33736279 | 33736279 | 1 | 4_33736279 | ENSG00000250954 | AC016687.3 | 39218 | Downstream | 4.38402562 | 1.17E-05 | 0.02268233 |
| 15 | 87829505 | 87829505 | 1 | 15_87829505 | ENSG00000140538 | NTRK3 | 30245 | Downstream | -4.383937 | 1.17E-05 | 0.02268898 |
| 17 | 29496020 | 29496020 | 1 | 17_29496020 | ENSG00000160551 | TAOK1 | 0 | INTRON | 4.3838986 | 1.17E-05 | 0.02269007 |
| 1 | 90429511 | 90429511 | 1 | 1_90429511 | ENSG00000287372 | AL627316.1 | 9115 | Upstream | -4.3838494 | 1.17E-05 | 0.02269007 |
| 6 | 50857868 | 50857868 | 1 | 6_50857868 | ENSG00000060303 | RPS17P5 | 206 | Upstream | 4.38382719 | 1.17E-05 | 0.02269007 |
| 5 | 92254990 | 92254990 | 1 | 5_92254990 | ENSG00000250049 | AC114316.1 | 0 | INTRON | 4.38382683 | 1.17E-05 | 0.02269007 |
| 11 | 50253738 | 50253738 | 1 | 11_50253738 | ENSG00000236919 | AC109635.1 | 5977 | Upstream | -4.3837641 | 1.17E-05 | 0.02269402 |
| 9 | 763607 | 763607 | 1 | 9_763607 | ENSG00000107104 | KANK1 | 17501 | Downstream | -4.383711 | 1.17E-05 | 0.02269638 |
| 13 | 31476522 | 31476522 | 1 | 13_31476522 | ENSG00000277319 | AL161616.1 | 6891 | Downstream | -4.3836916 | 1.17E-05 | 0.02269638 |
| 7 | 41301000 | 41301000 | 1 | 7_41301000 | ENSG00000224017 | LINC01449 | 167493 | Downstream | -4.3836639 | 1.17E-05 | 0.02269668 |
| 4 | 26395678 | 26395678 | 1 | 4_26395678 | ENSG00000168214 | RBPJ | 0 | INTRON | 4.38362272 | 1.17E-05 | 0.02269837 |
| 8 | 89236464 | 89236464 | 1 | 8_89236464 | ENSG00000253621 | RPSAP74 | 6936 | Downstream | 4.38348506 | 1.17E-05 | 0.02271013 |
| 6 | 24424031 | 24424031 | 1 | 6_24424031 | ENSG00000124532 | MRS2 | 0 | 3UTR | -4.3834362 | 1.17E-05 | 0.02271119 |
| 5 | 177337572 | 177337572 | 1 | 5_177337572 | ENSG00000169223 | LMAN2 | 0 | INTRON | 4.3834045 | 1.17E-05 | 0.02271119 |
| 4 | 55108498 | 55108498 | 1 | 4_55108498 | ENSG00000128052 | KDR | 0 | INTRON | -4.383381 | 1.17E-05 | 0.02271119 |
| 1 | 113311617 | 113311617 | 1 | 1_113311617 | ENSG00000081026 | MAGI3 | 78897 | Upstream | -4.3833754 | 1.17E-05 | 0.02271119 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | 89050142 | 89050142 | 1 | 4_89050142 | ENSG00000138640 | FAM13A | 0 | INTRON | -4.3832658 | 1.17E-05 | 0.02272003 |
| 5 | 174947852 | 174947852 | 1 | 5_174947852 | ENSG00000204754 | LINC01951 | 0 | INTRON | -4.3831912 | 1.17E-05 | 0.02272463 |
| 4 | 135703059 | 135703059 | 1 | 4_135703059 | ENSG00000250865 | AC105362.1 | 89324 | Downstream | 4.38317195 | 1.17E-05 | 0.02272463 |
| 1 | 176977830 | 176977830 | 1 | 1_176977830 | ENSG00000152092 | ASTN1 | 0 | INTRON | -4.3830567 | 1.17E-05 | 0.0227316 |
| 19 | 22689023 | 22689023 | 1 | 19_22689023 | ENSG00000268981 | AC024563.1 | 0 | INTRON | -4.3830554 | 1.17E-05 | 0.0227316 |
| 10 | 117795796 | 117795796 | 1 | 10_117795796 | ENSG00000263041 | AL513324.1 | 30097 | Downstream | 4.38301089 | 1.17E-05 | 0.02273366 |
| 11 | 34116542 | 34116542 | 1 | 11_34116542 | ENSG00000135372 | NAT10 | 0 | INTRON | 4.38296323 | 1.17E-05 | 0.02273411 |
| 2 | 195607335 | 195607335 | 1 | 2_195607335 | ENSG00000196950 | SLC39A10 | 0 | INTRON | 4.38292759 | 1.17E-05 | 0.02273411 |
| 2 | 126681897 | 126681897 | 1 | 2_126681897 | ENSG00000136732 | GYPC | 0 | INTRON | 4.38291028 | 1.17E-05 | 0.02273411 |
| 2 | 204445940 | 204445940 | 1 | 2_204445940 | ENSG00000236634 | AC016903.1 | 24135 | Downstream | -4.3829017 | 1.17E-05 | 0.02273411 |
| 13 | 111573929 | 111573929 | 1 | 13_111573929 | ENSG00000204398 | AL359649.1 | 14271 | Upstream | -4.3828823 | 1.17E-05 | 0.02273411 |
| 11 | 90120997 | 90120997 | 1 | 11_90120997 | ENSG00000207299 | AP000648.1 | 2536 | Downstream | -4.3828168 | 1.17E-05 | 0.02273836 |
| 8 | 78809144 | 78809144 | 1 | 8_78809144 | ENSG00000285744 | AC083837.1 | 0 | INTRON | 4.38262713 | 1.17E-05 | 0.02275336 |
| 13 | 47224907 | 47224907 | 1 | 13_47224907 | ENSG00000234590 | GNG5P5 | 82174 | Upstream | -4.3826235 | 1.17E-05 | 0.02275336 |
| 14 | 48091814 | 48091814 | 1 | 14_48091814 | ENSG00000258639 | AL359212.1 | 45598 | Downstream | 4.3825753 | 1.17E-05 | 0.0227558 |
| 13 | 39218590 | 39218590 | 1 | 13_39218590 | ENSG00000273507 | AL354809.1 | 0 | INTRON | 4.38253118 | 1.17E-05 | 0.02275619 |
| X | 46662227 | 46662227 | 1 | X_46662227 | ENSG00000065923 | SLC9A7 | 0 | INTRON | -4.3825219 | 1.17E-05 | 0.02275619 |
| 11 | 87402703 | 87402703 | 1 | 11_87402703 | ENSG00000254582 | PSMA2P1 | 72651 | Upstream | 4.38240563 | 1.17E-05 | 0.02276574 |
| 9 | 6766292 | 6766292 | 1 | 9_6766292 | ENSG00000107077 | KDM4C | 0 | INTRON | -4.3823176 | 1.17E-05 | 0.02277232 |
| 2 | 162021588 | 162021588 | 1 | 2_162021588 | ENSG00000197635 | DPP4 | 0 | EXON | -4.3822666 | 1.17E-05 | 0.02277232 |
| 13 | 46357311 | 46357311 | 1 | 13_46357311 | ENSG00000102445 | RUBCNL | 0 | INTRON | 4.38225572 | 1.17E-05 | 0.02277232 |
| X | 51765885 | 51765885 | 1 | X_51765885 | ENSG00000189369 | GSPT2 | 19653 | Downstream | 4.38224163 | 1.17E-05 | 0.02277232 |
| 7 | 130697645 | 130697645 | 1 | 7_130697645 | ENSG00000213265 | TSGA13 | 10213 | Upstream | 4.38221859 | 1.17E-05 | 0.02277232 |
| 8 | 38044771 | 38044771 | 1 | 8_38044771 | ENSG00000187840 | EIF4EBP1 | 0 | INTRON | 4.3821801 | 1.17E-05 | 0.02277375 |
| 13 | 50010874 | 50010874 | 1 | 13_50010874 | ENSG00000204977 | TRIM13 | 0 | INTRON | -4.3821304 | 1.18E-05 | 0.02277545 |
| 2 | 62488648 | 62488648 | 1 | 2_62488648 | ENSG00000241625 | RN7SL18P | 2529 | Upstream | -4.3821133 | 1.18E-05 | 0.02277545 |
| 16 | 46598324 | 46598324 | 1 | 16_46598324 | ENSG00000171241 | SHCBP1 | 0 | INTRON | -4.3820775 | 1.18E-05 | 0.02277545 |
| 2 | 190163993 | 190163993 | 1 | 2_190163993 | ENSG00000187699 | C2orf88 | 0 | 5UTR | 4.38206464 | 1.18E-05 | 0.02277545 |
| 5 | 26046590 | 26046590 | 1 | 5_26046590 | ENSG00000222560 | RNU4-43P | 33565 | Downstream | 4.3820268 | 1.18E-05 | 0.02277559 |
| 5 | 140089670 | 140089670 | 1 | 5_140089670 | ENSG00000245146 | MALINC1 | 0 | INTRON | -4.3820137 | 1.18E-05 | 0.02277559 |
| 2 | 196455112 | 196455112 | 1 | 2_196455112 | ENSG00000138411 | HECW2 | 0 | INTRON | 4.38197846 | 1.18E-05 | 0.02277669 |
| X | 155218137 | 155218137 | 1 | X_155218137 | ENSG00000155959 | VBP1 | 0 | INTRON | 4.38189922 | 1.18E-05 | 0.02278137 |
| 19 | 12907893 | 12907893 | 1 | 19_12907893 | ENSG00000105607 | GCDH | 0 | INTRON | 4.3818553 | 1.18E-05 | 0.02278137 |
| 2 | 25429264 | 25429264 | 1 | 2_25429264 | ENSG00000138101 | DTNB | 0 | INTRON | -4.3818506 | 1.18E-05 | 0.02278137 |
| 4 | 185281246 | 185281246 | 1 | 4_185281246 | ENSG00000109762 | SNX25 | 0 | INTRON | 4.38183456 | 1.18E-05 | 0.02278137 |
| Y | 11987682 | 11987682 | 1 | Y_11987682 | ENSG00000235649 | MXRA5Y | 296 | Downstream | -4.3817697 | 1.18E-05 | 0.02278177 |
| 10 | 68581096 | 68581096 | 1 | 10_68581096 | ENSG00000138336 | TET1 | 0 | INTRON | 4.38176675 | 1.18E-05 | 0.02278177 |
| 20 | 61847983 | 61847983 | 1 | 20_61847983 | ENSG00000179242 | CDH4 | 0 | INTRON | 4.38171591 | 1.18E-05 | 0.02278177 |
| 3 | 11354387 | 11354387 | 1 | 3_11354387 | ENSG00000197548 | ATG7 | 0 | INTRON | 4.38171187 | 1.18E-05 | 0.02278177 |
| 8 | 74178783 | 74178783 | 1 | 8_74178783 | ENSG00000253983 | AC087627.1 | 0 | INTRON | 4.38170682 | 1.18E-05 | 0.02278177 |
| 6 | 7339375 | 7339375 | 1 | 6_7339375 | ENSG00000220472 | AL139095.2 | 0 | EXON | -4.3815059 | 1.18E-05 | 0.02280021 |
| 13 | 83843893 | 83843893 | 1 | 13_83843893 | ENSG00000178235 | SLITRK1 | 33311 | Downstream | 4.38132949 | 1.18E-05 | 0.02281608 |
| 2 | 9601290 | 9601290 | 1 | 2_9601290 | ENSG00000134308 | YWHAQ | 0 | INTRON | 4.38121333 | 1.18E-05 | 0.02282565 |
| 20 | 28486476 | 28486476 | 1 | 20_28486476 | ENSG00000282826 | FRG1CP | 77373 | Downstream | -4.3811283 | 1.18E-05 | 0.02283197 |
| 11 | 69584733 | 69584733 | 1 | 11_69584733 | ENSG00000110092 | CCND1 | 56353 | Upstream | -4.3810887 | 1.18E-05 | 0.02283352 |
| 7 | 31476004 | 31476004 | 1 | 7_31476004 | ENSG00000180347 | ITPRID1 | 38066 | Upstream | 4.38103034 | 1.18E-05 | 0.02283561 |
| 13 | 108320394 | 108320394 | 1 | 13_108320394 | ENSG00000102524 | TNFSF13B | 11910 | Downstream | 4.3809921 | 1.18E-05 | 0.02283561 |
| 10 | 21718705 | 21718705 | 1 | 10_21718705 | ENSG00000078403 | MLLT10 | 0 | INTRON | 4.38098492 | 1.18E-05 | 0.02283561 |
| 9 | 36460835 | 36460835 | 1 | 9_36460835 | ENSG00000137075 | RNF38 | 0 | INTRON | -4.3809343 | 1.18E-05 | 0.02283561 |
| 2 | 143787250 | 143787250 | 1 | 2_143787250 | ENSG00000257226 | AC079584.2 | 11131 | Upstream | -4.3809244 | 1.18E-05 | 0.02283561 |
| 8 | 62895644 | 62895644 | 1 | 8_62895644 | ENSG00000185942 | NKAIN3 | 0 | INTRON | 4.38092029 | 1.18E-05 | 0.02283561 |
| 5 | 31145102 | 31145102 | 1 | 5_31145102 | ENSG00000254138 | AC113386.1 | 0 | INTRON | 4.38084883 | 1.18E-05 | 0.02283886 |
| 4 | 13929299 | 13929299 | 1 | 4_13929299 | ENSG00000250634 | LINC01182 | 0 | INTRON | -4.3808398 | 1.18E-05 | 0.02283886 |
| 5 | 63820622 | 63820622 | 1 | 5_63820622 | ENSG00000248285 | AC122707.1 | 137270 | Downstream | 4.38076994 | 1.18E-05 | 0.02284359 |
| 20 | 11422936 | 11422936 | 1 | 20_11422936 | ENSG00000235544 | RPS11P1 | 77081 | Upstream | -4.380634 | 1.18E-05 | 0.02285278 |
| 16 | 88885913 | 88885913 | 1 | 16_88885913 | ENSG00000259881 | AC092384.2 | 0 | EXON | 4.38063291 | 1.18E-05 | 0.02285278 |
| 2 | 90245368 | 90245368 | 1 | 2_90245368 | ENSG00000228325 | IGKV3D-7 | 9998 | Downstream | 4.38056511 | 1.18E-05 | 0.02285332 |
| 4 | 140703084 | 140703084 | 1 | 4_140703084 | ENSG00000109436 | TBC1D9 | 0 | INTRON | 4.38055452 | 1.18E-05 | 0.02285332 |
| 3 | 89684620 | 89684620 | 1 | 3_89684620 | ENSG00000240309 | MTCO1P6 | 94523 | Upstream | 4.38054323 | 1.18E-05 | 0.02285332 |
| 9 | 94177806 | 94177806 | 1 | 9_94177806 | ENSG00000269929 | AL158152.1 | 0 | EXON | -4.3805138 | 1.18E-05 | 0.02285332 |
| 14 | 96893443 | 96893443 | 1 | 14_96893443 | ENSG00000100749 | VRK1 | 0 | INTRON | 4.3805041 | 1.18E-05 | 0.02285332 |
| 1 | 103127884 | 103127884 | 1 | 1_103127884 | ENSG00000060718 | COL11A1 | 19012 | Upstream | 4.38046077 | 1.18E-05 | 0.02285412 |
| 14 | 73578814 | 73578814 | 1 | 14_73578814 | ENSG00000258603 | AC005225.2 | 0 | INTRON | -4.3804107 | 1.18E-05 | 0.02285412 |
| 16 | 67377631 | 67377631 | 1 | 16_67377631 | ENSG00000159708 | LRRC36 | 0 | INTRON | -4.3804061 | 1.18E-05 | 0.02285412 |
| 16 | 31054855 | 31054855 | 1 | 16_31054855 | ENSG00000232748 | AC135050.1 | 1604 | Upstream | -4.3803976 | 1.18E-05 | 0.02285412 |
| 15 | 61811958 | 61811958 | 1 | 15_61811958 | ENSG00000259564 | AC009554.1 | 22723 | Upstream | -4.380301 | 1.19E-05 | 0.02286167 |
| 11 | 33115104 | 33115104 | 1 | 11_33115104 | ENSG00000176102 | CSTF3 | 0 | INTRON | 4.38024409 | 1.19E-05 | 0.02286448 |
| 17 | 1097585 | 1097585 | 1 | 17_1097585 | ENSG00000159842 | ABR | 0 | INTRON | -4.380212 | 1.19E-05 | 0.02286448 |
| X | 19261390 | 19261390 | 1 | X_19261390 | ENSG00000131828 | PDHA1 | 82502 | Upstream | 4.38020013 | 1.19E-05 | 0.02286448 |
| 12 | 50364514 | 50364514 | 1 | 12_50364514 | ENSG00000185958 | FAM186A | 0 | INTRON | 4.3801318 | 1.19E-05 | 0.02286906 |
| 2 | 73026319 | 73026319 | 1 | 2_73026319 | ENSG00000144040 | SFXN5 | 0 | INTRON | 4.37999114 | 1.19E-05 | 0.02288123 |
| 10 | 122530699 | 122530699 | 1 | 10_122530699 | ENSG00000166033 | HTRA1 | 15792 | Downstream | -4.3798776 | 1.19E-05 | 0.02288937 |
| 7 | 31752412 | 31752412 | 1 | 7_31752412 | ENSG00000154678 | PDE1C | 0 | 3UTR | 4.37986431 | 1.19E-05 | 0.02288937 |
| 2 | 223267447 | 223267447 | 1 | 2_223267447 | ENSG00000243125 | RN7SL807P | 18653 | Upstream | -4.3798111 | 1.19E-05 | 0.02289236 |
| 2 | 219592365 | 219592365 | 1 | 2_219592365 | ENSG00000222678 | RN7SKP213 | 1381 | Upstream | 4.37974013 | 1.19E-05 | 0.02289722 |
| X | 71107096 | 71107096 | 1 | X_71107096 | ENSG00000285171 | AL590764.2 | 0 | INTRON | -4.3796595 | 1.19E-05 | 0.0229031 |
| 17 | 78877349 | 78877349 | 1 | 17_78877349 | ENSG00000178404 | CEP295NL | 0 | INTRON | 4.37962702 | 1.19E-05 | 0.02290393 |
| 3 | 189285823 | 189285823 | 1 | 3_189285823 | ENSG00000188001 | TPRG1 | 0 | INTRON | 4.37957782 | 1.19E-05 | 0.02290623 |
| 2 | 6854970 | 6854970 | 1 | 2_6854970 | ENSG00000134326 | CMPK2 | 0 | INTRON | 4.37952967 | 1.19E-05 | 0.02290623 |
| 4 | 179689924 | 179689924 | 1 | 4_179689924 | ENSG00000248921 | AC021193.1 | 166928 | Upstream | 4.37950957 | 1.19E-05 | 0.02290623 |
| 8 | 107837344 | 107837344 | 1 | 8_107837344 | ENSG00000287949 | AC025508.1 | 20244 | Upstream | -4.3795064 | 1.19E-05 | 0.02290623 |
| 12 | 14841798 | 14841798 | 1 | 12_14841798 | ENSG00000111339 | ART4 | 0 | INTRON | 4.37948179 | 1.19E-05 | 0.02290623 |
| 14 | 93317296 | 93317296 | 1 | 14_93317296 | ENSG00000011114 | BTBD7 | 0 | INTRON | -4.3793661 | 1.19E-05 | 0.02291579 |
| 3 | 66554784 | 66554784 | 1 | 3_66554784 | ENSG00000144749 | LRIG1 | 53521 | Upstream | 4.3793212 | 1.19E-05 | 0.02291792 |
| 11 | 60988372 | 60988372 | 1 | 11_60988372 | ENSG00000013725 | CD6 | 0 | INTRON | -4.3792834 | 1.19E-05 | 0.02291825 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
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| 4 | 87343331 | 87343331 | 1 | 4_87343331 | ENSG00000255723 | AC108516.2 | 0 | INTRON | 4.37926883 | 1.19E-05 | 0.02291825 |
| 3 | 18578524 | 18578524 | 1 | 3_18578524 | ENSG00000228956 | SATB1-AS1 | 0 | INTRON | 4.37922588 | 1.19E-05 | 0.02292017 |
| 12 | 106972742 | 106972742 | 1 | 12_106972742 | ENSG00000151135 | TMEM263 | 0 | 3UTR | 4.37915392 | 1.19E-05 | 0.02292395 |
| 11 | 69647487 | 69647487 | 1 | 11_69647487 | ENSG00000110092 | CCND1 | 0 | INTRON | -4.3791406 | 1.19E-05 | 0.02292395 |
| 20 | 63929235 | 63929235 | 1 | 20_63929235 | ENSG00000101152 | DNAJC5 | 0 | INTRON | 4.37904907 | 1.19E-05 | 0.02293099 |
| 1 | 240911867 | 240911867 | 1 | 1_240911867 | ENSG00000182901 | RGS7 | 0 | INTRON | -4.3787809 | 1.19E-05 | 0.02295008 |
| 6 | 151030125 | 151030125 | 1 | 6_151030125 | ENSG00000120254 | MTHFD1L | 0 | INTRON | -4.3787733 | 1.19E-05 | 0.02295008 |
| 12 | 28931351 | 28931351 | 1 | 12_28931351 | ENSG00000278687 | AC024255.1 | 47232 | Upstream | -4.3787552 | 1.19E-05 | 0.02295008 |
| 3 | 168264728 | 168264728 | 1 | 3_168264728 | ENSG00000206120 | EGFEM1P | 0 | INTRON | 4.3787494 | 1.19E-05 | 0.02295008 |
| 11 | 14206030 | 14206030 | 1 | 11_14206030 | ENSG00000262655 | SPON1 | 0 | INTRON | 4.37874457 | 1.19E-05 | 0.02295008 |
| 9 | 6349601 | 6349601 | 1 | 9_6349601 | ENSG00000170777 | TPD52L3 | 17701 | Downstream | 4.37866406 | 1.19E-05 | 0.02295596 |
| 17 | 10409830 | 10409830 | 1 | 17_10409830 | ENSG00000272736 | AC005323.2 | 0 | INTRON | 4.37857482 | 1.19E-05 | 0.02296277 |
| 1 | 199516549 | 199516549 | 1 | 1_199516549 | ENSG00000231718 | LINC02789 | 123242 | Downstream | 4.37847723 | 1.20E-05 | 0.0229695 |
| 1 | 116787371 | 116787371 | 1 | 1_116787371 | ENSG00000225079 | FTH1P22 | 11748 | Upstream | 4.37846167 | 1.20E-05 | 0.0229695 |
| 4 | 110241121 | 110241121 | 1 | 4_110241121 | ENSG00000166530 | HSBP1P2 | 10749 | Downstream | 4.37839057 | 1.20E-05 | 0.0229744 |
| 11 | 5001101 | 5001101 | 1 | 11_5001101 | ENSG00000176798 | OR51L1 | 0 | 3UTR | 4.37831848 | 1.20E-05 | 0.02297488 |
| 10 | 125755966 | 125755966 | 1 | 10_125755966 | ENSG00000154485 | MMP21 | 0 | INTRON | 4.3783159 | 1.20E-05 | 0.02297488 |
| 18 | 44589474 | 44589474 | 1 | 18_44589474 | ENSG00000267337 | LINC01478 | 9521 | Upstream | -4.3782897 | 1.20E-05 | 0.02297488 |
| X | 153864416 | 153864416 | 1 | X_153864416 | ENSG00000198910 | L1CAM | 0 | EXON | -4.3782876 | 1.20E-05 | 0.02297488 |
| 11 | 62992780 | 62992780 | 1 | 11_62992780 | ENSG00000149452 | SLC22A8 | 0 | EXON | -4.3781553 | 1.20E-05 | 0.02298571 |
| 15 | 31950267 | 31950267 | 1 | 15_31950267 | ENSG00000175344 | CHRNA7 | 0 | INTRON | 4.37810381 | 1.20E-05 | 0.02298571 |
| 3 | 31649237 | 31649237 | 1 | 3_31649237 | ENSG00000144645 | OSBPL10 | 8652 | Downstream | 4.37809876 | 1.20E-05 | 0.02298571 |
| 14 | 88870136 | 88870136 | 1 | 14_88870136 | ENSG00000165533 | TTC8 | 0 | 3UTR | 4.37808643 | 1.20E-05 | 0.02298571 |
| 8 | 4145121 | 4145121 | 1 | 8_4145121 | ENSG00000183117 | CSMD1 | 0 | INTRON | -4.3779975 | 1.20E-05 | 0.0229925 |
| 19 | 15069626 | 15069626 | 1 | 19_15069626 | ENSG00000105141 | CASP14 | 11333 | Downstream | 4.37794932 | 1.20E-05 | 0.02299402 |
| 11 | 112219031 | 112219031 | 1 | 11_112219031 | ENSG00000197580 | BCO2 | 0 | INTRON | 4.37791117 | 1.20E-05 | 0.02299402 |
| 3 | 95184212 | 95184212 | 1 | 3_95184212 | ENSG00000244048 | RPS18P6 | 11835 | Downstream | 4.37785778 | 1.20E-05 | 0.02299402 |
| 19 | 53253913 | 53253913 | 1 | 19_53253913 | ENSG00000197928 | ZNF677 | 0 | INTRON | 4.37784752 | 1.20E-05 | 0.02299402 |
| 7 | 76035094 | 76035094 | 1 | 7_76035094 | ENSG00000127952 | STYXL1 | 0 | INTRON | 4.37782141 | 1.20E-05 | 0.02299402 |
| 7 | 82409745 | 82409745 | 1 | 7_82409745 | ENSG00000153956 | CACNA2D1 | 0 | INTRON | -4.3778198 | 1.20E-05 | 0.02299402 |
| 6 | 15460893 | 15460893 | 1 | 6_15460893 | ENSG00000008083 | JARID2 | 0 | INTRON | -4.3778093 | 1.20E-05 | 0.02299402 |
| 5 | 116307131 | 116307131 | 1 | 5_116307131 | ENSG00000145781 | COMMD10 | 0 | INTRON | 4.37778635 | 1.20E-05 | 0.02299402 |
| 22 | 37316331 | 37316331 | 1 | 22_37316331 | ENSG00000100055 | CYTH4 | 990 | Downstream | 4.37772946 | 1.20E-05 | 0.02299743 |
| 8 | 62606257 | 62606257 | 1 | 8_62606257 | ENSG00000185942 | NKAIN3 | 0 | INTRON | -4.3776327 | 1.20E-05 | 0.02300138 |
| 2 | 173017491 | 173017491 | 1 | 2_173017491 | ENSG00000091428 | RAPGEF4 | 0 | EXON | 4.37762216 | 1.20E-05 | 0.02300138 |
| 4 | 60446031 | 60446031 | 1 | 4_60446031 | ENSG00000249066 | LINC02496 | 304543 | Upstream | 4.37760324 | 1.20E-05 | 0.02300138 |
| 7 | 51901653 | 51901653 | 1 | 7_51901653 | ENSG00000287039 | AC006478.2 | 36855 | Downstream | 4.37759378 | 1.20E-05 | 0.02300138 |
| 21 | 32253385 | 32253385 | 1 | 21_32253385 | ENSG00000261610 | AP000265.1 | 6418 | Downstream | -4.377544 | 1.20E-05 | 0.02300186 |
| 12 | 65508892 | 65508892 | 1 | 12_65508892 | ENSG00000250748 | AC025419.1 | 0 | INTRON | -4.3775031 | 1.20E-05 | 0.02300186 |
| 9 | 61725752 | 61725752 | 1 | 9_61725752 | ENSG00000231454 | AL935212.2 | 59366 | Downstream | 4.3774912 | 1.20E-05 | 0.02300186 |
| Y | 17185659 | 17185659 | 1 | Y_17185659 | ENSG00000228518 | SURF6P1 | 7166 | Upstream | -4.377491 | 1.20E-05 | 0.02300186 |
| 10 | 5645382 | 5645382 | 1 | 10_5645382 | ENSG00000196372 | ASB13 | 0 | INTRON | 4.37746268 | 1.20E-05 | 0.02300226 |
| 10 | 74939549 | 74939549 | 1 | 10_74939549 | ENSG00000156650 | KAT6B | 0 | INTRON | -4.3774164 | 1.20E-05 | 0.02300256 |
| 3 | 22404315 | 22404315 | 1 | 3_22404315 | ENSG00000132967 | HMGB1P5 | 21386 | Downstream | 4.37740202 | 1.20E-05 | 0.02300256 |
| 11 | 96205320 | 96205320 | 1 | 11_96205320 | ENSG00000184384 | MAML2 | 0 | INTRON | 4.37738617 | 1.20E-05 | 0.02300256 |
| 8 | 28660717 | 28660717 | 1 | 8_28660717 | ENSG00000012232 | EXTL3 | 0 | INTRON | -4.3772974 | 1.20E-05 | 0.02300676 |
| 3 | 57002190 | 57002190 | 1 | 3_57002190 | ENSG00000163947 | ARHGEF3 | 0 | INTRON | 4.37729729 | 1.20E-05 | 0.02300676 |
| 14 | 31482342 | 31482342 | 1 | 14_31482342 | ENSG00000214943 | GPR33 | 532 | Downstream | -4.377236 | 1.20E-05 | 0.02301063 |
| 14 | 99598098 | 99598098 | 1 | 14_99598098 | ENSG00000205476 | CCDC85C | 0 | INTRON | 4.37719012 | 1.20E-05 | 0.02301289 |
| 12 | 3810538 | 3810538 | 1 | 12_3810538 | ENSG00000111224 | PARP11 | 0 | 3UTR | -4.3771614 | 1.20E-05 | 0.02301333 |
| 8 | 43014454 | 43014454 | 1 | 8_43014454 | ENSG00000168172 | HOOK3 | 0 | INTRON | -4.3770466 | 1.20E-05 | 0.02302287 |
| 7 | 145783032 | 145783032 | 1 | 7_145783032 | ENSG00000230746 | AC006007.1 | 101663 | Upstream | -4.3769938 | 1.20E-05 | 0.02302585 |
| 5 | 119298111 | 119298111 | 1 | 5_119298111 | ENSG00000145779 | TNFAIP8 | 0 | INTRON | 4.37686852 | 1.20E-05 | 0.02303412 |
| 2 | 46078906 | 46078906 | 1 | 2_46078906 | ENSG00000171132 | PRKCE | 0 | INTRON | -4.3768665 | 1.20E-05 | 0.02303412 |
| 8 | 99556495 | 99556495 | 1 | 8_99556495 | ENSG00000132549 | VPS13B | 0 | 3UTR | -4.3768211 | 1.20E-05 | 0.02303632 |
| 6 | 100841169 | 100841169 | 1 | 6_100841169 | ENSG00000112249 | ASCC3 | 0 | INTRON | 4.37675729 | 1.20E-05 | 0.02304048 |
| 8 | 107294148 | 107294148 | 1 | 8_107294148 | ENSG00000154188 | ANGPT1 | 0 | EXON | 4.37665812 | 1.21E-05 | 0.02304837 |
| 11 | 27280334 | 27280334 | 1 | 11_27280334 | ENSG00000109881 | CCDC34 | 50492 | Downstream | 4.37657577 | 1.21E-05 | 0.02305206 |
| 14 | 82416892 | 82416892 | 1 | 14_82416892 | ENSG00000276782 | Metazoa_SRP | 12979 | Upstream | 4.37657414 | 1.21E-05 | 0.02305206 |
| 8 | 94802032 | 94802032 | 1 | 8_94802032 | ENSG00000156162 | DPY19L4 | 8196 | Downstream | 4.37651025 | 1.21E-05 | 0.02305478 |
| 6 | 11727091 | 11727091 | 1 | 6_11727091 | ENSG00000111863 | ADTRP | 0 | INTRON | 4.37649941 | 1.21E-05 | 0.02305478 |
| 8 | 133131575 | 133131575 | 1 | 8_133131575 | ENSG00000042832 | TG | 0 | INTRON | 4.37642075 | 1.21E-05 | 0.02306051 |
| 4 | 52904475 | 52904475 | 1 | 4_52904475 | ENSG00000184178 | SCFD2 | 0 | INTRON | -4.3762831 | 1.21E-05 | 0.02307234 |
| 12 | 90545905 | 90545905 | 1 | 12_90545905 | ENSG00000286021 | LINC02822 | 30496 | Upstream | -4.3762599 | 1.21E-05 | 0.02307234 |
| 6 | 60819485 | 60819485 | 1 | 6_60819485 | ENSG00000287598 | AL512427.2 | 0 | INTRON | -4.3760973 | 1.21E-05 | 0.02308695 |
| X | 119361789 | 119361789 | 1 | X_119361789 | ENSG00000226661 | AC004973.1 | 0 | INTRON | 4.37604692 | 1.21E-05 | 0.02308845 |
| 16 | 28981148 | 28981148 | 1 | 16_28981148 | ENSG00000169682 | SPNS1 | 0 | INTRON | 4.37603424 | 1.21E-05 | 0.02308845 |
| 3 | 46984082 | 46984082 | 1 | 3_46984082 | ENSG00000160796 | NBEAL2 | 0 | INTRON | 4.37597044 | 1.21E-05 | 0.02309261 |
| 6 | 133404744 | 133404744 | 1 | 6_133404744 | ENSG00000112319 | EYA4 | 0 | INTRON | 4.37591647 | 1.21E-05 | 0.02309573 |
| 2 | 175656657 | 175656657 | 1 | 2_175656657 | ENSG00000223976 | EXTL2P1 | 186229 | Upstream | 4.37577798 | 1.21E-05 | 0.02310781 |
| 20 | 24253670 | 24253670 | 1 | 20_24253670 | ENSG00000200231 | RNU1-23P | 16272 | Downstream | 4.3756265 | 1.21E-05 | 0.02311327 |
| 1 | 90983557 | 90983557 | 1 | 1_90983557 | ENSG00000122482 | ZNF644 | 0 | INTRON | -4.3756088 | 1.21E-05 | 0.02311327 |
| 21 | 32191185 | 32191185 | 1 | 21_32191185 | ENSG00000230323 | LINC00159 | 0 | INTRON | 4.37560428 | 1.21E-05 | 0.02311327 |
| 7 | 11934429 | 11934429 | 1 | 7_11934429 | ENSG00000005108 | THSD7A | 102231 | Upstream | -4.3755993 | 1.21E-05 | 0.02311327 |
| 10 | 124854059 | 124854059 | 1 | 10_124854059 | ENSG00000214807 | NPM1P31 | 13450 | Upstream | 4.37559445 | 1.21E-05 | 0.02311327 |
| 2 | 120295220 | 120295220 | 1 | 2_120295220 | ENSG00000144118 | RALB | 510 | Downstream | -4.375569 | 1.21E-05 | 0.02311327 |
| 2 | 66930216 | 66930216 | 1 | 2_66930216 | ENSG00000230525 | LINC01799 | 0 | INTRON | -4.3755415 | 1.21E-05 | 0.02311327 |
| 1 | 174231941 | 174231941 | 1 | 1_174231941 | ENSG00000152061 | RABGAP1L | 0 | INTRON | 4.37553072 | 1.21E-05 | 0.02311327 |
| 13 | 40682229 | 40682229 | 1 | 13_40682229 | ENSG00000150907 | FOXO1 | 15588 | Upstream | 4.37548483 | 1.21E-05 | 0.02311347 |
| 12 | 46999658 | 46999658 | 1 | 12_46999658 | ENSG00000274723 | AC079906.1 | 27503 | Downstream | 4.37544326 | 1.21E-05 | 0.02311347 |
| Y | 56724016 | 56724016 | 1 | Y_56724016 | ENSG00000235857 | CTBP2P1 | 131227 | Upstream | -4.3754108 | 1.21E-05 | 0.02311347 |
| 15 | 29981558 | 29981558 | 1 | 15_29981558 | ENSG00000104067 | TJP1 | 12693 | Upstream | 4.37540722 | 1.21E-05 | 0.02311347 |
| 10 | 51525392 | 51525392 | 1 | 10_51525392 | ENSG00000185532 | PRKG1 | 0 | INTRON | 4.37537005 | 1.21E-05 | 0.02311347 |
| 3 | 194742693 | 194742693 | 1 | 3_194742693 | ENSG00000237222 | LINC01968 | 0 | INTRON | -4.3753166 | 1.21E-05 | 0.02311347 |
| 10 | 116234837 | 116234837 | 1 | 10_116234837 | ENSG00000151892 | GFRA1 | 0 | INTRON | 4.3753039 | 1.21E-05 | 0.02311347 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
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| 3 | 70119346 | 70119346 | 1 | 3_70119346 | ENSG00000240405 | SAMMSON | 0 | INTRON | 4.37530308 | 1.21E-05 | 0.02311347 |
| 3 | 196497817 | 196497817 | 1 | 3_196497817 | ENSG00000163961 | RNF168 | 0 | INTRON | 4.37529864 | 1.21E-05 | 0.02311347 |
| 7 | 107973283 | 107973283 | 1 | 7_107973283 | ENSG00000091136 | LAMB1 | 0 | INTRON | 4.37528433 | 1.21E-05 | 0.02311347 |
| 3 | 182973037 | 182973037 | 1 | 3_182973037 | ENSG00000043093 | DCUN1D1 | 0 | INTRON | -4.3751785 | 1.21E-05 | 0.02312172 |
| 15 | 85198607 | 85198607 | 1 | 15_85198607 | ENSG00000259295 | CSPG4P12 | 0 | EXON | -4.3751577 | 1.21E-05 | 0.02312172 |
| 2 | 205584399 | 205584399 | 1 | 2_205584399 | ENSG00000116117 | PARD3B | 0 | INTRON | 4.3749784 | 1.21E-05 | 0.02313814 |
| 1 | 5949033 | 5949033 | 1 | 1_5949033 | ENSG00000131697 | NPHP4 | 0 | INTRON | -4.3749435 | 1.21E-05 | 0.02313821 |
| 8 | 21244983 | 21244983 | 1 | 8_21244983 | ENSG00000254092 | AC021613.1 | 0 | INTRON | -4.3749289 | 1.21E-05 | 0.02313821 |
| 15 | 73585526 | 73585526 | 1 | 15_73585526 | ENSG00000156642 | NPTN | 0 | INTRON | 4.3749004 | 1.21E-05 | 0.02313864 |
| 4 | 31597149 | 31597149 | 1 | 4_31597149 | ENSG00000249882 | LINC02501 | 38318 | Downstream | 4.37481186 | 1.22E-05 | 0.02314415 |
| 1 | 59238347 | 59238347 | 1 | 1_59238347 | ENSG00000224609 | AC093425.1 | 0 | INTRON | -4.3747756 | 1.22E-05 | 0.02314415 |
| 10 | 59550599 | 59550599 | 1 | 10_59550599 | ENSG00000235469 | MRPL50P4 | 804 | Downstream | -4.3747752 | 1.22E-05 | 0.02314415 |
| 14 | 34729232 | 34729232 | 1 | 14_34729232 | ENSG00000243824 | RPL12P6 | 11103 | Downstream | 4.37473345 | 1.22E-05 | 0.02314599 |
| 12 | 1768294 | 1768294 | 1 | 12_1768294 | ENSG00000006831 | ADIPOR2 | 0 | INTRON | -4.3746155 | 1.22E-05 | 0.02315592 |
| 14 | 69388718 | 69388718 | 1 | 14_69388718 | ENSG00000100632 | ERH | 0 | INTRON | -4.37453 | 1.22E-05 | 0.02315935 |
| 7 | 62439635 | 62439635 | 1 | 7_62439635 | ENSG00000233918 | AC128676.1 | 163957 | Upstream | -4.3745165 | 1.22E-05 | 0.02315935 |
| 16 | 69705102 | 69705102 | 1 | 16_69705102 | ENSG00000102908 | NFAT5 | 436 | Downstream | -4.37451 | 1.22E-05 | 0.02315935 |
| 20 | 3247466 | 3247466 | 1 | 20_3247466 | ENSG00000088854 | C20orf194 | 1838 | Downstream | 4.37448174 | 1.22E-05 | 0.02315976 |
| 16 | 5138888 | 5138888 | 1 | 16_5138888 | ENSG00000285567 | AC074051.5 | 0 | INTRON | -4.3744059 | 1.22E-05 | 0.02316246 |
| 2 | 157286065 | 157286065 | 1 | 2_157286065 | ENSG00000136542 | GALNT5 | 0 | EXON | 4.37436153 | 1.22E-05 | 0.02316246 |
| 22 | 18382036 | 18382036 | 1 | 22_18382036 | ENSG00000274044 | FAM230J | 0 | INTRON | 4.37436054 | 1.22E-05 | 0.02316246 |
| 2 | 54659205 | 54659205 | 1 | 2_54659205 | ENSG00000115306 | SPTBN1 | 0 | EXON | 4.37435647 | 1.22E-05 | 0.02316246 |
| 13 | 99391472 | 99391472 | 1 | 13_99391472 | ENSG00000134882 | UBAC2 | 4968 | Downstream | 4.3743103 | 1.22E-05 | 0.02316246 |
| 2 | 914857 | 914857 | 1 | 2_914857 | ENSG00000234796 | AC113607.1 | 0 | INTRON | -4.37431 | 1.22E-05 | 0.02316246 |
| 5 | 6880318 | 6880318 | 1 | 5_6880318 | ENSG00000250060 | AC122710.1 | 0 | INTRON | -4.3742688 | 1.22E-05 | 0.02316276 |
| 7 | 156081829 | 156081829 | 1 | 7_156081829 | ENSG00000207061 | Y_RNA | 104292 | Downstream | 4.37424987 | 1.22E-05 | 0.02316276 |
| 7 | 101278874 | 101278874 | 1 | 7_101278874 | ENSG00000278683 | AC006329.2 | 5159 | Downstream | 4.37423398 | 1.22E-05 | 0.02316276 |
| 8 | 61431374 | 61431374 | 1 | 8_61431374 | ENSG00000177182 | CLVS1 | 0 | INTRON | 4.37414513 | 1.22E-05 | 0.02316961 |
| 1 | 245454425 | 245454425 | 1 | 1_245454425 | ENSG00000162849 | KIF26B | 0 | INTRON | 4.37395015 | 1.22E-05 | 0.02318774 |
| 21 | 38223768 | 38223768 | 1 | 21_38223768 | ENSG00000157551 | KCNJ15 | 0 | INTRON | 4.37389691 | 1.22E-05 | 0.02319033 |
| 19 | 3711004 | 3711004 | 1 | 19_3711004 | ENSG00000105289 | TJP3 | 0 | INTRON | -4.3738771 | 1.22E-05 | 0.02319033 |
| 5 | 65471623 | 65471623 | 1 | 5_65471623 | ENSG00000049192 | ADAMTS6 | 0 | INTRON | 4.37376602 | 1.22E-05 | 0.02319507 |
| 11 | 112052011 | 112052011 | 1 | 11_112052011 | ENSG00000150768 | DLAT | 0 | INTRON | 4.37374341 | 1.22E-05 | 0.02319507 |
| 15 | 94194161 | 94194161 | 1 | 15_94194161 | ENSG00000258570 | AC110027.1 | 25410 | Downstream | -4.3737377 | 1.22E-05 | 0.02319507 |
| 20 | 39390251 | 39390251 | 1 | 20_39390251 | ENSG00000275337 | RN7SL680P | 40859 | Upstream | 4.37372474 | 1.22E-05 | 0.02319507 |
| X | 48641361 | 48641361 | 1 | X_48641361 | ENSG00000231725 | VN1R110P | 4226 | Downstream | -4.3737039 | 1.22E-05 | 0.02319507 |
| 8 | 86169094 | 86169094 | 1 | 8_86169094 | ENSG00000253699 | AC084128.1 | 11323 | Upstream | 4.37368632 | 1.22E-05 | 0.02319507 |
| 18 | 33602093 | 33602093 | 1 | 18_33602093 | ENSG00000141431 | ASXL3 | 0 | INTRON | -4.3736182 | 1.22E-05 | 0.02319972 |
| 3 | 52513417 | 52513417 | 1 | 3_52513417 | ENSG00000010327 | STAB1 | 0 | INTRON | -4.3735892 | 1.22E-05 | 0.02320022 |
| 20 | 32778290 | 32778290 | 1 | 20_32778290 | ENSG00000088305 | DNMT3B | 0 | INTRON | -4.3735231 | 1.22E-05 | 0.02320466 |
| 13 | 72908846 | 72908846 | 1 | 13_72908846 | ENSG00000083535 | PIBF1 | 0 | INTRON | -4.3734864 | 1.22E-05 | 0.02320537 |
| X | 3556521 | 3556521 | 1 | X_3556521 | ENSG00000207435 | RNU6-114P | 16335 | Upstream | 4.37346772 | 1.22E-05 | 0.02320537 |
| 2 | 102903223 | 102903223 | 1 | 2_102903223 | ENSG00000170417 | TMEM182 | 0 | INTRON | -4.3732626 | 1.22E-05 | 0.02322313 |
| 5 | 62499374 | 62499374 | 1 | 5_62499374 | ENSG00000068796 | KIF2A | 0 | INTRON | -4.3732521 | 1.22E-05 | 0.02322313 |
| 16 | 76598702 | 76598702 | 1 | 16_76598702 | ENSG00000287694 | AC106741.1 | 0 | INTRON | 4.37317892 | 1.22E-05 | 0.02322833 |
| 1 | 65724053 | 65724053 | 1 | 1_65724053 | ENSG00000285079 | AL513493.1 | 9206 | Downstream | 4.37314921 | 1.22E-05 | 0.0232289 |
| 4 | 31497846 | 31497846 | 1 | 4_31497846 | ENSG00000249882 | LINC02501 | 8575 | Upstream | 4.37303239 | 1.23E-05 | 0.02323225 |
| 9 | 94269044 | 94269044 | 1 | 9_94269044 | ENSG00000175787 | ZNF169 | 0 | INTRON | -4.3730265 | 1.23E-05 | 0.02323225 |
| 12 | 94602139 | 94602139 | 1 | 12_94602139 | ENSG00000057704 | TMCC3 | 0 | INTRON | 4.37300444 | 1.23E-05 | 0.02323225 |
| 12 | 63059700 | 63059700 | 1 | 12_63059700 | ENSG00000257664 | RSL24D1P5 | 3935 | Upstream | -4.3730021 | 1.23E-05 | 0.02323225 |
| 11 | 111587335 | 111587335 | 1 | 11_111587335 | ENSG00000170145 | SIK2 | 15113 | Upstream | -4.3729962 | 1.23E-05 | 0.02323225 |
| 12 | 118253715 | 118253715 | 1 | 12_118253715 | ENSG00000135090 | TAOK3 | 0 | INTRON | 4.37292628 | 1.23E-05 | 0.0232371 |
| X | 41838584 | 41838584 | 1 | X_41838584 | ENSG00000147044 | CASK | 0 | INTRON | 4.37286585 | 1.23E-05 | 0.02323885 |
| 6 | 144656553 | 144656553 | 1 | 6_144656553 | ENSG00000152818 | UTRN | 0 | INTRON | -4.3728613 | 1.23E-05 | 0.02323885 |
| 3 | 49976815 | 49976815 | 1 | 3_49976815 | ENSG00000004534 | RBM6 | 0 | INTRON | -4.3727649 | 1.23E-05 | 0.02324652 |
| 5 | 155625010 | 155625010 | 1 | 5_155625010 | ENSG00000270442 | AC008725.1 | 131412 | Downstream | 4.37266193 | 1.23E-05 | 0.02325385 |
| 3 | 99478565 | 99478565 | 1 | 3_99478565 | ENSG00000243296 | AC078828.1 | 21781 | Upstream | 4.3726475 | 1.23E-05 | 0.02325385 |
| 16 | 84091400 | 84091400 | 1 | 16_84091400 | ENSG00000140943 | MBTPS1 | 0 | INTRON | -4.3724822 | 1.23E-05 | 0.02326888 |
| 16 | 55285319 | 55285319 | 1 | 16_55285319 | ENSG00000259283 | AC109462.1 | 0 | INTRON | -4.3723981 | 1.23E-05 | 0.02327526 |
| 13 | 79429160 | 79429160 | 1 | 13_79429160 | ENSG00000227354 | RBM26-AS1 | 1843 | Downstream | -4.372288 | 1.23E-05 | 0.0232793 |
| 22 | 48075684 | 48075684 | 1 | 22_48075684 | ENSG00000278890 | FP325330.2 | 17409 | Downstream | 4.37227052 | 1.23E-05 | 0.0232793 |
| 2 | 91584660 | 91584660 | 1 | 2_91584660 | ENSG00000261600 | AC233266.2 | 3797 | Downstream | 4.37225723 | 1.23E-05 | 0.0232793 |
| 4 | 160240310 | 160240310 | 1 | 4_160240310 | ENSG00000250997 | AC093853.1 | 281518 | Downstream | 4.37224751 | 1.23E-05 | 0.0232793 |
| 4 | 42058355 | 42058355 | 1 | 4_42058355 | ENSG00000014824 | SLC30A9 | 0 | INTRON | 4.3722388 | 1.23E-05 | 0.0232793 |
| 17 | 80376118 | 80376118 | 1 | 17_80376118 | ENSG00000263069 | RNF213-AS1 | 0 | INTRON | 4.37214513 | 1.23E-05 | 0.02328378 |
| 15 | 97005279 | 97005279 | 1 | 15_97005279 | ENSG00000223120 | RN7SKP181 | 162895 | Downstream | -4.3721248 | 1.23E-05 | 0.02328378 |
| 8 | 141303377 | 141303377 | 1 | 8_141303377 | ENSG00000022567 | SLC45A4 | 0 | INTRON | 4.37212391 | 1.23E-05 | 0.02328378 |
| 11 | 16260235 | 16260235 | 1 | 11_16260235 | ENSG00000110693 | SOX6 | 0 | INTRON | 4.37207039 | 1.23E-05 | 0.02328485 |
| 13 | 91109354 | 91109354 | 1 | 13_91109354 | ENSG00000229557 | LINC00379 | 18258 | Downstream | 4.37202624 | 1.23E-05 | 0.02328485 |
| X | 50207017 | 50207017 | 1 | X_50207017 | ENSG00000147082 | CCNB3 | 0 | INTRON | 4.37201229 | 1.23E-05 | 0.02328485 |
| 13 | 46628884 | 46628884 | 1 | 13_46628884 | ENSG00000136141 | LRCH1 | 0 | INTRON | -4.3720014 | 1.23E-05 | 0.02328485 |
| 22 | 43091170 | 43091170 | 1 | 22_43091170 | ENSG00000234735 | AL022237.1 | 996 | Upstream | 4.37196786 | 1.23E-05 | 0.02328485 |
| 19 | 10285187 | 10285187 | 1 | 19_10285187 | ENSG00000090339 | ICAM1 | 0 | EXON | 4.37193136 | 1.23E-05 | 0.02328485 |
| 8 | 114931787 | 114931787 | 1 | 8_114931787 | ENSG00000253756 | CARSP2 | 139858 | Upstream | -4.3719293 | 1.23E-05 | 0.02328485 |
| 12 | 63587707 | 63587707 | 1 | 12_63587707 | ENSG00000177990 | DPY19L2 | 0 | INTRON | -4.3719198 | 1.23E-05 | 0.02328485 |
| 6 | 133273922 | 133273922 | 1 | 6_133273922 | ENSG00000112319 | EYA4 | 0 | INTRON | 4.37181871 | 1.23E-05 | 0.02329305 |
| 7 | 95241569 | 95241569 | 1 | 7_95241569 | ENSG00000158528 | PPP1R9A | 0 | INTRON | -4.3717457 | 1.23E-05 | 0.02329826 |
| 11 | 30362734 | 30362734 | 1 | 11_30362734 | ENSG00000242353 | RPL12P30 | 5413 | Upstream | -4.3717099 | 1.23E-05 | 0.02329926 |
| 3 | 145693570 | 145693570 | 1 | 3_145693570 | ENSG00000241695 | GM2AP1 | 8478 | Downstream | 4.37168779 | 1.23E-05 | 0.02329926 |
| 8 | 122988448 | 122988448 | 1 | 8_122988448 | ENSG00000259631 | AC104316.2 | 2819 | Upstream | 4.37165811 | 1.23E-05 | 0.02329984 |
| 2 | 65962869 | 65962869 | 1 | 2_65962869 | ENSG00000204929 | AC007389.1 | 0 | INTRON | -4.3715975 | 1.23E-05 | 0.02330219 |
| 7 | 10014220 | 10014220 | 1 | 7_10014220 | ENSG00000287409 | AC004936.1 | 0 | INTRON | 4.3715795 | 1.23E-05 | 0.02330219 |
| 11 | 55925600 | 55925600 | 1 | 11_55925600 | ENSG00000167825 | OR5I1 | 9855 | Downstream | -4.3715389 | 1.23E-05 | 0.02330219 |
| 19 | 15814923 | 15814923 | 1 | 19_15814923 | ENSG00000186723 | OR10H1 | 0 | INTRON | -4.3715373 | 1.23E-05 | 0.02330219 |
| 17 | 39875380 | 39875380 | 1 | 17_39875380 | ENSG00000186075 | ZPBP2 | 0 | EXON | 4.37148253 | 1.23E-05 | 0.02330219 |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | 130077189 | 130077189 | 1 | 8_130077189 | ENSG00000153317 | ASAP1 | 0 | INTRON | 4.37147276 | 1.23E-05 | 0.02330219 |
| 1 | 240625982 | 240625982 | 1 | 1_240625982 | ENSG00000228844 | AL358176.3 | 10616 | Downstream | 4.37146646 | 1.23E-05 | 0.02330219 |
| 2 | 160752117 | 160752117 | 1 | 2_160752117 | ENSG00000279844 | AC096656.1 | 97195 | Downstream | -4.371436 | 1.23E-05 | 0.02330285 |
| 3 | 178172447 | 178172447 | 1 | 3_178172447 | ENSG00000286003 | AC110992.1 | 0 | EXON | 4.37132996 | 1.23E-05 | 0.02331064 |
| 11 | 76653494 | 76653494 | 1 | 11_76653494 | ENSG00000254810 | AP001189.3 | 674 | Downstream | -4.3713146 | 1.24E-05 | 0.02331064 |
| 16 | 21445096 | 21445096 | 1 | 16_21445096 | ENSG00000169246 | NPIPB3 | 0 | INTRON | 4.37122555 | 1.24E-05 | 0.02331621 |
| 7 | 154223745 | 154223745 | 1 | 7_154223745 | ENSG00000130226 | DPP6 | 0 | INTRON | 4.37121409 | 1.24E-05 | 0.02331621 |
| 10 | 44152865 | 44152865 | 1 | 10_44152865 | ENSG00000237590 | AL137026.2 | 106736 | Downstream | -4.3710983 | 1.24E-05 | 0.02332465 |
| 4 | 77170209 | 77170209 | 1 | 4_77170209 | ENSG00000138764 | CCNG2 | 0 | INTRON | 4.37108666 | 1.24E-05 | 0.02332465 |
| 4 | 185384674 | 185384674 | 1 | 4_185384674 | ENSG00000250410 | AC112722.1 | 0 | INTRON | 4.37103708 | 1.24E-05 | 0.02332736 |
| 4 | 76918146 | 76918146 | 1 | 4_76918146 | ENSG00000186212 | SOWAHB | 20002 | Upstream | -4.370965 | 1.24E-05 | 0.0233303 |
| 12 | 3172910 | 3172910 | 1 | 12_3172910 | ENSG00000275850 | AC005912.2 | 0 | EXON | -4.3709611 | 1.24E-05 | 0.0233303 |
| 8 | 5451476 | 5451476 | 1 | 8_5451476 | ENSG00000271248 | AC091193.1 | 3741 | Downstream | -4.3709321 | 1.24E-05 | 0.02333082 |
| 8 | 100365484 | 100365484 | 1 | 8_100365484 | ENSG00000253217 | AP001574.1 | 14777 | Downstream | 4.37081831 | 1.24E-05 | 0.02333791 |
| 5 | 69918828 | 69918828 | 1 | 5_69918828 | ENSG00000198237 | AC131392.1 | 0 | INTRON | 4.37079282 | 1.24E-05 | 0.02333791 |
| 21 | 30357885 | 30357885 | 1 | 21_30357885 | ENSG00000250973 | KRTAP13-6P | 1000 | Upstream | 4.37078074 | 1.24E-05 | 0.02333791 |
| X | 52240655 | 52240655 | 1 | X_52240655 | ENSG00000287215 | AC231759.2 | 0 | INTRON | 4.37072967 | 1.24E-05 | 0.02333791 |
| 1 | 95129479 | 95129479 | 1 | 1_95129479 | ENSG00000152078 | TLCD4 | 0 | INTRON | 4.37070245 | 1.24E-05 | 0.02333791 |
| 16 | 14778692 | 14778692 | 1 | 16_14778692 | ENSG00000255037 | AC136443.2 | 8617 | Upstream | -4.3706819 | 1.24E-05 | 0.02333791 |
| 16 | 3843919 | 3843919 | 1 | 16_3843919 | ENSG00000005339 | CREBBP | 0 | INTRON | -4.3706623 | 1.24E-05 | 0.02333791 |
| 9 | 121206560 | 121206560 | 1 | 9_121206560 | ENSG00000119396 | RAB14 | 0 | INTRON | 4.37064771 | 1.24E-05 | 0.02333791 |
| 22 | 40207280 | 40207280 | 1 | 22_40207280 | ENSG00000100354 | TNRC6B | 0 | INTRON | -4.3706359 | 1.24E-05 | 0.02333791 |
| 11 | 66311064 | 66311064 | 1 | 11_66311064 | ENSG00000254458 | AP001107.3 | 1788 | Upstream | 4.37062394 | 1.24E-05 | 0.02333791 |
| 1 | 63479607 | 63479607 | 1 | 1_63479607 | ENSG00000142856 | ITGB3BP | 0 | INTRON | -4.3704865 | 1.24E-05 | 0.02335002 |
| 3 | 8657845 | 8657845 | 1 | 3_8657845 | ENSG00000125046 | SSUH2 | 0 | INTRON | -4.370445 | 1.24E-05 | 0.02335188 |
| 18 | 60675835 | 60675835 | 1 | 18_60675835 | ENSG00000267098 | AC113137.1 | 0 | INTRON | -4.3704023 | 1.24E-05 | 0.02335353 |
| 9 | 119953618 | 119953618 | 1 | 9_119953618 | ENSG00000261432 | LINC01613 | 15786 | Downstream | -4.3703812 | 1.24E-05 | 0.02335353 |
| 2 | 197380410 | 197380410 | 1 | 2_197380410 | ENSG00000213104 | NPM1P46 | 0 | INTRON | 4.37033402 | 1.24E-05 | 0.02335514 |
| 7 | 103554951 | 103554951 | 1 | 7_103554951 | ENSG00000189056 | RELN | 0 | INTRON | -4.370289 | 1.24E-05 | 0.02335514 |
| 17 | 5170058 | 5170058 | 1 | 17_5170058 | ENSG00000129204 | USP6 | 0 | INTRON | 4.37028561 | 1.24E-05 | 0.02335514 |
| 7 | 52591435 | 52591435 | 1 | 7_52591435 | ENSG00000286908 | AC006459.1 | 88001 | Downstream | 4.37025888 | 1.24E-05 | 0.02335514 |
| 7 | 134835920 | 134835920 | 1 | 7_134835920 | ENSG00000122786 | CALD1 | 0 | INTRON | 4.37024537 | 1.24E-05 | 0.02335514 |
| 20 | 49145196 | 49145196 | 1 | 20_49145196 | ENSG00000124214 | STAU1 | 0 | INTRON | -4.3702138 | 1.24E-05 | 0.02335593 |
| 14 | 48536508 | 48536508 | 1 | 14_48536508 | ENSG00000258751 | AL358335.2 | 44741 | Upstream | 4.3701596 | 1.24E-05 | 0.02335915 |
| 10 | 109887367 | 109887367 | 1 | 10_109887367 | ENSG00000108039 | XPNPEP1 | 0 | INTRON | 4.37008809 | 1.24E-05 | 0.02336421 |
| 11 | 26306209 | 26306209 | 1 | 11_26306209 | ENSG00000134343 | ANO3 | 0 | INTRON | 4.37005142 | 1.24E-05 | 0.02336555 |
| X | 105449515 | 105449515 | 1 | X_105449515 | ENSG00000189108 | IL1RAPL2 | 0 | INTRON | 4.36988845 | 1.24E-05 | 0.02338041 |
| 1 | 227133834 | 227133834 | 1 | 1_227133834 | ENSG00000143776 | CDC42BPA | 0 | INTRON | 4.36980267 | 1.24E-05 | 0.02338443 |
| 9 | 13241826 | 13241826 | 1 | 9_13241826 | ENSG00000107186 | MPDZ | 0 | INTRON | 4.36980263 | 1.24E-05 | 0.02338443 |
| 5 | 169260017 | 169260017 | 1 | 5_169260017 | ENSG00000184347 | SLIT3 | 0 | INTRON | -4.3697702 | 1.24E-05 | 0.02338532 |
| 8 | 20784001 | 20784001 | 1 | 8_20784001 | ENSG00000253300 | AC018541.1 | 83849 | Upstream | -4.3696235 | 1.24E-05 | 0.02339457 |
| 9 | 22607269 | 22607269 | 1 | 9_22607269 | ENSG00000234840 | LINC01239 | 38930 | Upstream | -4.3696116 | 1.24E-05 | 0.02339457 |
| 3 | 186863962 | 186863962 | 1 | 3_186863962 | ENSG00000181092 | ADIPOQ | 5499 | Downstream | 4.36960831 | 1.24E-05 | 0.02339457 |
| 16 | 34091214 | 34091214 | 1 | 16_34091214 | ENSG00000262561 | AC136932.1 | 29255 | Upstream | -4.3695633 | 1.24E-05 | 0.02339457 |
| 12 | 92377656 | 92377656 | 1 | 12_92377656 | ENSG00000277851 | LINC02391 | 13824 | Upstream | -4.3695633 | 1.24E-05 | 0.02339457 |
| 18 | 44839450 | 44839450 | 1 | 18_44839450 | ENSG00000152217 | SETBP1 | 0 | INTRON | -4.3695035 | 1.25E-05 | 0.02339581 |
| 19 | 40967028 | 40967028 | 1 | 19_40967028 | ENSG00000256612 | CYP2B7P | 16368 | Downstream | 4.36950348 | 1.25E-05 | 0.02339581 |
| 3 | 181992045 | 181992045 | 1 | 3_181992045 | ENSG00000242512 | LINC01206 | 0 | INTRON | 4.36940789 | 1.25E-05 | 0.02340346 |
| 16 | 32290377 | 32290377 | 1 | 16_32290377 | ENSG00000261127 | AC133548.2 | 0 | EXON | 4.36933125 | 1.25E-05 | 0.02340909 |
| 13 | 33274881 | 33274881 | 1 | 13_33274881 | ENSG00000236581 | STARD13-AS | 0 | INTRON | 4.3692539 | 1.25E-05 | 0.0234148 |
| 10 | 94595056 | 94595056 | 1 | 10_94595056 | ENSG00000119969 | HELLS | 0 | INTRON | 4.3691894 | 1.25E-05 | 0.02341913 |
| 14 | 77977080 | 77977080 | 1 | 14_77977080 | ENSG00000063761 | ADCK1 | 42066 | Downstream | 4.36905433 | 1.25E-05 | 0.02343104 |
| 9 | 127566877 | 127566877 | 1 | 9_127566877 | ENSG00000136830 | NIBAN2 | 0 | INTRON | 4.36895973 | 1.25E-05 | 0.0234386 |
| 7 | 154593649 | 154593649 | 1 | 7_154593649 | ENSG00000130226 | DPP6 | 0 | INTRON | 4.36886694 | 1.25E-05 | 0.02344278 |
| X | 49343432 | 49343432 | 1 | X_49343432 | ENSG00000275113 | GAGE2E | 0 | INTRON | -4.3688525 | 1.25E-05 | 0.02344278 |
| 19 | 2696997 | 2696997 | 1 | 19_2696997 | ENSG00000176533 | GNG7 | 0 | INTRON | 4.3688485 | 1.25E-05 | 0.02344278 |
| 9 | 93173300 | 93173300 | 1 | 9_93173300 | ENSG00000165238 | WNK2 | 11615 | Upstream | -4.3688123 | 1.25E-05 | 0.02344408 |
| 2 | 202219300 | 202219300 | 1 | 2_202219300 | ENSG00000116030 | SUMO1 | 0 | INTRON | 4.36877925 | 1.25E-05 | 0.02344504 |
| X | 72138172 | 72138172 | 1 | X_72138172 | ENSG00000204131 | NHSL2 | 0 | INTRON | -4.3687264 | 1.25E-05 | 0.02344812 |
| 8 | 70175526 | 70175526 | 1 | 8_70175526 | ENSG00000140396 | NCOA2 | 0 | INTRON | 4.36867567 | 1.25E-05 | 0.02345099 |
| 4 | 33633033 | 33633033 | 1 | 4_33633033 | ENSG00000288321 | AC079772.1 | 0 | INTRON | 4.3686478 | 1.25E-05 | 0.0234514 |
| 20 | 58469740 | 58469740 | 1 | 20_58469740 | ENSG00000198768 | APCDD1L | 0 | INTRON | 4.36847209 | 1.25E-05 | 0.02346538 |
| 8 | 112570314 | 112570314 | 1 | 8_112570314 | ENSG00000164796 | CSMD3 | 0 | INTRON | 4.36846946 | 1.25E-05 | 0.02346538 |
| 13 | 94780611 | 94780611 | 1 | 13_94780611 | ENSG00000227640 | SOX21-AS1 | 0 | INTRON | -4.3684382 | 1.25E-05 | 0.02346615 |
| 16 | 21593066 | 21593066 | 1 | 16_21593066 | ENSG00000197006 | METTL9 | 4151 | Upstream | 4.36840997 | 1.25E-05 | 0.0234666 |
| 10 | 70905010 | 70905010 | 1 | 10_70905010 | ENSG00000166228 | PCBD1 | 16445 | Upstream | 4.36834426 | 1.25E-05 | 0.02347107 |
| 10 | 99662159 | 99662159 | 1 | 10_99662159 | ENSG00000198018 | ENTPD7 | 0 | INTRON | 4.36827455 | 1.25E-05 | 0.02347597 |
| 9 | 69410649 | 69410649 | 1 | 9_69410649 | ENSG00000107282 | APBA1 | 16882 | Downstream | 4.36822748 | 1.25E-05 | 0.02347845 |
| 4 | 13703617 | 13703617 | 1 | 4_13703617 | ENSG00000250634 | LINC01182 | 0 | INTRON | 4.36817158 | 1.25E-05 | 0.02348187 |
| 19 | 56190059 | 56190059 | 1 | 19_56190059 | ENSG00000197213 | ZSCAN5B | 0 | EXON | 4.36808713 | 1.25E-05 | 0.02348375 |
| 1 | 229641081 | 229641081 | 1 | 1_229641081 | ENSG00000135763 | URB2 | 0 | INTRON | -4.3680674 | 1.25E-05 | 0.02348375 |
| 14 | 102426106 | 102426106 | 1 | 14_102426106 | ENSG00000196663 | TECPR2 | 0 | INTRON | -4.368059 | 1.25E-05 | 0.02348375 |
| 2 | 100640101 | 100640101 | 1 | 2_100640101 | ENSG00000287832 | AC092845.1 | 2342 | Downstream | -4.3680578 | 1.25E-05 | 0.02348375 |
| 19 | 55162580 | 55162580 | 1 | 19_55162580 | ENSG00000267577 | AC010327.4 | 0 | INTRON | 4.36802238 | 1.25E-05 | 0.02348385 |
| 16 | 1944772 | 1944772 | 1 | 16_1944772 | ENSG00000140986 | RPL3L | 0 | 3UTR | -4.3679982 | 1.25E-05 | 0.02348385 |
| 2 | 134784580 | 134784580 | 1 | 2_134784580 | ENSG00000224043 | CCNT2-AS1 | 0 | INTRON | -4.3679662 | 1.25E-05 | 0.02348385 |
| 12 | 90232599 | 90232599 | 1 | 12_90232599 | ENSG00000258183 | LINC02392 | 48294 | Upstream | 4.36795858 | 1.25E-05 | 0.02348385 |
| 8 | 81758995 | 81758995 | 1 | 8_81758995 | ENSG00000164695 | CHMP4C | 0 | 3UTR | 4.36792449 | 1.25E-05 | 0.02348385 |
| 18 | 10888 | 10888 | 1 | 18_10888 | ENSG00000262352 | LINC02564 | 214 | Upstream | -4.3679092 | 1.25E-05 | 0.02348385 |
| 12 | 59168212 | 59168212 | 1 | 12_59168212 | ENSG00000286351 | AC046129.1 | 37337 | Downstream | -4.3678799 | 1.25E-05 | 0.02348385 |
| 9 | 73898374 | 73898374 | 1 | 9_73898374 | ENSG00000223368 | AL513124.1 | 25077 | Upstream | 4.36786459 | 1.25E-05 | 0.02348385 |
| 13 | 47720969 | 47720969 | 1 | 13_47720969 | ENSG00000136143 | SUCLA2 | 24766 | Downstream | 4.36781594 | 1.25E-05 | 0.02348567 |
| 15 | 20543966 | 20543966 | 1 | 15_20543966 | ENSG00000258797 | AC023310.3 | 1609 | Downstream | -4.3677828 | 1.26E-05 | 0.02348567 |
| 17 | 15923565 | 15923565 | 1 | 17_15923565 | ENSG00000227790 | SPECC1P1 | 14933 | Downstream | -4.3677756 | 1.26E-05 | 0.02348567 |
| 20 | 25383911 | 25383911 | 1 | 20_25383911 | ENSG00000100997 | ABHD12 | 0 | INTRON | 4.36763738 | 1.26E-05 | 0.02349721 |

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| 1 | 238610855 | 238610855 | 1 | 1_238610855 | ENSG00000231877 | AL359551.1 | 72550 | Downstream | -4.3675252 | 1.26E-05 | 0.02350231 |
| 9 | 133371109 | 133371109 | 1 | 9_133371109 | ENSG00000148248 | SURF4 | 0 | INTRON | -4.3675027 | 1.26E-05 | 0.02350231 |
| 6 | 46951617 | 46951617 | 1 | 6_46951617 | ENSG00000069122 | ADGRF5 | 0 | INTRON | 4.36746226 | 1.26E-05 | 0.02350231 |
| 15 | 51919474 | 51919474 | 1 | 15_51919474 | ENSG00000259556 | AC090971.3 | 0 | INTRON | -4.3674488 | 1.26E-05 | 0.02350231 |
| 18 | 32628735 | 32628735 | 1 | 18_32628735 | ENSG00000285095 | AC025887.2 | 0 | INTRON | 4.36744514 | 1.26E-05 | 0.02350231 |
| 1 | 79565258 | 79565258 | 1 | 1_79565258 | ENSG00000232676 | ADH5P2 | 43055 | Downstream | -4.3674027 | 1.26E-05 | 0.02350231 |
| 13 | 105412886 | 105412886 | 1 | 13_105412886 | ENSG00000286929 | AL138954.1 | 0 | INTRON | 4.36740167 | 1.26E-05 | 0.02350231 |
| 2 | 194100713 | 194100713 | 1 | 2_194100713 | ENSG00000215043 | GLULP6 | 28640 | Downstream | -4.3673807 | 1.26E-05 | 0.02350231 |
| 13 | 23907198 | 23907198 | 1 | 13_23907198 | ENSG00000205863 | C1QTNF9B | 4543 | Upstream | -4.3671961 | 1.26E-05 | 0.0235196 |
| X | 58238258 | 58238258 | 1 | X_58238258 | ENSG00000235124 | KRT8P17 | 252125 | Downstream | -4.367089 | 1.26E-05 | 0.02352854 |
| 12 | 11832544 | 11832544 | 1 | 12_11832544 | ENSG00000139083 | ETV6 | 0 | INTRON | -4.3670134 | 1.26E-05 | 0.0235321 |
| 7 | 79425183 | 79425183 | 1 | 7_79425183 | ENSG00000187391 | MAGI2 | 0 | INTRON | 4.36700801 | 1.26E-05 | 0.0235321 |
| 15 | 77994179 | 77994179 | 1 | 15_77994179 | ENSG00000167202 | TBC1D2B | 0 | INTRON | 4.36696855 | 1.26E-05 | 0.02353376 |
| 1 | 97065609 | 97065609 | 1 | 1_97065609 | ENSG00000188641 | DPYD | 12133 | Downstream | -4.3669446 | 1.26E-05 | 0.02353376 |
| 8 | 112686744 | 112686744 | 1 | 8_112686744 | ENSG00000164796 | CSMD3 | 0 | INTRON | 4.36688777 | 1.26E-05 | 0.0235373 |
| 2 | 143806967 | 143806967 | 1 | 2_143806967 | ENSG00000236356 | AC079584.1 | 0 | INTRON | -4.3668459 | 1.26E-05 | 0.02353923 |
| 8 | 50865936 | 50865936 | 1 | 8_50865936 | ENSG00000253340 | AC087272.1 | 5874 | Downstream | 4.36675337 | 1.26E-05 | 0.02354661 |
| 13 | 48655991 | 48655991 | 1 | 13_48655991 | ENSG00000152207 | CYSLTR2 | 0 | INTRON | -4.3666586 | 1.26E-05 | 0.02355424 |
| 7 | 139977143 | 139977143 | 1 | 7_139977143 | ENSG00000059377 | TBXAS1 | 0 | INTRON | 4.36660623 | 1.26E-05 | 0.0235573 |
| 6 | 166226562 | 166226562 | 1 | 6_166226562 | ENSG00000280991 | AL121956.5 | 2771 | Upstream | -4.3665674 | 1.26E-05 | 0.0235589 |
| 11 | 18815273 | 18815273 | 1 | 11_18815273 | ENSG00000276789 | MRGPRX8P | 21030 | Upstream | -4.3665431 | 1.26E-05 | 0.02355894 |
| 7 | 149006036 | 149006036 | 1 | 7_149006036 | ENSG00000155660 | PDIA4 | 0 | EXON | 4.36650338 | 1.26E-05 | 0.02356064 |
| 7 | 80737134 | 80737134 | 1 | 7_80737134 | ENSG00000075223 | SEMA3C | 5403 | Downstream | 4.36647871 | 1.26E-05 | 0.02356071 |
| 17 | 58959471 | 58959471 | 1 | 17_58959471 | ENSG00000175175 | PPM1E | 0 | INTRON | -4.3664072 | 1.26E-05 | 0.02356537 |
| 17 | 28246013 | 28246013 | 1 | 17_28246013 | ENSG00000266830 | AC061975.6 | 440 | Downstream | -4.3663876 | 1.26E-05 | 0.02356537 |
| 3 | 162223100 | 162223100 | 1 | 3_162223100 | ENSG00000241874 | TOMM22P6 | 263440 | Downstream | -4.366276 | 1.26E-05 | 0.02357482 |
| 2 | 28835342 | 28835342 | 1 | 2_28835342 | ENSG00000163806 | SPDYA | 0 | INTRON | 4.36613389 | 1.26E-05 | 0.02358757 |
| X | 23719194 | 23719194 | 1 | X_23719194 | ENSG00000123130 | ACOT9 | 0 | INTRON | -4.3660567 | 1.27E-05 | 0.02359332 |
| 12 | 74547916 | 74547916 | 1 | 12_74547916 | ENSG00000253719 | ATXN7L3B | 2486 | Downstream | 4.36601494 | 1.27E-05 | 0.02359524 |
| 5 | 180057006 | 180057006 | 1 | 5_180057006 | ENSG00000113269 | RNF130 | 0 | INTRON | 4.36587178 | 1.27E-05 | 0.02360811 |
| 13 | 22784828 | 22784828 | 1 | 13_22784828 | ENSG00000253094 | SNORD36 | 18316 | Upstream | 4.36580593 | 1.27E-05 | 0.02361264 |
| 15 | 75623444 | 75623444 | 1 | 15_75623444 | ENSG00000169371 | SNUPN | 0 | INTRON | 4.36575183 | 1.27E-05 | 0.0236159 |
| 2 | 227790917 | 227790917 | 1 | 2_227790917 | ENSG00000229172 | AC073065.1 | 10922 | Upstream | 4.36569559 | 1.27E-05 | 0.02361939 |
| 12 | 97319408 | 97319408 | 1 | 12_97319408 | ENSG00000257920 | LINC02409 | 43199 | Upstream | 4.36558185 | 1.27E-05 | 0.0236262 |
| 8 | 144064237 | 144064237 | 1 | 8_144064237 | ENSG00000178814 | OPLAH | 272 | Upstream | -4.365554 | 1.27E-05 | 0.0236262 |
| 1 | 239414578 | 239414578 | 1 | 1_239414578 | ENSG00000133019 | CHRM3 | 0 | INTRON | 4.36551156 | 1.27E-05 | 0.0236262 |
| 2 | 2962238 | 2962238 | 1 | 2_2962238 | ENSG00000234423 | LINC01250 | 0 | INTRON | 4.36546641 | 1.27E-05 | 0.0236262 |
| 6 | 51341875 | 51341875 | 1 | 6_51341875 | ENSG00000270306 | AL158050.2 | 43406 | Downstream | 4.36546139 | 1.27E-05 | 0.0236262 |
| 7 | 16847283 | 16847283 | 1 | 7_16847283 | ENSG00000270593 | AC073333.2 | 2673 | Downstream | 4.36545544 | 1.27E-05 | 0.0236262 |
| 2 | 213391246 | 213391246 | 1 | 2_213391246 | ENSG00000144451 | SPAG16 | 0 | INTRON | 4.36544608 | 1.27E-05 | 0.0236262 |
| 1 | 10996083 | 10996083 | 1 | 1_10996083 | ENSG00000215785 | CFL1P6 | 4286 | Upstream | 4.36544117 | 1.27E-05 | 0.0236262 |
| 11 | 30258318 | 30258318 | 1 | 11_30258318 | ENSG00000254532 | AL358944.1 | 0 | INTRON | -4.3654051 | 1.27E-05 | 0.02362751 |
| 8 | 60611814 | 60611814 | 1 | 8_60611814 | ENSG00000104388 | RAB2A | 0 | INTRON | 4.3653743 | 1.27E-05 | 0.02362825 |
| 11 | 26261643 | 26261643 | 1 | 11_26261643 | ENSG00000287227 | AC021698.1 | 0 | INTRON | -4.3652302 | 1.27E-05 | 0.02364125 |
| 17 | 44341076 | 44341076 | 1 | 17_44341076 | ENSG00000030582 | GRN | 4169 | Upstream | 4.3650866 | 1.27E-05 | 0.02364962 |
| 19 | 18122473 | 18122473 | 1 | 19_18122473 | ENSG00000099308 | MAST3 | 0 | INTRON | -4.3650653 | 1.27E-05 | 0.02364962 |
| 8 | 69673966 | 69673966 | 1 | 8_69673966 | ENSG00000137571 | SLCO5A1 | 0 | INTRON | 4.36506503 | 1.27E-05 | 0.02364962 |
| 1 | 89678654 | 89678654 | 1 | 1_89678654 | ENSG00000271949 | AC093423.3 | 0 | INTRON | 4.36505714 | 1.27E-05 | 0.02364962 |
| 8 | 24582259 | 24582259 | 1 | 8_24582259 | ENSG00000253535 | AC120193.1 | 0 | INTRON | 4.36492004 | 1.27E-05 | 0.02366187 |
| 18 | 78850090 | 78850090 | 1 | 18_78850090 | ENSG00000266273 | AC044873.1 | 53418 | Upstream | 4.36487904 | 1.27E-05 | 0.02366372 |
| 3 | 39590224 | 39590224 | 1 | 3_39590224 | ENSG00000230757 | NFU1P1 | 53413 | Upstream | 4.36482883 | 1.27E-05 | 0.02366657 |
| 17 | 11081043 | 11081043 | 1 | 17_11081043 | ENSG00000243346 | RN7SL601P | 76411 | Upstream | 4.36474904 | 1.27E-05 | 0.02367262 |
| 1 | 100311412 | 100311412 | 1 | 1_100311412 | ENSG00000137996 | RTCA | 18643 | Downstream | -4.3647105 | 1.27E-05 | 0.0236742 |
| 8 | 126066846 | 126066846 | 1 | 8_126066846 | ENSG00000245164 | LINC00861 | 0 | INTRON | -4.3646733 | 1.27E-05 | 0.02367498 |
| 10 | 14972485 | 14972485 | 1 | 10_14972485 | ENSG00000197889 | MEIG1 | 0 | INTRON | 4.3646556 | 1.27E-05 | 0.02367498 |
| 5 | 19239847 | 19239847 | 1 | 5_19239847 | ENSG00000249557 | HSPD1P15 | 5360 | Downstream | 4.36462022 | 1.27E-05 | 0.02367607 |
| 19 | 18268031 | 18268031 | 1 | 19_18268031 | ENSG00000130518 | IQCN | 0 | INTRON | 4.3645978 | 1.27E-05 | 0.02367607 |
| 3 | 49393535 | 49393535 | 1 | 3_49393535 | ENSG00000067560 | RHOA | 0 | INTRON | 4.36442553 | 1.27E-05 | 0.0236874 |
| 9 | 39471817 | 39471817 | 1 | 9_39471817 | ENSG00000198416 | ZNF658B | 0 | INTRON | -4.3643757 | 1.27E-05 | 0.0236874 |
| 9 | 88264083 | 88264083 | 1 | 9_88264083 | ENSG00000226327 | RPSAP49 | 60370 | Upstream | 4.36436696 | 1.27E-05 | 0.0236874 |
| 16 | 77639697 | 77639697 | 1 | 16_77639697 | ENSG00000278862 | AC092724.1 | 17476 | Upstream | 4.36435719 | 1.27E-05 | 0.0236874 |
| 4 | 19592750 | 19592750 | 1 | 4_19592750 | ENSG00000248515 | AC024230.1 | 0 | INTRON | -4.364334 | 1.28E-05 | 0.0236874 |
| 17 | 57436201 | 57436201 | 1 | 17_57436201 | ENSG00000153944 | MSI2 | 0 | INTRON | 4.36431536 | 1.28E-05 | 0.0236874 |
| 14 | 86624793 | 86624793 | 1 | 14_86624793 | ENSG00000258994 | LINC02309 | 223508 | Downstream | -4.3642822 | 1.28E-05 | 0.0236874 |
| 12 | 80080448 | 80080448 | 1 | 12_80080448 | ENSG00000238842 | RNU7-106P | 11691 | Upstream | -4.364278 | 1.28E-05 | 0.0236874 |
| 7 | 9610587 | 9610587 | 1 | 7_9610587 | ENSG00000233876 | GAPDHP68 | 4390 | Upstream | 4.36426013 | 1.28E-05 | 0.0236874 |
| 11 | 32229765 | 32229765 | 1 | 11_32229765 | ENSG00000227160 | THEM7P | 0 | EXON | 4.36425448 | 1.28E-05 | 0.0236874 |
| 4 | 2776120 | 2776120 | 1 | 4_2776120 | ENSG00000087266 | SH3BP2 | 16950 | Upstream | 4.36407836 | 1.28E-05 | 0.02370378 |
| 6 | 68013110 | 68013110 | 1 | 6_68013110 | ENSG00000287557 | AL713998.4 | 14359 | Downstream | 4.36405561 | 1.28E-05 | 0.02370378 |
| 18 | 65626044 | 65626044 | 1 | 18_65626044 | ENSG00000265217 | AC090358.1 | 0 | INTRON | -4.3639364 | 1.28E-05 | 0.02371252 |
| 13 | 28419645 | 28419645 | 1 | 13_28419645 | ENSG00000102755 | FLT1 | 0 | INTRON | 4.36392732 | 1.28E-05 | 0.02371252 |
| 7 | 97106735 | 97106735 | 1 | 7_97106735 | ENSG00000196636 | SDHAF3 | 9854 | Upstream | 4.36379572 | 1.28E-05 | 0.0237242 |
| 17 | 3396267 | 3396267 | 1 | 17_3396267 | ENSG00000180016 | OR1E1 | 836 | Downstream | -4.3637545 | 1.28E-05 | 0.02372609 |
| 12 | 18854120 | 18854120 | 1 | 12_18854120 | ENSG00000177938 | CAPZA3 | 114932 | Downstream | -4.3636446 | 1.28E-05 | 0.02373499 |
| 1 | 188310855 | 188310855 | 1 | 1_188310855 | ENSG00000224278 | AL592447.1 | 68177 | Upstream | 4.36362481 | 1.28E-05 | 0.02373499 |
| 1 | 214043405 | 214043405 | 1 | 1_214043405 | ENSG00000117707 | PROX1 | 1895 | Downstream | 4.3634974 | 1.28E-05 | 0.02373678 |
| 5 | 35299648 | 35299648 | 1 | 5_35299648 | ENSG00000113494 | PRLR | 69161 | Upstream | -4.3634818 | 1.28E-05 | 0.02373678 |
| 14 | 47655511 | 47655511 | 1 | 14_47655511 | ENSG00000139915 | MDGA2 | 0 | INTRON | -4.3634698 | 1.28E-05 | 0.02373678 |
| 7 | 28419324 | 28419324 | 1 | 7_28419324 | ENSG00000146592 | CREB5 | 0 | INTRON | 4.36346743 | 1.28E-05 | 0.02373678 |
| X | 36766016 | 36766016 | 1 | X_36766016 | ENSG00000286475 | AL592156.2 | 0 | INTRON | -4.363455 | 1.28E-05 | 0.02373678 |
| 10 | 116883990 | 116883990 | 1 | 10_116883990 | ENSG00000187164 | SHTN1 | 0 | 3UTR | -4.3634351 | 1.28E-05 | 0.02373678 |
| 3 | 52018637 | 52018637 | 1 | 3_52018637 | ENSG00000162244 | RPL29 | 22742 | Upstream | 4.3634329 | 1.28E-05 | 0.02373678 |
| 8 | 115441700 | 115441700 | 1 | 8_115441700 | ENSG00000104447 | TRPS1 | 0 | INTRON | -4.3634177 | 1.28E-05 | 0.02373678 |
| 2 | 59704620 | 59704620 | 1 | 2_59704620 | ENSG00000271955 | AC007100.1 | 0 | INTRON | 4.3633803 | 1.28E-05 | 0.02373825 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | 46669101 | 46669101 | 1 | 3_46669101 | ENSG00000178038 | ALS2CL | 0 | 3UTR | 4.36334909 | 1.28E-05 | 0.02373905 |
| 19 | 5385819 | 5385819 | 1 | 19_5385819 | ENSG00000105426 | PTPRS | 45016 | Upstream | 4.3632696 | 1.28E-05 | 0.02374376 |
| 8 | 12212421 | 12212421 | 1 | 8_12212421 | ENSG00000254527 | ENPP7P12 | 6032 | Upstream | -4.3632581 | 1.28E-05 | 0.02374376 |
| 21 | 9825266 | 9825266 | 1 | 21_9825266 | ENSG00000280081 | LINC01667 | 0 | INTRON | 4.36320782 | 1.28E-05 | 0.02374663 |
| 3 | 77865456 | 77865456 | 1 | 3_77865456 | ENSG00000206891 | RNU6-217P | 53612 | Upstream | 4.36313796 | 1.28E-05 | 0.02374947 |
| 4 | 182676910 | 182676910 | 1 | 4_182676910 | ENSG00000218336 | TENM3 | 0 | INTRON | 4.36313409 | 1.28E-05 | 0.02374947 |
| 13 | 73206372 | 73206372 | 1 | 13_73206372 | ENSG00000201253 | RNU4-10P | 14705 | Downstream | 4.36306141 | 1.28E-05 | 0.02375436 |
| 7 | 107690940 | 107690940 | 1 | 7_107690940 | ENSG00000091137 | SLC26A4 | 0 | INTRON | 4.36304147 | 1.28E-05 | 0.02375436 |
| 12 | 4532217 | 4532217 | 1 | 12_4532217 | ENSG00000047621 | C12orf4 | 0 | INTRON | -4.3628946 | 1.28E-05 | 0.02376772 |
| 10 | 75949463 | 75949463 | 1 | 10_75949463 | ENSG00000148655 | LRMDA | 0 | INTRON | 4.36285479 | 1.28E-05 | 0.02376897 |
| 13 | 42525606 | 42525606 | 1 | 13_42525606 | ENSG00000120659 | TNFSF11 | 37129 | Upstream | -4.3628356 | 1.28E-05 | 0.02376897 |
| 22 | 48234838 | 48234838 | 1 | 22_48234838 | ENSG00000285707 | AL008720.1 | 20064 | Downstream | 4.36277228 | 1.28E-05 | 0.02377112 |
| 17 | 2696734 | 2696734 | 1 | 17_2696734 | ENSG00000132361 | CLUH | 0 | EXON | -4.362757 | 1.28E-05 | 0.02377112 |
| 15 | 26407846 | 26407846 | 1 | 15_26407846 | ENSG00000287280 | AC009878.2 | 0 | INTRON | -4.3627427 | 1.28E-05 | 0.02377112 |
| 15 | 97742131 | 97742131 | 1 | 15_97742131 | ENSG00000251209 | LINC00923 | 0 | INTRON | -4.3626872 | 1.28E-05 | 0.02377112 |
| 13 | 71656538 | 71656538 | 1 | 13_71656538 | ENSG00000276644 | DACH1 | 0 | INTRON | 4.36266975 | 1.28E-05 | 0.02377112 |
| 11 | 36488549 | 36488549 | 1 | 11_36488549 | ENSG00000175104 | TRAF6 | 0 | 3UTR | -4.3626479 | 1.28E-05 | 0.02377112 |
| 22 | 31152381 | 31152381 | 1 | 22_31152381 | ENSG00000214125 | AC005005.1 | 3584 | Downstream | 4.36262596 | 1.29E-05 | 0.02377112 |
| 2 | 230099554 | 230099554 | 1 | 2_230099554 | ENSG00000225963 | AC009950.1 | 21815 | Upstream | -4.3626233 | 1.29E-05 | 0.02377112 |
| 3 | 156678939 | 156678939 | 1 | 3_156678939 | ENSG00000163659 | TIPARP | 0 | INTRON | -4.362579 | 1.29E-05 | 0.02377112 |
| 2 | 118991380 | 118991380 | 1 | 2_118991380 | ENSG00000019169 | MARCO | 0 | INTRON | -4.362578 | 1.29E-05 | 0.02377112 |
| 7 | 140324634 | 140324634 | 1 | 7_140324634 | ENSG00000157800 | SLC37A3 | 0 | INTRON | 4.36255046 | 1.29E-05 | 0.02377153 |
| 14 | 23230392 | 23230392 | 1 | 14_23230392 | ENSG00000215277 | RNF212B | 0 | INTRON | 4.36245388 | 1.29E-05 | 0.02377944 |
| 2 | 101270244 | 101270244 | 1 | 2_101270244 | ENSG00000158435 | CNOT11 | 0 | 3UTR | -4.3623941 | 1.29E-05 | 0.02378336 |
| 21 | 7919245 | 7919245 | 1 | 21_7919245 | ENSG00000276289 | KCNE1B | 89319 | Upstream | -4.3622745 | 1.29E-05 | 0.02379379 |
| 1 | 9287464 | 9287464 | 1 | 1_9287464 | ENSG00000171621 | SPSB1 | 5429 | Upstream | -4.3621945 | 1.29E-05 | 0.02379852 |
| 9 | 130788887 | 130788887 | 1 | 9_130788887 | ENSG00000097007 | ABL1 | 0 | INTRON | 4.36218343 | 1.29E-05 | 0.02379852 |
| 2 | 182803643 | 182803643 | 1 | 2_182803643 | ENSG00000077232 | DNAJC10 | 9179 | Downstream | -4.3621405 | 1.29E-05 | 0.02380061 |
| 9 | 19416812 | 19416812 | 1 | 9_19416812 | ENSG00000177076 | ACER2 | 0 | INTRON | -4.3619889 | 1.29E-05 | 0.02381452 |
| 14 | 87976586 | 87976586 | 1 | 14_87976586 | ENSG00000054983 | GALC | 0 | EXON | 4.36194763 | 1.29E-05 | 0.02381643 |
| 1 | 181752192 | 181752192 | 1 | 1_181752192 | ENSG00000198216 | CACNA1E | 0 | EXON | -4.3619156 | 1.29E-05 | 0.02381733 |
| 14 | 80250515 | 80250515 | 1 | 14_80250515 | ENSG00000211448 | DIO2 | 0 | INTRON | -4.361836 | 1.29E-05 | 0.02382268 |
| 2 | 75693347 | 75693347 | 1 | 2_75693347 | ENSG00000005436 | GCFC2 | 0 | INTRON | 4.36180899 | 1.29E-05 | 0.02382268 |
| 9 | 88776094 | 88776094 | 1 | 9_88776094 | ENSG00000286414 | AL390791.1 | 0 | INTRON | 4.36179528 | 1.29E-05 | 0.02382268 |
| 16 | 36182890 | 36182890 | 1 | 16_36182890 | ENSG00000261084 | PPP1R1AP2 | 270374 | Downstream | -4.3617487 | 1.29E-05 | 0.02382517 |
| X | 55338313 | 55338313 | 1 | X_55338313 | ENSG00000232765 | AL158819.1 | 49528 | Downstream | -4.3616901 | 1.29E-05 | 0.02382896 |
| 2 | 230617729 | 230617729 | 1 | 2_230617729 | ENSG00000199791 | RNU6-451P | 30502 | Downstream | -4.3615499 | 1.29E-05 | 0.02383947 |
| 4 | 90822622 | 90822622 | 1 | 4_90822622 | ENSG00000184305 | CCSER1 | 0 | INTRON | 4.36154625 | 1.29E-05 | 0.02383947 |
| 3 | 175213180 | 175213180 | 1 | 3_175213180 | ENSG00000177694 | NAALADL2 | 0 | INTRON | -4.3614971 | 1.29E-05 | 0.02384164 |
| 2 | 225887578 | 225887578 | 1 | 2_225887578 | ENSG00000230621 | AC068138.1 | 105402 | Downstream | -4.3614789 | 1.29E-05 | 0.02384164 |
| 6 | 20477175 | 20477175 | 1 | 6_20477175 | ENSG00000112242 | E2F3 | 0 | INTRON | 4.36129031 | 1.29E-05 | 0.02385961 |
| Y | 26661413 | 26661413 | 1 | Y_26661413 | ENSG00000237917 | PARP4P1 | 26761 | Upstream | -4.3611559 | 1.29E-05 | 0.02387169 |
| 4 | 14834013 | 14834013 | 1 | 4_14834013 | ENSG00000248360 | LINC00504 | 0 | INTRON | 4.3609787 | 1.29E-05 | 0.02388844 |
| 7 | 105883010 | 105883010 | 1 | 7_105883010 | ENSG00000128536 | CDHR3 | 0 | INTRON | 4.36088245 | 1.30E-05 | 0.02389332 |
| 3 | 105652284 | 105652284 | 1 | 3_105652284 | ENSG00000114423 | CBLB | 3176 | Downstream | 4.36087247 | 1.30E-05 | 0.02389332 |
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| 22 | 26518441 | 26518441 | 1 | 22_26518441 | ENSG00000128294 | TPST2 | 3554 | Downstream | 4.3608391 | 1.30E-05 | 0.02389332 |
| 15 | 57828161 | 57828161 | 1 | 15_57828161 | ENSG00000255529 | POLR2M | 45399 | Downstream | 4.36078116 | 1.30E-05 | 0.02389706 |
| 1 | 26008052 | 26008052 | 1 | 1_26008052 | ENSG00000252691 | AL592064.2 | 1753 | Downstream | -4.3607405 | 1.30E-05 | 0.02389891 |
| 3 | 182815721 | 182815721 | 1 | 3_182815721 | ENSG00000058063 | ATP11B | 0 | INTRON | -4.360713 | 1.30E-05 | 0.02389932 |
| 6 | 14484996 | 14484996 | 1 | 6_14484996 | ENSG00000286277 | AL009177.1 | 0 | INTRON | -4.3605517 | 1.30E-05 | 0.02391436 |
| 8 | 65632384 | 65632384 | 1 | 8_65632384 | ENSG00000104442 | ARMC1 | 0 | INTRON | 4.3604906 | 1.30E-05 | 0.02391845 |
| 3 | 78505974 | 78505974 | 1 | 3_78505974 | ENSG00000239226 | MRPS17P3 | 19126 | Upstream | 4.36041064 | 1.30E-05 | 0.0239246 |
| 20 | 8867406 | 8867406 | 1 | 20_8867406 | ENSG00000182621 | PLCB1 | 0 | INTRON | 4.36038092 | 1.30E-05 | 0.02392526 |
| 11 | 65596600 | 65596600 | 1 | 11_65596600 | ENSG00000173338 | KCNK7 | 604 | Upstream | -4.3603392 | 1.30E-05 | 0.02392723 |
| 8 | 142139344 | 142139344 | 1 | 8_142139344 | ENSG00000287332 | AC103758.1 | 0 | INTRON | 4.36026909 | 1.30E-05 | 0.02393113 |
| 11 | 6000356 | 6000356 | 1 | 11_6000356 | ENSG00000183389 | OR56A4 | 0 | 3UTR | -4.3602561 | 1.30E-05 | 0.02393113 |
| 2 | 157407378 | 157407378 | 1 | 2_157407378 | ENSG00000115165 | CYTIP | 7240 | Downstream | 4.36020922 | 1.30E-05 | 0.02393367 |
| 2 | 9514251 | 9514251 | 1 | 2_9514251 | ENSG00000151694 | ADAM17 | 0 | INTRON | 4.36015619 | 1.30E-05 | 0.02393688 |
| 3 | 28800152 | 28800152 | 1 | 3_28800152 | ENSG00000283563 | AC098650.1 | 0 | INTRON | -4.3600883 | 1.30E-05 | 0.02394172 |
| 9 | 82231216 | 82231216 | 1 | 9_82231216 | ENSG00000228430 | AL162726.3 | 0 | INTRON | -4.3598527 | 1.30E-05 | 0.02396492 |
| 3 | 113077866 | 113077866 | 1 | 3_113077866 | ENSG00000240057 | AC078785.1 | 0 | INTRON | 4.35979042 | 1.30E-05 | 0.02396914 |
| 2 | 44129389 | 44129389 | 1 | 2_44129389 | ENSG00000252599 | RNU6-566P | 25399 | Downstream | 4.35969164 | 1.30E-05 | 0.02397674 |
| 5 | 123751489 | 123751489 | 1 | 5_123751489 | ENSG00000235275 | KRT18P16 | 114086 | Downstream | 4.35967371 | 1.30E-05 | 0.02397674 |
| 5 | 146964548 | 146964548 | 1 | 5_146964548 | ENSG00000156475 | PPP2R2B | 0 | INTRON | 4.35961462 | 1.30E-05 | 0.02398062 |
| 2 | 165109876 | 165109876 | 1 | 2_165109876 | ENSG00000153253 | SCN3A | 0 | INTRON | 4.35927079 | 1.30E-05 | 0.02401573 |
| 10 | 90863078 | 90863078 | 1 | 10_90863078 | ENSG00000148680 | HTR7 | 5039 | Upstream | 4.35920478 | 1.31E-05 | 0.02401748 |
| 16 | 17839925 | 17839925 | 1 | 16_17839925 | ENSG00000261555 | AC025277.1 | 13019 | Downstream | -4.3591886 | 1.31E-05 | 0.02401748 |
| 2 | 218285979 | 218285979 | 1 | 2_218285979 | ENSG00000135926 | TMBIM1 | 0 | 5UTR | 4.35918388 | 1.31E-05 | 0.02401748 |
| 5 | 122641776 | 122641776 | 1 | 5_122641776 | ENSG00000251538 | LINC02201 | 0 | INTRON | -4.3591262 | 1.31E-05 | 0.02401884 |
| 2 | 49949814 | 49949814 | 1 | 2_49949814 | ENSG00000179915 | NRXN1 | 0 | INTRON | -4.3591241 | 1.31E-05 | 0.02401884 |
| 4 | 137285462 | 137285462 | 1 | 4_137285462 | ENSG00000250813 | SERF1AP1 | 15538 | Downstream | -4.359014 | 1.31E-05 | 0.02402833 |
| 17 | 55580844 | 55580844 | 1 | 17_55580844 | ENSG00000236319 | AC105021.1 | 19267 | Upstream | -4.3589824 | 1.31E-05 | 0.0240292 |
| 10 | 51736335 | 51736335 | 1 | 10_51736335 | ENSG00000185532 | PRKG1 | 0 | INTRON | 4.35891086 | 1.31E-05 | 0.024033 |
| 17 | 59951761 | 59951761 | 1 | 17_59951761 | ENSG00000267318 | AC005702.1 | 0 | INTRON | 4.35887821 | 1.31E-05 | 0.024033 |
| 15 | 41023534 | 41023534 | 1 | 15_41023534 | ENSG00000128908 | INO80 | 0 | INTRON | 4.35887684 | 1.31E-05 | 0.024033 |
| 6 | 96083804 | 96083804 | 1 | 6_96083804 | ENSG00000172461 | FUT9 | 0 | INTRON | 4.35883657 | 1.31E-05 | 0.02403483 |
| 16 | 72523331 | 72523331 | 1 | 16_72523331 | ENSG00000261008 | LINC01572 | 0 | EXON | 4.35872479 | 1.31E-05 | 0.02404451 |
| 21 | 39982697 | 39982697 | 1 | 21_39982697 | ENSG00000171587 | DSCAM | 28301 | Downstream | -4.3584514 | 1.31E-05 | 0.02406713 |
| 15 | 50056977 | 50056977 | 1 | 15_50056977 | ENSG00000104043 | ATP8B4 | 0 | INTRON | -4.3584454 | 1.31E-05 | 0.02406713 |
| 12 | 119863009 | 119863009 | 1 | 12_119863009 | ENSG00000122966 | CIT | 0 | INTRON | -4.3584286 | 1.31E-05 | 0.02406713 |
| 7 | 148380527 | 148380527 | 1 | 7_148380527 | ENSG00000174469 | CNTNAP2 | 0 | INTRON | 4.35842438 | 1.31E-05 | 0.02406713 |
| 1 | 173192468 | 173192468 | 1 | 1_173192468 | ENSG00000117586 | TNFSF4 | 0 | INTRON | -4.3583044 | 1.31E-05 | 0.02407772 |
| 8 | 13212853 | 13212853 | 1 | 8_13212853 | ENSG00000164741 | DLC1 | 0 | INTRON | -4.3582195 | 1.31E-05 | 0.02408446 |
| 12 | 124480736 | 124480736 | 1 | 12_124480736 | ENSG00000196498 | NCOR2 | 0 | INTRON | 4.35819174 | 1.31E-05 | 0.02408492 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
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| 14 | 58347448 | 58347448 | 1 | 14_58347448 | ENSG00000032219 | ARID4A | 0 | INTRON | 4.35807473 | 1.31E-05 | 0.02408805 |
| 8 | 52917151 | 52917151 | 1 | 8_52917151 | ENSG00000183729 | NPBWR1 | 21279 | Upstream | 4.35806013 | 1.31E-05 | 0.02408805 |
| 1 | 226120107 | 226120107 | 1 | 1_226120107 | ENSG00000270598 | AL512343.1 | 7070 | Upstream | -4.35806 | 1.31E-05 | 0.02408805 |
| 7 | 68274425 | 68274425 | 1 | 7_68274425 | ENSG00000226829 | AC093655.1 | 0 | INTRON | 4.35800968 | 1.31E-05 | 0.02408805 |
| 16 | 17493592 | 17493592 | 1 | 16_17493592 | ENSG00000103489 | XYLT1 | 22632 | Upstream | 4.35800849 | 1.31E-05 | 0.02408805 |
| 13 | 44111405 | 44111405 | 1 | 13_44111405 | ENSG00000226519 | LINC00390 | 0 | INTRON | 4.35799801 | 1.31E-05 | 0.02408805 |
| 16 | 61106828 | 61106828 | 1 | 16_61106828 | ENSG00000224631 | RPS27AP16 | 50864 | Upstream | -4.3579392 | 1.31E-05 | 0.02409193 |
| 13 | 86073583 | 86073583 | 1 | 13_86073583 | ENSG00000232252 | AL354994.1 | 0 | INTRON | -4.3578624 | 1.31E-05 | 0.02409778 |
| 19 | 38907164 | 38907164 | 1 | 19_38907164 | ENSG00000104825 | NFKBIB | 0 | INTRON | -4.3577334 | 1.31E-05 | 0.02410901 |
| 7 | 155564082 | 155564082 | 1 | 7_155564082 | ENSG00000283128 | AC009403.2 | 0 | INTRON | 4.35770251 | 1.31E-05 | 0.02410901 |
| 15 | 26950571 | 26950571 | 1 | 15_26950571 | ENSG00000186297 | GABRA5 | 1363 | Downstream | 4.35768047 | 1.31E-05 | 0.02410901 |
| 16 | 4872183 | 4872183 | 1 | 16_4872183 | ENSG00000118900 | UBN1 | 0 | INTRON | 4.35766595 | 1.31E-05 | 0.02410901 |
| 21 | 17571150 | 17571150 | 1 | 21_17571150 | ENSG00000154639 | CXADR | 0 | INTRON | -4.3576256 | 1.31E-05 | 0.02411086 |
| 1 | 175100508 | 175100508 | 1 | 1_175100508 | ENSG00000120332 | TNN | 0 | INTRON | 4.35748991 | 1.32E-05 | 0.02412102 |
| 7 | 30020243 | 30020243 | 1 | 7_30020243 | ENSG00000106080 | FKBP14 | 0 | 3UTR | 4.35748618 | 1.32E-05 | 0.02412102 |
| X | 40858869 | 40858869 | 1 | X_40858869 | ENSG00000238222 | MKRN4P | 22864 | Downstream | 4.35743029 | 1.32E-05 | 0.02412363 |
| 2 | 199202208 | 199202208 | 1 | 2_199202208 | ENSG00000238698 | RNU7-147P | 11088 | Downstream | -4.3574153 | 1.32E-05 | 0.02412363 |
| 2 | 188795636 | 188795636 | 1 | 2_188795636 | ENSG00000223523 | AC092598.1 | 0 | INTRON | -4.3572609 | 1.32E-05 | 0.02413663 |
| X | 151460033 | 151460033 | 1 | X_151460033 | ENSG00000270052 | BX546450.2 | 37692 | Upstream | -4.3572502 | 1.32E-05 | 0.02413663 |
| 9 | 127285337 | 127285337 | 1 | 9_127285337 | ENSG00000136895 | GARNL3 | 0 | INTRON | 4.35720388 | 1.32E-05 | 0.02413913 |
| 2 | 162907055 | 162907055 | 1 | 2_162907055 | ENSG00000184611 | KCNH7 | 68288 | Upstream | 4.35717276 | 1.32E-05 | 0.02413996 |
| 14 | 73212267 | 73212267 | 1 | 14_73212267 | ENSG00000080815 | PSEN1 | 0 | INTRON | 4.35712818 | 1.32E-05 | 0.02414228 |
| 6 | 33568304 | 33568304 | 1 | 6_33568304 | ENSG00000204188 | GGNBP1 | 0 | INTRON | 4.35703912 | 1.32E-05 | 0.02414521 |
| 22 | 16197712 | 16197712 | 1 | 22_16197712 | ENSG00000278188 | U6 | 55840 | Downstream | 4.35703361 | 1.32E-05 | 0.02414521 |
| 7 | 33980229 | 33980229 | 1 | 7_33980229 | ENSG00000164619 | BMPER | 0 | INTRON | 4.35701481 | 1.32E-05 | 0.02414521 |
| 3 | 53673328 | 53673328 | 1 | 3_53673328 | ENSG00000157388 | CACNA1D | 0 | INTRON | -4.3570073 | 1.32E-05 | 0.02414521 |
| 17 | 1223407 | 1223407 | 1 | 17_1223407 | ENSG00000159842 | ABR | 0 | INTRON | -4.3569515 | 1.32E-05 | 0.02414877 |
| 2 | 49874281 | 49874281 | 1 | 2_49874281 | ENSG00000234253 | RPL7P13 | 4341 | Upstream | 4.35688285 | 1.32E-05 | 0.02415166 |
| 14 | 78601689 | 78601689 | 1 | 14_78601689 | ENSG00000021645 | NRXN3 | 0 | INTRON | 4.35686644 | 1.32E-05 | 0.02415166 |
| 9 | 136102175 | 136102175 | 1 | 9_136102175 | ENSG00000260193 | LINC02846 | 5632 | Downstream | 4.35685462 | 1.32E-05 | 0.02415166 |
| 12 | 45031391 | 45031391 | 1 | 12_45031391 | ENSG00000185610 | DBX2 | 0 | INTRON | 4.35679438 | 1.32E-05 | 0.0241557 |
| 7 | 26975725 | 26975725 | 1 | 7_26975725 | ENSG00000005020 | SKAP2 | 0 | INTRON | 4.35674582 | 1.32E-05 | 0.02415846 |
| 16 | 20739206 | 20739206 | 1 | 16_20739206 | ENSG00000005187 | ACSM3 | 0 | INTRON | 4.35669282 | 1.32E-05 | 0.02416171 |
| 17 | 46505002 | 46505002 | 1 | 17_46505002 | ENSG00000266497 | RDM1P2 | 0 | INTRON | 4.35659994 | 1.32E-05 | 0.02416689 |
| 4 | 124535617 | 124535617 | 1 | 4_124535617 | ENSG00000261083 | LINC02516 | 0 | INTRON | 4.35659061 | 1.32E-05 | 0.02416689 |
| 14 | 84550092 | 84550092 | 1 | 14_84550092 | ENSG00000251895 | RNU6-976P | 189849 | Upstream | 4.35657529 | 1.32E-05 | 0.02416689 |
| 1 | 217190881 | 217190881 | 1 | 1_217190881 | ENSG00000196482 | ESRRG | 53126 | Upstream | -4.3564389 | 1.32E-05 | 0.02417934 |
| 12 | 56162256 | 56162256 | 1 | 12_56162256 | ENSG00000092841 | MYL6 | 0 | EXON | 4.35640397 | 1.32E-05 | 0.0241806 |
| 8 | 113481863 | 113481863 | 1 | 8_113481863 | ENSG00000286937 | AC055788.1 | 0 | INTRON | 4.35633768 | 1.32E-05 | 0.02418532 |
| 13 | 46078345 | 46078345 | 1 | 13_46078345 | ENSG00000235903 | CPB2-AS1 | 0 | INTRON | -4.3562705 | 1.32E-05 | 0.02419014 |
| 16 | 55283916 | 55283916 | 1 | 16_55283916 | ENSG00000259283 | AC109462.1 | 0 | INTRON | 4.35614845 | 1.32E-05 | 0.02420103 |
| 2 | 179654224 | 179654224 | 1 | 2_179654224 | ENSG00000144331 | ZNF385B | 0 | INTRON | -4.3560921 | 1.32E-05 | 0.02420466 |
| 13 | 28436020 | 28436020 | 1 | 13_28436020 | ENSG00000102755 | FLT1 | 0 | INTRON | -4.3560296 | 1.32E-05 | 0.02420892 |
| 6 | 98637575 | 98637575 | 1 | 6_98637575 | ENSG00000187472 | AL589826.1 | 142681 | Downstream | 4.35600643 | 1.32E-05 | 0.02420892 |
| 2 | 228079020 | 228079020 | 1 | 2_228079020 | ENSG00000153820 | SPHKAP | 0 | INTRON | 4.35593299 | 1.33E-05 | 0.02421195 |
| 5 | 89477818 | 89477818 | 1 | 5_89477818 | ENSG00000250831 | AC074131.1 | 7779 | Upstream | 4.3559284 | 1.33E-05 | 0.02421195 |
| 7 | 150646572 | 150646572 | 1 | 7_150646572 | ENSG00000133561 | GIMAP6 | 13924 | Upstream | -4.3559085 | 1.33E-05 | 0.02421195 |
| 16 | 74553708 | 74553708 | 1 | 16_74553708 | ENSG00000090863 | GLG1 | 0 | INTRON | -4.3558097 | 1.33E-05 | 0.02421912 |
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| 1 | 208338683 | 208338683 | 1 | 1_208338683 | ENSG00000286198 | AL606753.2 | 68016 | Upstream | -4.355669 | 1.33E-05 | 0.02422811 |
| 10 | 76979858 | 76979858 | 1 | 10_76979858 | ENSG00000236467 | KCNMA1-AS1 | 0 | EXON | -4.3556304 | 1.33E-05 | 0.02422811 |
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| 12 | 124851668 | 124851668 | 1 | 12_124851668 | ENSG00000073060 | SCARB1 | 0 | INTRON | 4.35560009 | 1.33E-05 | 0.02422811 |
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| 3 | 162288832 | 162288832 | 1 | 3_162288832 | ENSG00000241874 | TOMM22P6 | 197708 | Downstream | 4.35548395 | 1.33E-05 | 0.02423291 |
| 7 | 128652740 | 128652740 | 1 | 7_128652740 | ENSG00000230715 | AC018638.2 | 100 | Upstream | 4.35546011 | 1.33E-05 | 0.02423295 |
| 9 | 122974308 | 122974308 | 1 | 9_122974308 | ENSG00000011454 | RABGAP1 | 0 | INTRON | 4.35534046 | 1.33E-05 | 0.02424359 |
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| 5 | 19460935 | 19460935 | 1 | 5_19460935 | ENSG00000145526 | CDH18 | 10360 | Downstream | 4.3552161 | 1.33E-05 | 0.02424695 |
| 4 | 29371137 | 29371137 | 1 | 4_29371137 | ENSG00000251373 | AC092593.2 | 35962 | Upstream | 4.35516351 | 1.33E-05 | 0.0242472 |
| 2 | 95994207 | 95994207 | 1 | 2_95994207 | ENSG00000174501 | ANKRD36C | 2376 | Upstream | 4.35514731 | 1.33E-05 | 0.0242472 |
| 11 | 100583680 | 100583680 | 1 | 11_100583680 | ENSG00000242165 | RN7SL222P | 58294 | Downstream | 4.35512371 | 1.33E-05 | 0.0242472 |
| 6 | 21224406 | 21224406 | 1 | 6_21224406 | ENSG00000145996 | CDKAL1 | 0 | INTRON | 4.35508486 | 1.33E-05 | 0.0242472 |
| 16 | 29715902 | 29715902 | 1 | 16_29715902 | ENSG00000222375 | RN7SKP127 | 15148 | Downstream | 4.35507985 | 1.33E-05 | 0.0242472 |
| 21 | 44930107 | 44930107 | 1 | 21_44930107 | ENSG00000273027 | AL844908.2 | 0 | EXON | -4.355033 | 1.33E-05 | 0.0242472 |
| 14 | 45864901 | 45864901 | 1 | 14_45864901 | ENSG00000258700 | LINC00871 | 26185 | Upstream | 4.35503027 | 1.33E-05 | 0.0242472 |
| 9 | 17429310 | 17429310 | 1 | 9_17429310 | ENSG00000044459 | CNTLN | 0 | INTRON | -4.3549789 | 1.33E-05 | 0.0242472 |
| 2 | 154603675 | 154603675 | 1 | 2_154603675 | ENSG00000223290 | RNA5SP107 | 13147 | Downstream | 4.35495812 | 1.33E-05 | 0.0242472 |
| 6 | 20931527 | 20931527 | 1 | 6_20931527 | ENSG00000145996 | CDKAL1 | 0 | INTRON | 4.35494953 | 1.33E-05 | 0.0242472 |
| 5 | 81006662 | 81006662 | 1 | 5_81006662 | ENSG00000113319 | RASGRF2 | 0 | INTRON | 4.3549355 | 1.33E-05 | 0.0242472 |
| 10 | 132067597 | 132067597 | 1 | 10_132067597 | ENSG00000188385 | JAKMIP3 | 0 | INTRON | -4.3549323 | 1.33E-05 | 0.0242472 |
| 9 | 5342527 | 5342527 | 1 | 9_5342527 | ENSG00000107018 | RLN1 | 2651 | Upstream | 4.35490092 | 1.33E-05 | 0.02424808 |
| 5 | 159190145 | 159190145 | 1 | 5_159190145 | ENSG00000145860 | RNF145 | 0 | INTRON | -4.3548698 | 1.33E-05 | 0.02424849 |
| 21 | 18424081 | 18424081 | 1 | 21_18424081 | ENSG00000154646 | TMPRSS15 | 0 | INTRON | -4.3548503 | 1.33E-05 | 0.02424849 |
| X | 124144539 | 124144539 | 1 | X_124144539 | ENSG00000101972 | STAG2 | 0 | INTRON | -4.35482 | 1.33E-05 | 0.02424925 |
| 1 | 211776429 | 211776429 | 1 | 1_211776429 | ENSG00000123684 | LPGAT1 | 0 | INTRON | 4.35479171 | 1.33E-05 | 0.02424979 |
| 11 | 105400814 | 105400814 | 1 | 11_105400814 | ENSG00000255501 | CARD18 | 0 | INTRON | 4.35473458 | 1.33E-05 | 0.02425244 |
| 17 | 43841872 | 43841872 | 1 | 17_43841872 | ENSG00000161649 | CD300LG | 5275 | Upstream | 4.35472085 | 1.33E-05 | 0.02425244 |
| 1 | 9794567 | 9794567 | 1 | 1_9794567 | ENSG00000171603 | CLSTN1 | 0 | INTRON | 4.35466226 | 1.33E-05 | 0.02425633 |
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| 20 | 959192 | 959192 | 1 | 20_959192 | ENSG00000101282 | RSPO4 | 0 | 3UTR | -4.3540694 | 1.34E-05 | 0.02431426 |
| 14 | 106251255 | 106251255 | 1 | 14_106251255 | ENSG00000253957 | IGHV3-22 | 6506 | Downstream | -4.3540212 | 1.34E-05 | 0.02431496 |
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| 6 | 147049840 | 147049840 | 1 | 6_147049840 | ENSG00000233452 | STXBP5-AS1 | 0 | INTRON | 4.35394803 | 1.34E-05 | 0.02431784 |
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| 13 | 113564172 | 113564172 | 1 | 13_113564172 | ENSG00000150403 | TMCO3 | 9582 | Downstream | -4.3537842 | 1.34E-05 | 0.02432988 |
| 9 | 135039845 | 135039845 | 1 | 9_135039845 | ENSG00000130558 | OLFM1 | 35576 | Upstream | -4.3537648 | 1.34E-05 | 0.02432988 |
| 10 | 106458783 | 106458783 | 1 | 10_106458783 | ENSG00000215002 | RPL23AP59 | 91322 | Upstream | 4.3536744 | 1.34E-05 | 0.02433676 |
| 10 | 104028150 | 104028150 | 1 | 10_104028150 | ENSG00000065613 | SLK | 0 | 3UTR | 4.35365599 | 1.34E-05 | 0.02433676 |
| 7 | 23739124 | 23739124 | 1 | 7_23739124 | ENSG00000196335 | STK31 | 0 | INTRON | 4.35360588 | 1.34E-05 | 0.02433757 |
| 7 | 1312187 | 1312187 | 1 | 7_1312187 | ENSG00000233082 | AC073094.1 | 42920 | Downstream | 4.35358705 | 1.34E-05 | 0.02433757 |
| 12 | 15004596 | 15004596 | 1 | 12_15004596 | ENSG00000255727 | LINC01489 | 0 | INTRON | 4.35355557 | 1.34E-05 | 0.02433757 |
| 12 | 85302796 | 85302796 | 1 | 12_85302796 | ENSG00000180318 | ALX1 | 1012 | Downstream | 4.35355511 | 1.34E-05 | 0.02433757 |
| 5 | 41281118 | 41281118 | 1 | 5_41281118 | ENSG00000039537 | C6 | 19680 | Upstream | 4.35341633 | 1.34E-05 | 0.02435039 |
| 3 | 57018672 | 57018672 | 1 | 3_57018672 | ENSG00000163947 | ARHGEF3 | 0 | INTRON | 4.35332619 | 1.34E-05 | 0.02435298 |
| 3 | 138442486 | 138442486 | 1 | 3_138442486 | ENSG00000158220 | ESYT3 | 0 | INTRON | -4.3533252 | 1.34E-05 | 0.02435298 |
| 1 | 171965073 | 171965073 | 1 | 1_171965073 | ENSG00000197959 | DNM3 | 0 | INTRON | -4.3533228 | 1.34E-05 | 0.02435298 |
| 18 | 55277999 | 55277999 | 1 | 18_55277999 | ENSG00000196628 | TCF4 | 0 | INTRON | 4.35328089 | 1.34E-05 | 0.02435313 |
| 8 | 113594526 | 113594526 | 1 | 8_113594526 | ENSG00000253207 | AC103993.1 | 5783 | Upstream | 4.3532632 | 1.34E-05 | 0.02435313 |
| 20 | 48910098 | 48910098 | 1 | 20_48910098 | ENSG00000124198 | ARFGEF2 | 11612 | Upstream | 4.35325127 | 1.34E-05 | 0.02435313 |
| 6 | 59785987 | 59785987 | 1 | 6_59785987 | ENSG00000283453 | AC244258.1 | 495456 | Upstream | 4.35313746 | 1.34E-05 | 0.0243619 |
| 1 | 206846939 | 206846939 | 1 | 1_206846939 | ENSG00000142224 | IL19 | 3958 | Downstream | -4.3531179 | 1.34E-05 | 0.0243619 |
| 4 | 139930761 | 139930761 | 1 | 4_139930761 | ENSG00000196782 | MAML3 | 0 | INTRON | 4.3531023 | 1.34E-05 | 0.0243619 |
| 5 | 128270515 | 128270515 | 1 | 5_128270515 | ENSG00000138829 | FBN2 | 0 | INTRON | -4.3530451 | 1.34E-05 | 0.02436319 |
| 21 | 32349368 | 32349368 | 1 | 21_32349368 | ENSG00000142207 | URB1 | 0 | EXON | -4.3530016 | 1.34E-05 | 0.02436319 |
| 7 | 112197469 | 112197469 | 1 | 7_112197469 | ENSG00000128512 | DOCK4 | 0 | INTRON | 4.35299546 | 1.34E-05 | 0.02436319 |
| 16 | 27319891 | 27319891 | 1 | 16_27319891 | ENSG00000077238 | IL4R | 0 | INTRON | -4.3529761 | 1.34E-05 | 0.02436319 |
| 18 | 56088073 | 56088073 | 1 | 18_56088073 | ENSG00000267712 | LINC01539 | 0 | INTRON | 4.3529738 | 1.34E-05 | 0.02436319 |
| 17 | 39616297 | 39616297 | 1 | 17_39616297 | ENSG00000214546 | AC087491.1 | 3315 | Upstream | 4.35294142 | 1.34E-05 | 0.02436419 |
| 3 | 193892085 | 193892085 | 1 | 3_193892085 | ENSG00000229155 | LINC02038 | 48061 | Upstream | 4.35290899 | 1.34E-05 | 0.0243652 |
| 1 | 240236767 | 240236767 | 1 | 1_240236767 | ENSG00000155816 | FMN2 | 0 | INTRON | 4.35287217 | 1.34E-05 | 0.0243667 |
| 10 | 125077165 | 125077165 | 1 | 10_125077165 | ENSG00000175029 | CTBP2 | 0 | INTRON | 4.35284016 | 1.34E-05 | 0.02436766 |
| 9 | 2147701 | 2147701 | 1 | 9_2147701 | ENSG00000080503 | SMARCA2 | 0 | INTRON | -4.3527793 | 1.34E-05 | 0.02437051 |
| 1 | 206272447 | 206272447 | 1 | 1_206272447 | ENSG00000266028 | SRGAP2 | 0 | INTRON | -4.352756 | 1.34E-05 | 0.02437051 |
| 22 | 44072069 | 44072069 | 1 | 22_44072069 | ENSG00000188677 | PARVB | 0 | INTRON | -4.3527445 | 1.34E-05 | 0.02437051 |
| 4 | 59514716 | 59514716 | 1 | 4_59514716 | ENSG00000199780 | Y_RNA | 19069 | Upstream | 4.35266243 | 1.34E-05 | 0.0243746 |
| 19 | 13091831 | 13091831 | 1 | 19_13091831 | ENSG00000008441 | NFIX | 0 | INTRON | -4.352661 | 1.34E-05 | 0.0243746 |
| 5 | 50931883 | 50931883 | 1 | 5_50931883 | ENSG00000251601 | AC022441.2 | 0 | INTRON | 4.35260507 | 1.35E-05 | 0.02437823 |
| 7 | 6740330 | 6740330 | 1 | 7_6740330 | ENSG00000187953 | PMS2CL | 0 | INTRON | -4.3525425 | 1.35E-05 | 0.02438066 |
| 8 | 18128898 | 18128898 | 1 | 8_18128898 | ENSG00000286542 | AC124242.3 | 1552 | Downstream | -4.352527 | 1.35E-05 | 0.02438066 |
| 2 | 132682947 | 132682947 | 1 | 2_132682947 | ENSG00000176771 | NCKAP5 | 0 | INTRON | -4.3525132 | 1.35E-05 | 0.02438066 |
| 2 | 138809248 | 138809248 | 1 | 2_138809248 | ENSG00000144227 | NXPH2 | 28858 | Upstream | 4.35243384 | 1.35E-05 | 0.02438542 |
| 21 | 40320830 | 40320830 | 1 | 21_40320830 | ENSG00000171587 | DSCAM | 0 | INTRON | 4.35242375 | 1.35E-05 | 0.02438542 |
| 2 | 111806797 | 111806797 | 1 | 2_111806797 | ENSG00000153107 | ANAPC1 | 0 | INTRON | 4.35239613 | 1.35E-05 | 0.0243859 |
| 5 | 136791333 | 136791333 | 1 | 5_136791333 | ENSG00000250284 | AC109439.2 | 27924 | Downstream | 4.35235601 | 1.35E-05 | 0.02438777 |
| 6 | 131733558 | 131733558 | 1 | 6_131733558 | ENSG00000154269 | ENPP3 | 0 | INTRON | -4.3521936 | 1.35E-05 | 0.02440069 |
| 5 | 56641813 | 56641813 | 1 | 5_56641813 | ENSG00000225940 | C5orf67 | 35581 | Upstream | 4.35219323 | 1.35E-05 | 0.02440069 |
| 15 | 29196507 | 29196507 | 1 | 15_29196507 | ENSG00000104059 | FAM189A1 | 0 | EXON | 4.35213641 | 1.35E-05 | 0.02440442 |
| 5 | 64198140 | 64198140 | 1 | 5_64198140 | ENSG00000164197 | RNF180 | 0 | INTRON | -4.352016 | 1.35E-05 | 0.02441476 |
| 11 | 45703677 | 45703677 | 1 | 11_45703677 | ENSG00000276639 | MIR7154 | 11901 | Upstream | 4.35199236 | 1.35E-05 | 0.02441476 |
| 1 | 168193238 | 168193238 | 1 | 1_168193238 | ENSG00000143155 | TIPRL | 0 | INTRON | 4.35197263 | 1.35E-05 | 0.02441476 |
| 16 | 78869930 | 78869930 | 1 | 16_78869930 | ENSG00000186153 | WWOX | 0 | INTRON | -4.3519503 | 1.35E-05 | 0.02441476 |
| 11 | 79317598 | 79317598 | 1 | 11_79317598 | ENSG00000149256 | TENM4 | 0 | INTRON | 4.35188883 | 1.35E-05 | 0.02441722 |
| 7 | 136685946 | 136685946 | 1 | 7_136685946 | ENSG00000234352 | AC009264.1 | 0 | INTRON | 4.35188158 | 1.35E-05 | 0.02441722 |
| 6 | 163105746 | 163105746 | 1 | 6_163105746 | ENSG00000112530 | PACRG | 0 | INTRON | -4.3518071 | 1.35E-05 | 0.02442293 |
| 16 | 7744754 | 7744754 | 1 | 16_7744754 | ENSG00000252138 | AC005774.1 | 17803 | Upstream | -4.3517486 | 1.35E-05 | 0.02442685 |
| 2 | 192306029 | 192306029 | 1 | 2_192306029 | ENSG00000144339 | TMEFF2 | 111096 | Upstream | 4.35162189 | 1.35E-05 | 0.02443823 |
| 6 | 123991842 | 123991842 | 1 | 6_123991842 | ENSG00000188580 | NKAIN2 | 0 | INTRON | 4.35159988 | 1.35E-05 | 0.02443823 |
| 12 | 127251668 | 127251668 | 1 | 12_127251668 | ENSG00000256292 | LINC02376 | 22596 | Downstream | -4.3515316 | 1.35E-05 | 0.02444324 |
| 4 | 15011169 | 15011169 | 1 | 4_15011169 | ENSG00000137449 | CPEB2 | 0 | INTRON | -4.3514902 | 1.35E-05 | 0.02444527 |
| 7 | 55685354 | 55685354 | 1 | 7_55685354 | ENSG00000176826 | FKBP9P1 | 0 | INTRON | 4.35139615 | 1.35E-05 | 0.02445288 |
| 15 | 90683265 | 90683265 | 1 | 15_90683265 | ENSG00000259736 | CRTC3-AS1 | 0 | INTRON | 4.35135174 | 1.35E-05 | 0.02445288 |
| 16 | 31962363 | 31962363 | 1 | 16_31962363 | ENSG00000197476 | AC034105.1 | 0 | EXON | 4.35133421 | 1.35E-05 | 0.02445288 |
| 4 | 132427511 | 132427511 | 1 | 4_132427511 | ENSG00000248369 | AC114741.1 | 8290 | Downstream | -4.3513076 | 1.35E-05 | 0.02445288 |
| 8 | 82261584 | 82261584 | 1 | 8_82261584 | ENSG00000254394 | AC060765.2 | 0 | INTRON | 4.35128585 | 1.35E-05 | 0.02445288 |
| 10 | 97575783 | 97575783 | 1 | 10_97575783 | ENSG00000165887 | ANKRD2 | 0 | INTRON | -4.3512534 | 1.35E-05 | 0.02445288 |
| 15 | 85889922 | 85889922 | 1 | 15_85889922 | ENSG00000264406 | MIR548AP | 64192 | Downstream | -4.351247 | 1.35E-05 | 0.02445288 |
| 7 | 158738243 | 158738243 | 1 | 7_158738243 | ENSG00000117868 | ESYT2 | 0 | INTRON | 4.35121835 | 1.35E-05 | 0.02445288 |
| 5 | 50959957 | 50959957 | 1 | 5_50959957 | ENSG00000250360 | AC008808.2 | 5729 | Downstream | 4.35117161 | 1.35E-05 | 0.02445288 |
| 2 | 204432158 | 204432158 | 1 | 2_204432158 | ENSG00000236634 | AC016903.1 | 37917 | Downstream | -4.3511666 | 1.35E-05 | 0.02445288 |
| 10 | 14652039 | 14652039 | 1 | 10_14652039 | ENSG00000065809 | FAM107B | 0 | INTRON | -4.3511658 | 1.35E-05 | 0.02445288 |
| 13 | 33636018 | 33636018 | 1 | 13_33636018 | ENSG00000230490 | AL139383.1 | 0 | INTRON | -4.3511033 | 1.35E-05 | 0.02445537 |
| 21 | 41155590 | 41155590 | 1 | 21_41155590 | ENSG00000226496 | LINC00323 | 7392 | Upstream | -4.3510911 | 1.35E-05 | 0.02445537 |
| 1 | 216547739 | 216547739 | 1 | 1_216547739 | ENSG00000196482 | ESRRG | 0 | INTRON | -4.3510699 | 1.35E-05 | 0.02445537 |
| 13 | 53881817 | 53881817 | 1 | 13_53881817 | ENSG00000261517 | LINC00558 | 0 | INTRON | -4.3510234 | 1.36E-05 | 0.02445537 |
| 7 | 24217427 | 24217427 | 1 | 7_24217427 | ENSG00000228944 | AC004485.1 | 0 | INTRON | -4.3510086 | 1.36E-05 | 0.02445537 |
| 4 | 181810751 | 181810751 | 1 | 4_181810751 | ENSG00000251336 | TEMN3-AS1 | 9267 | Downstream | 4.35100402 | 1.36E-05 | 0.02445537 |
| 8 | 126770388 | 126770388 | 1 | 8_126770388 | ENSG00000253438 | PCAT1 | 0 | INTRON | 4.35095696 | 1.36E-05 | 0.02445802 |
| 2 | 220507824 | 220507824 | 1 | 2_220507824 | ENSG00000236451 | AC067956.1 | 0 | INTRON | 4.35093348 | 1.36E-05 | 0.02445805 |
| 10 | 48724200 | 48724200 | 1 | 10_48724200 | ENSG00000128815 | WDFY4 | 0 | INTRON | -4.3508685 | 1.36E-05 | 0.02446271 |
| 3 | 187132032 | 187132032 | 1 | 3_187132032 | ENSG00000163923 | RPL39L | 0 | INTRON | -4.350837 | 1.36E-05 | 0.02446344 |
| 8 | 24080659 | 24080659 | 1 | 8_24080659 | ENSG00000207201 | RNU1-148P | 3501 | Upstream | 4.35079358 | 1.36E-05 | 0.02446344 |
| 18 | 11142850 | 11142850 | 1 | 18_11142850 | ENSG00000154864 | PIEZO2 | 0 | INTRON | 4.35079222 | 1.36E-05 | 0.02446344 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 239244086 | 239244086 | 1 | 2_239244086 | ENSG00000068024 | HDAC4 | 0 | INTRON | 4.35075311 | 1.36E-05 | 0.02446521 |
| 1 | 23851357 | 23851357 | 1 | 1_23851357 | ENSG00000179163 | FUCA1 | 0 | INTRON | 4.35068205 | 1.36E-05 | 0.02446969 |
| 2 | 121308594 | 121308594 | 1 | 2_121308594 | ENSG00000232723 | AC013399.1 | 1400 | Upstream | 4.35066271 | 1.36E-05 | 0.02446969 |
| 16 | 1533287 | 1533287 | 1 | 16_1533287 | ENSG00000187535 | IFT140 | 0 | 5UTR | 4.35060565 | 1.36E-05 | 0.02446969 |
| 8 | 18490983 | 18490983 | 1 | 8_18490983 | ENSG00000156011 | PSD3 | 36319 | Downstream | -4.3505989 | 1.36E-05 | 0.02446969 |
| 20 | 2234560 | 2234560 | 1 | 20_2234560 | ENSG00000286022 | AL121899.2 | 0 | INTRON | 4.35059676 | 1.36E-05 | 0.02446969 |
| 7 | 120960162 | 120960162 | 1 | 7_120960162 | ENSG00000071243 | ING3 | 0 | INTRON | -4.3505184 | 1.36E-05 | 0.02447437 |
| 2 | 115005069 | 115005069 | 1 | 2_115005069 | ENSG00000175497 | DPP10 | 0 | INTRON | 4.35049549 | 1.36E-05 | 0.02447437 |
| 17 | 22116765 | 22116765 | 1 | 17_22116765 | ENSG00000263563 | UBBP4 | 0 | INTRON | 4.3504852 | 1.36E-05 | 0.02447437 |
| 2 | 143717992 | 143717992 | 1 | 2_143717992 | ENSG00000075884 | ARHGAP15 | 0 | INTRON | 4.35044788 | 1.36E-05 | 0.0244754 |
| 19 | 32643623 | 32643623 | 1 | 19_32643623 | ENSG00000105186 | ANKRD27 | 0 | 5UTR | -4.3504296 | 1.36E-05 | 0.0244754 |
| 2 | 184462922 | 184462922 | 1 | 2_184462922 | ENSG00000286980 | AC020584.1 | 80053 | Downstream | 4.35036867 | 1.36E-05 | 0.02447919 |
| 1 | 1545272 | 1545272 | 1 | 1_1545272 | ENSG00000160075 | SSU72 | 0 | EXON | -4.3503311 | 1.36E-05 | 0.02447919 |
| 9 | 119446337 | 119446337 | 1 | 9_119446337 | ENSG00000260970 | AC006288.1 | 49037 | Upstream | -4.350326 | 1.36E-05 | 0.02447919 |
| 22 | 45903800 | 45903800 | 1 | 22_45903800 | ENSG00000235091 | BX324167.1 | 12362 | Upstream | 4.35029255 | 1.36E-05 | 0.02448033 |
| 14 | 78116130 | 78116130 | 1 | 14_78116130 | ENSG00000021645 | NRXN3 | 54242 | Upstream | 4.3501099 | 1.36E-05 | 0.02449814 |
| 8 | 27084136 | 27084136 | 1 | 8_27084136 | ENSG00000253903 | AC090150.2 | 1939 | Upstream | -4.3499629 | 1.36E-05 | 0.02451179 |
| 12 | 19608185 | 19608185 | 1 | 12_19608185 | ENSG00000139154 | AEBP2 | 0 | INTRON | 4.34994133 | 1.36E-05 | 0.02451179 |
| 7 | 42990803 | 42990803 | 1 | 7_42990803 | ENSG00000232006 | AC005537.1 | 0 | INTRON | -4.3498375 | 1.36E-05 | 0.02452081 |
| X | 10111936 | 10111936 | 1 | X_10111936 | ENSG00000047644 | WWC3 | 0 | INTRON | -4.3497212 | 1.36E-05 | 0.02453122 |
| 7 | 4957210 | 4957210 | 1 | 7_4957210 | ENSG00000136297 | MMD2 | 0 | INTRON | 4.34962193 | 1.36E-05 | 0.02453794 |
| 1 | 1121746 | 1121746 | 1 | 1_1121746 | ENSG00000131591 | C1orf159 | 5385 | Upstream | 4.34958208 | 1.36E-05 | 0.02453794 |
| 4 | 149733387 | 149733387 | 1 | 4_149733387 | ENSG00000234828 | IQCM | 0 | EXON | -4.3495783 | 1.36E-05 | 0.02453794 |
| 8 | 13360548 | 13360548 | 1 | 8_13360548 | ENSG00000164741 | DLC1 | 0 | INTRON | 4.34956839 | 1.36E-05 | 0.02453794 |
| 5 | 2901457 | 2901457 | 1 | 5_2901457 | ENSG00000248736 | AC094105.2 | 20038 | Upstream | -4.3495127 | 1.36E-05 | 0.02454158 |
| 19 | 6505416 | 6505416 | 1 | 19_6505416 | ENSG00000104833 | TUBB4A | 2568 | Upstream | 4.34945373 | 1.36E-05 | 0.02454483 |
| 22 | 29422495 | 29422495 | 1 | 22_29422495 | ENSG00000100280 | AP1B1 | 0 | INTRON | 4.34943202 | 1.36E-05 | 0.02454483 |
| 6 | 28721489 | 28721489 | 1 | 6_28721489 | ENSG00000237425 | RPSAP2 | 10527 | Upstream | 4.34941407 | 1.37E-05 | 0.02454483 |
| 8 | 119918207 | 119918207 | 1 | 8_119918207 | ENSG00000155792 | DEPTOR | 0 | INTRON | 4.34930194 | 1.37E-05 | 0.02455189 |
| 10 | 95406067 | 95406067 | 1 | 10_95406067 | ENSG00000095637 | SORBS1 | 0 | INTRON | -4.3492975 | 1.37E-05 | 0.02455189 |
| 18 | 40836738 | 40836738 | 1 | 18_40836738 | ENSG00000286328 | AC079052.1 | 504580 | Upstream | 4.34926784 | 1.37E-05 | 0.02455189 |
| 5 | 67280635 | 67280635 | 1 | 5_67280635 | ENSG00000251206 | AC010420.1 | 10453 | Downstream | 4.34925836 | 1.37E-05 | 0.02455189 |
| 13 | 56222138 | 56222138 | 1 | 13_56222138 | ENSG00000228319 | SPATA2P1 | 5196 | Downstream | -4.349192 | 1.37E-05 | 0.02455672 |
| 13 | 50947026 | 50947026 | 1 | 13_50947026 | ENSG00000136104 | RNASEH2B | 0 | INTRON | 4.34912475 | 1.37E-05 | 0.02456166 |
| 3 | 174595084 | 174595084 | 1 | 3_174595084 | ENSG00000177694 | NAALADL2 | 0 | INTRON | 4.34900919 | 1.37E-05 | 0.02457201 |
| 12 | 16721476 | 16721476 | 1 | 12_16721476 | ENSG00000283240 | AC007529.2 | 0 | INTRON | -4.3489605 | 1.37E-05 | 0.02457237 |
| 10 | 103600146 | 103600146 | 1 | 10_103600146 | ENSG00000107957 | SH3PXD2A | 0 | 3UTR | 4.34895966 | 1.37E-05 | 0.02457237 |
| 5 | 133063452 | 133063452 | 1 | 5_133063452 | ENSG00000170606 | HSPA4 | 0 | INTRON | -4.3489 | 1.37E-05 | 0.02457646 |
| 11 | 32981649 | 32981649 | 1 | 11_32981649 | ENSG00000060749 | QSER1 | 0 | INTRON | 4.34884041 | 1.37E-05 | 0.02457983 |
| 20 | 24800236 | 24800236 | 1 | 20_24800236 | ENSG00000231015 | AL049594.1 | 119245 | Downstream | 4.34880213 | 1.37E-05 | 0.02457983 |
| 10 | 113213391 | 113213391 | 1 | 10_113213391 | ENSG00000148737 | TCF7L2 | 45713 | Downstream | -4.3488005 | 1.37E-05 | 0.02457983 |
| 14 | 102193063 | 102193063 | 1 | 14_102193063 | ENSG00000140153 | WDR20 | 0 | INTRON | 4.34872256 | 1.37E-05 | 0.02458597 |
| 10 | 50093890 | 50093890 | 1 | 10_50093890 | ENSG00000099290 | WASHC2A | 0 | 3UTR | 4.34865912 | 1.37E-05 | 0.02458868 |
| 19 | 3410126 | 3410126 | 1 | 19_3410126 | ENSG00000141905 | NFIC | 0 | INTRON | -4.3486521 | 1.37E-05 | 0.02458868 |
| 18 | 9010844 | 9010844 | 1 | 18_9010844 | ENSG00000242058 | RPS4XP19 | 9184 | Upstream | 4.34846398 | 1.37E-05 | 0.02460435 |
| 6 | 131753031 | 131753031 | 1 | 6_131753031 | ENSG00000154269 | ENPP3 | 5613 | Downstream | 4.34845655 | 1.37E-05 | 0.02460435 |
| 19 | 10863649 | 10863649 | 1 | 19_10863649 | ENSG00000214212 | C19orf38 | 0 | INTRON | -4.3484429 | 1.37E-05 | 0.02460435 |
| 9 | 69491539 | 69491539 | 1 | 9_69491539 | ENSG00000107282 | APBA1 | 0 | INTRON | 4.34839374 | 1.37E-05 | 0.02460536 |
| 2 | 240778488 | 240778488 | 1 | 2_240778488 | ENSG00000130294 | KIF1A | 0 | INTRON | 4.34838073 | 1.37E-05 | 0.02460536 |
| 1 | 45352539 | 45352539 | 1 | 1_45352539 | ENSG00000288208 | AL451136.1 | 0 | INTRON | 4.34836453 | 1.37E-05 | 0.02460536 |
| 10 | 74688628 | 74688628 | 1 | 10_74688628 | ENSG00000156110 | ADK | 0 | INTRON | -4.3482872 | 1.37E-05 | 0.02461136 |
| 9 | 69128561 | 69128561 | 1 | 9_69128561 | ENSG00000119139 | TJP2 | 0 | INTRON | 4.34826473 | 1.37E-05 | 0.02461136 |
| 20 | 25105658 | 25105658 | 1 | 20_25105658 | ENSG00000225069 | AL080312.1 | 5730 | Downstream | -4.3482186 | 1.37E-05 | 0.02461394 |
| 2 | 106466996 | 106466996 | 1 | 2_106466996 | ENSG00000153165 | RGPD3 | 0 | INTRON | -4.348185 | 1.37E-05 | 0.02461512 |
| 7 | 106002427 | 106002427 | 1 | 7_106002427 | ENSG00000128536 | CDHR3 | 0 | INTRON | 4.34813783 | 1.37E-05 | 0.02461782 |
| 17 | 41974090 | 41974090 | 1 | 17_41974090 | ENSG00000173786 | CNP | 0 | 3UTR | -4.3479905 | 1.37E-05 | 0.02463038 |
| 17 | 6602629 | 6602629 | 1 | 17_6602629 | ENSG00000198920 | KIAA0753 | 0 | INTRON | 4.34797973 | 1.37E-05 | 0.02463038 |
| 10 | 133434367 | 133434367 | 1 | 10_133434367 | ENSG00000273327 | OR6L2P | 3049 | Upstream | 4.34793223 | 1.37E-05 | 0.02463312 |
| 6 | 19708951 | 19708951 | 1 | 6_19708951 | ENSG00000228412 | AL022068.1 | 0 | INTRON | 4.34780069 | 1.38E-05 | 0.0246453 |
| 6 | 15318158 | 15318158 | 1 | 6_15318158 | ENSG00000008083 | JARID2 | 0 | INTRON | 4.34775226 | 1.38E-05 | 0.02464538 |
| 16 | 2218780 | 2218780 | 1 | 16_2218780 | ENSG00000184207 | PGP | 3940 | Upstream | -4.3477494 | 1.38E-05 | 0.02464538 |
| 2 | 176686813 | 176686813 | 1 | 2_176686813 | ENSG00000224577 | LINC01117 | 0 | INTRON | -4.3477249 | 1.38E-05 | 0.02464538 |
| 22 | 20216866 | 20216866 | 1 | 22_20216866 | ENSG00000236499 | LINC00896 | 8342 | Downstream | 4.3477075 | 1.38E-05 | 0.02464538 |
| 6 | 32849557 | 32849557 | 1 | 6_32849557 | ENSG00000168394 | TAP1 | 0 | EXON | 4.34767384 | 1.38E-05 | 0.02464566 |
| 1 | 42351661 | 42351661 | 1 | 1_42351661 | ENSG00000227527 | AC096540.1 | 13285 | Upstream | 4.3476386 | 1.38E-05 | 0.02464566 |
| 12 | 75960770 | 75960770 | 1 | 12_75960770 | ENSG00000258077 | AC078923.1 | 0 | INTRON | 4.34762667 | 1.38E-05 | 0.02464566 |
| 1 | 161735114 | 161735114 | 1 | 1_161735114 | ENSG00000241347 | RN7SL466P | 693 | Upstream | 4.34761267 | 1.38E-05 | 0.02464566 |
| 12 | 6661440 | 6661440 | 1 | 12_6661440 | ENSG00000111653 | ING4 | 0 | INTRON | 4.34757973 | 1.38E-05 | 0.02464677 |
| 1 | 81746979 | 81746979 | 1 | 1_81746979 | ENSG00000117114 | ADGRL2 | 0 | INTRON | -4.347535 | 1.38E-05 | 0.02464841 |
| 13 | 85687750 | 85687750 | 1 | 13_85687750 | ENSG00000285834 | AL356413.1 | 6186 | Downstream | -4.3475189 | 1.38E-05 | 0.02464841 |
| 10 | 13757868 | 13757868 | 1 | 10_13757868 | ENSG00000151474 | FRMD4A | 0 | INTRON | 4.34749044 | 1.38E-05 | 0.02464902 |
| 10 | 52807216 | 52807216 | 1 | 10_52807216 | ENSG00000165471 | MBL2 | 35516 | Upstream | 4.34727459 | 1.38E-05 | 0.02466868 |
| 1 | 210881838 | 210881838 | 1 | 1_210881838 | ENSG00000143473 | KCNH1 | 0 | INTRON | -4.3472693 | 1.38E-05 | 0.02466868 |
| X | 122700366 | 122700366 | 1 | X_122700366 | ENSG00000212321 | U3 | 140059 | Upstream | 4.34713202 | 1.38E-05 | 0.02468153 |
| X | 41223836 | 41223836 | 1 | X_41223836 | ENSG00000124486 | USP9X | 0 | INTRON | 4.34707754 | 1.38E-05 | 0.02468506 |
| 9 | 2329922 | 2329922 | 1 | 9_2329922 | ENSG00000236404 | VLDLR-AS1 | 91674 | Downstream | -4.3469581 | 1.38E-05 | 0.02469425 |
| 9 | 31019763 | 31019763 | 1 | 9_31019763 | ENSG00000228557 | HSPA8P17 | 29191 | Downstream | -4.3469497 | 1.38E-05 | 0.02469425 |
| 3 | 165301860 | 165301860 | 1 | 3_165301860 | ENSG00000244128 | LINC01322 | 0 | INTRON | 4.34688469 | 1.38E-05 | 0.02469897 |
| 11 | 96578813 | 96578813 | 1 | 11_96578813 | ENSG00000254587 | AP003066.1 | 11503 | Upstream | 4.34679607 | 1.38E-05 | 0.02470635 |
| 2 | 212619286 | 212619286 | 1 | 2_212619286 | ENSG00000273118 | AC093865.1 | 0 | INTRON | 4.34664082 | 1.38E-05 | 0.02472117 |
| 6 | 66355661 | 66355661 | 1 | 6_66355661 | ENSG00000218890 | NUFIP1P1 | 260752 | Upstream | -4.3466184 | 1.38E-05 | 0.02472117 |
| Y | 12332179 | 12332179 | 1 | Y_12332179 | ENSG00000206159 | GYG2P1 | 0 | INTRON | 4.34657824 | 1.38E-05 | 0.0247231 |
| 7 | 139200619 | 139200619 | 1 | 7_139200619 | ENSG00000271537 | AC009220.3 | 1477 | Upstream | 4.34652959 | 1.38E-05 | 0.0247233 |
| 18 | 5563572 | 5563572 | 1 | 18_5563572 | ENSG00000082397 | EPB41L3 | 0 | INTRON | -4.3465283 | 1.38E-05 | 0.0247233 |
| 4 | 134935409 | 134935409 | 1 | 4_134935409 | ENSG00000249847 | AC104619.2 | 1278 | Upstream | 4.34650726 | 1.38E-05 | 0.0247233 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
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| 12 | 80626215 | 80626215 | 1 | 12_80626215 | ENSG00000139304 | PTPRQ | 0 | INTRON | -4.3461954 | 1.39E-05 | 0.02475224 |
| 13 | 79653479 | 79653479 | 1 | 13_79653479 | ENSG00000285902 | AL136442.1 | 0 | INTRON | -4.3461691 | 1.39E-05 | 0.02475224 |
| 8 | 105748565 | 105748565 | 1 | 8_105748565 | ENSG00000169946 | ZFPM2 | 0 | INTRON | 4.34613406 | 1.39E-05 | 0.02475224 |
| 10 | 114188624 | 114188624 | 1 | 10_114188624 | ENSG00000095627 | TDRD1 | 0 | INTRON | 4.34612446 | 1.39E-05 | 0.02475224 |
| 5 | 77126102 | 77126102 | 1 | 5_77126102 | ENSG00000250802 | ZBED3-AS1 | 0 | INTRON | 4.34611224 | 1.39E-05 | 0.02475224 |
| 14 | 32131495 | 32131495 | 1 | 14_32131495 | ENSG00000100852 | ARHGAP5 | 0 | INTRON | 4.34597041 | 1.39E-05 | 0.02476564 |
| 6 | 166977120 | 166977120 | 1 | 6_166977120 | ENSG00000227598 | Z94721.1 | 0 | INTRON | 4.34575615 | 1.39E-05 | 0.02478723 |
| 4 | 176648473 | 176648473 | 1 | 4_176648473 | ENSG00000248480 | AC093801.2 | 15242 | Upstream | -4.3457225 | 1.39E-05 | 0.02478843 |
| 5 | 159930735 | 159930735 | 1 | 5_159930735 | ENSG00000170214 | ADRA1B | 0 | INTRON | 4.34567015 | 1.39E-05 | 0.02479174 |
| 7 | 31899870 | 31899870 | 1 | 7_31899870 | ENSG00000154678 | PDE1C | 0 | INTRON | 4.34557731 | 1.39E-05 | 0.02479963 |
| 7 | 123965618 | 123965618 | 1 | 7_123965618 | ENSG00000106304 | SPAM1 | 0 | INTRON | 4.34551002 | 1.39E-05 | 0.02480463 |
| 17 | 22288483 | 22288483 | 1 | 17_22288483 | ENSG00000264956 | AC138761.1 | 182 | Downstream | -4.3454618 | 1.39E-05 | 0.02480616 |
| 3 | 40095557 | 40095557 | 1 | 3_40095557 | ENSG00000170011 | MYRIP | 0 | INTRON | 4.34545043 | 1.39E-05 | 0.02480616 |
| 5 | 168395298 | 168395298 | 1 | 5_168395298 | ENSG00000113645 | WWC1 | 0 | INTRON | 4.3453948 | 1.39E-05 | 0.02480666 |
| 2 | 127880493 | 127880493 | 1 | 2_127880493 | ENSG00000144233 | AMMECR1L | 0 | INTRON | -4.3453821 | 1.39E-05 | 0.02480666 |
| 22 | 28031213 | 28031213 | 1 | 22_28031213 | ENSG00000100154 | TTC28 | 0 | INTRON | -4.3453734 | 1.39E-05 | 0.02480666 |
| 12 | 114752192 | 114752192 | 1 | 12_114752192 | ENSG00000257817 | AC026765.3 | 0 | INTRON | 4.34533866 | 1.39E-05 | 0.02480666 |
| X | 151042214 | 151042214 | 1 | X_151042214 | ENSG00000212595 | RNA5SP525 | 15808 | Upstream | 4.34533095 | 1.39E-05 | 0.02480666 |
| 3 | 99744014 | 99744014 | 1 | 3_99744014 | ENSG00000144810 | COL8A1 | 0 | INTRON | 4.3452093 | 1.39E-05 | 0.02481544 |
| 7 | 43281095 | 43281095 | 1 | 7_43281095 | ENSG00000002746 | HECW1 | 0 | INTRON | 4.34520719 | 1.39E-05 | 0.02481544 |
| 19 | 1716805 | 1716805 | 1 | 19_1716805 | ENSG00000275642 | Metazoa_SRP | 7309 | Upstream | -4.3451752 | 1.39E-05 | 0.02481646 |
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| 8 | 18063334 | 18063334 | 1 | 8_18063334 | ENSG00000104763 | ASAH1 | 0 | EXON | -4.3450912 | 1.39E-05 | 0.02482075 |
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| 18 | 52350144 | 52350144 | 1 | 18_52350144 | ENSG00000187323 | DCC | 0 | INTRON | -4.345036 | 1.39E-05 | 0.0248218 |
| 5 | 79195459 | 79195459 | 1 | 5_79195459 | ENSG00000132837 | DMGDH | 0 | INTRON | -4.3448668 | 1.39E-05 | 0.02483628 |
| 20 | 15529214 | 15529214 | 1 | 20_15529214 | ENSG00000172264 | MACROD2 | 0 | INTRON | 4.34484978 | 1.39E-05 | 0.02483628 |
| 14 | 66832047 | 66832047 | 1 | 14_66832047 | ENSG00000171723 | GPHN | 0 | INTRON | 4.34483309 | 1.39E-05 | 0.02483628 |
| 12 | 83181064 | 83181064 | 1 | 12_83181064 | ENSG00000258338 | AC090680.1 | 8324 | Downstream | 4.34481602 | 1.39E-05 | 0.02483628 |
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| 2 | 61094792 | 61094792 | 1 | 2_61094792 | ENSG00000162929 | KIAA1841 | 0 | INTRON | -4.3446487 | 1.39E-05 | 0.02484741 |
| 7 | 138103336 | 138103336 | 1 | 7_138103336 | ENSG00000122787 | AKR1D1 | 0 | INTRON | -4.344625 | 1.40E-05 | 0.02484749 |
| 7 | 28352695 | 28352695 | 1 | 7_28352695 | ENSG00000146592 | CREB5 | 0 | INTRON | 4.34458547 | 1.40E-05 | 0.02484927 |
| 21 | 36865539 | 36865539 | 1 | 21_36865539 | ENSG00000159267 | HLCS | 0 | INTRON | 4.3445633 | 1.40E-05 | 0.02484927 |
| 3 | 181750977 | 181750977 | 1 | 3_181750977 | ENSG00000242808 | SOX2-OT | 0 | INTRON | -4.3445053 | 1.40E-05 | 0.02485324 |
| 6 | 69905650 | 69905650 | 1 | 6_69905650 | ENSG00000082293 | COL19A1 | 0 | INTRON | 4.34445759 | 1.40E-05 | 0.02485604 |
| 19 | 5616754 | 5616754 | 1 | 19_5616754 | ENSG00000130254 | SAFB2 | 0 | INTRON | 4.34442447 | 1.40E-05 | 0.02485719 |
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| 13 | 79265222 | 79265222 | 1 | 13_79265222 | ENSG00000139746 | RBM26 | 46601 | Downstream | -4.3443396 | 1.40E-05 | 0.02486084 |
| 2 | 240761015 | 240761015 | 1 | 2_240761015 | ENSG00000130294 | KIF1A | 0 | INTRON | 4.34430931 | 1.40E-05 | 0.02486084 |
| 13 | 104647932 | 104647932 | 1 | 13_104647932 | ENSG00000225823 | RPL7P45 | 166394 | Upstream | 4.3443004 | 1.40E-05 | 0.02486084 |
| 17 | 77377325 | 77377325 | 1 | 17_77377325 | ENSG00000184640 | SEPTIN9 | 0 | INTRON | 4.34426266 | 1.40E-05 | 0.02486251 |
| 3 | 69745607 | 69745607 | 1 | 3_69745607 | ENSG00000187098 | MITF | 0 | INTRON | 4.34423737 | 1.40E-05 | 0.02486277 |
| 10 | 119496978 | 119496978 | 1 | 10_119496978 | ENSG00000148908 | RGS10 | 2838 | Downstream | 4.34420029 | 1.40E-05 | 0.02486437 |
| 6 | 12354956 | 12354956 | 1 | 6_12354956 | ENSG00000218893 | SUMO2P12 | 35364 | Downstream | -4.34412 | 1.40E-05 | 0.02486703 |
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| X | 75888077 | 75888077 | 1 | X_75888077 | ENSG00000226753 | AL451105.1 | 622 | Upstream | 4.34393835 | 1.40E-05 | 0.02487883 |
| 15 | 93145960 | 93145960 | 1 | 15_93145960 | ENSG00000285663 | AC108457.1 | 31308 | Downstream | -4.3439276 | 1.40E-05 | 0.02487883 |
| 8 | 28044189 | 28044189 | 1 | 8_28044189 | ENSG00000189233 | NUGGC | 0 | INTRON | -4.3439116 | 1.40E-05 | 0.02487883 |
| 19 | 6751781 | 6751781 | 1 | 19_6751781 | ENSG00000125733 | TRIP10 | 251 | Downstream | -4.3438568 | 1.40E-05 | 0.02487883 |
| 2 | 24158683 | 24158683 | 1 | 2_24158683 | ENSG00000219626 | FAM228B | 0 | INTRON | 4.34384113 | 1.40E-05 | 0.02487883 |
| 2 | 84921054 | 84921054 | 1 | 2_84921054 | ENSG00000213399 | AC022210.1 | 4394 | Downstream | -4.3438281 | 1.40E-05 | 0.02487883 |
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| 7 | 44328105 | 44328105 | 1 | 7_44328105 | ENSG00000058404 | CAMK2B | 0 | INTRON | 4.34369514 | 1.40E-05 | 0.02489006 |
| 12 | 101154571 | 101154571 | 1 | 12_101154571 | ENSG00000256870 | SLC5A8 | 921 | Downstream | 4.34367491 | 1.40E-05 | 0.02489006 |
| 9 | 114628506 | 114628506 | 1 | 9_114628506 | ENSG00000157693 | TMEM268 | 0 | INTRON | 4.34365253 | 1.40E-05 | 0.02489006 |
| 15 | 82287178 | 82287178 | 1 | 15_82287178 | ENSG00000188659 | SAXO2 | 2248 | Downstream | -4.3434669 | 1.40E-05 | 0.02490851 |
| 6 | 169170209 | 169170209 | 1 | 6_169170209 | ENSG00000261039 | LINC02544 | 5067 | Downstream | -4.3433974 | 1.40E-05 | 0.02491128 |
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| 19 | 50762793 | 50762793 | 1 | 19_50762793 | ENSG00000269565 | GPR32P1 | 3601 | Downstream | 4.34336408 | 1.40E-05 | 0.02491237 |
| 2 | 201925931 | 201925931 | 1 | 2_201925931 | ENSG00000212184 | RNU6-440P | 1507 | Upstream | -4.3432856 | 1.40E-05 | 0.02491868 |
| 1 | 201359242 | 201359242 | 1 | 1_201359242 | ENSG00000118194 | TNNT2 | 0 | 3UTR | -4.3431926 | 1.40E-05 | 0.02492498 |
| 9 | 62315551 | 62315551 | 1 | 9_62315551 | ENSG00000231212 | AL590399.3 | 34389 | Downstream | -4.3431842 | 1.40E-05 | 0.02492498 |
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| 10 | 19567872 | 19567872 | 1 | 10_19567872 | ENSG00000204740 | MALRD1 | 0 | INTRON | 4.34305263 | 1.41E-05 | 0.02492952 |
| 4 | 6895291 | 6895291 | 1 | 4_6895291 | ENSG00000170871 | KIAA0232 | 11121 | Downstream | -4.3430242 | 1.41E-05 | 0.02493015 |
| 7 | 14037447 | 14037447 | 1 | 7_14037447 | ENSG00000252374 | Y_RNA | 26684 | Upstream | -4.3429276 | 1.41E-05 | 0.02493852 |
| 7 | 54046210 | 54046210 | 1 | 7_54046210 | ENSG00000238131 | LINC02854 | 98406 | Upstream | 4.34288669 | 1.41E-05 | 0.02494056 |
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| 6 | 139318008 | 139318008 | 1 | 6_139318008 | ENSG00000226571 | AL592429.2 | 0 | INTRON | 4.34239957 | 1.41E-05 | 0.02496578 |
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| 16 | 67083456 | 67083456 | 1 | 16_67083456 | ENSG00000067955 | CBFB | 0 | INTRON | 4.34227417 | 1.41E-05 | 0.02496809 |
| 11 | 87221663 | 87221663 | 1 | 11_87221663 | ENSG00000166575 | TMEM135 | 0 | INTRON | 4.34221562 | 1.41E-05 | 0.02496809 |
| 3 | 48245401 | 48245401 | 1 | 3_48245401 | ENSG00000164048 | ZNF589 | 0 | INTRON | 4.34220188 | 1.41E-05 | 0.02496809 |
| 17 | 823169 | 823169 | 1 | 17_823169 | ENSG00000167693 | NXN | 0 | INTRON | 4.3421986 | 1.41E-05 | 0.02496809 |
| 9 | 107502668 | 107502668 | 1 | 9_107502668 | ENSG00000136826 | KLF4 | 12186 | Upstream | -4.3421668 | 1.41E-05 | 0.02496809 |
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| 13 | 59962689 | 59962689 | 1 | 13_59962689 | ENSG00000139734 | DIAPH3 | 0 | INTRON | -4.3420927 | 1.41E-05 | 0.02497174 |
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| 2 | 53744158 | 53744158 | 1 | 2_53744158 | ENSG00000115239 | ASB3 | 0 | INTRON | -4.341934 | 1.41E-05 | 0.02498387 |
| 20 | 633754 | 633754 | 1 | 20_633754 | ENSG00000271303 | SRXN1 | 12860 | Downstream | -4.3419046 | 1.41E-05 | 0.02498463 |
| 5 | 139989596 | 139989596 | 1 | 5_139989596 | ENSG00000158458 | NRG2 | 0 | INTRON | 4.34186175 | 1.41E-05 | 0.02498592 |
| 10 | 93878247 | 93878247 | 1 | 10_93878247 | ENSG00000227995 | RAB11AP1 | 3045 | Downstream | -4.3418476 | 1.41E-05 | 0.02498592 |
| 4 | 116843554 | 116843554 | 1 | 4_116843554 | ENSG00000286637 | AC093765.2 | 0 | INTRON | -4.3417878 | 1.41E-05 | 0.02499012 |
| 16 | 8607534 | 8607534 | 1 | 16_8607534 | ENSG00000287522 | AC138420.1 | 8320 | Downstream | 4.34172458 | 1.41E-05 | 0.02499472 |
| 19 | 18620987 | 18620987 | 1 | 19_18620987 | ENSG00000105696 | TMEM59L | 0 | 3UTR | -4.3416596 | 1.41E-05 | 0.02499951 |
| 4 | 176395239 | 176395239 | 1 | 4_176395239 | ENSG00000129128 | SPCS3 | 62994 | Downstream | 4.34156638 | 1.41E-05 | 0.02500753 |
| 15 | 32338143 | 32338143 | 1 | 15_32338143 | ENSG00000260642 | AC139426.2 | 21394 | Upstream | -4.3415358 | 1.41E-05 | 0.02500841 |
| 21 | 27151598 | 27151598 | 1 | 21_27151598 | ENSG00000215326 | GPX1P2 | 7649 | Upstream | 4.34149952 | 1.42E-05 | 0.02500994 |
| 1 | 16616677 | 16616677 | 1 | 1_16616677 | ENSG00000271732 | AL137798.1 | 713 | Upstream | 4.34141074 | 1.42E-05 | 0.02501745 |
| 13 | 104293529 | 104293529 | 1 | 13_104293529 | ENSG00000287734 | AL136524.1 | 159272 | Downstream | -4.341351 | 1.42E-05 | 0.02501808 |
| 10 | 38958108 | 38958108 | 1 | 10_38958108 | ENSG00000233832 | AL590623.1 | 175000 | Downstream | -4.3413011 | 1.42E-05 | 0.02501808 |
| 7 | 79421098 | 79421098 | 1 | 7_79421098 | ENSG00000187391 | MAGI2 | 0 | INTRON | 4.34126767 | 1.42E-05 | 0.02501808 |
| 9 | 97345552 | 97345552 | 1 | 9_97345552 | ENSG00000255036 | STRA6LP | 0 | INTRON | 4.34125539 | 1.42E-05 | 0.02501808 |
| 7 | 148115640 | 148115640 | 1 | 7_148115640 | ENSG00000174469 | CNTNAP2 | 0 | INTRON | -4.3412386 | 1.42E-05 | 0.02501808 |
| 3 | 193994788 | 193994788 | 1 | 3_193994788 | ENSG00000238043 | AC024559.1 | 0 | INTRON | 4.3412296 | 1.42E-05 | 0.02501808 |
| 6 | 19156923 | 19156923 | 1 | 6_19156923 | ENSG00000217379 | AL589647.1 | 12763 | Downstream | 4.34117629 | 1.42E-05 | 0.02501808 |
| 17 | 15007109 | 15007109 | 1 | 17_15007109 | ENSG00000232058 | AC005772.1 | 7695 | Upstream | 4.34115411 | 1.42E-05 | 0.02501808 |
| 7 | 45668738 | 45668738 | 1 | 7_45668738 | ENSG00000164742 | ADCY1 | 0 | INTRON | 4.3411541 | 1.42E-05 | 0.02501808 |
| 1 | 85864100 | 85864100 | 1 | 1_85864100 | ENSG00000171502 | COL24A1 | 0 | INTRON | -4.3411171 | 1.42E-05 | 0.02501808 |
| 10 | 100491119 | 100491119 | 1 | 10_100491119 | ENSG00000075826 | SEC31B | 0 | INTRON | 4.34111514 | 1.42E-05 | 0.02501808 |
| 8 | 140494847 | 140494847 | 1 | 8_140494847 | ENSG00000259891 | AC107375.1 | 10965 | Downstream | 4.3411071 | 1.42E-05 | 0.02501808 |
| 19 | 37298088 | 37298088 | 1 | 19_37298088 | ENSG00000267605 | AC016590.1 | 0 | INTRON | -4.3410919 | 1.42E-05 | 0.02501808 |
| 10 | 13760204 | 13760204 | 1 | 10_13760204 | ENSG00000151474 | FRMD4A | 0 | INTRON | -4.341072 | 1.42E-05 | 0.02501808 |
| 5 | 74411957 | 74411957 | 1 | 5_74411957 | ENSG00000248673 | LINC01331 | 0 | INTRON | -4.3410633 | 1.42E-05 | 0.02501808 |
| 3 | 8940066 | 8940066 | 1 | 3_8940066 | ENSG00000070950 | RAD18 | 0 | INTRON | 4.34087183 | 1.42E-05 | 0.02503343 |
| 12 | 105955008 | 105955008 | 1 | 12_105955008 | ENSG00000257773 | ST13P3 | 60888 | Upstream | -4.340868 | 1.42E-05 | 0.02503343 |
| 10 | 17420209 | 17420209 | 1 | 10_17420209 | ENSG00000204832 | ST8SIA6-AS1 | 0 | INTRON | -4.3408602 | 1.42E-05 | 0.02503343 |
| 10 | 72607591 | 72607591 | 1 | 10_72607591 | ENSG00000107745 | MICU1 | 0 | INTRON | 4.3408187 | 1.42E-05 | 0.02503406 |
| 7 | 61024140 | 61024140 | 1 | 7_61024140 | ENSG00000233918 | AC128676.1 | 1251220 | Downstream | -4.3408092 | 1.42E-05 | 0.02503406 |
| 7 | 122252687 | 122252687 | 1 | 7_122252687 | ENSG00000213302 | AC015983.1 | 17784 | Downstream | -4.3407521 | 1.42E-05 | 0.02503759 |
| 7 | 105909079 | 105909079 | 1 | 7_105909079 | ENSG00000128536 | CDHR3 | 0 | INTRON | -4.3407326 | 1.42E-05 | 0.02503759 |
| 4 | 65611775 | 65611775 | 1 | 4_65611775 | ENSG00000145242 | EPHA5 | 0 | INTRON | -4.3406861 | 1.42E-05 | 0.02504029 |
| 2 | 48595456 | 48595456 | 1 | 2_48595456 | ENSG00000243244 | STON1 | 0 | 3UTR | 4.34064785 | 1.42E-05 | 0.02504206 |
| 6 | 138215133 | 138215133 | 1 | 6_138215133 | ENSG00000112379 | ARFGEF3 | 0 | INTRON | -4.3405994 | 1.42E-05 | 0.02504351 |
| 1 | 38773722 | 38773722 | 1 | 1_38773722 | ENSG00000284632 | AL354702.2 | 0 | INTRON | 4.3405896 | 1.42E-05 | 0.02504351 |
| 2 | 44647732 | 44647732 | 1 | 2_44647732 | ENSG00000143919 | CAMKMT | 0 | INTRON | 4.34049853 | 1.42E-05 | 0.0250513 |
| 3 | 52385557 | 52385557 | 1 | 3_52385557 | ENSG00000114841 | DNAH1 | 0 | INTRON | 4.34047094 | 1.42E-05 | 0.02505185 |
| 1 | 94908159 | 94908159 | 1 | 1_94908159 | ENSG00000117519 | CNN3 | 0 | INTRON | 4.3403748 | 1.42E-05 | 0.02505663 |
| 20 | 24604180 | 24604180 | 1 | 20_24604180 | ENSG00000101463 | SYNDIG1 | 0 | INTRON | -4.3403595 | 1.42E-05 | 0.02505663 |
| 17 | 44082111 | 44082111 | 1 | 17_44082111 | ENSG00000108840 | HDAC5 | 0 | EXON | -4.3403534 | 1.42E-05 | 0.02505663 |
| 7 | 67513382 | 67513382 | 1 | 7_67513382 | ENSG00000226392 | MTATP6P21 | 114448 | Upstream | -4.3403373 | 1.42E-05 | 0.02505663 |
| 10 | 76795669 | 76795669 | 1 | 10_76795669 | ENSG00000252888 | AC013738.1 | 39707 | Downstream | 4.34029694 | 1.42E-05 | 0.02505663 |
| 4 | 28830287 | 28830287 | 1 | 4_28830287 | ENSG00000250927 | MESTP3 | 6076 | Upstream | 4.3402925 | 1.42E-05 | 0.02505663 |
| 14 | 78489364 | 78489364 | 1 | 14_78489364 | ENSG00000021645 | NRXN3 | 0 | INTRON | -4.3401572 | 1.42E-05 | 0.02506855 |
| 4 | 123462216 | 123462216 | 1 | 4_123462216 | ENSG00000249125 | AC093821.1 | 28025 | Upstream | 4.34014254 | 1.42E-05 | 0.02506855 |
| 2 | 21523601 | 21523601 | 1 | 2_21523601 | ENSG00000231204 | AC011752.1 | 0 | INTRON | -4.3400336 | 1.42E-05 | 0.02507492 |
| 17 | 59146824 | 59146824 | 1 | 17_59146824 | ENSG00000182628 | SKA2 | 0 | INTRON | -4.3400203 | 1.42E-05 | 0.02507492 |
| 5 | 111238924 | 111238924 | 1 | 5_111238924 | ENSG00000152495 | CAMK4 | 0 | INTRON | -4.3400185 | 1.42E-05 | 0.02507492 |
| 2 | 108794921 | 108794921 | 1 | 2_108794921 | ENSG00000163006 | CCDC138 | 0 | INTRON | 4.33991521 | 1.43E-05 | 0.02508412 |
| 3 | 86284002 | 86284002 | 1 | 3_86284002 | ENSG00000239767 | AC108733.1 | 16578 | Upstream | -4.3398716 | 1.43E-05 | 0.0250865 |
| 2 | 170654981 | 170654981 | 1 | 2_170654981 | ENSG00000071909 | MYO3B | 0 | EXON | -4.3398137 | 1.43E-05 | 0.02508729 |
| 5 | 105931231 | 105931231 | 1 | 5_105931231 | ENSG00000201790 | RNA5SP189 | 8123 | Upstream | 4.33980174 | 1.43E-05 | 0.02508729 |
| 19 | 4549458 | 4549458 | 1 | 19_4549458 | ENSG00000167680 | SEMA6B | 0 | INTRON | -4.3397834 | 1.43E-05 | 0.02508729 |
| 16 | 34664524 | 34664524 | 1 | 16_34664524 | ENSG00000286968 | FP325313.2 | 215658 | Downstream | -4.3397519 | 1.43E-05 | 0.02508729 |
| 6 | 163443553 | 163443553 | 1 | 6_163443553 | ENSG00000112531 | QKI | 0 | INTRON | -4.3397511 | 1.43E-05 | 0.02508729 |
| 21 | 31682428 | 31682428 | 1 | 21_31682428 | ENSG00000156304 | SCAF4 | 0 | INTRON | 4.33971304 | 1.43E-05 | 0.02508831 |
| 1 | 77513754 | 77513754 | 1 | 1_77513754 | ENSG00000154027 | AK5 | 0 | INTRON | 4.33967931 | 1.43E-05 | 0.02508831 |
| 16 | 77426851 | 77426851 | 1 | 16_77426851 | ENSG00000140873 | ADAMTS18 | 0 | INTRON | 4.33967405 | 1.43E-05 | 0.02508831 |
| 6 | 55957349 | 55957349 | 1 | 6_55957349 | ENSG00000214604 | NPM1P36 | 16725 | Upstream | 4.33953418 | 1.43E-05 | 0.02510169 |
| 17 | 9444436 | 9444436 | 1 | 17_9444436 | ENSG00000170310 | STX8 | 0 | INTRON | 4.33942826 | 1.43E-05 | 0.02511119 |
| 6 | 38863079 | 38863079 | 1 | 6_38863079 | ENSG00000124721 | DNAH8 | 0 | INTRON | 4.33938653 | 1.43E-05 | 0.02511134 |
| 11 | 113913266 | 113913266 | 1 | 11_113913266 | ENSG00000149305 | HTR3B | 0 | INTRON | 4.33936196 | 1.43E-05 | 0.02511134 |
| 14 | 81188701 | 81188701 | 1 | 14_81188701 | ENSG00000165417 | GTF2A1 | 0 | INTRON | -4.3393488 | 1.43E-05 | 0.02511134 |
| 8 | 127798736 | 127798736 | 1 | 8_127798736 | ENSG00000249859 | PVT1 | 0 | INTRON | -4.3393361 | 1.43E-05 | 0.02511134 |
| 12 | 45430722 | 45430722 | 1 | 12_45430722 | ENSG00000177119 | ANO6 | 0 | 3UTR | 4.33929539 | 1.43E-05 | 0.02511161 |
| 22 | 32496720 | 32496720 | 1 | 22_32496720 | ENSG00000100225 | FBXO7 | 0 | INTRON | -4.3392577 | 1.43E-05 | 0.02511161 |
| 14 | 80779805 | 80779805 | 1 | 14_80779805 | ENSG00000100629 | CEP128 | 0 | INTRON | -4.3392456 | 1.43E-05 | 0.02511161 |
| 1 | 31778054 | 31778054 | 1 | 1_31778054 | ENSG00000254545 | AL354919.2 | 11075 | Upstream | 4.33924305 | 1.43E-05 | 0.02511161 |
| 1 | 162679928 | 162679928 | 1 | 1_162679928 | ENSG00000162733 | DDR2 | 0 | INTRON | -4.3392023 | 1.43E-05 | 0.02511368 |
| 12 | 120180272 | 120180272 | 1 | 12_120180272 | ENSG00000089154 | GCN1 | 0 | INTRON | 4.33910812 | 1.43E-05 | 0.02512185 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 135676780 | 135676780 | 1 | 2_135676780 | ENSG00000048991 | R3HDM1 | 0 | INTRON | 4.33906175 | 1.43E-05 | 0.02512455 |
| 2 | 88250719 | 88250719 | 1 | 2_88250719 | ENSG00000144115 | THNSL2 | 64083 | Downstream | -4.3389715 | 1.43E-05 | 0.02513228 |
| 10 | 87015580 | 87015580 | 1 | 10_87015580 | ENSG00000229969 | AL136982.2 | 0 | INTRON | 4.33894257 | 1.43E-05 | 0.02513299 |
| 10 | 58371324 | 58371324 | 1 | 10_58371324 | ENSG00000072401 | UBE2D1 | 573 | Downstream | -4.3386256 | 1.43E-05 | 0.02516531 |
| 3 | 11382316 | 11382316 | 1 | 3_11382316 | ENSG00000197548 | ATG7 | 0 | INTRON | -4.3386148 | 1.43E-05 | 0.02516531 |
| 1 | 229094575 | 229094575 | 1 | 1_229094575 | ENSG00000236975 | LINC02814 | 0 | INTRON | -4.3384828 | 1.43E-05 | 0.02517783 |
| 9 | 120342111 | 120342111 | 1 | 9_120342111 | ENSG00000136861 | CDK5RAP2 | 46757 | Downstream | 4.33837629 | 1.44E-05 | 0.02518074 |
| 6 | 47804028 | 47804028 | 1 | 6_47804028 | ENSG00000124818 | OPN5 | 0 | INTRON | 4.33836077 | 1.44E-05 | 0.02518074 |
| 1 | 61259349 | 61259349 | 1 | 1_61259349 | ENSG00000162599 | NFIA | 0 | INTRON | -4.3383522 | 1.44E-05 | 0.02518074 |
| 15 | 90714396 | 90714396 | 1 | 15_90714396 | ENSG00000259736 | CRTC3-AS1 | 0 | INTRON | 4.33835072 | 1.44E-05 | 0.02518074 |
| 12 | 54916494 | 54916494 | 1 | 12_54916494 | ENSG00000172551 | MUCL1 | 20486 | Downstream | 4.33833207 | 1.44E-05 | 0.02518074 |
| 2 | 34771710 | 34771710 | 1 | 2_34771710 | ENSG00000232153 | AC012593.1 | 0 | INTRON | 4.33832139 | 1.44E-05 | 0.02518074 |
| 14 | 67231733 | 67231733 | 1 | 14_67231733 | ENSG00000172717 | FAM71D | 3183 | Downstream | 4.33826923 | 1.44E-05 | 0.02518187 |
| 21 | 16747091 | 16747091 | 1 | 21_16747091 | ENSG00000237735 | AF130359.1 | 7427 | Downstream | 4.33825482 | 1.44E-05 | 0.02518187 |
| 5 | 164012562 | 164012562 | 1 | 5_164012562 | ENSG00000253331 | AC008662.1 | 106535 | Downstream | -4.3382435 | 1.44E-05 | 0.02518187 |
| 1 | 91978349 | 91978349 | 1 | 1_91978349 | ENSG00000137948 | BRDT | 0 | INTRON | 4.33810182 | 1.44E-05 | 0.02519256 |
| 3 | 93747925 | 93747925 | 1 | 3_93747925 | ENSG00000251727 | RNU6-488P | 95838 | Upstream | -4.33807 | 1.44E-05 | 0.02519256 |
| 3 | 48272137 | 48272137 | 1 | 3_48272137 | ENSG00000164048 | ZNF589 | 0 | INTRON | 4.33803541 | 1.44E-05 | 0.02519256 |
| X | 2542177 | 2542177 | 1 | X_2542177 | ENSG00000169084 | DHRSX | 39372 | Upstream | -4.3380313 | 1.44E-05 | 0.02519256 |
| 16 | 13390570 | 13390570 | 1 | 16_13390570 | ENSG00000262801 | U91319.1 | 0 | INTRON | 4.33802182 | 1.44E-05 | 0.02519256 |
| 16 | 15389440 | 15389440 | 1 | 16_15389440 | ENSG00000156968 | MPV17L | 6313 | Upstream | 4.3380144 | 1.44E-05 | 0.02519256 |
| Y | 13313118 | 13313118 | 1 | Y_13313118 | ENSG00000183878 | UTY | 0 | INTRON | 4.33792347 | 1.44E-05 | 0.02519845 |
| 19 | 22338258 | 22338258 | 1 | 19_22338258 | ENSG00000196350 | ZNF729 | 21082 | Downstream | 4.33790177 | 1.44E-05 | 0.02519845 |
| 6 | 139058831 | 139058831 | 1 | 6_139058831 | ENSG00000146386 | ABRACL | 15529 | Downstream | -4.3378951 | 1.44E-05 | 0.02519845 |
| 12 | 72527441 | 72527441 | 1 | 12_72527441 | ENSG00000072657 | TRHDE | 0 | INTRON | -4.3378107 | 1.44E-05 | 0.02520553 |
| 14 | 91186712 | 91186712 | 1 | 14_91186712 | ENSG00000133943 | DGLUCY | 0 | INTRON | -4.3376277 | 1.44E-05 | 0.02522393 |
| 8 | 125047010 | 125047010 | 1 | 8_125047010 | ENSG00000164961 | WASHC5 | 0 | INTRON | 4.33756703 | 1.44E-05 | 0.02522829 |
| 2 | 232741087 | 232741087 | 1 | 2_232741087 | ENSG00000204120 | GIGYF2 | 0 | INTRON | 4.33747709 | 1.44E-05 | 0.02523601 |
| 18 | 42043122 | 42043122 | 1 | 18_42043122 | ENSG00000078142 | PIK3C3 | 0 | INTRON | -4.3374435 | 1.44E-05 | 0.02523727 |
| 9 | 42233169 | 42233169 | 1 | 9_42233169 | ENSG00000275649 | AL445584.2 | 0 | INTRON | -4.3374054 | 1.44E-05 | 0.02523905 |
| 17 | 68990938 | 68990938 | 1 | 17_68990938 | ENSG00000154258 | ABCA9 | 0 | EXON | -4.3373567 | 1.44E-05 | 0.02524205 |
| 6 | 19807808 | 19807808 | 1 | 6_19807808 | ENSG00000228412 | AL022068.1 | 0 | INTRON | 4.3372721 | 1.44E-05 | 0.02524413 |
| 4 | 119108442 | 119108442 | 1 | 4_119108442 | ENSG00000172399 | MYOZ2 | 27341 | Upstream | 4.33726604 | 1.44E-05 | 0.02524413 |
| 1 | 184267699 | 184267699 | 1 | 1_184267699 | ENSG00000207080 | Y_RNA | 47958 | Upstream | -4.3372136 | 1.44E-05 | 0.02524413 |
| 3 | 9215286 | 9215286 | 1 | 3_9215286 | ENSG00000196220 | SRGAP3 | 0 | INTRON | -4.3372085 | 1.44E-05 | 0.02524413 |
| 6 | 54299744 | 54299744 | 1 | 6_54299744 | ENSG00000137251 | TINAG | 8114 | Upstream | -4.3371968 | 1.44E-05 | 0.02524413 |
| 5 | 159798794 | 159798794 | 1 | 5_159798794 | ENSG00000253311 | LINC01847 | 0 | INTRON | -4.3371963 | 1.44E-05 | 0.02524413 |
| 3 | 13957677 | 13957677 | 1 | 3_13957677 | ENSG00000180438 | TPRXL | 0 | INTRON | 4.33718025 | 1.44E-05 | 0.02524413 |
| 7 | 152536325 | 152536325 | 1 | 7_152536325 | ENSG00000231139 | AC104843.2 | 54315 | Downstream | -4.3370974 | 1.44E-05 | 0.02524838 |
| 2 | 228746762 | 228746762 | 1 | 2_228746762 | ENSG00000232023 | LINC01807 | 0 | INTRON | 4.33705703 | 1.44E-05 | 0.02524838 |
| 15 | 38135080 | 38135080 | 1 | 15_38135080 | ENSG00000259380 | AC087473.1 | 4514 | Downstream | -4.3370447 | 1.44E-05 | 0.02524838 |
| 18 | 4682840 | 4682840 | 1 | 18_4682840 | ENSG00000266268 | AP005203.1 | 92213 | Downstream | -4.3370378 | 1.44E-05 | 0.02524838 |
| 1 | 243420319 | 243420319 | 1 | 1_243420319 | ENSG00000054282 | SDCCAG8 | 0 | INTRON | -4.3370175 | 1.44E-05 | 0.02524838 |
| 2 | 8979922 | 8979922 | 1 | 2_8979922 | ENSG00000143797 | MBOAT2 | 0 | INTRON | -4.3370076 | 1.44E-05 | 0.02524838 |
| 12 | 121665376 | 121665376 | 1 | 12_121665376 | ENSG00000139714 | MORN3 | 0 | INTRON | 4.33679953 | 1.45E-05 | 0.02526607 |
| 5 | 104488681 | 104488681 | 1 | 5_104488681 | ENSG00000251574 | AC099520.1 | 0 | INTRON | 4.33679058 | 1.45E-05 | 0.02526607 |
| 10 | 20370477 | 20370477 | 1 | 10_20370477 | ENSG00000228339 | AMD1P1 | 19377 | Downstream | -4.3367859 | 1.45E-05 | 0.02526607 |
| 7 | 153126161 | 153126161 | 1 | 7_153126161 | ENSG00000224104 | AC079809.1 | 18151 | Downstream | 4.33670738 | 1.45E-05 | 0.0252725 |
| 18 | 3763732 | 3763732 | 1 | 18_3763732 | ENSG00000170579 | DLGAP1 | 0 | INTRON | 4.33663072 | 1.45E-05 | 0.02527581 |
| 19 | 4037834 | 4037834 | 1 | 19_4037834 | ENSG00000105229 | PIAS4 | 0 | EXON | -4.3366167 | 1.45E-05 | 0.02527581 |
| 14 | 49108216 | 49108216 | 1 | 14_49108216 | ENSG00000258868 | AL110505.1 | 30711 | Upstream | -4.3366108 | 1.45E-05 | 0.02527581 |
| 1 | 152385404 | 152385404 | 1 | 1_152385404 | ENSG00000237975 | FLG-AS1 | 0 | INTRON | 4.33639464 | 1.45E-05 | 0.0252954 |
| X | 118582756 | 118582756 | 1 | X_118582756 | ENSG00000147251 | DOCK11 | 0 | INTRON | 4.33638907 | 1.45E-05 | 0.0252954 |
| 17 | 28826900 | 28826900 | 1 | 17_28826900 | ENSG00000173065 | FAM222B | 0 | INTRON | 4.33635604 | 1.45E-05 | 0.0252954 |
| 5 | 145900199 | 145900199 | 1 | 5_145900199 | ENSG00000204928 | GRXCR2 | 0 | INTRON | -4.3363502 | 1.45E-05 | 0.0252954 |
| 2 | 237768937 | 237768937 | 1 | 2_237768937 | ENSG00000124831 | LRRFIP1 | 0 | EXON | 4.33616685 | 1.45E-05 | 0.0253139 |
| 3 | 56918719 | 56918719 | 1 | 3_56918719 | ENSG00000163947 | ARHGEF3 | 0 | INTRON | -4.3361235 | 1.45E-05 | 0.02531628 |
| 15 | 98258136 | 98258136 | 1 | 15_98258136 | ENSG00000259199 | AC022523.1 | 0 | INTRON | 4.33607513 | 1.45E-05 | 0.02531926 |
| 13 | 94058262 | 94058262 | 1 | 13_94058262 | ENSG00000183098 | GPC6 | 0 | INTRON | 4.3358991 | 1.45E-05 | 0.02533693 |
| 17 | 28050522 | 28050522 | 1 | 17_28050522 | ENSG00000087095 | NLK | 0 | INTRON | -4.3358051 | 1.45E-05 | 0.02534517 |
| 10 | 57725098 | 57725098 | 1 | 10_57725098 | ENSG00000235810 | AL731534.1 | 211673 | Downstream | 4.33575161 | 1.45E-05 | 0.02534616 |
| 2 | 161091585 | 161091585 | 1 | 2_161091585 | ENSG00000224467 | AC009313.1 | 4645 | Downstream | -4.3357513 | 1.45E-05 | 0.02534616 |
| 2 | 95831664 | 95831664 | 1 | 2_95831664 | ENSG00000232931 | LINC00342 | 0 | INTRON | 4.3356667 | 1.45E-05 | 0.02535093 |
| 13 | 72896722 | 72896722 | 1 | 13_72896722 | ENSG00000083535 | PIBF1 | 0 | INTRON | 4.33566098 | 1.45E-05 | 0.02535093 |
| X | 70278311 | 70278311 | 1 | X_70278311 | ENSG00000120500 | ARR3 | 0 | INTRON | -4.3356091 | 1.45E-05 | 0.02535093 |
| 13 | 38729062 | 38729062 | 1 | 13_38729062 | ENSG00000150893 | FREM2 | 0 | INTRON | 4.33560552 | 1.45E-05 | 0.02535093 |
| 14 | 31051248 | 31051248 | 1 | 14_31051248 | ENSG00000100478 | AP4S1 | 0 | INTRON | 4.33559725 | 1.45E-05 | 0.02535093 |
| 5 | 95985562 | 95985562 | 1 | 5_95985562 | ENSG00000251314 | AC104123.1 | 0 | INTRON | -4.335558 | 1.45E-05 | 0.02535285 |
| 3 | 195728844 | 195728844 | 1 | 3_195728844 | ENSG00000242086 | MUC20-OT1 | 0 | INTRON | 4.33552679 | 1.45E-05 | 0.02535385 |
| 1 | 107681939 | 107681939 | 1 | 1_107681939 | ENSG00000134215 | VAV3 | 0 | INTRON | -4.3354491 | 1.45E-05 | 0.0253578 |
| 1 | 67618254 | 67618254 | 1 | 1_67618254 | ENSG00000242482 | RN7SL392P | 38576 | Downstream | 4.3354475 | 1.45E-05 | 0.0253578 |
| 14 | 32154469 | 32154469 | 1 | 14_32154469 | ENSG00000285608 | AL161665.1 | 0 | EXON | 4.33541573 | 1.45E-05 | 0.02535886 |
| X | 139833520 | 139833520 | 1 | X_139833520 | ENSG00000101974 | ATP11C | 0 | INTRON | 4.33533703 | 1.46E-05 | 0.02536371 |
| 3 | 79858262 | 79858262 | 1 | 3_79858262 | ENSG00000169855 | ROBO1 | 90264 | Upstream | 4.33530518 | 1.46E-05 | 0.02536371 |
| 2 | 120184563 | 120184563 | 1 | 2_120184563 | ENSG00000224789 | AC012363.1 | 0 | INTRON | 4.33529657 | 1.46E-05 | 0.02536371 |
| 1 | 169855128 | 169855128 | 1 | 1_169855128 | ENSG00000000457 | SCYL3 | 0 | INTRON | 4.33526925 | 1.46E-05 | 0.02536371 |
| 14 | 70961357 | 70961357 | 1 | 14_70961357 | ENSG00000100731 | PCNX1 | 0 | INTRON | 4.33526107 | 1.46E-05 | 0.02536371 |
| 16 | 15818493 | 15818493 | 1 | 16_15818493 | ENSG00000133392 | MYH11 | 0 | INTRON | 4.33516397 | 1.46E-05 | 0.02537231 |
| 2 | 137943516 | 137943516 | 1 | 2_137943516 | ENSG00000150540 | HNMT | 20503 | Upstream | 4.33510043 | 1.46E-05 | 0.0253745 |
| 1 | 21917100 | 21917100 | 1 | 1_21917100 | ENSG00000142798 | HSPG2 | 0 | INTRON | 4.33509994 | 1.46E-05 | 0.0253745 |
| 13 | 78868109 | 78868109 | 1 | 13_78868109 | ENSG00000215357 | HSPD1P8 | 16901 | Downstream | -4.3350677 | 1.46E-05 | 0.02537553 |
| 2 | 41422203 | 41422203 | 1 | 2_41422203 | ENSG00000237442 | HNRNPA1P57 | 264648 | Downstream | 4.3350456 | 1.46E-05 | 0.02537553 |
| 18 | 53502916 | 53502916 | 1 | 18_53502916 | ENSG00000260433 | LINC01917 | 0 | INTRON | 4.33502348 | 1.46E-05 | 0.02537553 |
| 18 | 65719511 | 65719511 | 1 | 18_65719511 | ENSG00000081138 | CDH7 | 30740 | Upstream | 4.33495377 | 1.46E-05 | 0.02538059 |
| 18 | 61322396 | 61322396 | 1 | 18_61322396 | ENSG00000101542 | CDH20 | 11033 | Upstream | -4.3349346 | 1.46E-05 | 0.02538059 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 55496907 | 55496907 | 1 | 2_55496907 | ENSG00000239189 | RNU6-634P | 3042 | Upstream | 4.33484785 | 1.46E-05 | 0.025388 |
| 6 | 170694596 | 170694596 | 1 | 6_170694596 | ENSG00000230423 | AL672310.1 | 0 | INTRON | -4.3348185 | 1.46E-05 | 0.02538879 |
| 1 | 143859533 | 143859533 | 1 | 1_143859533 | ENSG00000237503 | AC239798.3 | 13029 | Upstream | 4.33474322 | 1.46E-05 | 0.02539477 |
| 18 | 33066152 | 33066152 | 1 | 18_33066152 | ENSG00000166960 | CCDC178 | 0 | INTRON | 4.33471276 | 1.46E-05 | 0.02539477 |
| 20 | 939766 | 939766 | 1 | 20_939766 | ENSG00000101282 | RSPO4 | 18685 | Downstream | -4.3346993 | 1.46E-05 | 0.02539477 |
| 10 | 28807443 | 28807443 | 1 | 10_28807443 | ENSG00000232624 | LINC01517 | 0 | INTRON | 4.33466929 | 1.46E-05 | 0.02539563 |
| 8 | 111433374 | 111433374 | 1 | 8_111433374 | ENSG00000253434 | LINC02237 | 0 | INTRON | -4.334553 | 1.46E-05 | 0.02540646 |
| 7 | 94674510 | 94674510 | 1 | 7_94674510 | ENSG00000242265 | PEG10 | 4815 | Downstream | -4.3344815 | 1.46E-05 | 0.02541212 |
| 1 | 180685299 | 180685299 | 1 | 1_180685299 | ENSG00000143324 | XPR1 | 0 | INTRON | 4.33443125 | 1.46E-05 | 0.02541533 |
| 2 | 241800335 | 241800335 | 1 | 2_241800335 | ENSG00000154252 | GAL3ST2 | 0 | INTRON | 4.33436555 | 1.46E-05 | 0.02542028 |
| 4 | 91268929 | 91268929 | 1 | 4_91268929 | ENSG00000184305 | CCSER1 | 0 | INTRON | 4.33433307 | 1.46E-05 | 0.02542028 |
| 15 | 37470980 | 37470980 | 1 | 15_37470980 | ENSG00000259434 | AC068875.1 | 0 | INTRON | 4.33432093 | 1.46E-05 | 0.02542028 |
| 7 | 120808718 | 120808718 | 1 | 7_120808718 | ENSG00000106025 | TSPAN12 | 0 | INTRON | -4.3341994 | 1.46E-05 | 0.02543173 |
| 22 | 40175080 | 40175080 | 1 | 22_40175080 | ENSG00000100354 | TNRC6B | 0 | INTRON | 4.33411462 | 1.46E-05 | 0.02543525 |
| 8 | 22445881 | 22445881 | 1 | 8_22445881 | ENSG00000120910 | PPP3CC | 0 | INTRON | 4.33411372 | 1.46E-05 | 0.02543525 |
| 7 | 42991099 | 42991099 | 1 | 7_42991099 | ENSG00000232006 | AC005537.1 | 0 | INTRON | -4.334099 | 1.46E-05 | 0.02543525 |
| 6 | 107725324 | 107725324 | 1 | 6_107725324 | ENSG00000146285 | SCML4 | 0 | INTRON | -4.334079 | 1.46E-05 | 0.02543525 |
| 5 | 57363153 | 57363153 | 1 | 5_57363153 | ENSG00000250961 | AC025470.2 | 31906 | Upstream | -4.3340369 | 1.46E-05 | 0.02543575 |
| 2 | 61843166 | 61843166 | 1 | 2_61843166 | ENSG00000170264 | FAM161A | 0 | INTRON | -4.3340298 | 1.46E-05 | 0.02543575 |
| 7 | 94249268 | 94249268 | 1 | 7_94249268 | ENSG00000285090 | AC002074.1 | 29411 | Downstream | 4.33398801 | 1.46E-05 | 0.02543671 |
| 14 | 34530060 | 34530060 | 1 | 14_34530060 | ENSG00000129518 | EAPP | 0 | INTRON | 4.33397658 | 1.46E-05 | 0.02543671 |
| 12 | 132531954 | 132531954 | 1 | 12_132531954 | ENSG00000112787 | FBRSL1 | 0 | INTRON | -4.3339283 | 1.46E-05 | 0.02543969 |
| 6 | 154196510 | 154196510 | 1 | 6_154196510 | ENSG00000074706 | IPCEF1 | 0 | INTRON | -4.3338796 | 1.47E-05 | 0.02544053 |
| 10 | 123850877 | 123850877 | 1 | 10_123850877 | ENSG00000121898 | CPXM2 | 0 | INTRON | 4.33387521 | 1.47E-05 | 0.02544053 |
| 17 | 80349983 | 80349983 | 1 | 17_80349983 | ENSG00000173821 | RNF213 | 0 | INTRON | -4.3338242 | 1.47E-05 | 0.02544053 |
| 5 | 74749614 | 74749614 | 1 | 5_74749614 | ENSG00000164347 | GFM2 | 0 | INTRON | -4.3338208 | 1.47E-05 | 0.02544053 |
| 4 | 185717135 | 185717135 | 1 | 4_185717135 | ENSG00000154556 | SORBS2 | 0 | INTRON | 4.33380878 | 1.47E-05 | 0.02544053 |
| 19 | 12327374 | 12327374 | 1 | 19_12327374 | ENSG00000188868 | ZNF563 | 0 | INTRON | -4.3337314 | 1.47E-05 | 0.02544483 |
| 2 | 115866217 | 115866217 | 1 | 2_115866217 | ENSG00000287451 | AC016721.1 | 0 | INTRON | -4.3337267 | 1.47E-05 | 0.02544483 |
| 18 | 57552547 | 57552547 | 1 | 18_57552547 | ENSG00000066926 | FECH | 0 | INTRON | 4.33368685 | 1.47E-05 | 0.02544684 |
| 8 | 133626548 | 133626548 | 1 | 8_133626548 | ENSG00000212273 | AC090821.1 | 18049 | Downstream | 4.33364321 | 1.47E-05 | 0.02544929 |
| 9 | 130967352 | 130967352 | 1 | 9_130967352 | ENSG00000236658 | AL161733.1 | 21832 | Downstream | -4.3335811 | 1.47E-05 | 0.02545389 |
| 7 | 10691268 | 10691268 | 1 | 7_10691268 | ENSG00000283117 | AC004949.1 | 0 | INTRON | -4.3335371 | 1.47E-05 | 0.02545638 |
| X | 154801524 | 154801524 | 1 | X_154801524 | ENSG00000130830 | MPP1 | 0 | INTRON | -4.333459 | 1.47E-05 | 0.02545947 |
| 9 | 60523667 | 60523667 | 1 | 9_60523667 | ENSG00000277598 | BX088702.1 | 23252 | Downstream | -4.333449 | 1.47E-05 | 0.02545947 |
| 2 | 38464132 | 38464132 | 1 | 2_38464132 | ENSG00000231367 | LINC02613 | 0 | INTRON | -4.3334284 | 1.47E-05 | 0.02545947 |
| 1 | 2420777 | 2420777 | 1 | 1_2420777 | ENSG00000149527 | PLCH2 | 5202 | Upstream | 4.33340223 | 1.47E-05 | 0.02545947 |
| 7 | 36717589 | 36717589 | 1 | 7_36717589 | ENSG00000136250 | AOAH | 0 | INTRON | 4.33339822 | 1.47E-05 | 0.02545947 |
| 6 | 163144177 | 163144177 | 1 | 6_163144177 | ENSG00000112530 | PACRG | 0 | INTRON | 4.33334686 | 1.47E-05 | 0.02546282 |
| 13 | 100110004 | 100110004 | 1 | 13_100110004 | ENSG00000175198 | PCCA | 0 | INTRON | 4.33328586 | 1.47E-05 | 0.02546728 |
| 1 | 9886639 | 9886639 | 1 | 1_9886639 | ENSG00000178585 | CTNNBIP1 | 0 | INTRON | 4.33320808 | 1.47E-05 | 0.0254678 |
| 7 | 102756571 | 102756571 | 1 | 7_102756571 | ENSG00000222011 | FAM185A | 0 | INTRON | 4.33316092 | 1.47E-05 | 0.0254678 |
| 8 | 85213398 | 85213398 | 1 | 8_85213398 | ENSG00000133740 | E2F5 | 0 | 3UTR | -4.3331587 | 1.47E-05 | 0.0254678 |
| 8 | 28634784 | 28634784 | 1 | 8_28634784 | ENSG00000012232 | EXTL3 | 0 | INTRON | 4.33315333 | 1.47E-05 | 0.0254678 |
| 20 | 5590268 | 5590268 | 1 | 20_5590268 | ENSG00000125772 | GPCPD1 | 0 | INTRON | 4.33314958 | 1.47E-05 | 0.0254678 |
| 3 | 13847551 | 13847551 | 1 | 3_13847551 | ENSG00000154764 | WNT7A | 0 | INTRON | -4.3331469 | 1.47E-05 | 0.0254678 |
| 5 | 89605736 | 89605736 | 1 | 5_89605736 | ENSG00000250437 | LINC02161 | 0 | INTRON | 4.3330648 | 1.47E-05 | 0.02547471 |
| 6 | 89747747 | 89747747 | 1 | 6_89747747 | ENSG00000112159 | MDN1 | 0 | INTRON | 4.333026 | 1.47E-05 | 0.02547606 |
| 13 | 66890658 | 66890658 | 1 | 13_66890658 | ENSG00000228842 | PCDH9-AS2 | 0 | INTRON | -4.332962 | 1.47E-05 | 0.02547606 |
| 5 | 120194683 | 120194683 | 1 | 5_120194683 | ENSG00000251293 | AC008574.1 | 50764 | Downstream | 4.3329488 | 1.47E-05 | 0.02547606 |
| 2 | 43467042 | 43467042 | 1 | 2_43467042 | ENSG00000115970 | THADA | 0 | INTRON | 4.33294236 | 1.47E-05 | 0.02547606 |
| 9 | 87698305 | 87698305 | 1 | 9_87698305 | ENSG00000196730 | DAPK1 | 0 | INTRON | 4.33294114 | 1.47E-05 | 0.02547606 |
| 4 | 183873245 | 183873245 | 1 | 4_183873245 | ENSG00000173320 | STOX2 | 0 | INTRON | 4.33288887 | 1.47E-05 | 0.02547895 |
| 22 | 27812693 | 27812693 | 1 | 22_27812693 | ENSG00000169184 | MN1 | 10937 | Upstream | -4.3328714 | 1.47E-05 | 0.02547895 |
| 16 | 24882465 | 24882465 | 1 | 16_24882465 | ENSG00000158865 | SLC5A11 | 0 | INTRON | 4.33272173 | 1.47E-05 | 0.02549369 |
| 3 | 20619747 | 20619747 | 1 | 3_20619747 | ENSG00000231304 | SGO1-AS1 | 0 | INTRON | -4.3326518 | 1.47E-05 | 0.02549681 |
| 5 | 4984136 | 4984136 | 1 | 5_4984136 | ENSG00000250481 | AC010451.1 | 0 | INTRON | 4.33265 | 1.47E-05 | 0.02549681 |
| 3 | 80808081 | 80808081 | 1 | 3_80808081 | ENSG00000242781 | LINC02050 | 18693 | Downstream | 4.33255957 | 1.47E-05 | 0.02550469 |
| 2 | 71092728 | 71092728 | 1 | 2_71092728 | ENSG00000124357 | NAGK | 12920 | Downstream | 4.33236592 | 1.48E-05 | 0.02552455 |
| 5 | 79124328 | 79124328 | 1 | 5_79124328 | ENSG00000132837 | DMGDH | 0 | INTRON | -4.3323064 | 1.48E-05 | 0.02552818 |
| 4 | 124996557 | 124996557 | 1 | 4_124996557 | ENSG00000151458 | ANKRD50 | 283825 | Upstream | -4.3322749 | 1.48E-05 | 0.02552818 |
| 12 | 130008014 | 130008014 | 1 | 12_130008014 | ENSG00000261650 | AC055717.2 | 16478 | Downstream | 4.33226445 | 1.48E-05 | 0.02552818 |
| 16 | 34671119 | 34671119 | 1 | 16_34671119 | ENSG00000286968 | FP325313.2 | 222253 | Downstream | -4.33224 | 1.48E-05 | 0.02552818 |
| 19 | 48569258 | 48569258 | 1 | 19_48569258 | ENSG00000287603 | AC008403.3 | 0 | INTRON | -4.3322227 | 1.48E-05 | 0.02552818 |
| 9 | 26613607 | 26613607 | 1 | 9_26613607 | ENSG00000279256 | AL442639.1 | 29089 | Downstream | 4.33215558 | 1.48E-05 | 0.02552998 |
| 3 | 94096568 | 94096568 | 1 | 3_94096568 | ENSG00000178694 | NSUN3 | 0 | INTRON | -4.3321468 | 1.48E-05 | 0.02552998 |
| 2 | 77185298 | 77185298 | 1 | 2_77185298 | ENSG00000176204 | LRRTM4 | 0 | INTRON | -4.3321129 | 1.48E-05 | 0.02552998 |
| 7 | 78755114 | 78755114 | 1 | 7_78755114 | ENSG00000187391 | MAGI2 | 0 | INTRON | 4.33206091 | 1.48E-05 | 0.02552998 |
| 13 | 29318074 | 29318074 | 1 | 13_29318074 | ENSG00000132938 | MTUS2 | 0 | INTRON | -4.3320554 | 1.48E-05 | 0.02552998 |
| 4 | 147990259 | 147990259 | 1 | 4_147990259 | ENSG00000071205 | ARHGAP10 | 0 | INTRON | 4.33203755 | 1.48E-05 | 0.02552998 |
| 17 | 64682595 | 64682595 | 1 | 17_64682595 | ENSG00000108854 | SMURF2 | 20288 | Upstream | 4.33203512 | 1.48E-05 | 0.02552998 |
| 4 | 103327825 | 103327825 | 1 | 4_103327825 | ENSG00000248740 | LINC02428 | 0 | INTRON | 4.33202829 | 1.48E-05 | 0.02552998 |
| 6 | 21200902 | 21200902 | 1 | 6_21200902 | ENSG00000145996 | CDKAL1 | 0 | INTRON | -4.3319302 | 1.48E-05 | 0.02553877 |
| 19 | 28461398 | 28461398 | 1 | 19_28461398 | ENSG00000267243 | AC005381.1 | 0 | EXON | 4.33189448 | 1.48E-05 | 0.02554032 |
| 3 | 142441901 | 142441901 | 1 | 3_142441901 | ENSG00000114127 | XRN1 | 0 | INTRON | -4.3318561 | 1.48E-05 | 0.02554218 |
| 8 | 143862496 | 143862496 | 1 | 8_143862496 | ENSG00000261150 | EPPK1 | 0 | EXON | -4.3317016 | 1.48E-05 | 0.02555464 |
| 6 | 74146441 | 74146441 | 1 | 6_74146441 | ENSG00000223786 | AL357507.1 | 0 | INTRON | -4.3316922 | 1.48E-05 | 0.02555464 |
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| 14 | 53532290 | 53532290 | 1 | 14_53532290 | ENSG00000237356 | AL365295.1 | 0 | INTRON | -4.3316026 | 1.48E-05 | 0.02556123 |
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| 16 | 60296388 | 60296388 | 1 | 16_60296388 | ENSG00000261436 | AC009081.2 | 50089 | Upstream | -4.3315224 | 1.48E-05 | 0.02556329 |
| 3 | 127388250 | 127388250 | 1 | 3_127388250 | ENSG00000244215 | LINC02016 | 0 | INTRON | 4.33142612 | 1.48E-05 | 0.02556329 |
| 11 | 13905633 | 13905633 | 1 | 11_13905633 | ENSG00000201856 | RNA5SP331 | 1850 | Downstream | 4.33140231 | 1.48E-05 | 0.02556329 |
| 6 | 47014520 | 47014520 | 1 | 6_47014520 | ENSG00000153292 | ADGRF1 | 0 | EXON | 4.33137169 | 1.48E-05 | 0.02556329 |
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| 3 | 177209071 | 177209071 | 1 | 3_177209071 | ENSG00000177565 | TBL1XR1 | 0 | INTRON | 4.33128163 | 1.48E-05 | 0.02556329 |
| 3 | 69311262 | 69311262 | 1 | 3_69311262 | ENSG00000114541 | FRMD4B | 0 | EXON | -4.3312799 | 1.48E-05 | 0.02556329 |
| 4 | 182254949 | 182254949 | 1 | 4_182254949 | ENSG00000218336 | TENM3 | 0 | INTRON | -4.3312667 | 1.48E-05 | 0.02556329 |
| 2 | 149240552 | 149240552 | 1 | 2_149240552 | ENSG00000150556 | LYPD6B | 25290 | Downstream | 4.33124999 | 1.48E-05 | 0.02556329 |
| 5 | 9105388 | 9105388 | 1 | 5_9105388 | ENSG00000112902 | SEMA5A | 0 | INTRON | -4.3311267 | 1.48E-05 | 0.02557502 |
| 8 | 12549564 | 12549564 | 1 | 8_12549564 | ENSG00000283674 | AC068587.4 | 0 | INTRON | -4.3310432 | 1.48E-05 | 0.02557773 |
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| 22 | 38012589 | 38012589 | 1 | 22_38012589 | ENSG00000100142 | POLR2F | 0 | INTRON | -4.3310364 | 1.48E-05 | 0.02557773 |
| 4 | 107910679 | 107910679 | 1 | 4_107910679 | ENSG00000164023 | SGMS2 | 0 | 3UTR | 4.33101422 | 1.48E-05 | 0.02557773 |
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| 3 | 50809143 | 50809143 | 1 | 3_50809143 | ENSG00000088538 | DOCK3 | 0 | INTRON | 4.33093904 | 1.48E-05 | 0.02558128 |
| 5 | 90056867 | 90056867 | 1 | 5_90056867 | ENSG00000264342 | MIR3660 | 40147 | Upstream | 4.33091301 | 1.48E-05 | 0.02558135 |
| 2 | 71407549 | 71407549 | 1 | 2_71407549 | ENSG00000075292 | ZNF638 | 0 | EXON | 4.33089389 | 1.49E-05 | 0.02558135 |
| 3 | 112382955 | 112382955 | 1 | 3_112382955 | ENSG00000243081 | AC092894.1 | 13691 | Downstream | -4.3307748 | 1.49E-05 | 0.02559056 |
| 11 | 38390606 | 38390606 | 1 | 11_38390606 | ENSG00000255477 | AC021713.1 | 108388 | Upstream | 4.33077005 | 1.49E-05 | 0.02559056 |
| 13 | 113622922 | 113622922 | 1 | 13_113622922 | ENSG00000198176 | TFDP1 | 0 | INTRON | 4.33061596 | 1.49E-05 | 0.0256034 |
| 8 | 701349 | 701349 | 1 | 8_701349 | ENSG00000104714 | ERICH1 | 0 | INTRON | -4.330615 | 1.49E-05 | 0.0256034 |
| 4 | 142677896 | 142677896 | 1 | 4_142677896 | ENSG00000109452 | INPP4B | 0 | INTRON | -4.3305095 | 1.49E-05 | 0.02561202 |
| 7 | 75454125 | 75454125 | 1 | 7_75454125 | ENSG00000272391 | POM121C | 0 | INTRON | 4.33049631 | 1.49E-05 | 0.02561202 |
| 5 | 27329209 | 27329209 | 1 | 5_27329209 | ENSG00000250337 | PURPL | 0 | INTRON | 4.33042693 | 1.49E-05 | 0.0256175 |
| 13 | 58234535 | 58234535 | 1 | 13_58234535 | ENSG00000232954 | LINC00374 | 1418 | Upstream | 4.33040166 | 1.49E-05 | 0.02561785 |
| 3 | 2342555 | 2342555 | 1 | 3_2342555 | ENSG00000144619 | CNTN4 | 0 | INTRON | 4.33036798 | 1.49E-05 | 0.02561918 |
| 7 | 42521326 | 42521326 | 1 | 7_42521326 | ENSG00000238284 | LINC01448 | 140389 | Downstream | 4.33034389 | 1.49E-05 | 0.02561939 |
| 14 | 52177962 | 52177962 | 1 | 14_52177962 | ENSG00000258440 | AL118557.1 | 21783 | Downstream | -4.330293 | 1.49E-05 | 0.02562272 |
| 19 | 34539549 | 34539549 | 1 | 19_34539549 | ENSG00000248830 | ZNF807 | 2912 | Downstream | 4.33023148 | 1.49E-05 | 0.02562729 |
| 2 | 163777820 | 163777820 | 1 | 2_163777820 | ENSG00000237844 | AC016766.1 | 0 | INTRON | -4.3301901 | 1.49E-05 | 0.02562952 |
| 4 | 142622553 | 142622553 | 1 | 4_142622553 | ENSG00000109452 | INPP4B | 0 | INTRON | 4.33014026 | 1.49E-05 | 0.02563044 |
| 17 | 19503458 | 19503458 | 1 | 17_19503458 | ENSG00000142494 | SLC47A1 | 0 | INTRON | -4.3301002 | 1.49E-05 | 0.02563044 |
| 5 | 461654 | 461654 | 1 | 5_461654 | ENSG00000180104 | EXOC3 | 0 | EXON | 4.33009931 | 1.49E-05 | 0.02563044 |
| 19 | 22608017 | 22608017 | 1 | 19_22608017 | ENSG00000269025 | AC011467.4 | 0 | EXON | 4.33007591 | 1.49E-05 | 0.02563044 |
| 6 | 15811474 | 15811474 | 1 | 6_15811474 | ENSG00000214027 | ARPC3P5 | 123307 | Upstream | -4.3300708 | 1.49E-05 | 0.02563044 |
| 6 | 28348707 | 28348707 | 1 | 6_28348707 | ENSG00000235109 | ZSCAN31 | 0 | INTRON | 4.32997608 | 1.49E-05 | 0.02563793 |
| 1 | 90544475 | 90544475 | 1 | 1_90544475 | ENSG00000229201 | LINC02787 | 11003 | Upstream | -4.329962 | 1.49E-05 | 0.02563793 |
| 8 | 119320667 | 119320667 | 1 | 8_119320667 | ENSG00000276479 | MIR548AZ | 4503 | Upstream | -4.3299343 | 1.49E-05 | 0.02563856 |
| 2 | 233327667 | 233327667 | 1 | 2_233327667 | ENSG00000130561 | SAG | 0 | EXON | 4.32991171 | 1.49E-05 | 0.02563861 |
| 7 | 157259764 | 157259764 | 1 | 7_157259764 | ENSG00000009335 | UBE3C | 0 | INTRON | 4.32987999 | 1.49E-05 | 0.02563916 |
| 1 | 160771064 | 160771064 | 1 | 1_160771064 | ENSG00000275801 | AL121985.3 | 4889 | Downstream | -4.3298625 | 1.49E-05 | 0.02563916 |
| 7 | 7633221 | 7633221 | 1 | 7_7633221 | ENSG00000106399 | RPA3 | 3296 | Downstream | -4.3298276 | 1.49E-05 | 0.02564063 |
| 5 | 26529402 | 26529402 | 1 | 5_26529402 | ENSG00000286204 | AC025475.2 | 44691 | Upstream | 4.3297968 | 1.49E-05 | 0.02564163 |
| 1 | 198997012 | 198997012 | 1 | 1_198997012 | ENSG00000233410 | LINC01222 | 9027 | Downstream | 4.32972635 | 1.49E-05 | 0.02564724 |
| 7 | 152153122 | 152153122 | 1 | 7_152153122 | ENSG00000055609 | KMT2C | 0 | INTRON | 4.32964529 | 1.49E-05 | 0.0256537 |
| 4 | 17740890 | 17740890 | 1 | 4_17740890 | ENSG00000047662 | FAM184B | 0 | INTRON | -4.3296265 | 1.49E-05 | 0.0256537 |
| 2 | 31177100 | 31177100 | 1 | 2_31177100 | ENSG00000214711 | CAPN14 | 0 | 3UTR | 4.32953868 | 1.49E-05 | 0.02566134 |
| 7 | 38914325 | 38914325 | 1 | 7_38914325 | ENSG00000006715 | VPS41 | 0 | INTRON | 4.32949557 | 1.49E-05 | 0.02566325 |
| 7 | 16465964 | 16465964 | 1 | 7_16465964 | ENSG00000171243 | SOSTDC1 | 0 | INTRON | -4.3294778 | 1.49E-05 | 0.02566325 |
| 4 | 111555690 | 111555690 | 1 | 4_111555690 | ENSG00000241722 | AC083795.1 | 3517 | Downstream | -4.3294404 | 1.49E-05 | 0.02566385 |
| 2 | 135585705 | 135585705 | 1 | 2_135585705 | ENSG00000048991 | R3HDM1 | 0 | INTRON | 4.32942818 | 1.49E-05 | 0.02566385 |
| 10 | 108959913 | 108959913 | 1 | 10_108959913 | ENSG00000222436 | RN7SKP278 | 18603 | Upstream | -4.329374 | 1.50E-05 | 0.02566679 |
| X | 72008506 | 72008506 | 1 | X_72008506 | ENSG00000204131 | NHSL2 | 0 | INTRON | -4.3293586 | 1.50E-05 | 0.02566679 |
| 6 | 67062904 | 67062904 | 1 | 6_67062904 | ENSG00000212229 | AL591004.1 | 147503 | Downstream | 4.3293282 | 1.50E-05 | 0.02566774 |
| 8 | 21978551 | 21978551 | 1 | 8_21978551 | ENSG00000130227 | XPO7 | 0 | INTRON | -4.3292027 | 1.50E-05 | 0.02567503 |
| 17 | 21224430 | 21224430 | 1 | 17_21224430 | ENSG00000235530 | AC087294.1 | 0 | INTRON | 4.3291975 | 1.50E-05 | 0.02567503 |
| 19 | 28354012 | 28354012 | 1 | 19_28354012 | ENSG00000267320 | AC005580.1 | 0 | INTRON | 4.32919215 | 1.50E-05 | 0.02567503 |
| 17 | 80960044 | 80960044 | 1 | 17_80960044 | ENSG00000141564 | RPTOR | 0 | INTRON | 4.32917677 | 1.50E-05 | 0.02567503 |
| 15 | 101840330 | 101840330 | 1 | 15_101840330 | ENSG00000214344 | OR4F13P | 1788 | Upstream | 4.32911828 | 1.50E-05 | 0.02567541 |
| 7 | 28758015 | 28758015 | 1 | 7_28758015 | ENSG00000146592 | CREB5 | 0 | INTRON | -4.3291044 | 1.50E-05 | 0.02567541 |
| 7 | 76835513 | 76835513 | 1 | 7_76835513 | ENSG00000285666 | AC006972.1 | 0 | INTRON | 4.32909285 | 1.50E-05 | 0.02567541 |
| 11 | 74833763 | 74833763 | 1 | 11_74833763 | ENSG00000166435 | XRRA1 | 0 | INTRON | 4.32908476 | 1.50E-05 | 0.02567541 |
| 8 | 86648130 | 86648130 | 1 | 8_86648130 | ENSG00000170289 | CNGB3 | 0 | INTRON | -4.3290315 | 1.50E-05 | 0.02567903 |
| 15 | 34622920 | 34622920 | 1 | 15_34622920 | ENSG00000252425 | AC100834.1 | 25362 | Upstream | -4.3288247 | 1.50E-05 | 0.02570056 |
| 14 | 101172097 | 101172097 | 1 | 14_101172097 | ENSG00000288252 | AL355836.4 | 0 | INTRON | 4.32870656 | 1.50E-05 | 0.02570482 |
| 13 | 56746989 | 56746989 | 1 | 13_56746989 | ENSG00000201665 | RN7SKP6 | 138294 | Downstream | -4.3287004 | 1.50E-05 | 0.02570482 |
| 4 | 139051527 | 139051527 | 1 | 4_139051527 | ENSG00000109381 | ELF2 | 0 | INTRON | 4.3286783 | 1.50E-05 | 0.02570482 |
| 5 | 37451482 | 37451482 | 1 | 5_37451482 | ENSG00000082068 | WDR70 | 0 | INTRON | 4.32866377 | 1.50E-05 | 0.02570482 |
| 10 | 105821124 | 105821124 | 1 | 10_105821124 | ENSG00000229466 | LINC02627 | 775 | Upstream | 4.32866068 | 1.50E-05 | 0.02570482 |
| 3 | 40357984 | 40357984 | 1 | 3_40357984 | ENSG00000223797 | ENTPD3-AS1 | 0 | INTRON | -4.3286551 | 1.50E-05 | 0.02570482 |
| 13 | 100899961 | 100899961 | 1 | 13_100899961 | ENSG00000233009 | NALCN-AS1 | 0 | INTRON | -4.3286326 | 1.50E-05 | 0.02570485 |
| 1 | 64509867 | 64509867 | 1 | 1_64509867 | ENSG00000158966 | CACHD1 | 0 | INTRON | 4.32859814 | 1.50E-05 | 0.02570581 |
| 11 | 100572422 | 100572422 | 1 | 11_100572422 | ENSG00000242165 | RN7SL222P | 69552 | Downstream | 4.32858002 | 1.50E-05 | 0.02570581 |
| 8 | 112570423 | 112570423 | 1 | 8_112570423 | ENSG00000164796 | CSMD3 | 0 | INTRON | 4.32851473 | 1.50E-05 | 0.02570699 |
| 3 | 109907286 | 109907286 | 1 | 3_109907286 | ENSG00000214380 | AC068781.1 | 8689 | Downstream | -4.3284935 | 1.50E-05 | 0.02570699 |
| 6 | 111371815 | 111371815 | 1 | 6_111371815 | ENSG00000009413 | REV3L | 0 | INTRON | -4.3284598 | 1.50E-05 | 0.02570699 |
| 16 | 31654304 | 31654304 | 1 | 16_31654304 | ENSG00000237185 | VN1R66P | 5082 | Downstream | 4.32843984 | 1.50E-05 | 0.02570699 |
| 1 | 42978831 | 42978831 | 1 | 1_42978831 | ENSG00000227533 | SLC2A1-AS1 | 0 | INTRON | 4.32843893 | 1.50E-05 | 0.02570699 |
| 4 | 108256308 | 108256308 | 1 | 4_108256308 | ENSG00000232021 | LEF1-AS1 | 0 | INTRON | 4.32843354 | 1.50E-05 | 0.02570699 |
| 13 | 27359413 | 27359413 | 1 | 13_27359413 | ENSG00000229609 | LINC01079 | 13934 | Upstream | 4.32841476 | 1.50E-05 | 0.02570699 |
| 6 | 164362916 | 164362916 | 1 | 6_164362916 | ENSG00000226739 | AL358972.1 | 14272 | Upstream | -4.3282635 | 1.50E-05 | 0.02572206 |
| 3 | 44631171 | 44631171 | 1 | 3_44631171 | ENSG00000186448 | ZNF197 | 0 | 3UTR | 4.32820576 | 1.50E-05 | 0.02572622 |
| 5 | 109598033 | 109598033 | 1 | 5_109598033 | ENSG00000214794 | KRT18P42 | 8441 | Downstream | 4.32816506 | 1.50E-05 | 0.02572838 |
| 9 | 66615886 | 66615886 | 1 | 9_66615886 | ENSG00000274181 | RBPJP2 | 19867 | Upstream | -4.3281268 | 1.50E-05 | 0.02573026 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 175529090 | 175529090 | 1 | 2_175529090 | ENSG00000229066 | AC093459.1 | 65910 | Downstream | 4.3280753 | 1.50E-05 | 0.02573369 |
| 2 | 97394576 | 97394576 | 1 | 2_97394576 | ENSG00000270187 | IGKV1OR2-11 | 8208 | Downstream | -4.3279412 | 1.51E-05 | 0.02574677 |
| 5 | 145160897 | 145160897 | 1 | 5_145160897 | ENSG00000251031 | AC132803.1 | 0 | INTRON | -4.3279085 | 1.51E-05 | 0.02574677 |
| 4 | 170275219 | 170275219 | 1 | 4_170275219 | ENSG00000250266 | LINC01612 | 0 | INTRON | 4.32789692 | 1.51E-05 | 0.02574677 |
| 19 | 18584868 | 18584868 | 1 | 19_18584868 | ENSG00000006016 | CRLF1 | 0 | INTRON | -4.327851 | 1.51E-05 | 0.02574955 |
| X | 17347554 | 17347554 | 1 | X_17347554 | ENSG00000238764 | AL845433.1 | 10375 | Upstream | 4.32773641 | 1.51E-05 | 0.02576036 |
| 1 | 145343733 | 145343733 | 1 | 1_145343733 | ENSG00000162825 | NBPF20 | 0 | INTRON | -4.327707 | 1.51E-05 | 0.02576121 |
| 11 | 95842799 | 95842799 | 1 | 11_95842799 | ENSG00000087053 | MTMR2 | 0 | INTRON | 4.32767757 | 1.51E-05 | 0.02576206 |
| 14 | 72575903 | 72575903 | 1 | 14_72575903 | ENSG00000258871 | AC004828.1 | 0 | INTRON | 4.32762602 | 1.51E-05 | 0.0257655 |
| 9 | 117707454 | 117707454 | 1 | 9_117707454 | ENSG00000285082 | AL160272.2 | 0 | INTRON | 4.32755422 | 1.51E-05 | 0.02576865 |
| 12 | 36054177 | 36054177 | 1 | 12_36054177 | ENSG00000258368 | ZNF970P | 1521409 | Upstream | -4.3275379 | 1.51E-05 | 0.02576865 |
| 6 | 133416859 | 133416859 | 1 | 6_133416859 | ENSG00000112319 | EYA4 | 0 | INTRON | -4.3275327 | 1.51E-05 | 0.02576865 |
| 1 | 231961842 | 231961842 | 1 | 1_231961842 | ENSG00000162946 | DISC1 | 0 | INTRON | 4.32750021 | 1.51E-05 | 0.02576986 |
| 10 | 16369840 | 16369840 | 1 | 10_16369840 | ENSG00000165983 | PTER | 67102 | Upstream | -4.3274681 | 1.51E-05 | 0.02576994 |
| 8 | 29359860 | 29359860 | 1 | 8_29359860 | ENSG00000285601 | AC084262.2 | 0 | EXON | 4.32745533 | 1.51E-05 | 0.02576994 |
| 2 | 146264840 | 146264840 | 1 | 2_146264840 | ENSG00000230559 | RPL17P12 | 70019 | Downstream | 4.3273532 | 1.51E-05 | 0.02577712 |
| 10 | 3143068 | 3143068 | 1 | 10_3143068 | ENSG00000237399 | PITRM1-AS1 | 0 | EXON | 4.32733487 | 1.51E-05 | 0.02577712 |
| 10 | 89151604 | 89151604 | 1 | 10_89151604 | ENSG00000233292 | AL513533.1 | 12146 | Downstream | -4.3273276 | 1.51E-05 | 0.02577712 |
| 11 | 47700309 | 47700309 | 1 | 11_47700309 | ENSG00000165923 | AGBL2 | 0 | INTRON | 4.32725251 | 1.51E-05 | 0.02578331 |
| 2 | 238006165 | 238006165 | 1 | 2_238006165 | ENSG00000184182 | UBE2F | 0 | INTRON | -4.3272054 | 1.51E-05 | 0.02578623 |
| 4 | 136610572 | 136610572 | 1 | 4_136610572 | ENSG00000279749 | AC093875.1 | 56833 | Downstream | 4.32712337 | 1.51E-05 | 0.0257909 |
| 15 | 80233846 | 80233846 | 1 | 15_80233846 | ENSG00000259417 | CTXND1 | 0 | INTRON | -4.3271062 | 1.51E-05 | 0.0257909 |
| X | 24888908 | 24888908 | 1 | X_24888908 | ENSG00000101868 | POLA1 | 0 | INTRON | -4.3270675 | 1.51E-05 | 0.0257909 |
| 3 | 106425254 | 106425254 | 1 | 3_106425254 | ENSG00000286854 | AC079382.2 | 0 | INTRON | 4.32705936 | 1.51E-05 | 0.0257909 |
| 1 | 40527033 | 40527033 | 1 | 1_40527033 | ENSG00000117010 | ZNF684 | 4539 | Upstream | -4.3270551 | 1.51E-05 | 0.0257909 |
| 11 | 54556284 | 54556284 | 1 | 11_54556284 | ENSG00000237610 | OR4C50P | 35195 | Upstream | -4.3270169 | 1.51E-05 | 0.02579278 |
| 3 | 44323897 | 44323897 | 1 | 3_44323897 | ENSG00000173769 | TOPAZ1 | 0 | INTRON | 4.32693645 | 1.51E-05 | 0.02579452 |
| 9 | 122030692 | 122030692 | 1 | 9_122030692 | ENSG00000175764 | TTLL11 | 0 | INTRON | 4.32693397 | 1.51E-05 | 0.02579452 |
| 15 | 100199370 | 100199370 | 1 | 15_100199370 | ENSG00000140470 | ADAMTS17 | 0 | EXON | -4.3268961 | 1.51E-05 | 0.02579452 |
| 14 | 74746804 | 74746804 | 1 | 14_74746804 | ENSG00000119616 | FCF1 | 8184 | Downstream | -4.326881 | 1.51E-05 | 0.02579452 |
| 17 | 78967113 | 78967113 | 1 | 17_78967113 | ENSG00000108679 | LGALS3BP | 4124 | Downstream | 4.32685253 | 1.51E-05 | 0.02579452 |
| 10 | 40972093 | 40972093 | 1 | 10_40972093 | ENSG00000229485 | KSR1P1 | 1177216 | Downstream | -4.3268328 | 1.51E-05 | 0.02579452 |
| 5 | 138116973 | 138116973 | 1 | 5_138116973 | ENSG00000112981 | NME5 | 0 | INTRON | 4.32683214 | 1.51E-05 | 0.02579452 |
| 19 | 52439057 | 52439057 | 1 | 19_52439057 | ENSG00000198633 | ZNF534 | 0 | EXON | -4.3268253 | 1.51E-05 | 0.02579452 |
| 15 | 21840650 | 21840650 | 1 | 15_21840650 | ENSG00000265793 | MIR3118-4 | 3099 | Upstream | 4.32669376 | 1.51E-05 | 0.02580734 |
| 17 | 33368820 | 33368820 | 1 | 17_33368820 | ENSG00000108684 | ASIC2 | 0 | INTRON | 4.32662203 | 1.51E-05 | 0.02581315 |
| 15 | 86952187 | 86952187 | 1 | 15_86952187 | ENSG00000273540 | AGBL1 | 0 | INTRON | -4.326538 | 1.51E-05 | 0.02581988 |
| 12 | 34620551 | 34620551 | 1 | 12_34620551 | ENSG00000256614 | AK6P1 | 370593 | Downstream | -4.3265205 | 1.51E-05 | 0.02581988 |
| 22 | 48628602 | 48628602 | 1 | 22_48628602 | ENSG00000219438 | TAFA5 | 0 | INTRON | -4.3264384 | 1.52E-05 | 0.02582691 |
| 7 | 22157950 | 22157950 | 1 | 7_22157950 | ENSG00000136237 | RAPGEF5 | 0 | INTRON | 4.32639604 | 1.52E-05 | 0.02582929 |
| 12 | 9431217 | 9431217 | 1 | 12_9431217 | ENSG00000214826 | DDX12P | 0 | INTRON | 4.32632889 | 1.52E-05 | 0.02583029 |
| 15 | 98696988 | 98696988 | 1 | 15_98696988 | ENSG00000140443 | IGF1R | 0 | INTRON | -4.3263284 | 1.52E-05 | 0.02583029 |
| 11 | 40710086 | 40710086 | 1 | 11_40710086 | ENSG00000148948 | LRRC4C | 0 | INTRON | 4.32631895 | 1.52E-05 | 0.02583029 |
| 16 | 28272871 | 28272871 | 1 | 16_28272871 | ENSG00000283662 | AC138904.3 | 0 | INTRON | -4.3262778 | 1.52E-05 | 0.02583029 |
| 4 | 3304088 | 3304088 | 1 | 4_3304088 | ENSG00000159788 | RGS12 | 0 | INTRON | -4.3262701 | 1.52E-05 | 0.02583029 |
| 3 | 100495906 | 100495906 | 1 | 3_100495906 | ENSG00000181458 | TMEM45A | 0 | INTRON | 4.32625071 | 1.52E-05 | 0.02583029 |
| 2 | 109257012 | 109257012 | 1 | 2_109257012 | ENSG00000172985 | SH3RF3 | 0 | INTRON | 4.32621584 | 1.52E-05 | 0.02583029 |
| 9 | 12854688 | 12854688 | 1 | 9_12854688 | ENSG00000222658 | Y_RNA | 30632 | Upstream | -4.3262109 | 1.52E-05 | 0.02583029 |
| 15 | 76827346 | 76827346 | 1 | 15_76827346 | ENSG00000140386 | SCAPER | 0 | INTRON | 4.32615634 | 1.52E-05 | 0.02583275 |
| 8 | 3569849 | 3569849 | 1 | 8_3569849 | ENSG00000183117 | CSMD1 | 0 | INTRON | 4.32614351 | 1.52E-05 | 0.02583275 |
| 4 | 186746970 | 186746970 | 1 | 4_186746970 | ENSG00000083857 | FAT1 | 20248 | Upstream | -4.3261146 | 1.52E-05 | 0.02583275 |
| 6 | 111383792 | 111383792 | 1 | 6_111383792 | ENSG00000173214 | MFSD4B | 0 | INTRON | 4.32610176 | 1.52E-05 | 0.02583275 |
| 2 | 99476844 | 99476844 | 1 | 2_99476844 | ENSG00000135945 | REV1 | 0 | INTRON | 4.32607752 | 1.52E-05 | 0.02583301 |
| 1 | 151727120 | 151727120 | 1 | 1_151727120 | ENSG00000178796 | RIIAD1 | 0 | INTRON | -4.3259751 | 1.52E-05 | 0.02584102 |
| 2 | 29815489 | 29815489 | 1 | 2_29815489 | ENSG00000171094 | ALK | 0 | INTRON | -4.3259651 | 1.52E-05 | 0.02584102 |

**Supplemental Table 1.** Top 10,000 differentially methylated CpG sites between cannabis users and controls before abstinence. WGBS data representing the top 10K CPG sites that showed differential methylation between cannabis users and controls prior to an 11-week abstinence period.

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 | 94210854 | 94210854 | 1 | 7_94210854 | ENSG00000285090 | AC002074.1 | 67825 | Downstream | -8.5702439 | 1.03E-17 | 1.76E-10 |
| 7 | 50787707 | 50787707 | 1 | 7_50787707 | ENSG00000106070 | GRB10 | 0 | INTRON | 7.26996432 | 3.60E-13 | 3.06E-06 |
| 4 | 49158728 | 49158728 | 1 | 4_49158728 | ENSG00000249828 | AC118282.3 | 44442 | Downstream | -7.1575071 | 8.22E-13 | 4.66E-06 |
| 16 | 34573895 | 34573895 | 1 | 16_34573895 | ENSG00000286968 | FP325313.2 | 125029 | Downstream | -7.1003115 | 1.24E-12 | 5.30E-06 |
| 4 | 21075155 | 21075155 | 1 | 4_21075155 | ENSG00000185774 | KCNIP4 | 0 | INTRON | 7.06400374 | 1.62E-12 | 5.51E-06 |
| 17 | 27774978 | 27774978 | 1 | 17_27774978 | ENSG00000007171 | NOS2 | 0 | INTRON | 7.01440302 | 2.31E-12 | 5.80E-06 |
| 2 | 21381471 | 21381471 | 1 | 2_21381471 | ENSG00000231204 | AC011752.1 | 0 | INTRON | -7.0099525 | 2.38E-12 | 5.80E-06 |
| 22 | 42168987 | 42168987 | 1 | 22_42168987 | ENSG00000100207 | TCF20 | 0 | INTRON | 6.96807785 | 3.21E-12 | 6.09E-06 |
| 1 | 19739916 | 19739916 | 1 | 1_19739916 | ENSG00000162542 | TMCO4 | 0 | EXON | -6.9677305 | 3.22E-12 | 6.09E-06 |
| 8 | 143864246 | 143864246 | 1 | 8_143864246 | ENSG00000261150 | EPPK1 | 0 | EXON | -6.9351028 | 4.06E-12 | 6.69E-06 |
| 11 | 45670938 | 45670938 | 1 | 11_45670938 | ENSG00000175264 | CHST1 | 5316 | Upstream | 6.92607216 | 4.33E-12 | 6.69E-06 |
| 2 | 214972497 | 214972497 | 1 | 2_214972497 | ENSG00000144452 | ABCA12 | 0 | INTRON | -6.8525619 | 7.25E-12 | 1.03E-05 |
| 5 | 48770128 | 48770128 | 1 | 5_48770128 | ENSG00000170571 | EMB | 1626063 | Downstream | -6.8308096 | 8.44E-12 | 1.11E-05 |
| 11 | 133270957 | 133270957 | 1 | 11_133270957 | ENSG00000183715 | OPCML | 0 | INTRON | 6.81163623 | 9.65E-12 | 1.17E-05 |
| 1 | 19990199 | 19990199 | 1 | 1_19990199 | ENSG00000188257 | PLA2G2A | 9783 | Upstream | -6.7703871 | 1.28E-11 | 1.45E-05 |
| 18 | 66200889 | 66200889 | 1 | 18_66200889 | ENSG00000264685 | PRPF19P1 | 131242 | Upstream | -6.7620427 | 1.36E-11 | 1.45E-05 |
| 4 | 108307744 | 108307744 | 1 | 4_108307744 | ENSG00000232021 | LEF1-AS1 | 49707 | Downstream | -6.6404087 | 3.13E-11 | 3.13E-05 |
| 8 | 143864243 | 143864243 | 1 | 8_143864243 | ENSG00000261150 | EPPK1 | 0 | EXON | -6.6196946 | 3.60E-11 | 3.40E-05 |
| 10 | 129611708 | 129611708 | 1 | 10_129611708 | ENSG00000170430 | MGMT | 0 | INTRON | 6.60587494 | 3.95E-11 | 3.54E-05 |
| 4 | 181436881 | 181436881 | 1 | 4_181436881 | ENSG00000225356 | AC093840.1 | 85784 | Upstream | -6.5812251 | 4.67E-11 | 3.78E-05 |
| 2 | 215928021 | 215928021 | 1 | 2_215928021 | ENSG00000226276 | AC093382.1 | 11286 | Downstream | 6.57483924 | 4.87E-11 | 3.78E-05 |
| 5 | 34501648 | 34501648 | 1 | 5_34501648 | ENSG00000249380 | AC138853.1 | 127798 | Downstream | -6.5741477 | 4.89E-11 | 3.78E-05 |
| 2 | 213355023 | 213355023 | 1 | 2_213355023 | ENSG00000144451 | SPAG16 | 0 | INTRON | -6.550004 | 5.75E-11 | 4.26E-05 |
| 15 | 79911066 | 79911066 | 1 | 15_79911066 | ENSG00000180953 | AC015871.1 | 0 | INTRON | 6.54088776 | 6.12E-11 | 4.34E-05 |
| 2 | 81089401 | 81089401 | 1 | 2_81089401 | ENSG00000234429 | AC105342.1 | 104935 | Downstream | -6.5313447 | 6.52E-11 | 4.44E-05 |
| 7 | 94210893 | 94210893 | 1 | 7_94210893 | ENSG00000285090 | AC002074.1 | 67786 | Downstream | -6.5205213 | 7.01E-11 | 4.59E-05 |
| 5 | 7826057 | 7826057 | 1 | 5_7826057 | ENSG00000078295 | ADCY2 | 0 | INTRON | -6.4951451 | 8.30E-11 | 5.08E-05 |
| 4 | 19678925 | 19678925 | 1 | 4_19678925 | ENSG00000248515 | AC024230.1 | 0 | INTRON | -6.4936392 | 8.38E-11 | 5.08E-05 |
| 10 | 33965547 | 33965547 | 1 | 10_33965547 | ENSG00000223470 | LINC02629 | 47743 | Downstream | -6.4888237 | 8.65E-11 | 5.08E-05 |
| 15 | 41959350 | 41959350 | 1 | 15_41959350 | ENSG00000103966 | EHD4 | 0 | INTRON | -6.4800335 | 9.17E-11 | 5.20E-05 |
| 20 | 62726308 | 62726308 | 1 | 20_62726308 | ENSG00000101188 | NTSR1 | 0 | INTRON | -6.4474137 | 1.14E-10 | 6.25E-05 |
| 12 | 37175348 | 37175348 | 1 | 12_37175348 | ENSG00000258368 | ZNF970P | 400238 | Upstream | -6.4387411 | 1.20E-10 | 6.41E-05 |
| 15 | 92670361 | 92670361 | 1 | 15_92670361 | ENSG00000185442 | FAM174B | 0 | INTRON | 6.41928046 | 1.37E-10 | 7.06E-05 |
| 7 | 32883569 | 32883569 | 1 | 7_32883569 | ENSG00000170852 | KBTBD2 | 0 | INTRON | -6.4092932 | 1.46E-10 | 7.24E-05 |
| 8 | 397492 | 397492 | 1 | 8_397492 | ENSG00000147364 | FBXO25 | 8935 | Upstream | -6.4064393 | 1.49E-10 | 7.24E-05 |
| 1 | 220489356 | 220489356 | 1 | 1_220489356 | ENSG00000231529 | LINC02779 | 1798 | Upstream | -6.3957866 | 1.60E-10 | 7.55E-05 |
| 16 | 79829190 | 79829190 | 1 | 16_79829190 | ENSG00000261082 | LINC01228 | 2040 | Upstream | -6.3896419 | 1.66E-10 | 7.65E-05 |
| 16 | 85445045 | 85445045 | 1 | 16_85445045 | ENSG00000131149 | GSE1 | 0 | INTRON | 6.38469825 | 1.72E-10 | 7.69E-05 |
| 6 | 111643240 | 111643240 | 1 | 6_111643240 | ENSG00000010810 | FYN | 17091 | Downstream | -6.3795768 | 1.78E-10 | 7.72E-05 |
| 12 | 22753784 | 22753784 | 1 | 12_22753784 | ENSG00000256995 | AC084816.1 | 0 | INTRON | 6.37614894 | 1.82E-10 | 7.72E-05 |
| 13 | 105287324 | 105287324 | 1 | 13_105287324 | ENSG00000286929 | AL138954.1 | 123491 | Upstream | -6.3618179 | 1.99E-10 | 8.27E-05 |
| 2 | 240736956 | 240736956 | 1 | 2_240736956 | ENSG00000130294 | KIF1A | 0 | INTRON | 6.35286532 | 2.11E-10 | 8.53E-05 |
| 9 | 69128561 | 69128561 | 1 | 9_69128561 | ENSG00000119139 | TJP2 | 0 | INTRON | 6.34989778 | 2.15E-10 | 8.53E-05 |
| 12 | 132258230 | 132258230 | 1 | 12_132258230 | ENSG00000182870 | GALNT9 | 0 | INTRON | 6.34622615 | 2.21E-10 | 8.53E-05 |
| 3 | 80344814 | 80344814 | 1 | 3_80344814 | ENSG00000242586 | AC108740.1 | 97266 | Upstream | 6.33708418 | 2.34E-10 | 8.85E-05 |
| 3 | 126622521 | 126622521 | 1 | 3_126622521 | ENSG00000197763 | TXNRD3 | 0 | EXON | -6.3332842 | 2.40E-10 | 8.88E-05 |
| 5 | 170706108 | 170706108 | 1 | 5_170706108 | ENSG00000182132 | KCNIP1 | 0 | INTRON | -6.3272629 | 2.50E-10 | 9.03E-05 |
| 22 | 17924140 | 17924140 | 1 | 22_17924140 | ENSG00000243156 | MICAL3 | 0 | INTRON | -6.315019 | 2.70E-10 | 9.58E-05 |
| 11 | 97030866 | 97030866 | 1 | 11_97030866 | ENSG00000255205 | MED28P5 | 30155 | Upstream | -6.2934086 | 3.11E-10 | 0.00010785 |
| 8 | 120193374 | 120193374 | 1 | 8_120193374 | ENSG00000187955 | COL14A1 | 0 | INTRON | 6.28353351 | 3.31E-10 | 0.00011263 |
| 4 | 136966387 | 136966387 | 1 | 4_136966387 | ENSG00000248869 | LINC02511 | 0 | INTRON | -6.2743787 | 3.51E-10 | 0.00011712 |
| 8 | 119279936 | 119279936 | 1 | 8_119279936 | ENSG00000253972 | MAL2-AS1 | 33088 | Upstream | -6.2630402 | 3.78E-10 | 0.00012321 |
| 12 | 132062697 | 132062697 | 1 | 12_132062697 | ENSG00000183495 | EP400 | 0 | EXON | 6.26048656 | 3.84E-10 | 0.00012321 |
| 1 | 219819387 | 219819387 | 1 | 1_219819387 | ENSG00000196660 | SLC30A10 | 0 | INTRON | 6.24820558 | 4.15E-10 | 0.00012881 |
| 7 | 98592684 | 98592684 | 1 | 7_98592684 | ENSG00000106236 | NPTX2 | 24600 | Upstream | 6.24777193 | 4.16E-10 | 0.00012881 |
| 6 | 32374137 | 32374137 | 1 | 6_32374137 | ENSG00000225914 | TSBP1-AS1 | 0 | INTRON | -6.2406453 | 4.36E-10 | 0.00013006 |
| 10 | 42101592 | 42101592 | 1 | 10_42101592 | ENSG00000229485 | KSR1P1 | 47717 | Downstream | -6.2396686 | 4.38E-10 | 0.00013006 |
| 8 | 58156560 | 58156560 | 1 | 8_58156560 | ENSG00000169122 | FAM110B | 0 | INTRON | 6.23796242 | 4.43E-10 | 0.00013006 |
| 8 | 19003376 | 19003376 | 1 | 8_19003376 | ENSG00000156011 | PSD3 | 0 | INTRON | -6.2351395 | 4.51E-10 | 0.00013018 |
| 16 | 26360370 | 26360370 | 1 | 16_26360370 | ENSG00000228480 | AC130464.1 | 2015 | Upstream | -6.2171595 | 5.06E-10 | 0.00014357 |
| 9 | 18251332 | 18251332 | 1 | 9_18251332 | ENSG00000178031 | ADAMTSL1 | 0 | INTRON | -6.2103454 | 5.29E-10 | 0.00014538 |
| 6 | 44142508 | 44142508 | 1 | 6_44142508 | ENSG00000137216 | TMEM63B | 0 | INTRON | -6.208478 | 5.35E-10 | 0.00014538 |
| 3 | 192755998 | 192755998 | 1 | 3_192755998 | ENSG00000114279 | FGF12 | 0 | INTRON | -6.207523 | 5.38E-10 | 0.00014538 |
| 2 | 78618848 | 78618848 | 1 | 2_78618848 | ENSG00000234877 | AC092660.1 | 19442 | Downstream | -6.2027206 | 5.55E-10 | 0.00014563 |
| 14 | 33518003 | 33518003 | 1 | 14_33518003 | ENSG00000151322 | NPAS3 | 0 | INTRON | -6.2023425 | 5.56E-10 | 0.00014563 |
| 3 | 12873138 | 12873138 | 1 | 3_12873138 | ENSG00000144712 | CAND2 | 1222 | Downstream | 6.19734666 | 5.74E-10 | 0.0001472 |
| 12 | 118379385 | 118379385 | 1 | 12_118379385 | ENSG00000111707 | SUDS3 | 0 | INTRON | -6.1958751 | 5.80E-10 | 0.0001472 |
| 18 | 37431615 | 37431615 | 1 | 18_37431615 | ENSG00000101489 | CELF4 | 0 | INTRON | 6.18980784 | 6.02E-10 | 0.00015073 |
| 13 | 89494822 | 89494822 | 1 | 13_89494822 | ENSG00000271395 | LINC02336 | 0 | INTRON | 6.18644629 | 6.15E-10 | 0.00015175 |
| 18 | 23360930 | 23360930 | 1 | 18_23360930 | ENSG00000134490 | TMEM241 | 0 | INTRON | -6.1791904 | 6.44E-10 | 0.00015563 |
| 20 | 29505272 | 29505272 | 1 | 20_29505272 | ENSG00000282995 | FRG1EP | 8093 | Upstream | -6.1779492 | 6.49E-10 | 0.00015563 |
| 1 | 1799141 | 1799141 | 1 | 1_1799141 | ENSG00000078369 | GNB1 | 0 | INTRON | -6.1726569 | 6.72E-10 | 0.0001587 |
| 10 | 70218675 | 70218675 | 1 | 10_70218675 | ENSG00000180817 | PPA1 | 0 | EXON | 6.15151818 | 7.67E-10 | 0.00017725 |
| 5 | 125671949 | 125671949 | 1 | 5_125671949 | ENSG00000248752 | AC116362.1 | 0 | INTRON | -6.1508194 | 7.71E-10 | 0.00017725 |
| 12 | 119933760 | 119933760 | 1 | 12_119933760 | ENSG00000226729 | RPL35AP30 | 25663 | Downstream | 6.14345481 | 8.07E-10 | 0.00018319 |
| 6 | 118699819 | 118699819 | 1 | 6_118699819 | ENSG00000111860 | CEP85L | 0 | INTRON | 6.14056595 | 8.22E-10 | 0.0001841 |
| 21 | 8204967 | 8204967 | 1 | 21_8204967 | ENSG00000278996 | FP671120.4 | 0 | INTRON | -6.1313176 | 8.72E-10 | 0.0001926 |
| 15 | 46107425 | 46107425 | 1 | 15_46107425 | ENSG00000259743 | AC068714.1 | 7033 | Upstream | 6.1291863 | 8.83E-10 | 0.00019269 |
| 17 | 18911191 | 18911191 | 1 | 17_18911191 | ENSG00000141127 | PRPSAP2 | 0 | 3UTR | 6.12219956 | 9.23E-10 | 0.00019819 |
| 6 | 115303058 | 115303058 | 1 | 6_115303058 | ENSG00000219619 | AL606845.1 | 55439 | Downstream | -6.1206783 | 9.32E-10 | 0.00019819 |
| X | 107157278 | 107157278 | 1 | X_107157278 | ENSG00000198088 | NUP62CL | 0 | INTRON | 6.11045039 | 9.94E-10 | 0.00020871 |
| 14 | 52854156 | 52854156 | 1 | 14_52854156 | ENSG00000285664 | AL139317.5 | 0 | INTRON | 6.10459002 | 1.03E-09 | 0.00021253 |
| 8 | 3233532 | 3233532 | 1 | 8_3233532 | ENSG00000183117 | CSMD1 | 0 | INTRON | -6.1036604 | 1.04E-09 | 0.00021253 |
| 14 | 73175384 | 73175384 | 1 | 14_73175384 | ENSG00000080815 | PSEN1 | 0 | INTRON | -6.1009765 | 1.05E-09 | 0.00021355 |
| 17 | 76280567 | 76280567 | 1 | 17_76280567 | ENSG00000129646 | QRICH2 | 0 | INTRON | -6.0956702 | 1.09E-09 | 0.00021651 |
| X | 135213706 | 135213706 | 1 | X_135213706 | ENSG00000228922 | AC234771.2 | 0 | INTRON | -6.0940441 | 1.10E-09 | 0.00021651 |
| 17 | 43289075 | 43289075 | 1 | 17_43289075 | ENSG00000236383 | CCDC200 | 0 | INTRON | 6.09157906 | 1.12E-09 | 0.00021651 |
| 12 | 351996 | 351996 | 1 | 12_351996 | ENSG00000073614 | KDM5A | 0 | INTRON | 6.09133767 | 1.12E-09 | 0.00021651 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | 56951117 | 56951117 | 1 | 3_56951117 | ENSG00000163947 | ARHGEF3 | 0 | INTRON | -6.085282 | 1.16E-09 | 0.00022043 |
| 6 | 139799398 | 139799398 | 1 | 6_139799398 | ENSG00000231426 | FILNC1 | 0 | INTRON | 6.08486256 | 1.17E-09 | 0.00022043 |
| 5 | 121241411 | 121241411 | 1 | 5_121241411 | ENSG00000229855 | AC008568.1 | 0 | INTRON | -6.0779446 | 1.22E-09 | 0.00022762 |
| 2 | 44003577 | 44003577 | 1 | 2_44003577 | ENSG00000138095 | LRPPRC | 7588 | Upstream | 6.07465298 | 1.24E-09 | 0.00022823 |
| 2 | 130066765 | 130066765 | 1 | 2_130066765 | ENSG00000196604 | POTEF | 6769 | Downstream | -6.0740319 | 1.25E-09 | 0.00022823 |
| 17 | 311724 | 311724 | 1 | 17_311724 | ENSG00000181031 | RPH3AL | 0 | INTRON | 6.06908043 | 1.29E-09 | 0.00023287 |
| 16 | 32740505 | 32740505 | 1 | 16_32740505 | ENSG00000260845 | AC138907.2 | 0 | INTRON | -6.0650353 | 1.32E-09 | 0.00023629 |
| 8 | 1632862 | 1632862 | 1 | 8_1632862 | ENSG00000198010 | DLGAP2 | 0 | EXON | 6.05780058 | 1.38E-09 | 0.00024459 |
| 13 | 18321379 | 18321379 | 1 | 13_18321379 | ENSG00000279231 | AL356585.3 | 10553 | Upstream | -6.0509551 | 1.44E-09 | 0.00025009 |
| 10 | 4396176 | 4396176 | 1 | 10_4396176 | ENSG00000224382 | LINC00703 | 0 | INTRON | -6.0509024 | 1.44E-09 | 0.00025009 |
| 20 | 25778957 | 25778957 | 1 | 20_25778957 | ENSG00000175170 | FAM182B | 0 | INTRON | -6.044185 | 1.50E-09 | 0.0002581 |
| 7 | 94210799 | 94210799 | 1 | 7_94210799 | ENSG00000285090 | AC002074.1 | 67880 | Downstream | -6.0352811 | 1.59E-09 | 0.00026456 |
| 12 | 17721162 | 17721162 | 1 | 12_17721162 | ENSG00000206662 | Y_RNA | 10116 | Downstream | -6.0349919 | 1.59E-09 | 0.00026456 |
| 1 | 369570 | 369570 | 1 | 1_369570 | ENSG00000237094 | AL732372.2 | 0 | INTRON | -6.0339604 | 1.60E-09 | 0.00026456 |
| 2 | 45273337 | 45273337 | 1 | 2_45273337 | ENSG00000205054 | LINC01121 | 0 | INTRON | 6.03380289 | 1.60E-09 | 0.00026456 |
| 9 | 136304791 | 136304791 | 1 | 9_136304791 | ENSG00000260220 | CCDC187 | 0 | INTRON | -6.0243285 | 1.70E-09 | 0.00027648 |
| 8 | 132204809 | 132204809 | 1 | 8_132204809 | ENSG00000184156 | KCNQ3 | 0 | INTRON | 6.02356957 | 1.71E-09 | 0.00027648 |
| X | 153947748 | 153947748 | 1 | X_153947748 | ENSG00000172534 | HCFC1 | 0 | 3UTR | -6.0180259 | 1.77E-09 | 0.00028342 |
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| 2 | 207956248 | 207956248 | 1 | 2_207956248 | ENSG00000178385 | PLEKHM3 | 0 | INTRON | 5.98932981 | 2.11E-09 | 0.000326 |
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| 22 | 33527508 | 33527508 | 1 | 22_33527508 | ENSG00000133424 | LARGE1 | 0 | INTRON | 5.98772987 | 2.13E-09 | 0.000326 |
| 4 | 16043626 | 16043626 | 1 | 4_16043626 | ENSG00000007062 | PROM1 | 0 | INTRON | -5.986368 | 2.15E-09 | 0.000326 |
| Y | 20948706 | 20948706 | 1 | Y_20948706 | ENSG00000226504 | TMEM167AP1 | 41144 | Upstream | 5.98404629 | 2.18E-09 | 0.00032776 |
| 17 | 75052422 | 75052422 | 1 | 17_75052422 | ENSG00000180901 | KCTD2 | 0 | INTRON | 5.98216432 | 2.20E-09 | 0.00032866 |
| 7 | 951359 | 951359 | 1 | 7_951359 | ENSG00000240230 | COX19 | 0 | INTRON | 5.97931216 | 2.24E-09 | 0.00033156 |
| X | 73924624 | 73924624 | 1 | X_73924624 | ENSG00000230590 | FTX | 15810 | Downstream | 5.97147245 | 2.35E-09 | 0.00034489 |
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| 10 | 37967005 | 37967005 | 1 | 10_37967005 | ENSG00000175395 | ZNF25 | 0 | INTRON | 5.96745289 | 2.41E-09 | 0.0003475 |
| 22 | 44338021 | 44338021 | 1 | 22_44338021 | ENSG00000138944 | SHISAL1 | 25070 | Upstream | 5.96407037 | 2.46E-09 | 0.0003518 |
| 5 | 163737646 | 163737646 | 1 | 5_163737646 | ENSG00000224012 | AC116917.1 | 28132 | Upstream | -5.9572217 | 2.57E-09 | 0.00036238 |
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| 2 | 95064912 | 95064912 | 1 | 2_95064912 | ENSG00000287362 | AC103563.9 | 2161 | Downstream | 5.955158 | 2.60E-09 | 0.00036238 |
| 13 | 101283400 | 101283400 | 1 | 13_101283400 | ENSG00000102452 | NALCN | 0 | INTRON | 5.95304542 | 2.63E-09 | 0.00036411 |
| 11 | 66237874 | 66237874 | 1 | 11_66237874 | ENSG00000175115 | PACS1 | 0 | INTRON | 5.95159771 | 2.66E-09 | 0.00036438 |
| 1 | 47376562 | 47376562 | 1 | 1_47376562 | ENSG00000162368 | CMPK1 | 0 | INTRON | 5.94395273 | 2.78E-09 | 0.00037874 |
| 2 | 18866873 | 18866873 | 1 | 2_18866873 | ENSG00000287284 | AC130814.1 | 72823 | Upstream | -5.9396459 | 2.86E-09 | 0.00038347 |
| 22 | 24133531 | 24133531 | 1 | 22_24133531 | ENSG00000099991 | CABIN1 | 0 | INTRON | 5.93931801 | 2.86E-09 | 0.00038347 |
| 7 | 144975368 | 144975368 | 1 | 7_144975368 | ENSG00000236343 | EI24P4 | 29689 | Upstream | 5.93434513 | 2.95E-09 | 0.00039219 |
| 1 | 242800939 | 242800939 | 1 | 1_242800939 | ENSG00000215800 | RSL24D1P4 | 27836 | Downstream | -5.9321371 | 2.99E-09 | 0.00039442 |
| 2 | 60168392 | 60168392 | 1 | 2_60168392 | ENSG00000271955 | AC007100.1 | 68192 | Upstream | 5.92450251 | 3.13E-09 | 0.00040302 |
| 13 | 108328467 | 108328467 | 1 | 13_108328467 | ENSG00000283384 | AL138694.1 | 6886 | Upstream | -5.9238563 | 3.14E-09 | 0.00040302 |
| 5 | 143166155 | 143166155 | 1 | 5_143166155 | ENSG00000145819 | ARHGAP26 | 0 | INTRON | 5.92369408 | 3.15E-09 | 0.00040302 |
| 20 | 11286186 | 11286186 | 1 | 20_11286186 | ENSG00000230990 | AL049649.1 | 0 | INTRON | -5.9235788 | 3.15E-09 | 0.00040302 |
| 10 | 42104242 | 42104242 | 1 | 10_42104242 | ENSG00000229485 | KSR1P1 | 45067 | Downstream | -5.9192681 | 3.23E-09 | 0.00041063 |
| 9 | 17810468 | 17810468 | 1 | 9_17810468 | ENSG00000107295 | SH3GL2 | 13344 | Downstream | 5.91198831 | 3.38E-09 | 0.00042603 |
| 11 | 127441362 | 127441362 | 1 | 11_127441362 | ENSG00000223315 | RN7SKP279 | 33214 | Downstream | -5.9097189 | 3.43E-09 | 0.00042876 |
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| 5 | 67401058 | 67401058 | 1 | 5_67401058 | ENSG00000249364 | AC112206.2 | 0 | INTRON | -5.906509 | 3.49E-09 | 0.00043086 |
| 10 | 63202483 | 63202483 | 1 | 10_63202483 | ENSG00000171988 | JMJD1C | 0 | INTRON | 5.90403472 | 3.55E-09 | 0.00043172 |
| 15 | 54749525 | 54749525 | 1 | 15_54749525 | ENSG00000137766 | UNC13C | 116111 | Downstream | 5.9033681 | 3.56E-09 | 0.00043172 |
| 6 | 33997148 | 33997148 | 1 | 6_33997148 | ENSG00000221697 | MIR1275 | 2823 | Downstream | -5.9013391 | 3.61E-09 | 0.00043172 |
| 8 | 143864253 | 143864253 | 1 | 8_143864253 | ENSG00000261150 | EPPK1 | 0 | EXON | -5.9007676 | 3.62E-09 | 0.00043172 |
| 22 | 17837138 | 17837138 | 1 | 22_17837138 | ENSG00000243156 | MICAL3 | 0 | INTRON | -5.8994306 | 3.65E-09 | 0.00043172 |
| 5 | 139370233 | 139370233 | 1 | 5_139370233 | ENSG00000170482 | SLC23A1 | 0 | INTRON | 5.89834216 | 3.67E-09 | 0.00043172 |
| 9 | 35895491 | 35895491 | 1 | 9_35895491 | ENSG00000196196 | HRCT1 | 10710 | Upstream | 5.8980185 | 3.68E-09 | 0.00043172 |
| 1 | 34248937 | 34248937 | 1 | 1_34248937 | ENSG00000270241 | AC115286.1 | 27921 | Downstream | -5.8965942 | 3.71E-09 | 0.00043248 |
| X | 99815446 | 99815446 | 1 | X_99815446 | ENSG00000229946 | B3GNT2P1 | 71293 | Downstream | 5.89248149 | 3.80E-09 | 0.00044037 |
| 7 | 94210829 | 94210829 | 1 | 7_94210829 | ENSG00000285090 | AC002074.1 | 67850 | Downstream | -5.8881722 | 3.90E-09 | 0.00044895 |
| 1 | 23334006 | 23334006 | 1 | 1_23334006 | ENSG00000125944 | HNRNPR | 0 | INTRON | -5.8868944 | 3.94E-09 | 0.0004494 |
| 5 | 61864281 | 61864281 | 1 | 5_61864281 | ENSG00000248199 | AC008877.1 | 13827 | Upstream | -5.8834804 | 4.02E-09 | 0.00045049 |
| 2 | 166535024 | 166535024 | 1 | 2_166535024 | ENSG00000136546 | SCN7A | 0 | INTRON | -5.8834299 | 4.02E-09 | 0.00045049 |
| X | 9373542 | 9373542 | 1 | X_9373542 | ENSG00000232111 | AC073488.1 | 29208 | Upstream | 5.88319673 | 4.02E-09 | 0.00045049 |
| 8 | 115819070 | 115819070 | 1 | 8_115819070 | ENSG00000104447 | TRPS1 | 9397 | Upstream | 5.88140986 | 4.07E-09 | 0.0004524 |
| 17 | 11187942 | 11187942 | 1 | 17_11187942 | ENSG00000285541 | AC005548.1 | 9940 | Downstream | -5.8794113 | 4.12E-09 | 0.00045295 |
| 3 | 13854360 | 13854360 | 1 | 3_13854360 | ENSG00000154764 | WNT7A | 0 | INTRON | 5.87906019 | 4.13E-09 | 0.00045295 |
| 21 | 26016602 | 26016602 | 1 | 21_26016602 | ENSG00000142192 | APP | 0 | INTRON | -5.8759913 | 4.20E-09 | 0.00045776 |
| 12 | 26743815 | 26743815 | 1 | 12_26743815 | ENSG00000123104 | ITPR2 | 0 | INTRON | 5.87518702 | 4.22E-09 | 0.00045776 |
| 4 | 65770283 | 65770283 | 1 | 4_65770283 | ENSG00000222765 | RNU2-40P | 36956 | Downstream | 5.87276766 | 4.29E-09 | 0.00046156 |
| 17 | 22393920 | 22393920 | 1 | 17_22393920 | ENSG00000276399 | AC209154.1 | 12098 | Upstream | 5.86874627 | 4.39E-09 | 0.00046992 |
| 10 | 101116738 | 101116738 | 1 | 10_101116738 | ENSG00000236311 | TLX1NB | 0 | INTRON | 5.86615955 | 4.46E-09 | 0.00047432 |
| 11 | 69303712 | 69303712 | 1 | 11_69303712 | ENSG00000213275 | IFITM9P | 0 | EXON | 5.86406472 | 4.52E-09 | 0.0004753 |
| 3 | 196357686 | 196357686 | 1 | 3_196357686 | ENSG00000163960 | UBXN7 | 0 | INTRON | 5.86375446 | 4.53E-09 | 0.0004753 |
| 14 | 84675476 | 84675476 | 1 | 14_84675476 | ENSG00000251895 | RNU6-976P | 64465 | Upstream | -5.8609025 | 4.60E-09 | 0.00048057 |
| 2 | 61628145 | 61628145 | 1 | 2_61628145 | ENSG00000206973 | RNU6-1145P | 22423 | Downstream | 5.85245118 | 4.84E-09 | 0.00050257 |
| 8 | 27554951 | 27554951 | 1 | 8_27554951 | ENSG00000234770 | GULOP | 5322 | Upstream | 5.84996094 | 4.92E-09 | 0.00050706 |
| 1 | 63560048 | 63560048 | 1 | 1_63560048 | ENSG00000142856 | ITGB3BP | 0 | INTRON | 5.84840963 | 4.96E-09 | 0.00050784 |
| 13 | 37457915 | 37457915 | 1 | 13_37457915 | ENSG00000230390 | LINC01048 | 23551 | Downstream | -5.8474341 | 4.99E-09 | 0.00050784 |
| 8 | 112047912 | 112047912 | 1 | 8_112047912 | ENSG00000222146 | RNU4-37P | 100829 | Downstream | 5.84670667 | 5.01E-09 | 0.00050784 |
| 19 | 49405413 | 49405413 | 1 | 19_49405413 | ENSG00000161609 | CCDC155 | 0 | INTRON | -5.8445216 | 5.08E-09 | 0.00051 |
| 19 | 58442323 | 58442323 | 1 | 19_58442323 | ENSG00000269473 | AC012313.8 | 0 | EXON | 5.84278892 | 5.13E-09 | 0.00051 |
| 8 | 13618359 | 13618359 | 1 | 8_13618359 | ENSG00000286798 | AC022832.2 | 11284 | Upstream | 5.84231636 | 5.15E-09 | 0.00051 |
| 8 | 118474105 | 118474105 | 1 | 8_118474105 | ENSG00000177570 | SAMD12 | 0 | INTRON | 5.84208215 | 5.16E-09 | 0.00051 |
| 12 | 14856962 | 14856962 | 1 | 12_14856962 | ENSG00000182993 | C12orf60 | 0 | INTRON | 5.83885624 | 5.26E-09 | 0.00051446 |
| 13 | 67747886 | 67747886 | 1 | 13_67747886 | ENSG00000287876 | AL512452.1 | 0 | INTRON | 5.83870688 | 5.26E-09 | 0.00051446 |
| 3 | 191515084 | 191515084 | 1 | 3_191515084 | ENSG00000223812 | AC073365.1 | 0 | INTRON | 5.83752045 | 5.30E-09 | 0.00051447 |
| 11 | 61642237 | 61642237 | 1 | 11_61642237 | ENSG00000243742 | RPLP0P2 | 2788 | Downstream | -5.8367978 | 5.32E-09 | 0.00051447 |

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| 6 | 113228000 | 113228000 | 1 | 6_113228000 | ENSG00000216904 | SOCS5P5 | 3928 | Downstream | 5.8310879 | 5.51E-09 | 0.00052371 |
| 22 | 28003699 | 28003699 | 1 | 22_28003699 | ENSG00000235954 | TTC28-AS1 | 0 | INTRON | 5.82936689 | 5.56E-09 | 0.00052371 |
| 9 | 95198022 | 95198022 | 1 | 9_95198022 | ENSG00000158169 | FANCC | 0 | INTRON | -5.8282585 | 5.60E-09 | 0.00052371 |
| 15 | 89915288 | 89915288 | 1 | 15_89915288 | ENSG00000242498 | ARPIN | 2336 | Upstream | 5.82815433 | 5.60E-09 | 0.00052371 |
| 12 | 123068323 | 123068323 | 1 | 12_123068323 | ENSG00000090975 | PITPNM2 | 0 | INTRON | -5.8281349 | 5.61E-09 | 0.00052371 |
| 8 | 116331186 | 116331186 | 1 | 8_116331186 | ENSG00000249917 | LINC00536 | 6124 | Upstream | 5.82726971 | 5.63E-09 | 0.00052371 |
| 11 | 44892447 | 44892447 | 1 | 11_44892447 | ENSG00000175274 | TP53I11 | 0 | INTRON | 5.82641407 | 5.66E-09 | 0.00052371 |
| 1 | 76403606 | 76403606 | 1 | 1_76403606 | ENSG00000184005 | ST6GALNAC3 | 0 | INTRON | -5.8254597 | 5.70E-09 | 0.00052386 |
| 1 | 144536655 | 144536655 | 1 | 1_144536655 | ENSG00000275291 | U1 | 12634 | Upstream | 5.82437699 | 5.73E-09 | 0.00052443 |
| 3 | 91480464 | 91480464 | 1 | 3_91480464 | ENSG00000283544 | ABBA01000935.2 | 0 | INTRON | -5.8227357 | 5.79E-09 | 0.00052678 |
| 9 | 71745109 | 71745109 | 1 | 9_71745109 | ENSG00000135048 | CEMIP2 | 0 | EXON | -5.8207414 | 5.86E-09 | 0.00053027 |
| 7 | 94210861 | 94210861 | 1 | 7_94210861 | ENSG00000285090 | AC002074.1 | 67818 | Downstream | -5.8141692 | 6.09E-09 | 0.00054861 |
| 2 | 142286488 | 142286488 | 1 | 2_142286488 | ENSG00000244125 | AC078882.1 | 148658 | Upstream | -5.8125674 | 6.15E-09 | 0.00055097 |
| 8 | 13491605 | 13491605 | 1 | 8_13491605 | ENSG00000164741 | DLC1 | 0 | INTRON | -5.8103992 | 6.23E-09 | 0.00055237 |
| 19 | 34903715 | 34903715 | 1 | 19_34903715 | ENSG00000271171 | AC008555.5 | 0 | INTRON | -5.8103907 | 6.23E-09 | 0.00055237 |
| 3 | 188600594 | 188600594 | 1 | 3_188600594 | ENSG00000145012 | LPP | 0 | INTRON | -5.8090965 | 6.28E-09 | 0.00055377 |
| 7 | 14526248 | 14526248 | 1 | 7_14526248 | ENSG00000136267 | DGKB | 0 | INTRON | -5.8072699 | 6.35E-09 | 0.00055696 |
| 1 | 70744662 | 70744662 | 1 | 1_70744662 | ENSG00000229051 | LINC01788 | 0 | INTRON | 5.80543495 | 6.42E-09 | 0.0005602 |
| 11 | 122909280 | 122909280 | 1 | 11_122909280 | ENSG00000109944 | JHY | 0 | INTRON | 5.80277424 | 6.52E-09 | 0.00056626 |
| 3 | 41141211 | 41141211 | 1 | 3_41141211 | ENSG00000233919 | AC009743.1 | 21075 | Downstream | -5.7958965 | 6.80E-09 | 0.00058698 |
| 22 | 20175802 | 20175802 | 1 | 22_20175802 | ENSG00000249923 | AC007663.2 | 22926 | Downstream | 5.79299736 | 6.91E-09 | 0.00059419 |
| 17 | 9068872 | 9068872 | 1 | 17_9068872 | ENSG00000065320 | NTN1 | 0 | INTRON | 5.79018991 | 7.03E-09 | 0.00060058 |
| 18 | 49345861 | 49345861 | 1 | 18_49345861 | ENSG00000141627 | DYM | 0 | INTRON | -5.789455 | 7.06E-09 | 0.00060058 |
| 6 | 77863848 | 77863848 | 1 | 6_77863848 | ENSG00000269964 | MEI4 | 0 | INTRON | 5.78867486 | 7.09E-09 | 0.00060058 |
| 8 | 20714551 | 20714551 | 1 | 8_20714551 | ENSG00000253300 | AC018541.1 | 14399 | Upstream | -5.7868065 | 7.17E-09 | 0.00060429 |
| 5 | 176490033 | 176490033 | 1 | 5_176490033 | ENSG00000113194 | FAF2 | 0 | INTRON | -5.7854299 | 7.23E-09 | 0.00060462 |
| 11 | 90099019 | 90099019 | 1 | 11_90099019 | ENSG00000254436 | AP000648.2 | 202 | Upstream | 5.78505889 | 7.25E-09 | 0.00060462 |
| X | 103866089 | 103866089 | 1 | X_103866089 | ENSG00000231728 | TMSB15B-AS1 | 14578 | Downstream | -5.7840214 | 7.29E-09 | 0.00060534 |
| 1 | 248911651 | 248911651 | 1 | 1_248911651 | ENSG00000185220 | PGBD2 | 0 | INTRON | 5.78321839 | 7.33E-09 | 0.00060534 |
| 8 | 118553324 | 118553324 | 1 | 8_118553324 | ENSG00000177570 | SAMD12 | 0 | INTRON | 5.78235133 | 7.37E-09 | 0.00060553 |
| 17 | 63183965 | 63183965 | 1 | 17_63183965 | ENSG00000170921 | TANC2 | 0 | INTRON | 5.77808492 | 7.56E-09 | 0.00061809 |
| 13 | 110420835 | 110420835 | 1 | 13_110420835 | ENSG00000134871 | COL4A2 | 0 | INTRON | -5.7757851 | 7.66E-09 | 0.00062102 |
| 22 | 16195973 | 16195973 | 1 | 22_16195973 | ENSG00000278188 | U6 | 54101 | Downstream | -5.7756788 | 7.66E-09 | 0.00062102 |
| 1 | 232445687 | 232445687 | 1 | 1_232445687 | ENSG00000116991 | SIPA1L2 | 0 | EXON | 5.77266926 | 7.80E-09 | 0.00062636 |
| 6 | 31195280 | 31195280 | 1 | 6_31195280 | ENSG00000272501 | AL662844.4 | 0 | EXON | 5.77264039 | 7.80E-09 | 0.00062636 |
| 4 | 94840772 | 94840772 | 1 | 4_94840772 | ENSG00000138696 | BMPR1B | 0 | INTRON | 5.77013525 | 7.92E-09 | 0.00063122 |
| 3 | 25278271 | 25278271 | 1 | 3_25278271 | ENSG00000077092 | RARB | 0 | INTRON | -5.7697567 | 7.94E-09 | 0.00063122 |
| 12 | 116027481 | 116027481 | 1 | 12_116027481 | ENSG00000123066 | MED13L | 0 | INTRON | 5.76630118 | 8.10E-09 | 0.0006413 |
| 20 | 48698767 | 48698767 | 1 | 20_48698767 | ENSG00000124126 | PREX1 | 0 | INTRON | 5.76382601 | 8.22E-09 | 0.00064558 |
| 7 | 41940630 | 41940630 | 1 | 7_41940630 | ENSG00000106571 | GLI3 | 20318 | Downstream | -5.7636166 | 8.23E-09 | 0.00064558 |
| 8 | 33326575 | 33326575 | 1 | 8_33326575 | ENSG00000252735 | RNU6-528P | 12291 | Upstream | 5.76241627 | 8.29E-09 | 0.00064616 |
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| 11 | 113504351 | 113504351 | 1 | 11_113504351 | ENSG00000149295 | DRD2 | 28660 | Upstream | -5.7598527 | 8.42E-09 | 0.00065114 |
| 15 | 48243512 | 48243512 | 1 | 15_48243512 | ENSG00000074803 | SLC12A1 | 0 | INTRON | 5.75846441 | 8.49E-09 | 0.00065355 |
| 15 | 53812638 | 53812638 | 1 | 15_53812638 | ENSG00000259301 | AC084759.1 | 24632 | Downstream | 5.75518298 | 8.65E-09 | 0.00066337 |
| 11 | 65880061 | 65880061 | 1 | 11_65880061 | ENSG00000172543 | CTSW | 0 | INTRON | 5.75428911 | 8.70E-09 | 0.0006639 |
| 2 | 134756544 | 134756544 | 1 | 2_134756544 | ENSG00000224043 | CCNT2-AS1 | 0 | INTRON | 5.74935336 | 8.96E-09 | 0.00068052 |
| 4 | 87728795 | 87728795 | 1 | 4_87728795 | ENSG00000249001 | AC093895.1 | 0 | INTRON | 5.74746768 | 9.06E-09 | 0.00068446 |
| 3 | 70867945 | 70867945 | 1 | 3_70867945 | ENSG00000206939 | RNU6-281P | 59493 | Downstream | -5.7459853 | 9.14E-09 | 0.00068446 |
| 11 | 113106268 | 113106268 | 1 | 11_113106268 | ENSG00000149294 | NCAM1 | 0 | INTRON | -5.7452331 | 9.18E-09 | 0.00068446 |
| 4 | 112743356 | 112743356 | 1 | 4_112743356 | ENSG00000241002 | AC017007.3 | 4250 | Downstream | -5.7447178 | 9.21E-09 | 0.00068446 |
| 7 | 12767544 | 12767544 | 1 | 7_12767544 | ENSG00000229618 | AC011287.1 | 0 | INTRON | 5.74464317 | 9.21E-09 | 0.00068446 |
| 12 | 109468738 | 109468738 | 1 | 12_109468738 | ENSG00000110906 | KCTD10 | 0 | INTRON | 5.74271198 | 9.32E-09 | 0.0006893 |
| 18 | 24930872 | 24930872 | 1 | 18_24930872 | ENSG00000266573 | AC018697.1 | 0 | INTRON | -5.7406414 | 9.43E-09 | 0.00069476 |
| 21 | 45986775 | 45986775 | 1 | 21_45986775 | ENSG00000142156 | COL6A1 | 0 | INTRON | 5.7397837 | 9.48E-09 | 0.00069528 |
| 2 | 171738224 | 171738224 | 1 | 2_171738224 | ENSG00000077380 | DYNC1I2 | 0 | INTRON | -5.7370365 | 9.63E-09 | 0.00070362 |
| 17 | 1963832 | 1963832 | 1 | 17_1963832 | ENSG00000185924 | RTN4RL1 | 0 | INTRON | 5.73491802 | 9.76E-09 | 0.00070942 |
| 8 | 143864310 | 143864310 | 1 | 8_143864310 | ENSG00000261150 | EPPK1 | 0 | EXON | -5.7341187 | 9.80E-09 | 0.00070974 |
| 2 | 8409355 | 8409355 | 1 | 2_8409355 | ENSG00000236790 | LINC00299 | 0 | INTRON | 5.73163639 | 9.95E-09 | 0.00071511 |
| 14 | 99830797 | 99830797 | 1 | 14_99830797 | ENSG00000066629 | EML1 | 0 | INTRON | 5.73128815 | 9.97E-09 | 0.00071511 |
| 8 | 95375663 | 95375663 | 1 | 8_95375663 | ENSG00000253773 | C8orf37-AS1 | 0 | INTRON | 5.7306909 | 1.00E-08 | 0.00071511 |
| 14 | 56084826 | 56084826 | 1 | 14_56084826 | ENSG00000277763 | AL138995.1 | 32489 | Downstream | 5.72151298 | 1.06E-08 | 0.00074957 |
| 14 | 105378167 | 105378167 | 1 | 14_105378167 | ENSG00000179364 | PACS2 | 0 | INTRON | 5.72128025 | 1.06E-08 | 0.00074957 |
| 16 | 21424608 | 21424608 | 1 | 16_21424608 | ENSG00000169246 | NPIPB3 | 0 | INTRON | 5.7199758 | 1.07E-08 | 0.00075222 |
| 2 | 225052522 | 225052522 | 1 | 2_225052522 | ENSG00000135905 | DOCK10 | 10077 | Upstream | 5.71927165 | 1.07E-08 | 0.00075222 |
| 1 | 86073490 | 86073490 | 1 | 1_86073490 | ENSG00000171502 | COL24A1 | 0 | INTRON | 5.71497566 | 1.10E-08 | 0.00076486 |
| 6 | 80220885 | 80220885 | 1 | 6_80220885 | ENSG00000083123 | BCKDHB | 0 | INTRON | -5.7137991 | 1.10E-08 | 0.00076486 |
| 9 | 18271985 | 18271985 | 1 | 9_18271985 | ENSG00000178031 | ADAMTSL1 | 0 | INTRON | 5.71317366 | 1.11E-08 | 0.00076486 |
| 10 | 12258444 | 12258444 | 1 | 10_12258444 | ENSG00000151465 | CDC123 | 7855 | Downstream | 5.71235597 | 1.11E-08 | 0.00076486 |
| 3 | 152279235 | 152279235 | 1 | 3_152279235 | ENSG00000152601 | MBNL1 | 0 | INTRON | 5.71218109 | 1.12E-08 | 0.00076486 |
| 1 | 214163168 | 214163168 | 1 | 1_214163168 | ENSG00000283518 | LINC02775 | 0 | INTRON | -5.7118355 | 1.12E-08 | 0.00076486 |
| 21 | 46602655 | 46602655 | 1 | 21_46602655 | ENSG00000160307 | S100B | 0 | 5UTR | 5.71158861 | 1.12E-08 | 0.00076486 |
| 3 | 50644841 | 50644841 | 1 | 3_50644841 | ENSG00000114738 | MAPKAPK3 | 0 | INTRON | 5.71028197 | 1.13E-08 | 0.00076768 |
| 10 | 58184501 | 58184501 | 1 | 10_58184501 | ENSG00000151151 | IPMK | 7015 | Downstream | -5.7085403 | 1.14E-08 | 0.00077248 |
| 19 | 26161055 | 26161055 | 1 | 19_26161055 | ENSG00000267696 | ERVK-28 | 1477427 | Downstream | -5.7042169 | 1.17E-08 | 0.0007892 |
| 11 | 115004563 | 115004563 | 1 | 11_115004563 | ENSG00000252870 | AP003179.1 | 123654 | Downstream | -5.700351 | 1.20E-08 | 0.00080412 |
| 12 | 69422110 | 69422110 | 1 | 12_69422110 | ENSG00000241765 | RPS26P45 | 545 | Upstream | -5.6993676 | 1.20E-08 | 0.00080559 |
| 4 | 13133935 | 13133935 | 1 | 4_13133935 | ENSG00000283271 | U6 | 82524 | Downstream | 5.69709204 | 1.22E-08 | 0.00081321 |
| 12 | 131143237 | 131143237 | 1 | 12_131143237 | ENSG00000111452 | ADGRD1 | 1768 | Downstream | -5.6959062 | 1.23E-08 | 0.00081568 |
| 21 | 13489125 | 13489125 | 1 | 21_13489125 | ENSG00000226930 | GTF2IP2 | 0 | EXON | -5.6926288 | 1.25E-08 | 0.00082826 |
| 8 | 68687559 | 68687559 | 1 | 8_68687559 | ENSG00000165084 | C8orf34 | 0 | INTRON | -5.691843 | 1.26E-08 | 0.0008284 |
| 11 | 102183903 | 102183903 | 1 | 11_102183903 | ENSG00000137693 | YAP1 | 0 | INTRON | -5.6912783 | 1.26E-08 | 0.0008284 |
| 19 | 20895794 | 20895794 | 1 | 19_20895794 | ENSG00000105750 | ZNF85 | 27427 | Upstream | 5.6893331 | 1.28E-08 | 0.00083362 |
| 1 | 109889003 | 109889003 | 1 | 1_109889003 | ENSG00000235005 | AL450468.1 | 2739 | Upstream | -5.6888918 | 1.28E-08 | 0.00083362 |
| 3 | 128463680 | 128463680 | 1 | 3_128463680 | ENSG00000179407 | DNAJB8 | 0 | 5UTR | 5.68774769 | 1.29E-08 | 0.00083602 |
| 9 | 90681388 | 90681388 | 1 | 9_90681388 | ENSG00000165023 | DIRAS2 | 38526 | Upstream | -5.6820059 | 1.33E-08 | 0.00085936 |
| 4 | 26357886 | 26357886 | 1 | 4_26357886 | ENSG00000168214 | RBPJ | 0 | INTRON | 5.68092571 | 1.34E-08 | 0.00085936 |

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| 2 | 26468411 | 26468411 | 1 | 2_26468411 | ENSG00000115155 | OTOF | 0 | EXON | 5.67920034 | 1.35E-08 | 0.00085936 |
| 16 | 103378 | 103378 | 1 | 16_103378 | ENSG00000103148 | NPRL3 | 0 | INTRON | -5.6787048 | 1.36E-08 | 0.00085936 |
| 14 | 105098807 | 105098807 | 1 | 14_105098807 | ENSG00000257556 | LINC02298 | 0 | EXON | 5.67843772 | 1.36E-08 | 0.00085936 |
| 2 | 187538591 | 187538591 | 1 | 2_187538591 | ENSG00000224063 | AC007319.1 | 0 | INTRON | -5.6782635 | 1.36E-08 | 0.00085936 |
| 9 | 32465081 | 32465081 | 1 | 9_32465081 | ENSG00000107201 | DDX58 | 0 | INTRON | -5.6778982 | 1.36E-08 | 0.00085936 |
| 12 | 26279031 | 26279031 | 1 | 12_26279031 | ENSG00000256234 | AC022509.2 | 0 | INTRON | -5.6746559 | 1.39E-08 | 0.0008705 |
| 11 | 66140052 | 66140052 | 1 | 11_66140052 | ENSG00000175115 | PACS1 | 0 | INTRON | 5.67337687 | 1.40E-08 | 0.0008705 |
| 8 | 18360609 | 18360609 | 1 | 8_18360609 | ENSG00000253937 | NATP | 9997 | Upstream | -5.6730812 | 1.40E-08 | 0.0008705 |
| 13 | 52471050 | 52471050 | 1 | 13_52471050 | ENSG00000136108 | CKAP2 | 0 | INTRON | -5.6725866 | 1.41E-08 | 0.0008705 |
| 10 | 126063006 | 126063006 | 1 | 10_126063006 | ENSG00000148848 | ADAM12 | 0 | INTRON | 5.67255087 | 1.41E-08 | 0.0008705 |
| 13 | 99454291 | 99454291 | 1 | 13_99454291 | ENSG00000125304 | TM9SF2 | 0 | INTRON | -5.6715734 | 1.41E-08 | 0.00087198 |
| 20 | 17418368 | 17418368 | 1 | 20_17418368 | ENSG00000125851 | PCSK2 | 0 | INTRON | -5.6710197 | 1.42E-08 | 0.00087198 |
| 2 | 66632464 | 66632464 | 1 | 2_66632464 | ENSG00000232046 | LINC01798 | 0 | INTRON | 5.67001591 | 1.43E-08 | 0.00087395 |
| 1 | 237273195 | 237273195 | 1 | 1_237273195 | ENSG00000198626 | RYR2 | 0 | INTRON | 5.66931524 | 1.43E-08 | 0.00087439 |
| 7 | 939554 | 939554 | 1 | 7_939554 | ENSG00000105963 | ADAP1 | 0 | INTRON | 5.66839232 | 1.44E-08 | 0.00087597 |
| 9 | 70315576 | 70315576 | 1 | 9_70315576 | ENSG00000198887 | SMC5 | 0 | EXON | -5.6669569 | 1.45E-08 | 0.00088019 |
| 8 | 143862177 | 143862177 | 1 | 8_143862177 | ENSG00000261150 | EPPK1 | 0 | EXON | -5.6645639 | 1.47E-08 | 0.0008884 |
| 9 | 134411170 | 134411170 | 1 | 9_134411170 | ENSG00000186350 | RXRA | 0 | INTRON | 5.66414956 | 1.48E-08 | 0.0008884 |
| 14 | 57234725 | 57234725 | 1 | 14_57234725 | ENSG00000070367 | EXOC5 | 0 | INTRON | -5.6615025 | 1.50E-08 | 0.00089808 |
| 8 | 85423894 | 85423894 | 1 | 8_85423894 | ENSG00000164879 | CA3 | 0 | INTRON | 5.66108134 | 1.50E-08 | 0.00089808 |
| 13 | 85597504 | 85597504 | 1 | 13_85597504 | ENSG00000226317 | LINC00351 | 52934 | Downstream | -5.6589521 | 1.52E-08 | 0.00090002 |
| 2 | 101595979 | 101595979 | 1 | 2_101595979 | ENSG00000286101 | AC093894.2 | 28078 | Upstream | 5.65848784 | 1.53E-08 | 0.00090002 |
| 1 | 32947425 | 32947425 | 1 | 1_32947425 | ENSG00000116514 | RNF19B | 0 | INTRON | 5.65781112 | 1.53E-08 | 0.00090002 |
| 4 | 58605150 | 58605150 | 1 | 4_58605150 | ENSG00000250078 | AC019133.1 | 39938 | Upstream | 5.65635255 | 1.55E-08 | 0.00090002 |
| 12 | 48019016 | 48019016 | 1 | 12_48019016 | ENSG00000257985 | AC004801.4 | 0 | INTRON | 5.65631177 | 1.55E-08 | 0.00090002 |
| 22 | 49639385 | 49639385 | 1 | 22_49639385 | ENSG00000188511 | C22orf34 | 0 | INTRON | 5.65618854 | 1.55E-08 | 0.00090002 |
| 3 | 193386396 | 193386396 | 1 | 3_193386396 | ENSG00000187527 | ATP13A5 | 7576 | Upstream | -5.6561471 | 1.55E-08 | 0.00090002 |
| 9 | 109753335 | 109753335 | 1 | 9_109753335 | ENSG00000157654 | PALM2-AKAP2 | 0 | INTRON | -5.6559597 | 1.55E-08 | 0.00090002 |
| 1 | 190925597 | 190925597 | 1 | 1_190925597 | ENSG00000285638 | AL138927.1 | 0 | INTRON | -5.6542839 | 1.56E-08 | 0.00090525 |
| 15 | 23299174 | 23299174 | 1 | 15_23299174 | ENSG00000259414 | AC242376.1 | 5507 | Upstream | -5.6537964 | 1.57E-08 | 0.00090525 |
| 3 | 85824055 | 85824055 | 1 | 3_85824055 | ENSG00000241648 | CADM2-AS2 | 0 | INTRON | -5.6527916 | 1.58E-08 | 0.00090748 |
| 2 | 182182132 | 182182132 | 1 | 2_182182132 | ENSG00000115252 | PDE1A | 0 | INTRON | 5.6507144 | 1.60E-08 | 0.00091498 |
| 9 | 8651721 | 8651721 | 1 | 9_8651721 | ENSG00000153707 | PTPRD | 0 | INTRON | -5.6502202 | 1.60E-08 | 0.00091498 |
| 8 | 6461080 | 6461080 | 1 | 8_6461080 | ENSG00000147316 | MCPH1 | 0 | INTRON | 5.6460391 | 1.64E-08 | 0.00093437 |
| 13 | 89052942 | 89052942 | 1 | 13_89052942 | ENSG00000233211 | GRPEL2P1 | 74157 | Upstream | -5.6449912 | 1.65E-08 | 0.00093694 |
| 10 | 72191206 | 72191206 | 1 | 10_72191206 | ENSG00000138303 | ASCC1 | 0 | INTRON | 5.64420572 | 1.66E-08 | 0.0009381 |
| 10 | 61979813 | 61979813 | 1 | 10_61979813 | ENSG00000150347 | ARID5B | 0 | INTRON | 5.64165638 | 1.68E-08 | 0.00094694 |
| 20 | 52875078 | 52875078 | 1 | 20_52875078 | ENSG00000232286 | AL121902.1 | 12223 | Upstream | 5.64145256 | 1.69E-08 | 0.00094694 |
| 20 | 31363472 | 31363472 | 1 | 20_31363472 | ENSG00000212717 | DEFB117 | 2542 | Downstream | 5.64081717 | 1.69E-08 | 0.00094731 |
| 15 | 91008241 | 91008241 | 1 | 15_91008241 | ENSG00000284946 | AC068831.7 | 0 | INTRON | -5.637956 | 1.72E-08 | 0.00095606 |
| 1 | 181868980 | 181868980 | 1 | 1_181868980 | ENSG00000222397 | RN7SKP229 | 29206 | Upstream | 5.63784172 | 1.72E-08 | 0.00095606 |
| 14 | 51967984 | 51967984 | 1 | 14_51967984 | ENSG00000186469 | GNG2 | 0 | 3UTR | -5.6368727 | 1.73E-08 | 0.00095606 |
| 7 | 67133282 | 67133282 | 1 | 7_67133282 | ENSG00000198874 | TYW1 | 0 | INTRON | -5.6363417 | 1.74E-08 | 0.00095606 |
| 19 | 18283889 | 18283889 | 1 | 19_18283889 | ENSG00000241464 | RPL39P38 | 1453 | Downstream | 5.63618753 | 1.74E-08 | 0.00095606 |
| 13 | 51456556 | 51456556 | 1 | 13_51456556 | ENSG00000236778 | INTS6-AS1 | 0 | INTRON | 5.63547349 | 1.75E-08 | 0.00095606 |
| 19 | 19507680 | 19507680 | 1 | 19_19507680 | ENSG00000167491 | GATAD2A | 0 | 3UTR | 5.63454207 | 1.76E-08 | 0.00095606 |
| 10 | 97413755 | 97413755 | 1 | 10_97413755 | ENSG00000052749 | RRP12 | 0 | INTRON | -5.634421 | 1.76E-08 | 0.00095606 |
| 8 | 63040716 | 63040716 | 1 | 8_63040716 | ENSG00000137563 | GGH | 1910 | Upstream | 5.63420824 | 1.76E-08 | 0.00095606 |
| 12 | 95491549 | 95491549 | 1 | 12_95491549 | ENSG00000111142 | METAP2 | 0 | INTRON | -5.6329306 | 1.77E-08 | 0.0009601 |
| 9 | 91667383 | 91667383 | 1 | 9_91667383 | ENSG00000169071 | ROR2 | 0 | INTRON | 5.63140435 | 1.79E-08 | 0.00096556 |
| 12 | 31649284 | 31649284 | 1 | 12_31649284 | ENSG00000139160 | ETFBKMT | 0 | INTRON | 5.63018312 | 1.80E-08 | 0.00096935 |
| 5 | 15552821 | 15552821 | 1 | 5_15552821 | ENSG00000183580 | FBXL7 | 0 | INTRON | -5.6274005 | 1.83E-08 | 0.00097527 |
| 6 | 136339397 | 136339397 | 1 | 6_136339397 | ENSG00000135525 | MAP7 | 2883 | Downstream | 5.62701882 | 1.83E-08 | 0.00097527 |
| 4 | 5766636 | 5766636 | 1 | 4_5766636 | ENSG00000072840 | EVC | 0 | INTRON | 5.62659198 | 1.84E-08 | 0.00097527 |
| 12 | 51015657 | 51015657 | 1 | 12_51015657 | ENSG00000110911 | SLC11A2 | 0 | INTRON | 5.62546046 | 1.85E-08 | 0.00097527 |
| 3 | 45798779 | 45798779 | 1 | 3_45798779 | ENSG00000163817 | SLC6A20 | 2243 | Upstream | 5.62441274 | 1.86E-08 | 0.00097527 |
| 6 | 53072942 | 53072942 | 1 | 6_53072942 | ENSG00000112146 | FBXO9 | 0 | INTRON | 5.62420435 | 1.86E-08 | 0.00097527 |
| 2 | 65796243 | 65796243 | 1 | 2_65796243 | ENSG00000204929 | AC007389.1 | 0 | INTRON | -5.6240769 | 1.87E-08 | 0.00097527 |
| 10 | 94261155 | 94261155 | 1 | 10_94261155 | ENSG00000138193 | PLCE1 | 0 | INTRON | -5.624051 | 1.87E-08 | 0.00097527 |
| 7 | 94210917 | 94210917 | 1 | 7_94210917 | ENSG00000285090 | AC002074.1 | 67762 | Downstream | -5.623963 | 1.87E-08 | 0.00097527 |
| 3 | 37165183 | 37165183 | 1 | 3_37165183 | ENSG00000093167 | LRRFIP2 | 0 | INTRON | -5.6237564 | 1.87E-08 | 0.00097527 |
| 1 | 164366722 | 164366722 | 1 | 1_164366722 | ENSG00000213070 | HMGB3P6 | 9358 | Downstream | 5.62263666 | 1.88E-08 | 0.00097617 |
| X | 49866897 | 49866897 | 1 | X_49866897 | ENSG00000234390 | USP27X-AS1 | 9826 | Downstream | -5.6225408 | 1.88E-08 | 0.00097617 |
| 4 | 125540807 | 125540807 | 1 | 4_125540807 | ENSG00000283550 | MIR2054 | 33500 | Downstream | 5.61804601 | 1.93E-08 | 0.00099885 |
| 9 | 130757903 | 130757903 | 1 | 9_130757903 | ENSG00000097007 | ABL1 | 0 | INTRON | -5.6136333 | 1.98E-08 | 0.00102157 |
| 1 | 2611921 | 2611921 | 1 | 1_2611921 | ENSG00000142606 | MMEL1 | 0 | INTRON | -5.6072283 | 2.06E-08 | 0.00105689 |
| 20 | 32761317 | 32761317 | 1 | 20_32761317 | ENSG00000088305 | DNMT3B | 1067 | Upstream | -5.6053776 | 2.08E-08 | 0.00106225 |
| 10 | 122485141 | 122485141 | 1 | 10_122485141 | ENSG00000166033 | HTRA1 | 0 | INTRON | -5.6053089 | 2.08E-08 | 0.00106225 |
| 3 | 5652622 | 5652622 | 1 | 3_5652622 | ENSG00000229642 | AC087857.1 | 310219 | Upstream | -5.6031247 | 2.11E-08 | 0.00107251 |
| 2 | 20695254 | 20695254 | 1 | 2_20695254 | ENSG00000118961 | LDAH | 0 | INTRON | 5.60145793 | 2.13E-08 | 0.00107964 |
| 1 | 51592275 | 51592275 | 1 | 1_51592275 | ENSG00000117859 | OSBPL9 | 0 | INTRON | -5.5988289 | 2.16E-08 | 0.00109288 |
| 4 | 115943223 | 115943223 | 1 | 4_115943223 | ENSG00000249259 | AC027613.1 | 0 | INTRON | -5.5961952 | 2.19E-08 | 0.00110631 |
| 3 | 51858999 | 51858999 | 1 | 3_51858999 | ENSG00000184345 | IQCF2 | 2615 | Upstream | 5.59533344 | 2.20E-08 | 0.00110853 |
| 7 | 27528138 | 27528138 | 1 | 7_27528138 | ENSG00000106049 | HIBADH | 0 | INTRON | 5.59341848 | 2.23E-08 | 0.00111753 |
| 19 | 23005020 | 23005020 | 1 | 19_23005020 | ENSG00000269067 | ZNF728 | 1844 | Upstream | -5.5914462 | 2.25E-08 | 0.00112542 |
| 15 | 66736698 | 66736698 | 1 | 15_66736698 | ENSG00000137834 | SMAD6 | 0 | INTRON | 5.59099624 | 2.26E-08 | 0.00112542 |
| 16 | 50379877 | 50379877 | 1 | 16_50379877 | ENSG00000261393 | AC007493.2 | 8397 | Downstream | -5.590667 | 2.26E-08 | 0.00112542 |
| 11 | 128299470 | 128299470 | 1 | 11_128299470 | ENSG00000272575 | LINC02098 | 58029 | Downstream | 5.58867738 | 2.29E-08 | 0.00113507 |
| 13 | 38086258 | 38086258 | 1 | 13_38086258 | ENSG00000223685 | LINC00571 | 0 | INTRON | 5.58654245 | 2.32E-08 | 0.00114577 |
| 11 | 53232999 | 53232999 | 1 | 11_53232999 | ENSG00000237610 | OR4C50P | 1358480 | Upstream | -5.5854234 | 2.33E-08 | 0.00114983 |
| 7 | 155018427 | 155018427 | 1 | 7_155018427 | ENSG00000273344 | PAXIP1-AS1 | 12724 | Downstream | 5.58306655 | 2.36E-08 | 0.00116216 |
| 3 | 158071810 | 158071810 | 1 | 3_158071810 | ENSG00000242536 | AC079943.2 | 0 | INTRON | -5.5809435 | 2.39E-08 | 0.00117283 |
| 6 | 85745666 | 85745666 | 1 | 6_85745666 | ENSG00000222686 | RNU4-72P | 5914 | Upstream | 5.58047488 | 2.40E-08 | 0.00117283 |
| 10 | 13690625 | 13690625 | 1 | 10_13690625 | ENSG00000151474 | FRMD4A | 0 | INTRON | 5.57934289 | 2.41E-08 | 0.0011771 |
| 7 | 152870896 | 152870896 | 1 | 7_152870896 | ENSG00000133627 | ACTR3B | 15518 | Downstream | -5.5782875 | 2.43E-08 | 0.00118088 |
| 18 | 67959941 | 67959941 | 1 | 18_67959941 | ENSG00000264634 | AC100844.1 | 3515 | Downstream | 5.57762945 | 2.44E-08 | 0.00118198 |
| 9 | 33066980 | 33066980 | 1 | 9_33066980 | ENSG00000122692 | SMU1 | 0 | INTRON | -5.575956 | 2.46E-08 | 0.00119001 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 74087455 | 74087455 | 1 | 9_74087455 | ENSG00000223368 | AL513124.1 | 214158 | Upstream | 5.57422233 | 2.49E-08 | 0.00119804 |
| 15 | 65420007 | 65420007 | 1 | 15_65420007 | ENSG00000103742 | IGDCC4 | 0 | INTRON | 5.57322893 | 2.50E-08 | 0.00119804 |
| 19 | 55689819 | 55689819 | 1 | 19_55689819 | ENSG00000063245 | EPN1 | 0 | INTRON | 5.572815 | 2.51E-08 | 0.00119804 |
| 1 | 6216646 | 6216646 | 1 | 1_6216646 | ENSG00000158286 | RNF207 | 0 | INTRON | -5.5725286 | 2.51E-08 | 0.00119804 |
| 15 | 52620612 | 52620612 | 1 | 15_52620612 | ENSG00000047346 | FAM214A | 0 | INTRON | 5.57230902 | 2.51E-08 | 0.00119804 |
| 5 | 179053812 | 179053812 | 1 | 5_179053812 | ENSG00000177932 | ZNF354C | 6560 | Upstream | -5.5718265 | 2.52E-08 | 0.00119804 |
| 11 | 113478370 | 113478370 | 1 | 11_113478370 | ENSG00000149295 | DRD2 | 2679 | Upstream | 5.5713569 | 2.53E-08 | 0.00119804 |
| 18 | 76805902 | 76805902 | 1 | 18_76805902 | ENSG00000264278 | ZNF236-DT | 0 | INTRON | 5.56979098 | 2.55E-08 | 0.00120549 |
| 14 | 78128292 | 78128292 | 1 | 14_78128292 | ENSG00000021645 | NRXN3 | 42080 | Upstream | 5.56840189 | 2.57E-08 | 0.00120865 |
| 17 | 22224606 | 22224606 | 1 | 17_22224606 | ENSG00000263725 | FTLP13 | 3001 | Downstream | 5.56798662 | 2.58E-08 | 0.00120865 |
| 12 | 95801030 | 95801030 | 1 | 12_95801030 | ENSG00000258343 | AC090001.1 | 0 | INTRON | -5.5675236 | 2.58E-08 | 0.00120865 |
| 14 | 47073369 | 47073369 | 1 | 14_47073369 | ENSG00000139915 | MDGA2 | 0 | INTRON | 5.56740991 | 2.59E-08 | 0.00120865 |
| 4 | 70867501 | 70867501 | 1 | 4_70867501 | ENSG00000207007 | RNU6-891P | 15261 | Downstream | 5.56510953 | 2.62E-08 | 0.00121847 |
| 16 | 7253732 | 7253732 | 1 | 16_7253732 | ENSG00000078328 | RBFOX1 | 0 | INTRON | -5.5649681 | 2.62E-08 | 0.00121847 |
| 9 | 41270320 | 41270320 | 1 | 9_41270320 | ENSG00000279561 | AL845472.2 | 0 | EXON | 5.56456734 | 2.63E-08 | 0.00121847 |
| 9 | 113811037 | 113811037 | 1 | 9_113811037 | ENSG00000232905 | AL162393.1 | 39649 | Downstream | -5.5621416 | 2.66E-08 | 0.00122964 |
| 2 | 115734453 | 115734453 | 1 | 2_115734453 | ENSG00000175497 | DPP10 | 0 | INTRON | -5.5619 | 2.67E-08 | 0.00122964 |
| 20 | 58807523 | 58807523 | 1 | 20_58807523 | ENSG00000268649 | AL132655.2 | 9608 | Downstream | 5.56118018 | 2.68E-08 | 0.00122964 |
| 20 | 28041272 | 28041272 | 1 | 20_28041272 | ENSG00000282826 | FRG1CP | 522577 | Downstream | -5.5610849 | 2.68E-08 | 0.00122964 |
| 5 | 173543848 | 173543848 | 1 | 5_173543848 | ENSG00000253768 | AC008663.1 | 18629 | Upstream | -5.5599383 | 2.70E-08 | 0.00123273 |
| 3 | 37955745 | 37955745 | 1 | 3_37955745 | ENSG00000144677 | CTDSPL | 0 | INTRON | 5.55970882 | 2.70E-08 | 0.00123273 |
| 4 | 190187413 | 190187413 | 1 | 4_190187413 | ENSG00000260596 | DUX4 | 1471 | Downstream | 5.55807699 | 2.73E-08 | 0.00124098 |
| 10 | 25838156 | 25838156 | 1 | 10_25838156 | ENSG00000251711 | RNU6-632P | 18730 | Upstream | -5.5568562 | 2.75E-08 | 0.00124441 |
| 6 | 15437049 | 15437049 | 1 | 6_15437049 | ENSG00000008083 | JARID2 | 0 | INTRON | 5.55666403 | 2.75E-08 | 0.00124441 |
| 6 | 148137441 | 148137441 | 1 | 6_148137441 | ENSG00000230205 | AL359382.1 | 37 | Upstream | 5.55450859 | 2.78E-08 | 0.00125652 |
| 11 | 24263393 | 24263393 | 1 | 11_24263393 | ENSG00000254594 | LINC02686 | 1175 | Upstream | -5.5523937 | 2.82E-08 | 0.00126846 |
| 9 | 120537286 | 120537286 | 1 | 9_120537286 | ENSG00000136861 | CDK5RAP2 | 0 | INTRON | -5.5514387 | 2.83E-08 | 0.00127204 |
| 2 | 3569297 | 3569297 | 1 | 2_3569297 | ENSG00000287126 | AC108488.3 | 0 | EXON | 5.55029009 | 2.85E-08 | 0.00127706 |
| 2 | 47620257 | 47620257 | 1 | 2_47620257 | ENSG00000095002 | MSH2 | 0 | INTRON | 5.54939304 | 2.87E-08 | 0.00128026 |
| 15 | 59796326 | 59796326 | 1 | 15_59796326 | ENSG00000286495 | AC092079.2 | 5020 | Downstream | 5.54879434 | 2.88E-08 | 0.00128129 |
| X | 18650278 | 18650278 | 1 | X_18650278 | ENSG00000102104 | RS1 | 0 | EXON | 5.54789678 | 2.89E-08 | 0.00128452 |
| 7 | 125210571 | 125210571 | 1 | 7_125210571 | ENSG00000224897 | POT1-AS1 | 0 | INTRON | 5.54671558 | 2.91E-08 | 0.00128782 |
| 3 | 114900967 | 114900967 | 1 | 3_114900967 | ENSG00000181722 | ZBTB20 | 0 | INTRON | -5.5465366 | 2.91E-08 | 0.00128782 |
| 2 | 15891752 | 15891752 | 1 | 2_15891752 | ENSG00000238371 | AC010145.2 | 11916 | Upstream | 5.54586747 | 2.93E-08 | 0.00128941 |
| 8 | 30770431 | 30770431 | 1 | 8_30770431 | ENSG00000104691 | UBXN8 | 3425 | Downstream | 5.54522873 | 2.94E-08 | 0.00128983 |
| 14 | 26386591 | 26386591 | 1 | 14_26386591 | ENSG00000139910 | NOVA1 | 56498 | Downstream | -5.5449052 | 2.94E-08 | 0.00128983 |
| 3 | 194299765 | 194299765 | 1 | 3_194299765 | ENSG00000214145 | LINC00887 | 0 | EXON | -5.5439011 | 2.96E-08 | 0.00129392 |
| 2 | 65811975 | 65811975 | 1 | 2_65811975 | ENSG00000204929 | AC007389.1 | 0 | INTRON | -5.5429038 | 2.97E-08 | 0.00129609 |
| 17 | 81715591 | 81715591 | 1 | 17_81715591 | ENSG00000183048 | SLC25A10 | 0 | 3UTR | -5.5419777 | 2.99E-08 | 0.00129609 |
| 16 | 79063084 | 79063084 | 1 | 16_79063084 | ENSG00000186153 | WWOX | 0 | INTRON | -5.5416788 | 3.00E-08 | 0.00129609 |
| 17 | 30726788 | 30726788 | 1 | 17_30726788 | ENSG00000264538 | SUZ12P1 | 0 | INTRON | 5.54153207 | 3.00E-08 | 0.00129609 |
| 2 | 96160911 | 96160911 | 1 | 2_96160911 | ENSG00000228873 | AC012307.1 | 13899 | Upstream | -5.5413724 | 3.00E-08 | 0.00129609 |
| 2 | 156125900 | 156125900 | 1 | 2_156125900 | ENSG00000226383 | LINC01876 | 0 | INTRON | -5.5399381 | 3.03E-08 | 0.00130251 |
| 5 | 107368418 | 107368418 | 1 | 5_107368418 | ENSG00000184349 | EFNA5 | 8470 | Downstream | 5.53962032 | 3.03E-08 | 0.00130251 |
| 10 | 27535824 | 27535824 | 1 | 10_27535824 | ENSG00000099246 | RAB18 | 0 | INTRON | 5.53828774 | 3.05E-08 | 0.00130915 |
| 2 | 111276457 | 111276457 | 1 | 2_111276457 | ENSG00000172965 | MIR4435-2HG | 0 | INTRON | 5.53758594 | 3.07E-08 | 0.00131111 |
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| 20 | 17716772 | 17716772 | 1 | 20_17716772 | ENSG00000125888 | BANF2 | 0 | INTRON | 5.53457417 | 3.12E-08 | 0.00131992 |
| 8 | 143864215 | 143864215 | 1 | 8_143864215 | ENSG00000261150 | EPPK1 | 0 | EXON | -5.5341369 | 3.13E-08 | 0.00131992 |
| 5 | 41781154 | 41781154 | 1 | 5_41781154 | ENSG00000083720 | OXCT1 | 0 | INTRON | 5.53349121 | 3.14E-08 | 0.00131992 |
| 3 | 9870764 | 9870764 | 1 | 3_9870764 | ENSG00000187288 | CIDEC | 0 | INTRON | -5.5333063 | 3.14E-08 | 0.00131992 |
| 2 | 239295134 | 239295134 | 1 | 2_239295134 | ENSG00000068024 | HDAC4 | 0 | INTRON | 5.53292348 | 3.15E-08 | 0.00131992 |
| 1 | 180940958 | 180940958 | 1 | 1_180940958 | ENSG00000135835 | KIAA1614 | 0 | INTRON | -5.5319389 | 3.17E-08 | 0.00132063 |
| 3 | 101219560 | 101219560 | 1 | 3_101219560 | ENSG00000081148 | IMPG2 | 2985 | Downstream | -5.5317351 | 3.17E-08 | 0.00132063 |
| 5 | 153582861 | 153582861 | 1 | 5_153582861 | ENSG00000155511 | GRIA1 | 0 | INTRON | 5.53153884 | 3.17E-08 | 0.00132063 |
| 13 | 73833757 | 73833757 | 1 | 13_73833757 | ENSG00000118922 | KLF12 | 0 | INTRON | -5.5309793 | 3.18E-08 | 0.00132162 |
| 11 | 62441293 | 62441293 | 1 | 11_62441293 | ENSG00000124942 | AHNAK | 0 | INTRON | -5.5291201 | 3.22E-08 | 0.00133245 |
| 22 | 15706531 | 15706531 | 1 | 22_15706531 | ENSG00000198062 | POTEH | 0 | INTRON | -5.5283165 | 3.23E-08 | 0.00133257 |
| 8 | 131278943 | 131278943 | 1 | 8_131278943 | ENSG00000253507 | AC104257.1 | 29601 | Upstream | -5.5278313 | 3.24E-08 | 0.00133257 |
| 2 | 169726062 | 169726062 | 1 | 2_169726062 | ENSG00000213160 | KLHL23 | 0 | INTRON | 5.52782772 | 3.24E-08 | 0.00133257 |
| 8 | 143317133 | 143317133 | 1 | 8_143317133 | ENSG00000184428 | TOP1MT | 0 | INTRON | 5.52702739 | 3.26E-08 | 0.00133544 |
| 2 | 159738762 | 159738762 | 1 | 2_159738762 | ENSG00000136536 | 7-Mar | 0 | INTRON | 5.52598747 | 3.28E-08 | 0.00133979 |
| 14 | 47865555 | 47865555 | 1 | 14_47865555 | ENSG00000259117 | AL121576.1 | 63354 | Upstream | 5.52561165 | 3.28E-08 | 0.00133979 |
| 16 | 75481796 | 75481796 | 1 | 16_75481796 | ENSG00000183196 | CHST6 | 0 | INTRON | 5.52483318 | 3.30E-08 | 0.00134253 |
| 6 | 138280163 | 138280163 | 1 | 6_138280163 | ENSG00000112379 | ARFGEF3 | 0 | EXON | -5.5233003 | 3.33E-08 | 0.00134925 |
| 4 | 47566845 | 47566845 | 1 | 4_47566845 | ENSG00000145246 | ATP10D | 0 | INTRON | 5.52309828 | 3.33E-08 | 0.00134925 |
| 14 | 101183475 | 101183475 | 1 | 14_101183475 | ENSG00000288245 | AL355836.3 | 2311 | Downstream | 5.52270069 | 3.34E-08 | 0.00134925 |
| 12 | 17426698 | 17426698 | 1 | 12_17426698 | ENSG00000256756 | TIMM17BP1 | 25784 | Downstream | -5.5220003 | 3.35E-08 | 0.00135143 |
| 2 | 67558087 | 67558087 | 1 | 2_67558087 | ENSG00000224173 | LINC02831 | 3979 | Upstream | 5.5213435 | 3.36E-08 | 0.00135328 |
| 13 | 50055448 | 50055448 | 1 | 13_50055448 | ENSG00000231607 | DLEU2 | 0 | INTRON | -5.519195 | 3.41E-08 | 0.0013667 |
| 4 | 185560503 | 185560503 | 1 | 4_185560503 | ENSG00000154553 | PDLIM3 | 24891 | Upstream | 5.51774853 | 3.43E-08 | 0.00137475 |
| 2 | 177849714 | 177849714 | 1 | 2_177849714 | ENSG00000128655 | PDE11A | 0 | INTRON | 5.51646604 | 3.46E-08 | 0.0013769 |
| 21 | 8152614 | 8152614 | 1 | 21_8152614 | ENSG00000278996 | FP671120.4 | 45005 | Upstream | -5.5164507 | 3.46E-08 | 0.0013769 |
| 19 | 31556342 | 31556342 | 1 | 19_31556342 | ENSG00000267407 | LINC02841 | 1539 | Downstream | 5.51577844 | 3.47E-08 | 0.0013769 |
| 14 | 104874511 | 104874511 | 1 | 14_104874511 | ENSG00000099814 | CEP170B | 0 | INTRON | 5.51551689 | 3.48E-08 | 0.0013769 |
| X | 100556098 | 100556098 | 1 | X_100556098 | ENSG00000000005 | TNMD | 28837 | Upstream | 5.51541726 | 3.48E-08 | 0.0013769 |
| 19 | 36182143 | 36182143 | 1 | 19_36182143 | ENSG00000196357 | ZNF565 | 0 | 3UTR | 5.5138232 | 3.51E-08 | 0.00138621 |
| 16 | 81311715 | 81311715 | 1 | 16_81311715 | ENSG00000260495 | AC009148.1 | 0 | EXON | 5.51179415 | 3.55E-08 | 0.00139876 |
| 10 | 105648175 | 105648175 | 1 | 10_105648175 | ENSG00000233477 | PPIAP38 | 37207 | Downstream | -5.511424 | 3.56E-08 | 0.00139876 |
| 19 | 53653138 | 53653138 | 1 | 19_53653138 | ENSG00000200393 | RNU6-698P | 546 | Upstream | -5.5095864 | 3.60E-08 | 0.0014061 |
| 1 | 246367884 | 246367884 | 1 | 1_246367884 | ENSG00000185420 | SMYD3 | 0 | INTRON | 5.50905459 | 3.61E-08 | 0.0014061 |
| 8 | 42824781 | 42824781 | 1 | 8_42824781 | ENSG00000131931 | THAP1 | 11892 | Downstream | 5.5088845 | 3.61E-08 | 0.0014061 |
| 2 | 62345468 | 62345468 | 1 | 2_62345468 | ENSG00000270335 | AC093159.2 | 3479 | Downstream | 5.50847593 | 3.62E-08 | 0.0014061 |
| 5 | 163781721 | 163781721 | 1 | 5_163781721 | ENSG00000251998 | RNU6-168P | 14343 | Downstream | 5.50823047 | 3.62E-08 | 0.0014061 |
| 3 | 84885304 | 84885304 | 1 | 3_84885304 | ENSG00000242339 | LINC02025 | 0 | INTRON | 5.50806322 | 3.63E-08 | 0.0014061 |
| 2 | 16755642 | 16755642 | 1 | 2_16755642 | ENSG00000223536 | AC008164.1 | 0 | INTRON | 5.50767876 | 3.64E-08 | 0.0014061 |

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| 6 | 132371983 | 132371983 | 1 | 6_132371983 | ENSG00000079931 | MOXD1 | 0 | INTRON | 5.50630803 | 3.66E-08 | 0.00141068 |
| 8 | 11245846 | 11245846 | 1 | 8_11245846 | ENSG00000236827 | LINC00529 | 1779 | Downstream | 5.50560208 | 3.68E-08 | 0.00141315 |
| 15 | 83964541 | 83964541 | 1 | 15_83964541 | ENSG00000156218 | ADAMTSL3 | 0 | INTRON | 5.50473707 | 3.70E-08 | 0.00141325 |
| 13 | 113566373 | 113566373 | 1 | 13_113566373 | ENSG00000150403 | TMCO3 | 11783 | Downstream | 5.5044854 | 3.70E-08 | 0.00141325 |
| 7 | 130062990 | 130062990 | 1 | 7_130062990 | ENSG00000128607 | KLHDC10 | 7543 | Upstream | -5.5044003 | 3.70E-08 | 0.00141325 |
| 2 | 161394116 | 161394116 | 1 | 2_161394116 | ENSG00000115233 | PSMD14 | 0 | INTRON | -5.5035248 | 3.72E-08 | 0.00141711 |
| 1 | 233783112 | 233783112 | 1 | 1_233783112 | ENSG00000286109 | AL357972.1 | 52366 | Downstream | 5.49997107 | 3.80E-08 | 0.00144274 |
| 4 | 152315514 | 152315514 | 1 | 4_152315514 | ENSG00000270883 | AC080078.2 | 2387 | Downstream | -5.4981048 | 3.84E-08 | 0.00145316 |
| 1 | 159330065 | 159330065 | 1 | 1_159330065 | ENSG00000196266 | OR10J3 | 15406 | Upstream | 5.49791626 | 3.84E-08 | 0.00145316 |
| 10 | 133478348 | 133478348 | 1 | 10_133478348 | ENSG00000214279 | SCART1 | 0 | INTRON | -5.4971556 | 3.86E-08 | 0.00145621 |
| 1 | 40573939 | 40573939 | 1 | 1_40573939 | ENSG00000286838 | AL356379.2 | 0 | INTRON | 5.49588525 | 3.89E-08 | 0.00146191 |
| 21 | 24474230 | 24474230 | 1 | 21_24474230 | ENSG00000237484 | LINC01684 | 0 | INTRON | -5.495685 | 3.89E-08 | 0.00146191 |
| 2 | 118993165 | 118993165 | 1 | 2_118993165 | ENSG00000019169 | MARCO | 0 | EXON | 5.49381138 | 3.93E-08 | 0.00147376 |
| 16 | 19585990 | 19585990 | 1 | 16_19585990 | ENSG00000103544 | VPS35L | 0 | INTRON | -5.4934835 | 3.94E-08 | 0.00147376 |
| 13 | 52666897 | 52666897 | 1 | 13_52666897 | ENSG00000165416 | SUGT1 | 0 | EXON | 5.49300601 | 3.95E-08 | 0.00147451 |
| 1 | 244811483 | 244811483 | 1 | 1_244811483 | ENSG00000287601 | BX323046.2 | 22890 | Downstream | 5.49088882 | 4.00E-08 | 0.00148539 |
| 2 | 17447792 | 17447792 | 1 | 2_17447792 | ENSG00000236348 | PSMC1P10 | 61375 | Downstream | 5.4907454 | 4.00E-08 | 0.00148539 |
| 2 | 114040116 | 114040116 | 1 | 2_114040116 | ENSG00000234199 | LINC01191 | 32812 | Downstream | -5.4901669 | 4.02E-08 | 0.00148539 |
| 3 | 10522252 | 10522252 | 1 | 3_10522252 | ENSG00000157087 | ATP2B2 | 0 | INTRON | 5.49016594 | 4.02E-08 | 0.00148539 |
| 20 | 28515283 | 28515283 | 1 | 20_28515283 | ENSG00000282826 | FRG1CP | 48566 | Downstream | -5.4894883 | 4.03E-08 | 0.00148786 |
| 18 | 46864447 | 46864447 | 1 | 18_46864447 | ENSG00000078043 | PIAS2 | 0 | INTRON | -5.4880989 | 4.06E-08 | 0.00149636 |
| 6 | 2472359 | 2472359 | 1 | 6_2472359 | ENSG00000250903 | GMDS-DT | 0 | INTRON | -5.4838875 | 4.16E-08 | 0.0015282 |
| 6 | 91786831 | 91786831 | 1 | 6_91786831 | ENSG00000219867 | AL590635.1 | 29011 | Downstream | -5.4836143 | 4.17E-08 | 0.0015282 |
| 4 | 70733370 | 70733370 | 1 | 4_70733370 | ENSG00000018189 | RUFY3 | 0 | INTRON | 5.48315073 | 4.18E-08 | 0.00152892 |
| 8 | 140546573 | 140546573 | 1 | 8_140546573 | ENSG00000123908 | AGO2 | 0 | INTRON | 5.4824625 | 4.19E-08 | 0.00153158 |
| 4 | 181322267 | 181322267 | 1 | 4_181322267 | ENSG00000249460 | LINC02500 | 57122 | Upstream | -5.4820736 | 4.20E-08 | 0.00153167 |
| 7 | 26279241 | 26279241 | 1 | 7_26279241 | ENSG00000232383 | AC010677.1 | 2635 | Downstream | 5.48061403 | 4.24E-08 | 0.00154106 |
| 2 | 143188941 | 143188941 | 1 | 2_143188941 | ENSG00000075884 | ARHGAP15 | 0 | INTRON | 5.48006933 | 4.25E-08 | 0.0015425 |
| 2 | 1222839 | 1222839 | 1 | 2_1222839 | ENSG00000172554 | SNTG2 | 0 | INTRON | 5.47945197 | 4.27E-08 | 0.0015425 |
| 12 | 110338098 | 110338098 | 1 | 12_110338098 | ENSG00000174437 | ATP2A2 | 0 | INTRON | 5.47890162 | 4.28E-08 | 0.0015425 |
| 18 | 65138338 | 65138338 | 1 | 18_65138338 | ENSG00000263863 | AC007948.1 | 12628 | Upstream | 5.47870457 | 4.28E-08 | 0.0015425 |
| 18 | 58249768 | 58249768 | 1 | 18_58249768 | ENSG00000049759 | NEDD4L | 0 | INTRON | -5.4783399 | 4.29E-08 | 0.0015425 |
| 4 | 38938025 | 38938025 | 1 | 4_38938025 | ENSG00000197712 | FAM114A1 | 0 | INTRON | -5.4781948 | 4.30E-08 | 0.0015425 |
| 1 | 38796474 | 38796474 | 1 | 1_38796474 | ENSG00000284632 | AL354702.2 | 0 | INTRON | -5.4777852 | 4.31E-08 | 0.00154254 |
| 16 | 17397429 | 17397429 | 1 | 16_17397429 | ENSG00000103489 | XYLT1 | 0 | INTRON | 5.47744518 | 4.32E-08 | 0.00154254 |
| 19 | 2072419 | 2072419 | 1 | 19_2072419 | ENSG00000172081 | MOB3A | 0 | 3UTR | -5.4760999 | 4.35E-08 | 0.00154614 |
| 1 | 89956171 | 89956171 | 1 | 1_89956171 | ENSG00000272672 | AL391497.1 | 16024 | Downstream | -5.4760814 | 4.35E-08 | 0.00154614 |
| 11 | 103432040 | 103432040 | 1 | 11_103432040 | ENSG00000187240 | DYNC2H1 | 0 | INTRON | -5.475887 | 4.35E-08 | 0.00154614 |
| 16 | 88200397 | 88200397 | 1 | 16_88200397 | ENSG00000260420 | LINC02182 | 5180 | Downstream | 5.47541044 | 4.36E-08 | 0.00154614 |
| 20 | 49396877 | 49396877 | 1 | 20_49396877 | ENSG00000283529 | AL035685.1 | 0 | INTRON | 5.47518224 | 4.37E-08 | 0.00154614 |
| 8 | 140892484 | 140892484 | 1 | 8_140892484 | ENSG00000169398 | PTK2 | 0 | INTRON | 5.47412503 | 4.40E-08 | 0.00155217 |
| 13 | 32069136 | 32069136 | 1 | 13_32069136 | ENSG00000073910 | FRY | 0 | INTRON | 5.47255336 | 4.44E-08 | 0.00156276 |
| 16 | 48038063 | 48038063 | 1 | 16_48038063 | ENSG00000288026 | AC096996.3 | 12524 | Downstream | 5.47191455 | 4.45E-08 | 0.00156516 |
| 12 | 32860952 | 32860952 | 1 | 12_32860952 | ENSG00000057294 | PKP2 | 0 | INTRON | 5.47119031 | 4.47E-08 | 0.00156699 |
| 3 | 58550277 | 58550277 | 1 | 3_58550277 | ENSG00000168306 | ACOX2 | 12994 | Upstream | 5.47066187 | 4.48E-08 | 0.00156699 |
| 1 | 238227391 | 238227391 | 1 | 1_238227391 | ENSG00000234464 | AL356010.2 | 11551 | Upstream | -5.4706128 | 4.48E-08 | 0.00156699 |
| 3 | 132607238 | 132607238 | 1 | 3_132607238 | ENSG00000274810 | NPHP3-ACAD11 | 0 | INTRON | 5.47001929 | 4.50E-08 | 0.00156903 |
| 8 | 54553691 | 54553691 | 1 | 8_54553691 | ENSG00000104237 | RP1 | 0 | INTRON | -5.4693411 | 4.52E-08 | 0.00157182 |
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| 22 | 50147230 | 50147230 | 1 | 22_50147230 | ENSG00000073146 | MOV10L1 | 0 | INTRON | -5.4658516 | 4.61E-08 | 0.00159653 |
| 8 | 57448542 | 57448542 | 1 | 8_57448542 | ENSG00000287301 | AC068075.2 | 24869 | Downstream | 5.46536226 | 4.62E-08 | 0.0015968 |
| 10 | 47975453 | 47975453 | 1 | 10_47975453 | ENSG00000276850 | AC245041.2 | 0 | INTRON | 5.46510073 | 4.63E-08 | 0.0015968 |
| 16 | 35187480 | 35187480 | 1 | 16_35187480 | ENSG00000260073 | AC023824.1 | 5206 | Downstream | -5.4646063 | 4.64E-08 | 0.00159773 |
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| 15 | 93660009 | 93660009 | 1 | 15_93660009 | ENSG00000258631 | AC110023.1 | 0 | INTRON | 5.46104904 | 4.73E-08 | 0.00160856 |
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| 2 | 128757201 | 128757201 | 1 | 2_128757201 | ENSG00000237532 | AC012451.1 | 175625 | Upstream | 5.46058861 | 4.75E-08 | 0.00160856 |
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| 17 | 70538422 | 70538422 | 1 | 17_70538422 | ENSG00000267471 | AC005771.1 | 90494 | Downstream | 5.45899534 | 4.79E-08 | 0.00161342 |
| 13 | 18527340 | 18527340 | 1 | 13_18527340 | ENSG00000231238 | LINC00349 | 11539 | Upstream | -5.4585857 | 4.80E-08 | 0.00161395 |
| 4 | 169588940 | 169588940 | 1 | 4_169588940 | ENSG00000137601 | NEK1 | 0 | INTRON | 5.45598675 | 4.87E-08 | 0.0016345 |
| 1 | 16640308 | 16640308 | 1 | 1_16640308 | ENSG00000215908 | CROCCP2 | 0 | INTRON | 5.45534948 | 4.89E-08 | 0.00163715 |
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| 17 | 3216275 | 3216275 | 1 | 17_3216275 | ENSG00000172146 | OR1A1 | 0 | EXON | -5.4500657 | 5.04E-08 | 0.00166451 |
| 12 | 74666594 | 74666594 | 1 | 12_74666594 | ENSG00000188646 | AC123904.1 | 2453 | Upstream | 5.44997029 | 5.04E-08 | 0.00166451 |
| 6 | 115505457 | 115505457 | 1 | 6_115505457 | ENSG00000228777 | LINC02534 | 128082 | Downstream | 5.44948908 | 5.05E-08 | 0.00166578 |
| 7 | 130353533 | 130353533 | 1 | 7_130353533 | ENSG00000158525 | CPA5 | 0 | INTRON | 5.44765523 | 5.10E-08 | 0.00167979 |
| 19 | 36103228 | 36103228 | 1 | 19_36103228 | ENSG00000075702 | WDR62 | 0 | INTRON | -5.4462104 | 5.15E-08 | 0.00169022 |
| 1 | 36374044 | 36374044 | 1 | 1_36374044 | ENSG00000196182 | STK40 | 0 | INTRON | -5.4450111 | 5.18E-08 | 0.00169837 |
| 12 | 49078927 | 49078927 | 1 | 12_49078927 | ENSG00000277672 | AC011603.4 | 3125 | Downstream | 5.44459483 | 5.19E-08 | 0.00169907 |
| 7 | 73340214 | 73340214 | 1 | 7_73340214 | ENSG00000077800 | FKBP6 | 0 | INTRON | -5.4442185 | 5.20E-08 | 0.0016994 |
| 8 | 63238522 | 63238522 | 1 | 8_63238522 | ENSG00000241964 | RN7SL135P | 3611 | Upstream | 5.44237206 | 5.26E-08 | 0.00171172 |
| 5 | 157320391 | 157320391 | 1 | 5_157320391 | ENSG00000055163 | CYFIP2 | 0 | INTRON | 5.44225008 | 5.26E-08 | 0.00171172 |
| 12 | 7094008 | 7094008 | 1 | 12_7094008 | ENSG00000139178 | C1RL | 0 | INTRON | -5.4410675 | 5.30E-08 | 0.00171983 |
| 8 | 112719460 | 112719460 | 1 | 8_112719460 | ENSG00000164796 | CSMD3 | 0 | INTRON | -5.440381 | 5.32E-08 | 0.00172318 |
| 13 | 70637165 | 70637165 | 1 | 13_70637165 | ENSG00000276841 | AL445264.1 | 72728 | Upstream | 5.43906833 | 5.36E-08 | 0.00173039 |
| 3 | 196818555 | 196818555 | 1 | 3_196818555 | ENSG00000180370 | PAK2 | 0 | INTRON | 5.43896045 | 5.36E-08 | 0.00173039 |
| 12 | 423643 | 423643 | 1 | 12_423643 | ENSG00000120647 | CCDC77 | 0 | INTRON | -5.4371271 | 5.41E-08 | 0.00174497 |

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| 9 | 98007420 | 98007420 | 1 | 9_98007420 | ENSG00000136938 | ANP32B | 0 | INTRON | 5.43602639 | 5.45E-08 | 0.00174915 |
| 7 | 67439446 | 67439446 | 1 | 7_67439446 | ENSG00000106610 | STAG3L4 | 76496 | Downstream | -5.4347948 | 5.49E-08 | 0.001756 |
| 9 | 7158442 | 7158442 | 1 | 9_7158442 | ENSG00000107077 | KDM4C | 0 | INTRON | 5.43465767 | 5.49E-08 | 0.001756 |
| 16 | 88866103 | 88866103 | 1 | 16_88866103 | ENSG00000205022 | PABPN1L | 0 | INTRON | -5.4341529 | 5.51E-08 | 0.00175768 |
| 2 | 207313511 | 207313511 | 1 | 2_207313511 | ENSG00000223725 | AC009226.1 | 0 | INTRON | -5.4333118 | 5.53E-08 | 0.00175897 |
| 12 | 27587359 | 27587359 | 1 | 12_27587359 | ENSG00000110841 | PPFIBP1 | 0 | INTRON | 5.43318971 | 5.54E-08 | 0.00175897 |
| 10 | 22311562 | 22311562 | 1 | 10_22311562 | ENSG00000148444 | COMMD3 | 4823 | Upstream | 5.4322466 | 5.56E-08 | 0.00175897 |
| 17 | 69667991 | 69667991 | 1 | 17_69667991 | ENSG00000227517 | LINC01483 | 0 | INTRON | 5.43195686 | 5.57E-08 | 0.00175897 |
| 22 | 43301563 | 43301563 | 1 | 22_43301563 | ENSG00000159307 | SCUBE1 | 0 | INTRON | 5.43165094 | 5.58E-08 | 0.00175897 |
| 8 | 16362800 | 16362800 | 1 | 8_16362800 | ENSG00000038945 | MSR1 | 0 | INTRON | -5.43155 | 5.59E-08 | 0.00175897 |
| 7 | 103014855 | 103014855 | 1 | 7_103014855 | ENSG00000161040 | FBXL13 | 0 | INTRON | 5.43137104 | 5.59E-08 | 0.00175897 |
| 7 | 129917148 | 129917148 | 1 | 7_129917148 | ENSG00000186591 | UBE2H | 0 | INTRON | -5.4313645 | 5.59E-08 | 0.00175897 |
| 10 | 78751782 | 78751782 | 1 | 10_78751782 | ENSG00000228683 | AC016820.1 | 54760 | Upstream | 5.43096371 | 5.61E-08 | 0.0017591 |
| 10 | 30332331 | 30332331 | 1 | 10_30332331 | ENSG00000107951 | MTPAP | 0 | INTRON | 5.43069272 | 5.61E-08 | 0.0017591 |
| 17 | 54600309 | 54600309 | 1 | 17_54600309 | ENSG00000288036 | AC015943.1 | 8939 | Downstream | 5.42947393 | 5.65E-08 | 0.0017679 |
| 3 | 11578949 | 11578949 | 1 | 3_11578949 | ENSG00000144560 | VGLL4 | 0 | INTRON | 5.42735785 | 5.72E-08 | 0.00178167 |
| X | 20283562 | 20283562 | 1 | X_20283562 | ENSG00000177189 | RPS6KA3 | 16043 | Upstream | -5.4269793 | 5.73E-08 | 0.00178167 |
| 19 | 4914583 | 4914583 | 1 | 19_4914583 | ENSG00000276043 | UHRF1 | 0 | INTRON | 5.42675071 | 5.74E-08 | 0.00178167 |
| 22 | 31555215 | 31555215 | 1 | 22_31555215 | ENSG00000198089 | SFI1 | 0 | INTRON | 5.42659232 | 5.74E-08 | 0.00178167 |
| 10 | 28709377 | 28709377 | 1 | 10_28709377 | ENSG00000095739 | BAMBI | 26445 | Downstream | 5.42645554 | 5.75E-08 | 0.00178167 |
| 21 | 46356242 | 46356242 | 1 | 21_46356242 | ENSG00000160299 | PCNT | 0 | INTRON | 5.42524617 | 5.79E-08 | 0.00179051 |
| 7 | 105677037 | 105677037 | 1 | 7_105677037 | ENSG00000146776 | ATXN7L1 | 0 | INTRON | -5.4234704 | 5.85E-08 | 0.00180512 |
| 1 | 191392126 | 191392126 | 1 | 1_191392126 | ENSG00000233882 | LINC01680 | 163659 | Upstream | 5.42300317 | 5.86E-08 | 0.00180656 |
| 15 | 45335021 | 45335021 | 1 | 15_45335021 | ENSG00000259433 | AC051619.3 | 2387 | Upstream | -5.422583 | 5.87E-08 | 0.00180754 |
| 1 | 21680329 | 21680329 | 1 | 1_21680329 | ENSG00000090686 | USP48 | 0 | INTRON | 5.42224314 | 5.89E-08 | 0.00180771 |
| 17 | 44615721 | 44615721 | 1 | 17_44615721 | ENSG00000271222 | AC091152.3 | 18377 | Downstream | 5.42033426 | 5.95E-08 | 0.00182237 |
| 2 | 100733759 | 100733759 | 1 | 2_100733759 | ENSG00000286737 | AC092168.3 | 6198 | Upstream | -5.4192718 | 5.98E-08 | 0.00182237 |
| 21 | 34629200 | 34629200 | 1 | 21_34629200 | ENSG00000159200 | RCAN1 | 14087 | Upstream | 5.41923837 | 5.99E-08 | 0.00182237 |
| 2 | 51953808 | 51953808 | 1 | 2_51953808 | ENSG00000231918 | AC007402.1 | 0 | INTRON | -5.419208 | 5.99E-08 | 0.00182237 |
| 7 | 139032509 | 139032509 | 1 | 7_139032509 | ENSG00000146858 | ZC3HAV1L | 0 | INTRON | -5.4187644 | 6.00E-08 | 0.00182237 |
| 7 | 99063976 | 99063976 | 1 | 7_99063976 | ENSG00000198742 | SMURF1 | 0 | INTRON | -5.4185661 | 6.01E-08 | 0.00182237 |
| 13 | 95803448 | 95803448 | 1 | 13_95803448 | ENSG00000102595 | UGGT2 | 0 | INTRON | 5.41855503 | 6.01E-08 | 0.00182237 |
| 17 | 83117014 | 83117014 | 1 | 17_83117014 | ENSG00000261888 | AC144831.1 | 10104 | Downstream | 5.41780262 | 6.03E-08 | 0.0018268 |
| 11 | 40425425 | 40425425 | 1 | 11_40425425 | ENSG00000148948 | LRRC4C | 0 | INTRON | 5.41628714 | 6.08E-08 | 0.00183907 |
| 1 | 62635429 | 62635429 | 1 | 1_62635429 | ENSG00000116641 | DOCK7 | 0 | EXON | -5.4152327 | 6.12E-08 | 0.00184666 |
| 10 | 87229703 | 87229703 | 1 | 10_87229703 | ENSG00000184923 | NUTM2A | 0 | INTRON | -5.4138328 | 6.17E-08 | 0.00185504 |
| 3 | 157594604 | 157594604 | 1 | 3_157594604 | ENSG00000174899 | SLC66A1L | 0 | INTRON | 5.41370144 | 6.17E-08 | 0.00185504 |
| 10 | 12375386 | 12375386 | 1 | 10_12375386 | ENSG00000183049 | CAMK1D | 0 | INTRON | 5.41347358 | 6.18E-08 | 0.00185504 |
| 13 | 67909217 | 67909217 | 1 | 13_67909217 | ENSG00000226537 | OR7E33P | 1768 | Upstream | -5.4122068 | 6.23E-08 | 0.00186492 |
| 14 | 82946905 | 82946905 | 1 | 14_82946905 | ENSG00000258600 | AL359238.1 | 70200 | Downstream | 5.41006474 | 6.30E-08 | 0.00188405 |
| 3 | 39550853 | 39550853 | 1 | 3_39550853 | ENSG00000168314 | MOBP | 21374 | Downstream | 5.40872417 | 6.35E-08 | 0.00189487 |
| 5 | 32517217 | 32517217 | 1 | 5_32517217 | ENSG00000249142 | AC074134.1 | 5540 | Upstream | -5.4081504 | 6.37E-08 | 0.00189763 |
| 2 | 102374574 | 102374574 | 1 | 2_102374574 | ENSG00000115604 | IL18R1 | 0 | INTRON | 5.40745955 | 6.39E-08 | 0.00190163 |
| 1 | 233507385 | 233507385 | 1 | 1_233507385 | ENSG00000287423 | AL360006.1 | 20158 | Downstream | -5.4071086 | 6.41E-08 | 0.00190203 |
| 1 | 228373057 | 228373057 | 1 | 1_228373057 | ENSG00000154358 | OBSCN | 0 | EXON | 5.40664298 | 6.42E-08 | 0.00190366 |
| 15 | 74837840 | 74837840 | 1 | 15_74837840 | ENSG00000140474 | ULK3 | 0 | EXON | 5.40596851 | 6.45E-08 | 0.00190751 |
| 14 | 63848763 | 63848763 | 1 | 14_63848763 | ENSG00000202182 | Y_RNA | 401 | Upstream | 5.40540117 | 6.47E-08 | 0.00191024 |
| 6 | 45446059 | 45446059 | 1 | 6_45446059 | ENSG00000124813 | RUNX2 | 0 | INTRON | 5.40439282 | 6.50E-08 | 0.00191768 |
| 9 | 98358496 | 98358496 | 1 | 9_98358496 | ENSG00000136928 | GABBR2 | 0 | INTRON | 5.40343734 | 6.54E-08 | 0.00192301 |
| 4 | 119296494 | 119296494 | 1 | 4_119296494 | ENSG00000164096 | C4orf3 | 0 | 3UTR | -5.4032757 | 6.54E-08 | 0.00192301 |
| 11 | 70390388 | 70390388 | 1 | 11_70390388 | ENSG00000246889 | AP000487.1 | 0 | INTRON | 5.40283355 | 6.56E-08 | 0.00192443 |
| 1 | 65549641 | 65549641 | 1 | 1_65549641 | ENSG00000116678 | LEPR | 0 | INTRON | -5.4022933 | 6.58E-08 | 0.00192651 |
| 9 | 95144854 | 95144854 | 1 | 9_95144854 | ENSG00000158169 | FANCC | 0 | INTRON | -5.4020222 | 6.59E-08 | 0.00192651 |
| 3 | 14524354 | 14524354 | 1 | 3_14524354 | ENSG00000144596 | GRIP2 | 0 | EXON | 5.4014885 | 6.61E-08 | 0.00192894 |
| 6 | 44867387 | 44867387 | 1 | 6_44867387 | ENSG00000196284 | SUPT3H | 0 | INTRON | -5.4007196 | 6.64E-08 | 0.0019336 |
| X | 57481703 | 57481703 | 1 | X_57481703 | ENSG00000165591 | FAAH2 | 0 | INTRON | 5.40013061 | 6.66E-08 | 0.0019336 |
| 6 | 161604878 | 161604878 | 1 | 6_161604878 | ENSG00000185345 | PRKN | 0 | INTRON | -5.4000369 | 6.66E-08 | 0.0019336 |
| 10 | 33975115 | 33975115 | 1 | 10_33975115 | ENSG00000223470 | LINC02629 | 57311 | Downstream | -5.3998295 | 6.67E-08 | 0.0019336 |
| 17 | 31054608 | 31054608 | 1 | 17_31054608 | ENSG00000265798 | AC138207.6 | 0 | INTRON | 5.39925333 | 6.69E-08 | 0.00193573 |
| 2 | 4955016 | 4955016 | 1 | 2_4955016 | ENSG00000207192 | RNU6-649P | 9633 | Downstream | -5.3990217 | 6.70E-08 | 0.00193573 |
| 19 | 36656198 | 36656198 | 1 | 19_36656198 | ENSG00000197808 | ZNF461 | 0 | INTRON | 5.39837248 | 6.72E-08 | 0.00193683 |
| 10 | 119473585 | 119473585 | 1 | 10_119473585 | ENSG00000198873 | GRK5 | 13840 | Downstream | 5.3981744 | 6.73E-08 | 0.00193683 |
| 15 | 57239243 | 57239243 | 1 | 15_57239243 | ENSG00000140262 | TCF12 | 0 | INTRON | 5.39787786 | 6.74E-08 | 0.00193683 |
| 9 | 128497340 | 128497340 | 1 | 9_128497340 | ENSG00000136811 | ODF2 | 0 | INTRON | -5.3977048 | 6.75E-08 | 0.00193683 |
| 9 | 9584885 | 9584885 | 1 | 9_9584885 | ENSG00000153707 | PTPRD | 0 | INTRON | -5.3969801 | 6.78E-08 | 0.00193913 |
| 10 | 28625659 | 28625659 | 1 | 10_28625659 | ENSG00000095787 | WAC | 2547 | Downstream | -5.3967191 | 6.79E-08 | 0.00193913 |
| 10 | 130857886 | 130857886 | 1 | 10_130857886 | ENSG00000264803 | MIR378C | 104701 | Downstream | 5.39643496 | 6.80E-08 | 0.00193913 |
| 6 | 45361975 | 45361975 | 1 | 6_45361975 | ENSG00000124813 | RUNX2 | 0 | INTRON | -5.3962857 | 6.80E-08 | 0.00193913 |
| 5 | 413061 | 413061 | 1 | 5_413061 | ENSG00000286169 | AHRR | 0 | INTRON | 5.39566997 | 6.83E-08 | 0.00194253 |
| 18 | 4917016 | 4917016 | 1 | 18_4917016 | ENSG00000266268 | AP005203.1 | 0 | INTRON | 5.39475609 | 6.86E-08 | 0.00194686 |
| 7 | 33064939 | 33064939 | 1 | 7_33064939 | ENSG00000122643 | NT5C3A | 2142 | Upstream | 5.39467144 | 6.86E-08 | 0.00194686 |
| 1 | 158043806 | 158043806 | 1 | 1_158043806 | ENSG00000183853 | KIRREL1 | 0 | INTRON | 5.39316312 | 6.92E-08 | 0.0019576 |
| 19 | 15388894 | 15388894 | 1 | 19_15388894 | ENSG00000011243 | AKAP8L | 0 | INTRON | 5.39308516 | 6.93E-08 | 0.0019576 |
| 16 | 6238598 | 6238598 | 1 | 16_6238598 | ENSG00000078328 | RBFOX1 | 0 | INTRON | -5.3923894 | 6.95E-08 | 0.00196194 |
| 19 | 49039576 | 49039576 | 1 | 19_49039576 | ENSG00000267685 | NTF6B | 538 | Upstream | -5.3919746 | 6.97E-08 | 0.00196322 |
| 1 | 143226117 | 143226117 | 1 | 1_143226117 | ENSG00000276118 | AC242852.1 | 117062 | Upstream | -5.3905885 | 7.02E-08 | 0.00197156 |
| 2 | 44439701 | 44439701 | 1 | 2_44439701 | ENSG00000143919 | CAMKMT | 0 | INTRON | 5.39037256 | 7.03E-08 | 0.00197156 |
| 12 | 69825921 | 69825921 | 1 | 12_69825921 | ENSG00000166268 | MYRFL | 0 | INTRON | -5.3901192 | 7.04E-08 | 0.00197156 |
| 6 | 43299637 | 43299637 | 1 | 6_43299637 | ENSG00000137204 | SLC22A7 | 0 | EXON | -5.3897715 | 7.05E-08 | 0.00197156 |
| 17 | 38686051 | 38686051 | 1 | 17_38686051 | ENSG00000273604 | EPOP | 11094 | Upstream | 5.38968939 | 7.06E-08 | 0.00197156 |
| 7 | 4441632 | 4441632 | 1 | 7_4441632 | ENSG00000261809 | CYP3A54P | 70326 | Downstream | 5.38943657 | 7.07E-08 | 0.00197156 |
| 22 | 27238308 | 27238308 | 1 | 22_27238308 | ENSG00000233521 | LINC01638 | 13174 | Upstream | 5.38838995 | 7.11E-08 | 0.00197983 |
| 4 | 158908118 | 158908118 | 1 | 4_158908118 | ENSG00000164123 | C4orf45 | 0 | INTRON | -5.3871541 | 7.16E-08 | 0.00199023 |
| 16 | 34907708 | 34907708 | 1 | 16_34907708 | ENSG00000279165 | AC135776.4 | 34268 | Upstream | -5.3858779 | 7.21E-08 | 0.00200114 |
| 22 | 38944910 | 38944910 | 1 | 22_38944910 | ENSG00000128383 | APOBEC3A | 7830 | Upstream | 5.38511088 | 7.24E-08 | 0.00200642 |
| 15 | 28565306 | 28565306 | 1 | 15_28565306 | ENSG00000260444 | AC138749.2 | 154 | Upstream | -5.38467 | 7.26E-08 | 0.00200807 |
| 10 | 113564877 | 113564877 | 1 | 10_113564877 | ENSG00000148702 | HABP2 | 0 | INTRON | 5.3836312 | 7.30E-08 | 0.00201054 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 | 44531128 | 44531128 | 1 | 7_44531128 | ENSG00000015520 | NPC1L1 | 0 | INTRON | 5.38348491 | 7.31E-08 | 0.00201054 |
| 1 | 25046166 | 25046166 | 1 | 1_25046166 | ENSG00000285823 | LINC02793 | 0 | INTRON | -5.3834823 | 7.31E-08 | 0.00201054 |
| 1 | 114901235 | 114901235 | 1 | 1_114901235 | ENSG00000198765 | SYCP1 | 0 | INTRON | -5.3832828 | 7.31E-08 | 0.00201054 |
| 13 | 67468517 | 67468517 | 1 | 13_67468517 | ENSG00000230040 | LINC00364 | 88523 | Downstream | -5.3827467 | 7.34E-08 | 0.00201324 |
| 8 | 47165407 | 47165407 | 1 | 8_47165407 | ENSG00000248531 | NDUFA5P12 | 0 | INTRON | 5.38199194 | 7.37E-08 | 0.00201324 |
| 14 | 62711398 | 62711398 | 1 | 14_62711398 | ENSG00000140015 | KCNH5 | 0 | INTRON | 5.381751 | 7.38E-08 | 0.00201324 |
| 12 | 131730508 | 131730508 | 1 | 12_131730508 | ENSG00000061936 | SFSWAP | 0 | INTRON | 5.38080695 | 7.42E-08 | 0.00201324 |
| 13 | 62832273 | 62832273 | 1 | 13_62832273 | ENSG00000228669 | LINC00448 | 35559 | Upstream | -5.3807619 | 7.42E-08 | 0.00201324 |
| 7 | 120959846 | 120959846 | 1 | 7_120959846 | ENSG00000071243 | ING3 | 0 | INTRON | 5.38038776 | 7.43E-08 | 0.00201324 |
| 6 | 168093890 | 168093890 | 1 | 6_168093890 | ENSG00000153303 | FRMD1 | 0 | INTRON | 5.37996511 | 7.45E-08 | 0.00201324 |
| 1 | 239960276 | 239960276 | 1 | 1_239960276 | ENSG00000215805 | AL356361.1 | 12510 | Upstream | 5.37984074 | 7.46E-08 | 0.00201324 |
| 21 | 13935265 | 13935265 | 1 | 21_13935265 | ENSG00000215559 | ANKRD20A11P | 0 | INTRON | 5.37979341 | 7.46E-08 | 0.00201324 |
| 12 | 43137129 | 43137129 | 1 | 12_43137129 | ENSG00000258331 | LINC02461 | 18185 | Upstream | -5.3797899 | 7.46E-08 | 0.00201324 |
| 11 | 35300741 | 35300741 | 1 | 11_35300741 | ENSG00000110436 | SLC1A2 | 0 | INTRON | -5.3796082 | 7.46E-08 | 0.00201324 |
| 7 | 154401835 | 154401835 | 1 | 7_154401835 | ENSG00000130226 | DPP6 | 0 | INTRON | 5.37913572 | 7.48E-08 | 0.00201324 |
| 13 | 98542134 | 98542134 | 1 | 13_98542134 | ENSG00000102572 | STK24 | 0 | INTRON | -5.3790729 | 7.49E-08 | 0.00201324 |
| 12 | 1236866 | 1236866 | 1 | 12_1236866 | ENSG00000082805 | ERC1 | 0 | EXON | 5.37901516 | 7.49E-08 | 0.00201324 |
| 13 | 113967121 | 113967121 | 1 | 13_113967121 | ENSG00000283199 | C13orf46 | 0 | INTRON | 5.37822151 | 7.52E-08 | 0.00201895 |
| 7 | 142966057 | 142966057 | 1 | 7_142966057 | ENSG00000197993 | KEL | 3694 | Upstream | -5.3772104 | 7.56E-08 | 0.00202243 |
| 16 | 16649903 | 16649903 | 1 | 16_16649903 | ENSG00000260126 | AC136431.1 | 0 | INTRON | -5.3770189 | 7.57E-08 | 0.00202243 |
| 11 | 8702678 | 8702678 | 1 | 11_8702678 | ENSG00000166444 | ST5 | 0 | EXON | 5.37695552 | 7.58E-08 | 0.00202243 |
| 18 | 37662141 | 37662141 | 1 | 18_37662141 | ENSG00000285940 | AC009899.1 | 0 | INTRON | 5.37657477 | 7.59E-08 | 0.00202243 |
| 9 | 128851244 | 128851244 | 1 | 9_128851244 | ENSG00000171097 | KYAT1 | 0 | INTRON | -5.3764959 | 7.59E-08 | 0.00202243 |
| 5 | 21492868 | 21492868 | 1 | 5_21492868 | ENSG00000183666 | GUSBP1 | 0 | INTRON | -5.3757114 | 7.63E-08 | 0.00202694 |
| 20 | 8767690 | 8767690 | 1 | 20_8767690 | ENSG00000182621 | PLCB1 | 0 | INTRON | -5.3754895 | 7.64E-08 | 0.00202694 |
| Y | 19063145 | 19063145 | 1 | Y_19063145 | ENSG00000176728 | TTTY14 | 0 | INTRON | 5.3748372 | 7.67E-08 | 0.00202694 |
| 3 | 68343968 | 68343968 | 1 | 3_68343968 | ENSG00000183662 | TAFA1 | 0 | INTRON | 5.37478288 | 7.67E-08 | 0.00202694 |
| 8 | 92337667 | 92337667 | 1 | 8_92337667 | ENSG00000253118 | AC022695.1 | 14244 | Downstream | 5.37453129 | 7.68E-08 | 0.00202694 |
| 22 | 39417787 | 39417787 | 1 | 22_39417787 | ENSG00000100324 | TAB1 | 0 | EXON | 5.37436379 | 7.69E-08 | 0.00202694 |
| 6 | 11808828 | 11808828 | 1 | 6_11808828 | ENSG00000234427 | AL022724.2 | 1773 | Upstream | -5.3741323 | 7.70E-08 | 0.00202694 |
| 19 | 50399682 | 50399682 | 1 | 19_50399682 | ENSG00000062822 | POLD1 | 0 | INTRON | 5.37368444 | 7.71E-08 | 0.00202884 |
| 7 | 92027248 | 92027248 | 1 | 7_92027248 | ENSG00000127914 | AKAP9 | 0 | INTRON | -5.3725441 | 7.76E-08 | 0.00203119 |
| 9 | 73498653 | 73498653 | 1 | 9_73498653 | ENSG00000286840 | AL451127.2 | 11010 | Downstream | 5.37184814 | 7.79E-08 | 0.00203119 |
| 17 | 9068544 | 9068544 | 1 | 17_9068544 | ENSG00000065320 | NTN1 | 0 | INTRON | 5.3712583 | 7.82E-08 | 0.00203119 |
| 5 | 126967994 | 126967994 | 1 | 5_126967994 | ENSG00000173926 | 3-Mar | 0 | INTRON | 5.371008 | 7.83E-08 | 0.00203119 |
| 2 | 78618880 | 78618880 | 1 | 2_78618880 | ENSG00000234877 | AC092660.1 | 19474 | Downstream | -5.3710017 | 7.83E-08 | 0.00203119 |
| 20 | 4309092 | 4309092 | 1 | 20_4309092 | ENSG00000171873 | ADRA1D | 59805 | Upstream | -5.3709824 | 7.83E-08 | 0.00203119 |
| 4 | 176917745 | 176917745 | 1 | 4_176917745 | ENSG00000287544 | AC097518.2 | 0 | INTRON | -5.370936 | 7.83E-08 | 0.00203119 |
| 16 | 56080765 | 56080765 | 1 | 16_56080765 | ENSG00000246379 | AC040168.1 | 0 | INTRON | 5.37086742 | 7.84E-08 | 0.00203119 |
| 22 | 43238457 | 43238457 | 1 | 22_43238457 | ENSG00000159307 | SCUBE1 | 0 | 3UTR | 5.37077562 | 7.84E-08 | 0.00203119 |
| 4 | 169235272 | 169235272 | 1 | 4_169235272 | ENSG00000154447 | SH3RF1 | 0 | INTRON | -5.3704698 | 7.85E-08 | 0.00203119 |
| 2 | 228374059 | 228374059 | 1 | 2_228374059 | ENSG00000286772 | AC009410.1 | 4440 | Upstream | 5.37043611 | 7.85E-08 | 0.00203119 |
| 19 | 990511 | 990511 | 1 | 19_990511 | ENSG00000065268 | WDR18 | 0 | INTRON | -5.3693141 | 7.90E-08 | 0.0020391 |
| 1 | 17576435 | 17576435 | 1 | 1_17576435 | ENSG00000074964 | ARHGEF10L | 0 | INTRON | 5.36918809 | 7.91E-08 | 0.0020391 |
| 13 | 99789070 | 99789070 | 1 | 13_99789070 | ENSG00000125246 | CLYBL | 0 | INTRON | 5.36847029 | 7.94E-08 | 0.00204413 |
| 10 | 130195674 | 130195674 | 1 | 10_130195674 | ENSG00000108010 | GLRX3 | 11153 | Downstream | 5.3677152 | 7.97E-08 | 0.00204961 |
| 17 | 12871230 | 12871230 | 1 | 17_12871230 | ENSG00000006740 | ARHGAP44 | 0 | INTRON | 5.36490886 | 8.10E-08 | 0.00207859 |
| 6 | 43031769 | 43031769 | 1 | 6_43031769 | ENSG00000124541 | RRP36 | 0 | INTRON | -5.3626076 | 8.20E-08 | 0.0020961 |
| X | 22413991 | 22413991 | 1 | X_22413991 | ENSG00000233067 | PTCHD1-AS | 0 | INTRON | -5.3623868 | 8.21E-08 | 0.0020961 |
| 4 | 174281646 | 174281646 | 1 | 4_174281646 | ENSG00000164117 | FBXO8 | 0 | INTRON | -5.3621756 | 8.22E-08 | 0.0020961 |
| 13 | 104861437 | 104861437 | 1 | 13_104861437 | ENSG00000225823 | RPL7P45 | 46368 | Downstream | 5.36203253 | 8.23E-08 | 0.0020961 |
| 21 | 16614654 | 16614654 | 1 | 21_16614654 | ENSG00000215386 | MIR99AHG | 0 | INTRON | 5.361946 | 8.23E-08 | 0.0020961 |
| 12 | 60433797 | 60433797 | 1 | 12_60433797 | ENSG00000257865 | AC090022.2 | 14504 | Downstream | 5.36170426 | 8.24E-08 | 0.0020961 |
| 2 | 184511343 | 184511343 | 1 | 2_184511343 | ENSG00000283839 | AC096667.1 | 82233 | Downstream | -5.3614983 | 8.25E-08 | 0.0020961 |
| 2 | 190897172 | 190897172 | 1 | 2_190897172 | ENSG00000115419 | GLS | 0 | INTRON | -5.360004 | 8.32E-08 | 0.00210835 |
| 1 | 3342135 | 3342135 | 1 | 1_3342135 | ENSG00000142611 | PRDM16 | 0 | INTRON | 5.35989919 | 8.33E-08 | 0.00210835 |
| 9 | 26987389 | 26987389 | 1 | 9_26987389 | ENSG00000096872 | IFT74 | 0 | INTRON | -5.3596382 | 8.34E-08 | 0.00210835 |
| 9 | 15633932 | 15633932 | 1 | 9_15633932 | ENSG00000164989 | CCDC171 | 0 | INTRON | 5.35919395 | 8.36E-08 | 0.00210942 |
| 13 | 94184173 | 94184173 | 1 | 13_94184173 | ENSG00000236520 | GPC6-AS1 | 0 | INTRON | 5.35901048 | 8.37E-08 | 0.00210942 |
| 17 | 38899738 | 38899738 | 1 | 17_38899738 | ENSG00000002834 | LASP1 | 0 | INTRON | 5.3578187 | 8.42E-08 | 0.00211799 |
| 6 | 33145827 | 33145827 | 1 | 6_33145827 | ENSG00000230313 | HCG24 | 0 | INTRON | 5.35774316 | 8.43E-08 | 0.00211799 |
| 3 | 28272976 | 28272976 | 1 | 3_28272976 | ENSG00000187118 | CMC1 | 0 | INTRON | 5.35715909 | 8.45E-08 | 0.00212171 |
| 4 | 3514409 | 3514409 | 1 | 4_3514409 | ENSG00000163956 | LRPAP1 | 0 | INTRON | -5.3568772 | 8.47E-08 | 0.00212182 |
| 14 | 91333968 | 91333968 | 1 | 14_91333968 | ENSG00000015133 | CCDC88C | 0 | INTRON | 5.35661734 | 8.48E-08 | 0.00212182 |
| 8 | 6221008 | 6221008 | 1 | 8_6221008 | ENSG00000253880 | AC009435.1 | 0 | INTRON | 5.3559363 | 8.51E-08 | 0.0021267 |
| 2 | 120306529 | 120306529 | 1 | 2_120306529 | ENSG00000144118 | RALB | 11819 | Downstream | 5.35436165 | 8.59E-08 | 0.00214216 |
| 8 | 137511830 | 137511830 | 1 | 8_137511830 | ENSG00000285817 | AC105213.1 | 12924 | Downstream | 5.35315329 | 8.64E-08 | 0.00215336 |
| 6 | 92984878 | 92984878 | 1 | 6_92984878 | ENSG00000235099 | AL138731.1 | 85508 | Upstream | 5.34923248 | 8.83E-08 | 0.00219732 |
| 1 | 43862087 | 43862087 | 1 | 1_43862087 | ENSG00000126091 | ST3GAL3 | 0 | INTRON | 5.34670546 | 8.96E-08 | 0.00222495 |
| 4 | 39776446 | 39776446 | 1 | 4_39776446 | ENSG00000078140 | UBE2K | 0 | INTRON | -5.3461268 | 8.99E-08 | 0.00222882 |
| 2 | 125248778 | 125248778 | 1 | 2_125248778 | ENSG00000206726 | RNU6-259P | 259453 | Downstream | -5.345661 | 9.01E-08 | 0.00223131 |
| 19 | 52860822 | 52860822 | 1 | 19_52860822 | ENSG00000268225 | AC010487.1 | 984 | Downstream | -5.3449602 | 9.04E-08 | 0.0022367 |
| 5 | 56199122 | 56199122 | 1 | 5_56199122 | ENSG00000164512 | ANKRD55 | 0 | INTRON | -5.3438905 | 9.10E-08 | 0.00224366 |
| 10 | 46322850 | 46322850 | 1 | 10_46322850 | ENSG00000274209 | ANTXRL | 0 | INTRON | -5.3438714 | 9.10E-08 | 0.00224366 |
| 11 | 56355500 | 56355500 | 1 | 11_56355500 | ENSG00000172487 | OR8J1 | 0 | INTRON | -5.3422178 | 9.18E-08 | 0.00226072 |
| 5 | 130268604 | 130268604 | 1 | 5_130268604 | ENSG00000198108 | CHSY3 | 81970 | Downstream | 5.34180338 | 9.20E-08 | 0.00226072 |
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| 10 | 87229901 | 87229901 | 1 | 10_87229901 | ENSG00000223482 | NUTM2A-AS1 | 0 | INTRON | -5.3412001 | 9.23E-08 | 0.00226386 |
| 9 | 136878072 | 136878072 | 1 | 9_136878072 | ENSG00000127191 | TRAF2 | 3839 | Upstream | 5.33932234 | 9.33E-08 | 0.00227852 |
| 3 | 32849421 | 32849421 | 1 | 3_32849421 | ENSG00000206557 | TRIM71 | 0 | INTRON | 5.33903095 | 9.34E-08 | 0.00227852 |
| 4 | 150432168 | 150432168 | 1 | 4_150432168 | ENSG00000198589 | LRBA | 0 | INTRON | -5.3389313 | 9.35E-08 | 0.00227852 |
| Y | 56764935 | 56764935 | 1 | Y_56764935 | ENSG00000235857 | CTBP2P1 | 90308 | Upstream | -5.3388074 | 9.36E-08 | 0.00227852 |
| 8 | 134200853 | 134200853 | 1 | 8_134200853 | ENSG00000288067 | AC105180.2 | 0 | INTRON | -5.3387287 | 9.36E-08 | 0.00227852 |
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| 22 | 20064572 | 20064572 | 1 | 22_20064572 | ENSG00000183597 | TANGO2 | 0 | 3UTR | 5.33579538 | 9.51E-08 | 0.00230906 |
| 10 | 31488940 | 31488940 | 1 | 10_31488940 | ENSG00000148516 | ZEB1 | 0 | INTRON | 5.33499614 | 9.55E-08 | 0.00231136 |
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| 8 | 110821 | 110821 | 1 | 8_110821 | ENSG00000253896 | AC144568.2 | 31046 | Downstream | -5.3327801 | 9.67E-08 | 0.00232314 |
| 14 | 32268513 | 32268513 | 1 | 14_32268513 | ENSG00000259086 | AL136298.3 | 3343 | Downstream | 5.33245097 | 9.69E-08 | 0.00232314 |
| 13 | 53030459 | 53030459 | 1 | 13_53030459 | ENSG00000102837 | OLFM4 | 0 | INTRON | 5.33228384 | 9.70E-08 | 0.00232314 |
| 5 | 20274020 | 20274020 | 1 | 5_20274020 | ENSG00000145526 | CDH18 | 0 | INTRON | -5.3320561 | 9.71E-08 | 0.00232314 |
| 2 | 121907664 | 121907664 | 1 | 2_121907664 | ENSG00000286481 | AC011246.1 | 0 | INTRON | 5.33187245 | 9.72E-08 | 0.00232314 |
| 10 | 112991486 | 112991486 | 1 | 10_112991486 | ENSG00000148737 | TCF7L2 | 0 | INTRON | -5.3318664 | 9.72E-08 | 0.00232314 |
| 20 | 63055272 | 63055272 | 1 | 20_63055272 | ENSG00000272259 | LINC01749 | 0 | INTRON | 5.33149085 | 9.74E-08 | 0.00232468 |
| 9 | 22393436 | 22393436 | 1 | 9_22393436 | ENSG00000176399 | DMRTA1 | 53387 | Upstream | 5.33038291 | 9.80E-08 | 0.00233563 |
| 3 | 75745108 | 75745108 | 1 | 3_75745108 | ENSG00000227124 | ZNF717 | 0 | INTRON | 5.32986779 | 9.83E-08 | 0.00233899 |
| 2 | 88322000 | 88322000 | 1 | 2_88322000 | ENSG00000232508 | MRPL45P1 | 42694 | Downstream | 5.32937951 | 9.85E-08 | 0.00233963 |
| 7 | 6667793 | 6667793 | 1 | 7_6667793 | ENSG00000228010 | AC073343.2 | 0 | INTRON | -5.3292671 | 9.86E-08 | 0.00233963 |
| 2 | 26109205 | 26109205 | 1 | 2_26109205 | ENSG00000084733 | RAB10 | 0 | INTRON | 5.32902808 | 9.87E-08 | 0.00233963 |
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| 4 | 129129692 | 129129692 | 1 | 4_129129692 | ENSG00000251345 | AC093826.1 | 3413 | Upstream | 5.32804855 | 9.93E-08 | 0.00233963 |
| 8 | 100388891 | 100388891 | 1 | 8_100388891 | ENSG00000253824 | AP003472.1 | 0 | INTRON | 5.32723084 | 9.97E-08 | 0.00234693 |
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| 16 | 52301637 | 52301637 | 1 | 16_52301637 | ENSG00000260887 | CASC22 | 20999 | Downstream | 5.32648212 | 1.00E-07 | 0.00235012 |
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| 20 | 62311067 | 62311067 | 1 | 20_62311067 | ENSG00000130702 | LAMA5 | 0 | EXON | 5.31974715 | 1.04E-07 | 0.0023986 |
| 21 | 9579970 | 9579970 | 1 | 21_9579970 | ENSG00000279211 | AC124864.1 | 53 | Downstream | 5.3195379 | 1.04E-07 | 0.0023986 |
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| 5 | 167802063 | 167802063 | 1 | 5_167802063 | ENSG00000145934 | TENM2 | 0 | INTRON | -5.3174966 | 1.05E-07 | 0.00241258 |
| 17 | 2427094 | 2427094 | 1 | 17_2427094 | ENSG00000127804 | METTL16 | 0 | INTRON | -5.3164193 | 1.06E-07 | 0.00242363 |
| 17 | 18984138 | 18984138 | 1 | 17_18984138 | ENSG00000154025 | SLC5A10 | 0 | INTRON | -5.315191 | 1.07E-07 | 0.00243418 |
| 13 | 112752481 | 112752481 | 1 | 13_112752481 | ENSG00000232684 | ATP11A-AS1 | 0 | INTRON | 5.31481542 | 1.07E-07 | 0.00243418 |
| 3 | 95363605 | 95363605 | 1 | 3_95363605 | ENSG00000244048 | RPS18P6 | 191228 | Downstream | 5.31467225 | 1.07E-07 | 0.00243418 |
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| 1 | 74174445 | 74174445 | 1 | 1_74174445 | ENSG00000162620 | LRRIQ3 | 0 | INTRON | -5.3138609 | 1.07E-07 | 0.00243418 |
| 19 | 28183175 | 28183175 | 1 | 19_28183175 | ENSG00000267509 | AC010511.1 | 57745 | Downstream | 5.31371452 | 1.07E-07 | 0.00243418 |
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| 17 | 12536987 | 12536987 | 1 | 17_12536987 | ENSG00000179136 | LINC00670 | 12776 | Upstream | 5.29509538 | 1.19E-07 | 0.00257203 |
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| 8 | 127819637 | 127819637 | 1 | 8_127819637 | ENSG00000249859 | PVT1 | 0 | INTRON | 5.29485479 | 1.19E-07 | 0.00257203 |
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| 9 | 63350575 | 63350575 | 1 | 9_63350575 | ENSG00000237238 | BMS1P10 | 0 | INTRON | -5.2940328 | 1.20E-07 | 0.00257709 |
| 7 | 64509783 | 64509783 | 1 | 7_64509783 | ENSG00000228653 | HNRNPCP7 | 8054 | Downstream | 5.29361186 | 1.20E-07 | 0.00257976 |
| 2 | 148250591 | 148250591 | 1 | 2_148250591 | ENSG00000204406 | MBD5 | 0 | INTRON | 5.29293922 | 1.20E-07 | 0.002586 |

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| 15 | 92330175 | 92330175 | 1 | 15_92330175 | ENSG00000260661 | AC116903.2 | 0 | INTRON | 5.29087163 | 1.22E-07 | 0.00259684 |
| X | 58195829 | 58195829 | 1 | X_58195829 | ENSG00000235124 | KRT8P17 | 209696 | Downstream | 5.29070713 | 1.22E-07 | 0.00259684 |
| 14 | 19219251 | 19219251 | 1 | 14_19219251 | ENSG00000277252 | AL589743.6 | 1544 | Downstream | -5.2906502 | 1.22E-07 | 0.00259684 |
| 20 | 61532919 | 61532919 | 1 | 20_61532919 | ENSG00000179242 | CDH4 | 0 | INTRON | 5.29056547 | 1.22E-07 | 0.00259684 |
| 13 | 28321575 | 28321575 | 1 | 13_28321575 | ENSG00000102755 | FLT1 | 0 | 5UTR | -5.289883 | 1.22E-07 | 0.00260329 |
| 7 | 85682398 | 85682398 | 1 | 7_85682398 | ENSG00000227785 | AC092013.1 | 46054 | Upstream | -5.2889382 | 1.23E-07 | 0.00261351 |
| 7 | 76388296 | 76388296 | 1 | 7_76388296 | ENSG00000146700 | SSC4D | 1037 | Downstream | 5.28846551 | 1.23E-07 | 0.002617 |
| 9 | 121175157 | 121175157 | 1 | 9_121175157 | ENSG00000119397 | CNTRL | 0 | EXON | 5.28801069 | 1.24E-07 | 0.00262025 |
| 20 | 11781521 | 11781521 | 1 | 20_11781521 | ENSG00000228422 | LINC00687 | 18941 | Downstream | -5.2872251 | 1.24E-07 | 0.00262825 |
| 14 | 93986347 | 93986347 | 1 | 14_93986347 | ENSG00000175699 | CCDC197 | 877 | Upstream | 5.28692958 | 1.24E-07 | 0.00262865 |
| 17 | 29836583 | 29836583 | 1 | 17_29836583 | ENSG00000141298 | SSH2 | 0 | INTRON | 5.28674246 | 1.25E-07 | 0.00262865 |
| 12 | 2340773 | 2340773 | 1 | 12_2340773 | ENSG00000151067 | CACNA1C | 0 | INTRON | 5.28572905 | 1.25E-07 | 0.00263401 |
| X | 129454022 | 129454022 | 1 | X_129454022 | ENSG00000102038 | SMARCA1 | 0 | INTRON | 5.28571758 | 1.25E-07 | 0.00263401 |
| 20 | 59250313 | 59250313 | 1 | 20_59250313 | ENSG00000124203 | ZNF831 | 0 | INTRON | -5.2855947 | 1.25E-07 | 0.00263401 |
| 5 | 150708112 | 150708112 | 1 | 5_150708112 | ENSG00000132912 | DCTN4 | 327 | Downstream | 5.28532962 | 1.25E-07 | 0.00263401 |
| 2 | 164486321 | 164486321 | 1 | 2_164486321 | ENSG00000115290 | GRB14 | 6095 | Downstream | -5.2852376 | 1.26E-07 | 0.00263401 |
| 16 | 58064174 | 58064174 | 1 | 16_58064174 | ENSG00000102996 | MMP15 | 17273 | Downstream | 5.28400029 | 1.26E-07 | 0.00264358 |
| 6 | 6221429 | 6221429 | 1 | 6_6221429 | ENSG00000124491 | F13A1 | 0 | INTRON | -5.2839937 | 1.26E-07 | 0.00264358 |
| 8 | 135400776 | 135400776 | 1 | 8_135400776 | ENSG00000254372 | AC040914.1 | 55088 | Downstream | -5.2838978 | 1.26E-07 | 0.00264358 |
| 18 | 14216660 | 14216660 | 1 | 18_14216660 | ENSG00000186481 | ANKRD20A5P | 0 | INTRON | 5.28361255 | 1.27E-07 | 0.00264368 |
| 2 | 3600932 | 3600932 | 1 | 2_3600932 | ENSG00000118004 | COLEC11 | 0 | INTRON | 5.28344132 | 1.27E-07 | 0.00264368 |
| 8 | 16785180 | 16785180 | 1 | 8_16785180 | ENSG00000253496 | AC011586.2 | 0 | INTRON | -5.2824708 | 1.27E-07 | 0.00265448 |
| 20 | 56136016 | 56136016 | 1 | 20_56136016 | ENSG00000222118 | RNA5SP487 | 69035 | Downstream | -5.2818718 | 1.28E-07 | 0.00265992 |
| 11 | 3686619 | 3686619 | 1 | 11_3686619 | ENSG00000110713 | NUP98 | 0 | INTRON | -5.2815778 | 1.28E-07 | 0.00266094 |
| 16 | 79350528 | 79350528 | 1 | 16_79350528 | ENSG00000222244 | RNA5SP431 | 85955 | Downstream | -5.2804363 | 1.29E-07 | 0.00267431 |
| 11 | 120612741 | 120612741 | 1 | 11_120612741 | ENSG00000149403 | GRIK4 | 0 | INTRON | -5.2788486 | 1.30E-07 | 0.00269429 |
| 9 | 126676027 | 126676027 | 1 | 9_126676027 | ENSG00000136944 | LMX1B | 0 | INTRON | 5.27851523 | 1.30E-07 | 0.00269591 |
| 10 | 6633111 | 6633111 | 1 | 10_6633111 | ENSG00000225948 | LINC02648 | 7765 | Downstream | -5.2775429 | 1.31E-07 | 0.00270696 |
| 14 | 33736146 | 33736146 | 1 | 14_33736146 | ENSG00000151322 | NPAS3 | 0 | INTRON | -5.2767167 | 1.32E-07 | 0.00271589 |
| 10 | 74746531 | 74746531 | 1 | 10_74746531 | ENSG00000213525 | FAM32CP | 1824 | Upstream | 5.27643704 | 1.32E-07 | 0.00271674 |
| 2 | 178590796 | 178590796 | 1 | 2_178590796 | ENSG00000155657 | TTN | 0 | EXON | -5.2758007 | 1.32E-07 | 0.00272253 |
| 9 | 6509005 | 6509005 | 1 | 9_6509005 | ENSG00000147854 | UHRF2 | 1951 | Downstream | 5.27556618 | 1.32E-07 | 0.00272253 |
| 4 | 118769360 | 118769360 | 1 | 4_118769360 | ENSG00000150961 | SEC24D | 0 | INTRON | 5.27535725 | 1.32E-07 | 0.00272253 |
| 5 | 136792304 | 136792304 | 1 | 5_136792304 | ENSG00000250284 | AC109439.2 | 28895 | Downstream | 5.27515955 | 1.33E-07 | 0.00272253 |
| 14 | 68712356 | 68712356 | 1 | 14_68712356 | ENSG00000182185 | RAD51B | 0 | INTRON | -5.2748911 | 1.33E-07 | 0.00272294 |
| 11 | 72132886 | 72132886 | 1 | 11_72132886 | ENSG00000110203 | FOLR3 | 0 | INTRON | 5.27458817 | 1.33E-07 | 0.00272294 |
| 4 | 149768803 | 149768803 | 1 | 4_149768803 | ENSG00000234828 | IQCM | 0 | INTRON | -5.2744694 | 1.33E-07 | 0.00272294 |
| 1 | 90061449 | 90061449 | 1 | 1_90061449 | ENSG00000287015 | AL161797.1 | 14340 | Downstream | 5.27357328 | 1.34E-07 | 0.0027322 |
| 7 | 100433537 | 100433537 | 1 | 7_100433537 | ENSG00000146834 | MEPCE | 0 | EXON | 5.2734061 | 1.34E-07 | 0.0027322 |
| 8 | 119459360 | 119459360 | 1 | 8_119459360 | ENSG00000253398 | AC021733.2 | 0 | INTRON | -5.2726327 | 1.34E-07 | 0.00274046 |
| 12 | 98033376 | 98033376 | 1 | 12_98033376 | ENSG00000263890 | MIR4303 | 37928 | Upstream | -5.2719965 | 1.35E-07 | 0.00274402 |
| 3 | 11946655 | 11946655 | 1 | 3_11946655 | ENSG00000263988 | RN7SL147P | 6132 | Downstream | 5.27182686 | 1.35E-07 | 0.00274402 |
| 2 | 208538077 | 208538077 | 1 | 2_208538077 | ENSG00000144407 | PTH2R | 0 | INTRON | -5.2717362 | 1.35E-07 | 0.00274402 |
| 6 | 102922676 | 102922676 | 1 | 6_102922676 | ENSG00000217120 | Z98755.1 | 79837 | Upstream | 5.27118344 | 1.36E-07 | 0.00274902 |
| 7 | 105972841 | 105972841 | 1 | 7_105972841 | ENSG00000128536 | CDHR3 | 0 | INTRON | -5.2702985 | 1.36E-07 | 0.00275902 |
| 1 | 36609735 | 36609735 | 1 | 1_36609735 | ENSG00000230214 | FTLP18 | 20599 | Upstream | -5.2695047 | 1.37E-07 | 0.00276355 |
| 16 | 81619161 | 81619161 | 1 | 16_81619161 | ENSG00000279294 | AC092135.1 | 0 | EXON | 5.26935013 | 1.37E-07 | 0.00276355 |
| X | 40520788 | 40520788 | 1 | X_40520788 | ENSG00000235685 | AC092473.1 | 5280 | Downstream | -5.2692869 | 1.37E-07 | 0.00276355 |
| 5 | 70118533 | 70118533 | 1 | 5_70118533 | ENSG00000179978 | AC140134.1 | 0 | INTRON | -5.2689417 | 1.37E-07 | 0.00276355 |
| 9 | 121653639 | 121653639 | 1 | 9_121653639 | ENSG00000136848 | DAB2IP | 0 | INTRON | 5.26873837 | 1.37E-07 | 0.00276355 |
| 2 | 10505229 | 10505229 | 1 | 2_10505229 | ENSG00000257135 | ODC1-DT | 47536 | Downstream | 5.26851792 | 1.38E-07 | 0.00276355 |
| 3 | 183969520 | 183969520 | 1 | 3_183969520 | ENSG00000114770 | ABCC5 | 0 | INTRON | 5.26844634 | 1.38E-07 | 0.00276355 |
| 2 | 154783038 | 154783038 | 1 | 2_154783038 | ENSG00000162989 | KCNJ3 | 0 | INTRON | -5.2682576 | 1.38E-07 | 0.00276355 |
| 3 | 37474923 | 37474923 | 1 | 3_37474923 | ENSG00000144668 | ITGA9 | 0 | INTRON | 5.2666736 | 1.39E-07 | 0.0027842 |
| 14 | 101361066 | 101361066 | 1 | 14_101361066 | ENSG00000258460 | AL355096.1 | 25569 | Upstream | 5.26640467 | 1.39E-07 | 0.002785 |
| 5 | 165888674 | 165888674 | 1 | 5_165888674 | ENSG00000253946 | AC008489.1 | 16451 | Upstream | -5.2654962 | 1.40E-07 | 0.00279552 |
| 16 | 1790780 | 1790780 | 1 | 16_1790780 | ENSG00000099769 | IGFALS | 0 | EXON | 5.26491343 | 1.40E-07 | 0.00280111 |
| 16 | 48472265 | 48472265 | 1 | 16_48472265 | ENSG00000260688 | AC026470.1 | 1132 | Upstream | 5.2645917 | 1.41E-07 | 0.00280273 |
| 3 | 29701682 | 29701682 | 1 | 3_29701682 | ENSG00000283563 | AC098650.1 | 0 | INTRON | 5.2642253 | 1.41E-07 | 0.00280422 |
| 8 | 122586095 | 122586095 | 1 | 8_122586095 | ENSG00000253819 | LINC01151 | 0 | INTRON | -5.2639538 | 1.41E-07 | 0.00280422 |
| 1 | 71134676 | 71134676 | 1 | 1_71134676 | ENSG00000229956 | ZRANB2-AS2 | 0 | INTRON | -5.2638493 | 1.41E-07 | 0.00280422 |
| 4 | 152443216 | 152443216 | 1 | 4_152443216 | ENSG00000109670 | FBXW7 | 0 | INTRON | 5.26338435 | 1.41E-07 | 0.00280547 |
| 4 | 174110476 | 174110476 | 1 | 4_174110476 | ENSG00000248174 | LINC02268 | 0 | INTRON | -5.2633383 | 1.41E-07 | 0.00280547 |
| 10 | 68143823 | 68143823 | 1 | 10_68143823 | ENSG00000138347 | MYPN | 0 | INTRON | 5.26270057 | 1.42E-07 | 0.00281195 |
| 1 | 121230140 | 121230140 | 1 | 1_121230140 | ENSG00000171943 | SRGAP2C | 0 | INTRON | 5.2624336 | 1.42E-07 | 0.00281276 |
| 2 | 63855604 | 63855604 | 1 | 2_63855604 | ENSG00000169764 | UGP2 | 0 | 5UTR | -5.2616017 | 1.43E-07 | 0.00281468 |
| 16 | 31327680 | 31327680 | 1 | 16_31327680 | ENSG00000169896 | ITGAM | 0 | INTRON | -5.2615542 | 1.43E-07 | 0.00281468 |
| 20 | 21455836 | 21455836 | 1 | 20_21455836 | ENSG00000223128 | RN7SKP140 | 30795 | Upstream | -5.2615041 | 1.43E-07 | 0.00281468 |
| 10 | 126185068 | 126185068 | 1 | 10_126185068 | ENSG00000148848 | ADAM12 | 0 | INTRON | 5.26114548 | 1.43E-07 | 0.00281468 |
| 15 | 25898242 | 25898242 | 1 | 15_25898242 | ENSG00000206187 | LINC02346 | 3876 | Upstream | -5.2610224 | 1.43E-07 | 0.00281468 |
| 10 | 49297153 | 49297153 | 1 | 10_49297153 | ENSG00000236208 | C10orf71-AS1 | 0 | INTRON | 5.26085644 | 1.43E-07 | 0.00281468 |
| 6 | 94141206 | 94141206 | 1 | 6_94141206 | ENSG00000231143 | AL157378.1 | 22713 | Upstream | -5.260818 | 1.43E-07 | 0.00281468 |
| 4 | 180237253 | 180237253 | 1 | 4_180237253 | ENSG00000287775 | AC096747.1 | 120090 | Upstream | -5.2603942 | 1.44E-07 | 0.00281792 |
| 9 | 33669397 | 33669397 | 1 | 9_33669397 | ENSG00000237984 | PTENP1 | 4106 | Downstream | 5.25995074 | 1.44E-07 | 0.00282148 |
| 17 | 73276305 | 73276305 | 1 | 17_73276305 | ENSG00000179604 | CDC42EP4 | 7318 | Downstream | 5.25950044 | 1.44E-07 | 0.00282515 |
| 8 | 93035697 | 93035697 | 1 | 8_93035697 | ENSG00000277063 | MIR8084 | 5858 | Downstream | -5.2585788 | 1.45E-07 | 0.00283608 |
| 5 | 93367562 | 93367562 | 1 | 5_93367562 | ENSG00000237187 | NR2F1-AS1 | 0 | INTRON | 5.25824827 | 1.45E-07 | 0.00283792 |
| 6 | 112318596 | 112318596 | 1 | 6_112318596 | ENSG00000281613 | AL365214.3 | 0 | INTRON | 5.25794619 | 1.46E-07 | 0.00283933 |
| 11 | 91313155 | 91313155 | 1 | 11_91313155 | ENSG00000280093 | AP002791.1 | 69753 | Upstream | -5.2571704 | 1.46E-07 | 0.00284726 |
| 5 | 99227572 | 99227572 | 1 | 5_99227572 | ENSG00000248489 | LINC02062 | 232559 | Downstream | 5.25701187 | 1.46E-07 | 0.00284726 |
| 5 | 14460060 | 14460060 | 1 | 5_14460060 | ENSG00000038382 | TRIO | 0 | INTRON | 5.25620017 | 1.47E-07 | 0.00285356 |
| 8 | 65550602 | 65550602 | 1 | 8_65550602 | ENSG00000254081 | LINC01299 | 0 | INTRON | 5.25618538 | 1.47E-07 | 0.00285356 |
| 11 | 117477226 | 117477226 | 1 | 11_117477226 | ENSG00000177103 | DSCAML1 | 0 | INTRON | 5.25510819 | 1.48E-07 | 0.00286704 |
| 7 | 152384071 | 152384071 | 1 | 7_152384071 | ENSG00000055609 | KMT2C | 0 | INTRON | 5.2548496 | 1.48E-07 | 0.00286781 |
| 8 | 117727668 | 117727668 | 1 | 8_117727668 | ENSG00000182197 | EXT1 | 66821 | Downstream | 5.25439178 | 1.49E-07 | 0.00286879 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | 142740668 | 142740668 | 1 | 8_142740668 | ENSG00000126233 | SLURP1 | 280 | Downstream | 5.25423909 | 1.49E-07 | 0.00286879 |
| 10 | 74260664 | 74260664 | 1 | 10_74260664 | ENSG00000156110 | ADK | 0 | INTRON | -5.2541597 | 1.49E-07 | 0.00286879 |
| 10 | 76646598 | 76646598 | 1 | 10_76646598 | ENSG00000269256 | AC024603.1 | 85604 | Upstream | -5.2537655 | 1.49E-07 | 0.00287168 |
| 22 | 17020131 | 17020131 | 1 | 22_17020131 | ENSG00000276400 | VN1R9P | 1266 | Downstream | -5.2533589 | 1.49E-07 | 0.00287289 |
| 6 | 31841074 | 31841074 | 1 | 6_31841074 | ENSG00000204387 | SNHG32 | 1308 | Downstream | 5.25327121 | 1.49E-07 | 0.00287289 |
| 3 | 67066404 | 67066404 | 1 | 3_67066404 | ENSG00000163376 | KBTBD8 | 55194 | Downstream | -5.2529196 | 1.50E-07 | 0.00287514 |
| 5 | 9479471 | 9479471 | 1 | 5_9479471 | ENSG00000112902 | SEMA5A | 0 | INTRON | -5.2522095 | 1.50E-07 | 0.00288299 |
| 16 | 3408869 | 3408869 | 1 | 16_3408869 | ENSG00000103343 | ZNF174 | 0 | EXON | 5.25172548 | 1.51E-07 | 0.00288733 |
| 15 | 69382293 | 69382293 | 1 | 15_69382293 | ENSG00000137819 | PAQR5 | 0 | INTRON | 5.2512817 | 1.51E-07 | 0.00289104 |
| 15 | 68703802 | 68703802 | 1 | 15_68703802 | ENSG00000103647 | CORO2B | 0 | INTRON | -5.2510365 | 1.51E-07 | 0.00289164 |
| 7 | 129861882 | 129861882 | 1 | 7_129861882 | ENSG00000186591 | UBE2H | 0 | INTRON | -5.2503876 | 1.52E-07 | 0.00289859 |
| 18 | 25938711 | 25938711 | 1 | 18_25938711 | ENSG00000264193 | AC027229.1 | 14504 | Downstream | -5.2481167 | 1.54E-07 | 0.00293125 |
| 6 | 51791212 | 51791212 | 1 | 6_51791212 | ENSG00000170927 | PKHD1 | 0 | INTRON | -5.2473759 | 1.54E-07 | 0.00293262 |
| 1 | 14070682 | 14070682 | 1 | 1_14070682 | ENSG00000189337 | KAZN | 0 | INTRON | 5.24730326 | 1.54E-07 | 0.00293262 |
| 3 | 101101985 | 101101985 | 1 | 3_101101985 | ENSG00000242573 | ACTR3P3 | 61108 | Upstream | -5.2472565 | 1.54E-07 | 0.00293262 |
| 16 | 89992482 | 89992482 | 1 | 16_89992482 | ENSG00000223959 | AFG3L1P | 0 | INTRON | 5.24708947 | 1.55E-07 | 0.00293262 |
| 21 | 21039409 | 21039409 | 1 | 21_21039409 | ENSG00000154654 | NCAM2 | 0 | INTRON | 5.24700028 | 1.55E-07 | 0.00293262 |
| 7 | 118603340 | 118603340 | 1 | 7_118603340 | ENSG00000287827 | AC002529.1 | 89510 | Downstream | -5.2462326 | 1.55E-07 | 0.00294114 |
| 5 | 152208595 | 152208595 | 1 | 5_152208595 | ENSG00000254226 | LINC01933 | 0 | INTRON | 5.24605483 | 1.55E-07 | 0.00294114 |
| 2 | 60488852 | 60488852 | 1 | 2_60488852 | ENSG00000119866 | BCL11A | 0 | INTRON | 5.24579418 | 1.56E-07 | 0.00294203 |
| 1 | 16712321 | 16712321 | 1 | 1_16712321 | ENSG00000268869 | ESPNP | 0 | INTRON | 5.24558328 | 1.56E-07 | 0.00294213 |
| 15 | 57724494 | 57724494 | 1 | 15_57724494 | ENSG00000255529 | POLR2M | 0 | INTRON | 5.2446199 | 1.57E-07 | 0.00295426 |
| 5 | 93815793 | 93815793 | 1 | 5_93815793 | ENSG00000113391 | FAM172A | 0 | INTRON | 5.24293812 | 1.58E-07 | 0.00297532 |
| 14 | 37758110 | 37758110 | 1 | 14_37758110 | ENSG00000139865 | TTC6 | 0 | INTRON | 5.24288687 | 1.58E-07 | 0.00297532 |
| 16 | 34710406 | 34710406 | 1 | 16_34710406 | ENSG00000279165 | AC135776.4 | 231570 | Upstream | 5.24269772 | 1.58E-07 | 0.00297532 |
| 15 | 84191088 | 84191088 | 1 | 15_84191088 | ENSG00000259726 | CSPG4P11 | 0 | EXON | -5.2418962 | 1.59E-07 | 0.00298498 |
| 2 | 108861566 | 108861566 | 1 | 2_108861566 | ENSG00000163006 | CCDC138 | 0 | INTRON | -5.2398347 | 1.61E-07 | 0.00301519 |
| 12 | 130219898 | 130219898 | 1 | 12_130219898 | ENSG00000242963 | AC026336.1 | 2741 | Upstream | -5.2389583 | 1.61E-07 | 0.00302335 |
| 9 | 8284074 | 8284074 | 1 | 9_8284074 | ENSG00000153707 | PTPRD | 30171 | Downstream | -5.2385939 | 1.62E-07 | 0.00302335 |
| 3 | 100189221 | 100189221 | 1 | 3_100189221 | ENSG00000287378 | AC129803.1 | 0 | INTRON | 5.23857696 | 1.62E-07 | 0.00302335 |
| 17 | 30882034 | 30882034 | 1 | 17_30882034 | ENSG00000176208 | ATAD5 | 0 | INTRON | -5.2385238 | 1.62E-07 | 0.00302335 |
| 17 | 55397836 | 55397836 | 1 | 17_55397836 | ENSG00000108960 | MMD | 0 | INTRON | -5.2380463 | 1.62E-07 | 0.00302786 |
| 8 | 60961457 | 60961457 | 1 | 8_60961457 | ENSG00000254777 | AC022182.1 | 0 | INTRON | 5.2364231 | 1.64E-07 | 0.00304753 |
| 5 | 94939558 | 94939558 | 1 | 5_94939558 | ENSG00000175471 | MCTP1 | 0 | INTRON | 5.23640539 | 1.64E-07 | 0.00304753 |
| 20 | 43473154 | 43473154 | 1 | 20_43473154 | ENSG00000288000 | AL031681.2 | 0 | INTRON | -5.2362443 | 1.64E-07 | 0.00304753 |
| 4 | 56128657 | 56128657 | 1 | 4_56128657 | ENSG00000109265 | KIAA1211 | 0 | INTRON | 5.23571241 | 1.64E-07 | 0.00305298 |
| 10 | 4459687 | 4459687 | 1 | 10_4459687 | ENSG00000287246 | AC022535.3 | 10995 | Downstream | -5.2354882 | 1.65E-07 | 0.00305336 |
| 6 | 126296728 | 126296728 | 1 | 6_126296728 | ENSG00000286215 | AL356534.1 | 7494 | Downstream | -5.2352018 | 1.65E-07 | 0.00305476 |
| 8 | 12801301 | 12801301 | 1 | 8_12801301 | ENSG00000255494 | LINC00681 | 0 | INTRON | -5.2347294 | 1.65E-07 | 0.00305925 |
| 5 | 73826530 | 73826530 | 1 | 5_73826530 | ENSG00000214944 | ARHGEF28 | 0 | INTRON | -5.2341854 | 1.66E-07 | 0.00306402 |
| 10 | 93042455 | 93042455 | 1 | 10_93042455 | ENSG00000138190 | EXOC6 | 0 | INTRON | -5.2340401 | 1.66E-07 | 0.00306402 |
| 14 | 35739728 | 35739728 | 1 | 14_35739728 | ENSG00000174373 | RALGAPA1 | 0 | INTRON | 5.23333907 | 1.66E-07 | 0.00307025 |
| 14 | 92303373 | 92303373 | 1 | 14_92303373 | ENSG00000286630 | AL133240.2 | 5725 | Downstream | 5.23321185 | 1.67E-07 | 0.00307025 |
| 17 | 49393703 | 49393703 | 1 | 17_49393703 | ENSG00000262039 | AC091180.5 | 0 | INTRON | -5.2330643 | 1.67E-07 | 0.00307025 |
| 21 | 32428074 | 32428074 | 1 | 21_32428074 | ENSG00000166979 | EVA1C | 0 | INTRON | 5.23253758 | 1.67E-07 | 0.00307568 |
| 2 | 89243973 | 89243973 | 1 | 2_89243973 | ENSG00000243238 | IGKV2-30 | 807 | Downstream | -5.2317108 | 1.68E-07 | 0.00308403 |
| 12 | 117311286 | 117311286 | 1 | 12_117311286 | ENSG00000089250 | NOS1 | 0 | INTRON | 5.23158594 | 1.68E-07 | 0.00308403 |
| 1 | 184580303 | 184580303 | 1 | 1_184580303 | ENSG00000116667 | C1orf21 | 0 | INTRON | 5.23143856 | 1.68E-07 | 0.00308403 |
| 6 | 146841082 | 146841082 | 1 | 6_146841082 | ENSG00000233452 | STXBP5-AS1 | 0 | EXON | -5.2299772 | 1.70E-07 | 0.00310399 |
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| 1 | 39981377 | 39981377 | 1 | 1_39981377 | ENSG00000168389 | MFSD2A | 11409 | Downstream | 5.22948734 | 1.70E-07 | 0.00310399 |
| 2 | 240293850 | 240293850 | 1 | 2_240293850 | ENSG00000276366 | U3 | 4407 | Downstream | 5.22945081 | 1.70E-07 | 0.00310399 |
| 4 | 151991786 | 151991786 | 1 | 4_151991786 | ENSG00000286066 | AC097375.4 | 0 | EXON | -5.2291145 | 1.70E-07 | 0.00310631 |
| 12 | 26022935 | 26022935 | 1 | 12_26022935 | ENSG00000123094 | RASSF8 | 0 | INTRON | 5.22719971 | 1.72E-07 | 0.00313528 |
| 1 | 68880274 | 68880274 | 1 | 1_68880274 | ENSG00000285407 | AL033530.1 | 0 | INTRON | 5.22656858 | 1.73E-07 | 0.00313983 |
| 11 | 119644086 | 119644086 | 1 | 11_119644086 | ENSG00000110400 | NECTIN1 | 0 | INTRON | 5.22653592 | 1.73E-07 | 0.00313983 |
| 22 | 17515353 | 17515353 | 1 | 22_17515353 | ENSG00000099954 | CECR2 | 0 | INTRON | 5.22491468 | 1.74E-07 | 0.00316101 |
| 9 | 66230936 | 66230936 | 1 | 9_66230936 | ENSG00000284658 | AL513478.3 | 22103 | Upstream | 5.22489674 | 1.74E-07 | 0.00316101 |
| 3 | 68892480 | 68892480 | 1 | 3_68892480 | ENSG00000163377 | TAFA4 | 0 | INTRON | 5.22449558 | 1.75E-07 | 0.00316354 |
| 15 | 54667588 | 54667588 | 1 | 15_54667588 | ENSG00000137766 | UNC13C | 34174 | Downstream | -5.2243102 | 1.75E-07 | 0.00316354 |
| 21 | 24650798 | 24650798 | 1 | 21_24650798 | ENSG00000237484 | LINC01684 | 102856 | Downstream | -5.2239852 | 1.75E-07 | 0.00316354 |
| 3 | 152338429 | 152338429 | 1 | 3_152338429 | ENSG00000152601 | MBNL1 | 0 | INTRON | 5.2239612 | 1.75E-07 | 0.00316354 |
| 15 | 61215935 | 61215935 | 1 | 15_61215935 | ENSG00000069667 | RORA | 0 | INTRON | 5.2233545 | 1.76E-07 | 0.00317057 |
| 3 | 100453529 | 100453529 | 1 | 3_100453529 | ENSG00000206535 | LNP1 | 0 | INTRON | -5.2222968 | 1.77E-07 | 0.00318536 |
| 1 | 121202648 | 121202648 | 1 | 1_121202648 | ENSG00000171943 | SRGAP2C | 0 | INTRON | 5.22155481 | 1.77E-07 | 0.00319476 |
| 20 | 55225830 | 55225830 | 1 | 20_55225830 | ENSG00000185834 | RPL12P4 | 150690 | Downstream | 5.22105491 | 1.78E-07 | 0.00320001 |
| 17 | 81593736 | 81593736 | 1 | 17_81593736 | ENSG00000182446 | NPLOC4 | 0 | INTRON | -5.2207979 | 1.78E-07 | 0.00320108 |
| 11 | 46909372 | 46909372 | 1 | 11_46909372 | ENSG00000134569 | LRP4 | 0 | INTRON | -5.2205697 | 1.78E-07 | 0.00320164 |
| 7 | 155548795 | 155548795 | 1 | 7_155548795 | ENSG00000146910 | CNPY1 | 0 | INTRON | 5.21948257 | 1.79E-07 | 0.0032171 |
| 16 | 6829624 | 6829624 | 1 | 16_6829624 | ENSG00000078328 | RBFOX1 | 0 | INTRON | -5.2190108 | 1.80E-07 | 0.00321939 |
| 4 | 159121826 | 159121826 | 1 | 4_159121826 | ENSG00000109756 | RAPGEF2 | 0 | INTRON | 5.21896083 | 1.80E-07 | 0.00321939 |
| 17 | 68211268 | 68211268 | 1 | 17_68211268 | ENSG00000274712 | AC005332.4 | 3775 | Downstream | -5.2180579 | 1.81E-07 | 0.00322542 |
| 2 | 2003724 | 2003724 | 1 | 2_2003724 | ENSG00000186487 | MYT1L | 0 | INTRON | 5.21796456 | 1.81E-07 | 0.00322542 |
| 6 | 51912588 | 51912588 | 1 | 6_51912588 | ENSG00000170927 | PKHD1 | 0 | INTRON | -5.2178513 | 1.81E-07 | 0.00322542 |
| 8 | 15790048 | 15790048 | 1 | 8_15790048 | ENSG00000250483 | PPM1AP1 | 16100 | Downstream | -5.2178364 | 1.81E-07 | 0.00322542 |
| 7 | 116713381 | 116713381 | 1 | 7_116713381 | ENSG00000105976 | MET | 0 | INTRON | -5.2166518 | 1.82E-07 | 0.00324007 |
| 15 | 35932559 | 35932559 | 1 | 15_35932559 | ENSG00000259245 | LINC02853 | 0 | INTRON | 5.21660909 | 1.82E-07 | 0.00324007 |
| 4 | 48160060 | 48160060 | 1 | 4_48160060 | ENSG00000135605 | TEC | 0 | INTRON | 5.21608525 | 1.83E-07 | 0.00324585 |
| 4 | 14925551 | 14925551 | 1 | 4_14925551 | ENSG00000247624 | CPEB2-DT | 0 | INTRON | 5.21562173 | 1.83E-07 | 0.00324877 |
| 5 | 150019131 | 150019131 | 1 | 5_150019131 | ENSG00000113716 | HMGXB3 | 0 | INTRON | -5.2153098 | 1.84E-07 | 0.00324877 |
| 4 | 39821917 | 39821917 | 1 | 4_39821917 | ENSG00000121892 | PDS5A | 945 | Downstream | 5.21528687 | 1.84E-07 | 0.00324877 |
| 4 | 99967219 | 99967219 | 1 | 4_99967219 | ENSG00000245322 | AC097460.1 | 0 | INTRON | -5.2150791 | 1.84E-07 | 0.00324877 |
| 3 | 34952096 | 34952096 | 1 | 3_34952096 | ENSG00000235534 | FECHP1 | 78242 | Downstream | -5.2149539 | 1.84E-07 | 0.00324877 |
| 5 | 143994442 | 143994442 | 1 | 5_143994442 | ENSG00000239390 | RN7SL87P | 146436 | Upstream | 5.21453966 | 1.84E-07 | 0.00325002 |
| 4 | 115106961 | 115106961 | 1 | 4_115106961 | ENSG00000138653 | NDST4 | 0 | INTRON | -5.214498 | 1.84E-07 | 0.00325002 |
| 8 | 52937045 | 52937045 | 1 | 8_52937045 | ENSG00000183729 | NPBWR1 | 1385 | Upstream | 5.21425966 | 1.85E-07 | 0.00325083 |
| 2 | 204472127 | 204472127 | 1 | 2_204472127 | ENSG00000236634 | AC016903.1 | 0 | INTRON | -5.2136881 | 1.85E-07 | 0.00325749 |
| 12 | 45780899 | 45780899 | 1 | 12_45780899 | ENSG00000189079 | ARID2 | 0 | INTRON | -5.2133088 | 1.86E-07 | 0.00326079 |

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| 3 | 67055917 | 67055917 | 1 | 3_67055917 | ENSG00000163376 | KBTBD8 | 44707 | Downstream | 5.21208493 | 1.87E-07 | 0.00327519 |
| 17 | 37389422 | 37389422 | 1 | 17_37389422 | ENSG00000278540 | ACACA | 0 | INTRON | 5.21191772 | 1.87E-07 | 0.00327519 |
| 7 | 133087867 | 133087867 | 1 | 7_133087867 | ENSG00000272393 | RNU6-92P | 4935 | Downstream | 5.21162325 | 1.87E-07 | 0.00327702 |
| 11 | 96018608 | 96018608 | 1 | 11_96018608 | ENSG00000184384 | MAML2 | 0 | INTRON | 5.21135812 | 1.87E-07 | 0.00327834 |
| 2 | 6508422 | 6508422 | 1 | 2_6508422 | ENSG00000226488 | LINC01824 | 0 | INTRON | -5.2111523 | 1.88E-07 | 0.00327861 |
| 1 | 195049836 | 195049836 | 1 | 1_195049836 | ENSG00000285718 | AL353072.2 | 118526 | Upstream | -5.2107778 | 1.88E-07 | 0.00328187 |
| 16 | 24109012 | 24109012 | 1 | 16_24109012 | ENSG00000166501 | PRKCB | 0 | INTRON | 5.21012985 | 1.89E-07 | 0.00328997 |
| 11 | 106842669 | 106842669 | 1 | 11_106842669 | ENSG00000152402 | GUCY1A2 | 0 | INTRON | -5.2093259 | 1.90E-07 | 0.00329813 |
| Y | 11421035 | 11421035 | 1 | Y_11421035 | ENSG00000275828 | AC134879.3 | 2319 | Downstream | 5.20902154 | 1.90E-07 | 0.00329813 |
| 1 | 7287366 | 7287366 | 1 | 1_7287366 | ENSG00000171735 | CAMTA1 | 0 | INTRON | 5.20901634 | 1.90E-07 | 0.00329813 |
| 3 | 109286893 | 109286893 | 1 | 3_109286893 | ENSG00000163530 | DPPA2 | 6894 | Downstream | 5.20891139 | 1.90E-07 | 0.00329813 |
| 4 | 117255282 | 117255282 | 1 | 4_117255282 | ENSG00000223605 | AC107399.1 | 5094 | Downstream | 5.20554256 | 1.93E-07 | 0.00335511 |
| 11 | 14824083 | 14824083 | 1 | 11_14824083 | ENSG00000152270 | PDE3B | 0 | INTRON | 5.20517183 | 1.94E-07 | 0.00335839 |
| 12 | 129252633 | 129252633 | 1 | 12_129252633 | ENSG00000151952 | TMEM132D | 0 | INTRON | -5.2046264 | 1.94E-07 | 0.00336073 |
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| 2 | 178022379 | 178022379 | 1 | 2_178022379 | ENSG00000128655 | PDE11A | 0 | INTRON | 5.20447602 | 1.95E-07 | 0.00336073 |
| 7 | 36986560 | 36986560 | 1 | 7_36986560 | ENSG00000155849 | ELMO1 | 0 | INTRON | 5.2042018 | 1.95E-07 | 0.00336154 |
| 5 | 13960707 | 13960707 | 1 | 5_13960707 | ENSG00000039139 | DNAH5 | 16164 | Upstream | 5.20405462 | 1.95E-07 | 0.00336154 |
| 15 | 31528026 | 31528026 | 1 | 15_31528026 | ENSG00000169918 | OTUD7A | 0 | INTRON | 5.20302184 | 1.96E-07 | 0.00337686 |
| 10 | 113714501 | 113714501 | 1 | 10_113714501 | ENSG00000165806 | CASP7 | 0 | INTRON | -5.2027327 | 1.96E-07 | 0.0033787 |
| 4 | 186663057 | 186663057 | 1 | 4_186663057 | ENSG00000083857 | FAT1 | 0 | INTRON | 5.20226593 | 1.97E-07 | 0.00338378 |
| 16 | 24757924 | 24757924 | 1 | 16_24757924 | ENSG00000090905 | TNRC6A | 0 | INTRON | -5.2017566 | 1.97E-07 | 0.00338964 |
| 10 | 72366543 | 72366543 | 1 | 10_72366543 | ENSG00000107745 | MICU1 | 783 | Downstream | -5.2012205 | 1.98E-07 | 0.00339601 |
| 5 | 77609337 | 77609337 | 1 | 5_77609337 | ENSG00000164253 | WDR41 | 0 | INTRON | 5.20086689 | 1.98E-07 | 0.00339905 |
| 22 | 11722761 | 11722761 | 1 | 22_11722761 | ENSG00000286406 | AC138776.1 | 104761 | Upstream | -5.2005677 | 1.99E-07 | 0.0034011 |
| 5 | 180173044 | 180173044 | 1 | 5_180173044 | ENSG00000146090 | RASGEF1C | 0 | INTRON | 5.20009064 | 1.99E-07 | 0.00340642 |
| 16 | 67255877 | 67255877 | 1 | 16_67255877 | ENSG00000135740 | SLC9A5 | 0 | 3UTR | 5.19967104 | 2.00E-07 | 0.00340977 |
| 2 | 175012853 | 175012853 | 1 | 2_175012853 | ENSG00000128656 | CHN1 | 7472 | Upstream | -5.1995346 | 2.00E-07 | 0.00340977 |
| 2 | 145981481 | 145981481 | 1 | 2_145981481 | ENSG00000233842 | AC079248.1 | 50335 | Downstream | -5.199317 | 2.00E-07 | 0.00341034 |
| 3 | 114366766 | 114366766 | 1 | 3_114366766 | ENSG00000241560 | ZBTB20-AS1 | 0 | EXON | 5.19911106 | 2.00E-07 | 0.00341071 |
| 6 | 132996833 | 132996833 | 1 | 6_132996833 | ENSG00000231023 | LINC00326 | 0 | INTRON | -5.1983022 | 2.01E-07 | 0.00341811 |
| 20 | 34751136 | 34751136 | 1 | 20_34751136 | ENSG00000198646 | NCOA6 | 0 | INTRON | -5.1981531 | 2.01E-07 | 0.00341811 |
| 1 | 237323650 | 237323650 | 1 | 1_237323650 | ENSG00000198626 | RYR2 | 0 | INTRON | -5.1981178 | 2.01E-07 | 0.00341811 |
| 5 | 123651338 | 123651338 | 1 | 5_123651338 | ENSG00000235275 | KRT18P16 | 13935 | Downstream | 5.19785636 | 2.02E-07 | 0.00341811 |
| 1 | 7023900 | 7023900 | 1 | 1_7023900 | ENSG00000171735 | CAMTA1 | 0 | INTRON | -5.1976601 | 2.02E-07 | 0.00341811 |
| 2 | 85371264 | 85371264 | 1 | 2_85371264 | ENSG00000115459 | ELMOD3 | 0 | 3UTR | 5.19727746 | 2.02E-07 | 0.00341811 |
| 6 | 100578747 | 100578747 | 1 | 6_100578747 | ENSG00000112249 | ASCC3 | 0 | INTRON | 5.19726878 | 2.02E-07 | 0.00341811 |
| 2 | 29752569 | 29752569 | 1 | 2_29752569 | ENSG00000171094 | ALK | 0 | INTRON | -5.1971597 | 2.02E-07 | 0.00341811 |
| 6 | 7502048 | 7502048 | 1 | 6_7502048 | ENSG00000219993 | AL138878.1 | 4154 | Upstream | 5.19697605 | 2.03E-07 | 0.00341811 |
| 7 | 19349438 | 19349438 | 1 | 7_19349438 | ENSG00000223838 | AC007091.1 | 4092 | Upstream | -5.1968558 | 2.03E-07 | 0.00341811 |
| 8 | 26764842 | 26764842 | 1 | 8_26764842 | ENSG00000120907 | ADRA1A | 0 | INTRON | -5.1962678 | 2.03E-07 | 0.00342304 |
| 12 | 122880981 | 122880981 | 1 | 12_122880981 | ENSG00000280138 | AC027290.2 | 0 | EXON | -5.1962196 | 2.03E-07 | 0.00342304 |
| X | 2432602 | 2432602 | 1 | X_2432602 | ENSG00000169084 | DHRSX | 0 | INTRON | 5.1947344 | 2.05E-07 | 0.00342994 |
| 6 | 29570564 | 29570564 | 1 | 6_29570564 | ENSG00000204681 | GABBR1 | 0 | INTRON | -5.1946755 | 2.05E-07 | 0.00342994 |
| 13 | 62779604 | 62779604 | 1 | 13_62779604 | ENSG00000228669 | LINC00448 | 0 | INTRON | 5.19448303 | 2.05E-07 | 0.00342994 |
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| 14 | 27753236 | 27753236 | 1 | 14_27753236 | ENSG00000258932 | AL390334.1 | 0 | INTRON | -5.1944149 | 2.05E-07 | 0.00342994 |
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| 1 | 99467583 | 99467583 | 1 | 1_99467583 | ENSG00000233983 | AL365220.1 | 2807 | Downstream | -5.1936785 | 2.06E-07 | 0.00342994 |
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| 16 | 1760329 | 1760329 | 1 | 16_1760329 | ENSG00000138834 | MAPK8IP3 | 0 | 3UTR | 5.19346559 | 2.06E-07 | 0.00342994 |
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| 8 | 10529669 | 10529669 | 1 | 8_10529669 | ENSG00000184647 | PRSS55 | 0 | EXON | 5.19239876 | 2.08E-07 | 0.00343628 |
| 1 | 234510066 | 234510066 | 1 | 1_234510066 | ENSG00000231768 | LINC01354 | 17820 | Downstream | 5.19165181 | 2.08E-07 | 0.00344674 |
| 5 | 125260905 | 125260905 | 1 | 5_125260905 | ENSG00000260192 | LINC02240 | 0 | INTRON | 5.19131192 | 2.09E-07 | 0.00344703 |
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| 7 | 45038450 | 45038450 | 1 | 7_45038450 | ENSG00000136280 | CCM2 | 0 | INTRON | 5.19091412 | 2.09E-07 | 0.00344703 |
| 15 | 62050009 | 62050009 | 1 | 15_62050009 | ENSG00000129003 | VPS13C | 0 | INTRON | 5.19050849 | 2.10E-07 | 0.00344862 |
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| 8 | 108679574 | 108679574 | 1 | 8_108679574 | ENSG00000164841 | TMEM74 | 0 | INTRON | 5.19008961 | 2.10E-07 | 0.0034523 |
| 8 | 122385705 | 122385705 | 1 | 8_122385705 | ENSG00000255364 | SMILR | 28626 | Downstream | 5.18954298 | 2.11E-07 | 0.00345911 |
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| 2 | 241695556 | 241695556 | 1 | 2_241695556 | ENSG00000168395 | ING5 | 0 | INTRON | -5.1860298 | 2.15E-07 | 0.00349799 |
| 4 | 87302786 | 87302786 | 1 | 4_87302786 | ENSG00000170509 | HSD17B13 | 1002 | Downstream | 5.1850718 | 2.16E-07 | 0.00350952 |
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| 1 | 168982890 | 168982890 | 1 | 1_168982890 | ENSG00000203601 | LINC00970 | 0 | INTRON | -5.1838429 | 2.17E-07 | 0.00352113 |
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| X | 130091774 | 130091774 | 1 | X_130091774 | ENSG00000102034 | ELF4 | 0 | INTRON | 5.183114 | 2.18E-07 | 0.00352614 |
| 8 | 38777727 | 38777727 | 1 | 8_38777727 | ENSG00000147526 | TACC1 | 0 | INTRON | 5.18273699 | 2.19E-07 | 0.00352993 |
| 5 | 87006519 | 87006519 | 1 | 5_87006519 | ENSG00000249061 | AC109492.1 | 0 | INTRON | -5.1822973 | 2.19E-07 | 0.00353135 |
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| 15 | 57679881 | 57679881 | 1 | 15_57679881 | ENSG00000137878 | GCOM1 | 0 | INTRON | -5.1817919 | 2.20E-07 | 0.00353135 |
| 6 | 159038669 | 159038669 | 1 | 6_159038669 | ENSG00000271913 | AL035530.2 | 0 | INTRON | -5.1817795 | 2.20E-07 | 0.00353135 |
| 13 | 98948513 | 98948513 | 1 | 13_98948513 | ENSG00000088387 | DOCK9 | 0 | INTRON | 5.18079814 | 2.21E-07 | 0.00354531 |
| 18 | 35861295 | 35861295 | 1 | 18_35861295 | ENSG00000267797 | NRBF2P1 | 18678 | Downstream | 5.18058036 | 2.21E-07 | 0.00354531 |
| 6 | 108567979 | 108567979 | 1 | 6_108567979 | ENSG00000118689 | FOXO3 | 0 | INTRON | -5.1805162 | 2.21E-07 | 0.00354531 |
| 12 | 95357266 | 95357266 | 1 | 12_95357266 | ENSG00000257943 | AC084879.1 | 0 | INTRON | -5.1790257 | 2.23E-07 | 0.00357039 |
| 17 | 50611026 | 50611026 | 1 | 17_50611026 | ENSG00000006283 | CACNA1G | 0 | INTRON | 5.17835379 | 2.24E-07 | 0.0035799 |
| 17 | 50449553 | 50449553 | 1 | 17_50449553 | ENSG00000167107 | ACSF2 | 0 | INTRON | 5.1778922 | 2.24E-07 | 0.0035854 |
| 1 | 33299729 | 33299729 | 1 | 1_33299729 | ENSG00000160094 | ZNF362 | 0 | 3UTR | 5.17753975 | 2.25E-07 | 0.0035888 |
| 4 | 145604320 | 145604320 | 1 | 4_145604320 | ENSG00000151611 | MMAA | 0 | INTRON | -5.1768363 | 2.26E-07 | 0.00359616 |
| 16 | 76452414 | 76452414 | 1 | 16_76452414 | ENSG00000152910 | CNTNAP4 | 0 | INTRON | -5.176714 | 2.26E-07 | 0.00359616 |
| 6 | 166363202 | 166363202 | 1 | 6_166363202 | ENSG00000060762 | MPC1 | 1716 | Downstream | -5.1766331 | 2.26E-07 | 0.00359616 |
| 11 | 112305796 | 112305796 | 1 | 11_112305796 | ENSG00000250303 | LINC02762 | 0 | INTRON | 5.17588598 | 2.27E-07 | 0.00360721 |
| 3 | 40095569 | 40095569 | 1 | 3_40095569 | ENSG00000170011 | MYRIP | 0 | INTRON | 5.17558408 | 2.27E-07 | 0.00360967 |
| 15 | 45062409 | 45062409 | 1 | 15_45062409 | ENSG00000140263 | SORD | 0 | INTRON | 5.17449177 | 2.29E-07 | 0.00362746 |
| 20 | 48023248 | 48023248 | 1 | 20_48023248 | ENSG00000286179 | AL139351.2 | 1011 | Upstream | -5.1740746 | 2.29E-07 | 0.00363077 |
| X | 31690304 | 31690304 | 1 | X_31690304 | ENSG00000198947 | DMD | 0 | INTRON | 5.17397384 | 2.29E-07 | 0.00363077 |
| 18 | 65898213 | 65898213 | 1 | 18_65898213 | ENSG00000081138 | CDH7 | 7876 | Downstream | -5.1719917 | 2.32E-07 | 0.0036656 |
| 10 | 6300587 | 6300587 | 1 | 10_6300587 | ENSG00000215244 | LINC02649 | 0 | INTRON | 5.17179285 | 2.32E-07 | 0.0036656 |
| 8 | 143864209 | 143864209 | 1 | 8_143864209 | ENSG00000261150 | EPPK1 | 0 | EXON | -5.1716696 | 2.32E-07 | 0.0036656 |
| 11 | 66698485 | 66698485 | 1 | 11_66698485 | ENSG00000173898 | SPTBN2 | 0 | INTRON | 5.17103777 | 2.33E-07 | 0.00367194 |
| 15 | 93254156 | 93254156 | 1 | 15_93254156 | ENSG00000257060 | AC091078.1 | 0 | INTRON | 5.17100002 | 2.33E-07 | 0.00367194 |
| 10 | 1071647 | 1071647 | 1 | 10_1071647 | ENSG00000047056 | WDR37 | 0 | INTRON | 5.17049368 | 2.33E-07 | 0.00367708 |
| 18 | 26013865 | 26013865 | 1 | 18_26013865 | ENSG00000141380 | SS18 | 2387 | Downstream | 5.17039255 | 2.34E-07 | 0.00367708 |
| 6 | 168512201 | 168512201 | 1 | 6_168512201 | ENSG00000112562 | SMOC2 | 0 | INTRON | -5.169996 | 2.34E-07 | 0.00367958 |
| 10 | 109750053 | 109750053 | 1 | 10_109750053 | ENSG00000224907 | RPL21P91 | 57597 | Upstream | 5.16991991 | 2.34E-07 | 0.00367958 |
| 7 | 18472634 | 18472634 | 1 | 7_18472634 | ENSG00000048052 | HDAC9 | 0 | INTRON | -5.1691019 | 2.35E-07 | 0.00368707 |
| 16 | 56012736 | 56012736 | 1 | 16_56012736 | ENSG00000246379 | AC040168.1 | 0 | INTRON | -5.1690018 | 2.35E-07 | 0.00368707 |
| 12 | 109105580 | 109105580 | 1 | 12_109105580 | ENSG00000076248 | UNG | 0 | INTRON | -5.1689314 | 2.35E-07 | 0.00368707 |
| 15 | 37057901 | 37057901 | 1 | 15_37057901 | ENSG00000134138 | MEIS2 | 0 | INTRON | -5.1688511 | 2.36E-07 | 0.00368707 |
| 6 | 108712133 | 108712133 | 1 | 6_108712133 | ENSG00000118689 | FOXO3 | 27359 | Downstream | -5.1683788 | 2.36E-07 | 0.003693 |
| 13 | 104442018 | 104442018 | 1 | 13_104442018 | ENSG00000287734 | AL136524.1 | 307761 | Downstream | -5.1660341 | 2.39E-07 | 0.00373617 |
| 1 | 214820519 | 214820519 | 1 | 1_214820519 | ENSG00000185221 | GAPDHP24 | 50214 | Upstream | 5.16568718 | 2.40E-07 | 0.00373967 |
| 20 | 52952190 | 52952190 | 1 | 20_52952190 | ENSG00000182463 | TSHZ2 | 20167 | Upstream | -5.1646622 | 2.41E-07 | 0.00375677 |
| 12 | 132409107 | 132409107 | 1 | 12_132409107 | ENSG00000274373 | AC148476.1 | 15396 | Downstream | 5.16376101 | 2.42E-07 | 0.00377031 |
| 4 | 45014087 | 45014087 | 1 | 4_45014087 | ENSG00000248744 | AC108467.1 | 0 | INTRON | 5.1636468 | 2.42E-07 | 0.00377031 |
| 10 | 118346865 | 118346865 | 1 | 10_118346865 | ENSG00000232139 | LINC00867 | 0 | INTRON | -5.1629486 | 2.43E-07 | 0.00377262 |
| 3 | 154593332 | 154593332 | 1 | 3_154593332 | ENSG00000243861 | AC092994.1 | 54023 | Upstream | -5.1628549 | 2.43E-07 | 0.00377262 |
| X | 54454375 | 54454375 | 1 | X_54454375 | ENSG00000102302 | FGD1 | 0 | INTRON | -5.1628399 | 2.43E-07 | 0.00377262 |
| 2 | 153497784 | 153497784 | 1 | 2_153497784 | ENSG00000227400 | AC012501.2 | 0 | INTRON | -5.1627781 | 2.43E-07 | 0.00377262 |
| 12 | 116961065 | 116961065 | 1 | 12_116961065 | ENSG00000174989 | FBXW8 | 0 | INTRON | 5.16267805 | 2.43E-07 | 0.00377262 |
| X | 30713174 | 30713174 | 1 | X_30713174 | ENSG00000243055 | GK-AS1 | 0 | INTRON | -5.162277 | 2.44E-07 | 0.0037753 |
| 2 | 59047914 | 59047914 | 1 | 2_59047914 | ENSG00000233723 | LINC01122 | 0 | INTRON | -5.1619624 | 2.44E-07 | 0.0037753 |
| 3 | 41290649 | 41290649 | 1 | 3_41290649 | ENSG00000168038 | ULK4 | 0 | INTRON | -5.1619098 | 2.44E-07 | 0.0037753 |
| 17 | 28670825 | 28670825 | 1 | 17_28670825 | ENSG00000109111 | SUPT6H | 0 | INTRON | 5.16179528 | 2.45E-07 | 0.0037753 |
| 21 | 39373039 | 39373039 | 1 | 21_39373039 | ENSG00000227406 | RNF6P1 | 723 | Downstream | 5.16169469 | 2.45E-07 | 0.0037753 |
| 7 | 47781312 | 47781312 | 1 | 7_47781312 | ENSG00000158683 | PKD1L1 | 0 | INTRON | 5.16039819 | 2.46E-07 | 0.00379584 |
| 14 | 39444082 | 39444082 | 1 | 14_39444082 | ENSG00000258526 | AL049828.1 | 0 | INTRON | 5.16034023 | 2.47E-07 | 0.00379584 |
| 2 | 134434822 | 134434822 | 1 | 2_134434822 | ENSG00000152127 | MGAT5 | 0 | INTRON | -5.1598218 | 2.47E-07 | 0.00380292 |
| 15 | 46390316 | 46390316 | 1 | 15_46390316 | ENSG00000285934 | AC091074.2 | 9273 | Downstream | 5.15860853 | 2.49E-07 | 0.00382419 |
| 6 | 6474975 | 6474975 | 1 | 6_6474975 | ENSG00000216863 | LY86-AS1 | 0 | INTRON | 5.15839184 | 2.49E-07 | 0.00382516 |
| 3 | 198174311 | 198174311 | 1 | 3_198174311 | ENSG00000236438 | FAM157A | 0 | INTRON | -5.1578589 | 2.50E-07 | 0.0038326 |
| 7 | 111186927 | 111186927 | 1 | 7_111186927 | ENSG00000184903 | IMMP2L | 0 | INTRON | 5.15735547 | 2.50E-07 | 0.00383776 |
| 1 | 1323152 | 1323152 | 1 | 1_1323152 | ENSG00000127054 | INTS11 | 0 | 5UTR | 5.15726968 | 2.51E-07 | 0.00383776 |
| 5 | 171304598 | 171304598 | 1 | 5_171304598 | ENSG00000275038 | AC091980.2 | 1381 | Downstream | 5.15632603 | 2.52E-07 | 0.00384911 |
| 4 | 870891 | 870891 | 1 | 4_870891 | ENSG00000178950 | GAK | 0 | EXON | 5.15627801 | 2.52E-07 | 0.00384911 |
| 11 | 101620210 | 101620210 | 1 | 11_101620210 | ENSG00000137672 | TRPC6 | 0 | INTRON | 5.15616477 | 2.52E-07 | 0.00384911 |
| 4 | 127635986 | 127635986 | 1 | 4_127635986 | ENSG00000164066 | INTU | 0 | INTRON | -5.1560431 | 2.52E-07 | 0.00384911 |
| 3 | 163320875 | 163320875 | 1 | 3_163320875 | ENSG00000241369 | LINC01192 | 0 | INTRON | -5.1556537 | 2.53E-07 | 0.00385366 |
| 3 | 86051276 | 86051276 | 1 | 3_86051276 | ENSG00000175161 | CADM2 | 0 | INTRON | 5.15514966 | 2.53E-07 | 0.00386058 |
| 3 | 56404413 | 56404413 | 1 | 3_56404413 | ENSG00000187672 | ERC2 | 0 | INTRON | -5.1549106 | 2.54E-07 | 0.00386205 |
| 19 | 6251704 | 6251704 | 1 | 19_6251704 | ENSG00000130382 | MLLT1 | 0 | INTRON | 5.15402131 | 2.55E-07 | 0.00387306 |
| 16 | 6187762 | 6187762 | 1 | 16_6187762 | ENSG00000078328 | RBFOX1 | 0 | INTRON | -5.1539324 | 2.55E-07 | 0.00387306 |
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| 2 | 191968520 | 191968520 | 1 | 2_191968520 | ENSG00000233766 | AC098617.1 | 0 | INTRON | 5.15336589 | 2.56E-07 | 0.00387306 |
| 10 | 108251242 | 108251242 | 1 | 10_108251242 | ENSG00000234544 | PTGES3P5 | 44856 | Upstream | 5.15330104 | 2.56E-07 | 0.00387306 |
| 20 | 54515524 | 54515524 | 1 | 20_54515524 | ENSG00000101134 | DOK5 | 0 | INTRON | 5.15320761 | 2.56E-07 | 0.00387306 |
| 7 | 114088893 | 114088893 | 1 | 7_114088893 | ENSG00000128573 | FOXP2 | 0 | INTRON | 5.15297642 | 2.56E-07 | 0.00387439 |
| 6 | 138533908 | 138533908 | 1 | 6_138533908 | ENSG00000135540 | NHSL1 | 0 | INTRON | -5.1527034 | 2.57E-07 | 0.0038766 |
| 3 | 5270807 | 5270807 | 1 | 3_5270807 | ENSG00000230944 | AC026202.1 | 14046 | Upstream | -5.1523193 | 2.57E-07 | 0.0038811 |
| 6 | 94601996 | 94601996 | 1 | 6_94601996 | ENSG00000216853 | MTCYBP36 | 154817 | Upstream | 5.15192924 | 2.58E-07 | 0.00388574 |
| 2 | 122330408 | 122330408 | 1 | 2_122330408 | ENSG00000286481 | AC011246.1 | 0 | INTRON | -5.1514369 | 2.58E-07 | 0.00389251 |
| X | 1512340 | 1512340 | 1 | X_1512340 | ENSG00000182162 | P2RY8 | 0 | INTRON | 5.1506247 | 2.60E-07 | 0.00390595 |
| 2 | 123502541 | 123502541 | 1 | 2_123502541 | ENSG00000226708 | AC073409.1 | 58096 | Upstream | 5.15013293 | 2.60E-07 | 0.00391275 |
| 9 | 127694591 | 127694591 | 1 | 9_127694591 | ENSG00000187024 | PTRH1 | 0 | INTRON | 5.14924644 | 2.62E-07 | 0.00392452 |
| 5 | 99525916 | 99525916 | 1 | 5_99525916 | ENSG00000206356 | AC114324.1 | 454 | Upstream | 5.14886729 | 2.62E-07 | 0.00392452 |
| 4 | 60033894 | 60033894 | 1 | 4_60033894 | ENSG00000283043 | AC097655.1 | 4374 | Upstream | 5.14853646 | 2.63E-07 | 0.00392452 |
| 10 | 27383807 | 27383807 | 1 | 10_27383807 | ENSG00000237956 | TRIAP1P1 | 5445 | Upstream | 5.14848523 | 2.63E-07 | 0.00392452 |
| 7 | 25223194 | 25223194 | 1 | 7_25223194 | ENSG00000105954 | NPVF | 1375 | Downstream | -5.1483508 | 2.63E-07 | 0.00392452 |
| 7 | 29052675 | 29052675 | 1 | 7_29052675 | ENSG00000106066 | CPVL | 0 | INTRON | 5.1483483 | 2.63E-07 | 0.00392452 |
| 11 | 45505899 | 45505899 | 1 | 11_45505899 | ENSG00000254746 | AC103855.2 | 0 | INTRON | 5.14824579 | 2.63E-07 | 0.00392452 |
| 7 | 76037026 | 76037026 | 1 | 7_76037026 | ENSG00000127952 | STYXL1 | 0 | INTRON | 5.14819827 | 2.63E-07 | 0.00392452 |
| 1 | 234701236 | 234701236 | 1 | 1_234701236 | ENSG00000230628 | AL160408.3 | 5083 | Upstream | 5.14808374 | 2.63E-07 | 0.00392452 |
| 21 | 36188546 | 36188546 | 1 | 21_36188546 | ENSG00000142197 | DOP1B | 0 | INTRON | 5.14755297 | 2.64E-07 | 0.00393219 |
| 8 | 28354412 | 28354412 | 1 | 8_28354412 | ENSG00000214050 | FBXO16 | 0 | INTRON | -5.1470257 | 2.65E-07 | 0.0039398 |
| 17 | 4577662 | 4577662 | 1 | 17_4577662 | ENSG00000262519 | TXNP4 | 5147 | Downstream | 5.14633151 | 2.66E-07 | 0.00395095 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 218700671 | 218700671 | 1 | 1_218700671 | ENSG00000212610 | U3 | 158772 | Upstream | 5.1460779 | 2.66E-07 | 0.00395284 |
| 9 | 1544488 | 1544488 | 1 | 9_1544488 | ENSG00000287465 | AL358053.1 | 0 | INTRON | -5.1453914 | 2.67E-07 | 0.00396386 |
| 12 | 37240505 | 37240505 | 1 | 12_37240505 | ENSG00000258368 | ZNF970P | 335081 | Upstream | 5.14382823 | 2.69E-07 | 0.00398893 |
| 13 | 80866730 | 80866730 | 1 | 13_80866730 | ENSG00000286746 | AL590807.1 | 0 | INTRON | -5.1437586 | 2.69E-07 | 0.00398893 |
| 14 | 101986293 | 101986293 | 1 | 14_101986293 | ENSG00000197102 | DYNC1H1 | 0 | EXON | 5.14371686 | 2.69E-07 | 0.00398893 |
| 2 | 193500748 | 193500748 | 1 | 2_193500748 | ENSG00000235218 | AC092638.2 | 223134 | Upstream | 5.14235331 | 2.71E-07 | 0.00400969 |
| 7 | 39664979 | 39664979 | 1 | 7_39664979 | ENSG00000006451 | RALA | 0 | INTRON | 5.14215377 | 2.72E-07 | 0.00400969 |
| 20 | 39231788 | 39231788 | 1 | 20_39231788 | ENSG00000287983 | AL035251.1 | 0 | EXON | 5.14209626 | 2.72E-07 | 0.00400969 |
| 11 | 12649979 | 12649979 | 1 | 11_12649979 | ENSG00000286521 | AC107881.1 | 0 | INTRON | 5.14193124 | 2.72E-07 | 0.00400969 |
| 22 | 30307939 | 30307939 | 1 | 22_30307939 | ENSG00000099992 | TBC1D10A | 0 | INTRON | -5.1419265 | 2.72E-07 | 0.00400969 |
| 1 | 181069279 | 181069279 | 1 | 1_181069279 | ENSG00000153029 | MR1 | 7341 | Downstream | -5.1408988 | 2.73E-07 | 0.00402123 |
| 2 | 203815398 | 203815398 | 1 | 2_203815398 | ENSG00000206970 | RNU6-474P | 33255 | Downstream | 5.14089479 | 2.73E-07 | 0.00402123 |
| 15 | 53350737 | 53350737 | 1 | 15_53350737 | ENSG00000287596 | AC066614.1 | 69127 | Upstream | 5.14083908 | 2.74E-07 | 0.00402123 |
| 16 | 31789366 | 31789366 | 1 | 16_31789366 | ENSG00000259810 | AC002519.1 | 0 | EXON | -5.1407364 | 2.74E-07 | 0.00402123 |
| 4 | 130102437 | 130102437 | 1 | 4_130102437 | ENSG00000249618 | LINC02465 | 127108 | Downstream | -5.140416 | 2.74E-07 | 0.00402185 |
| 1 | 149366234 | 149366234 | 1 | 1_149366234 | ENSG00000274423 | SEC22B2 | 8622 | Downstream | -5.1401729 | 2.74E-07 | 0.00402185 |
| 15 | 69128615 | 69128615 | 1 | 15_69128615 | ENSG00000259222 | AC027088.2 | 28628 | Downstream | 5.14014908 | 2.75E-07 | 0.00402185 |
| 22 | 44182040 | 44182040 | 1 | 22_44182040 | ENSG00000138964 | PARVG | 0 | INTRON | 5.14005994 | 2.75E-07 | 0.00402185 |
| 20 | 53903103 | 53903103 | 1 | 20_53903103 | ENSG00000241721 | SUMO1P1 | 27546 | Upstream | -5.1394328 | 2.76E-07 | 0.00403182 |
| 4 | 128359706 | 128359706 | 1 | 4_128359706 | ENSG00000251432 | LINC02615 | 0 | INTRON | 5.13896355 | 2.76E-07 | 0.00403289 |
| 3 | 26741482 | 26741482 | 1 | 3_26741482 | ENSG00000179796 | LRRC3B | 23945 | Downstream | 5.13894367 | 2.76E-07 | 0.00403289 |
| 5 | 164422868 | 164422868 | 1 | 5_164422868 | ENSG00000241956 | AC109466.1 | 0 | INTRON | -5.1388822 | 2.76E-07 | 0.00403289 |
| 17 | 40788147 | 40788147 | 1 | 17_40788147 | ENSG00000173908 | KRT28 | 4048 | Downstream | 5.13864203 | 2.77E-07 | 0.00403289 |
| 8 | 143918086 | 143918086 | 1 | 8_143918086 | ENSG00000178209 | PLEC | 0 | EXON | 5.13857673 | 2.77E-07 | 0.00403289 |
| 2 | 18149797 | 18149797 | 1 | 2_18149797 | ENSG00000170745 | KCNS3 | 0 | INTRON | -5.1382772 | 2.77E-07 | 0.00403399 |
| 7 | 5347579 | 5347579 | 1 | 7_5347579 | ENSG00000182095 | TNRC18 | 0 | INTRON | 5.13808891 | 2.78E-07 | 0.00403399 |
| Y | 13204828 | 13204828 | 1 | Y_13204828 | ENSG00000223915 | DPPA2P1 | 26055 | Upstream | 5.1380432 | 2.78E-07 | 0.00403399 |
| 17 | 29632004 | 29632004 | 1 | 17_29632004 | ENSG00000141298 | SSH2 | 0 | EXON | 5.13725239 | 2.79E-07 | 0.00404754 |
| 5 | 151848793 | 151848793 | 1 | 5_151848793 | ENSG00000145888 | GLRA1 | 0 | INTRON | 5.13684143 | 2.79E-07 | 0.00405294 |
| 9 | 106531028 | 106531028 | 1 | 9_106531028 | ENSG00000234323 | LINC01505 | 0 | INTRON | -5.1366506 | 2.80E-07 | 0.0040536 |
| 10 | 8583794 | 8583794 | 1 | 10_8583794 | ENSG00000236420 | CHCHD3P1 | 36138 | Upstream | -5.1360866 | 2.81E-07 | 0.00406056 |
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| 9 | 34427551 | 34427551 | 1 | 9_34427551 | ENSG00000164970 | FAM219A | 0 | INTRON | 5.13513772 | 2.82E-07 | 0.00406902 |
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| 6 | 103484818 | 103484818 | 1 | 6_103484818 | ENSG00000202283 | AL591387.1 | 98316 | Upstream | 5.13464515 | 2.83E-07 | 0.00407051 |
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| 10 | 36757372 | 36757372 | 1 | 10_36757372 | ENSG00000207271 | Y_RNA | 131234 | Upstream | 5.13422376 | 2.83E-07 | 0.00407202 |
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| 4 | 150602838 | 150602838 | 1 | 4_150602838 | ENSG00000198589 | LRBA | 0 | INTRON | -5.1328453 | 2.85E-07 | 0.00408427 |
| 1 | 22021763 | 22021763 | 1 | 1_22021763 | ENSG00000285959 | AL590556.3 | 0 | INTRON | 5.13139692 | 2.88E-07 | 0.00410958 |
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| 21 | 13719855 | 13719855 | 1 | 21_13719855 | ENSG00000278618 | MIR8069-2 | 4333 | Upstream | -5.1311857 | 2.88E-07 | 0.00411008 |
| 17 | 43337185 | 43337185 | 1 | 17_43337185 | ENSG00000188825 | LINC00910 | 1555 | Downstream | -5.1308119 | 2.88E-07 | 0.00411192 |
| 9 | 3271106 | 3271106 | 1 | 9_3271106 | ENSG00000080298 | RFX3 | 0 | EXON | -5.130786 | 2.89E-07 | 0.00411192 |
| 3 | 12637072 | 12637072 | 1 | 3_12637072 | ENSG00000132155 | RAF1 | 0 | INTRON | 5.13038653 | 2.89E-07 | 0.00411684 |
| 17 | 35994491 | 35994491 | 1 | 17_35994491 | ENSG00000275688 | CCL15-CCL14 | 0 | INTRON | 5.13024573 | 2.89E-07 | 0.00411684 |
| 2 | 154809124 | 154809124 | 1 | 2_154809124 | ENSG00000162989 | KCNJ3 | 0 | INTRON | 5.12949825 | 2.91E-07 | 0.00412557 |
| 7 | 78374069 | 78374069 | 1 | 7_78374069 | ENSG00000187391 | MAGI2 | 0 | INTRON | 5.12949664 | 2.91E-07 | 0.00412557 |
| 8 | 15058765 | 15058765 | 1 | 8_15058765 | ENSG00000185053 | SGCZ | 0 | INTRON | -5.1293753 | 2.91E-07 | 0.00412557 |
| 17 | 39715517 | 39715517 | 1 | 17_39715517 | ENSG00000141736 | ERBB2 | 0 | 3UTR | 5.12876612 | 2.92E-07 | 0.0041355 |
| 12 | 65913737 | 65913737 | 1 | 12_65913737 | ENSG00000149948 | HMGA2 | 0 | INTRON | 5.12809485 | 2.93E-07 | 0.0041426 |
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| 10 | 132209946 | 132209946 | 1 | 10_132209946 | ENSG00000165752 | STK32C | 0 | INTRON | 5.1279728 | 2.93E-07 | 0.0041426 |
| 1 | 214155210 | 214155210 | 1 | 1_214155210 | ENSG00000283518 | LINC02775 | 0 | INTRON | -5.1277069 | 2.93E-07 | 0.00414501 |
| 19 | 1433763 | 1433763 | 1 | 19_1433763 | ENSG00000071626 | DAZAP1 | 0 | EXON | -5.1268417 | 2.95E-07 | 0.00416064 |
| 3 | 197643119 | 197643119 | 1 | 3_197643119 | ENSG00000273308 | AC024560.3 | 2549 | Upstream | -5.1265488 | 2.95E-07 | 0.00416366 |
| X | 376775 | 376775 | 1 | X_376775 | ENSG00000167393 | PPP2R3B | 0 | INTRON | 5.12637388 | 2.95E-07 | 0.00416407 |
| 2 | 59755827 | 59755827 | 1 | 2_59755827 | ENSG00000271955 | AC007100.1 | 0 | INTRON | -5.1252173 | 2.97E-07 | 0.00418135 |
| 4 | 85703265 | 85703265 | 1 | 4_85703265 | ENSG00000138639 | ARHGAP24 | 0 | INTRON | -5.1251347 | 2.97E-07 | 0.00418135 |
| 6 | 68496103 | 68496103 | 1 | 6_68496103 | ENSG00000288088 | AL606923.2 | 0 | INTRON | 5.12500444 | 2.98E-07 | 0.00418135 |
| 6 | 122838698 | 122838698 | 1 | 6_122838698 | ENSG00000232362 | ATP5MGP2 | 20979 | Downstream | 5.12497066 | 2.98E-07 | 0.00418135 |
| 14 | 68053124 | 68053124 | 1 | 14_68053124 | ENSG00000182185 | RAD51B | 0 | INTRON | 5.12477619 | 2.98E-07 | 0.00418221 |
| 16 | 76453812 | 76453812 | 1 | 16_76453812 | ENSG00000152910 | CNTNAP4 | 0 | INTRON | 5.12422117 | 2.99E-07 | 0.00419109 |
| 6 | 107820095 | 107820095 | 1 | 6_107820095 | ENSG00000146285 | SCML4 | 0 | INTRON | 5.12401049 | 2.99E-07 | 0.00419232 |
| 1 | 79804011 | 79804011 | 1 | 1_79804011 | ENSG00000285409 | AC099671.1 | 163721 | Downstream | 5.12384153 | 2.99E-07 | 0.00419263 |
| 8 | 139863241 | 139863241 | 1 | 8_139863241 | ENSG00000167632 | TRAPPC9 | 0 | INTRON | 5.12347338 | 3.00E-07 | 0.00419737 |
| 17 | 67857758 | 67857758 | 1 | 17_67857758 | ENSG00000171634 | BPTF | 0 | INTRON | -5.1216441 | 3.03E-07 | 0.00423482 |
| 10 | 96056257 | 96056257 | 1 | 10_96056257 | ENSG00000226688 | ENTPD1-AS1 | 0 | INTRON | 5.12114872 | 3.04E-07 | 0.00424133 |
| 13 | 108451230 | 108451230 | 1 | 13_108451230 | ENSG00000283384 | AL138694.1 | 2914 | Downstream | -5.121045 | 3.04E-07 | 0.00424133 |
| 7 | 15660961 | 15660961 | 1 | 7_15660961 | ENSG00000106511 | MEOX2 | 0 | INTRON | -5.1208353 | 3.04E-07 | 0.00424257 |
| 13 | 57314710 | 57314710 | 1 | 13_57314710 | ENSG00000234421 | SLC25A5P4 | 28 | Upstream | -5.1204653 | 3.05E-07 | 0.00424441 |
| 8 | 13051053 | 13051053 | 1 | 8_13051053 | ENSG00000206996 | RNU6-842P | 6597 | Downstream | 5.12044448 | 3.05E-07 | 0.00424441 |
| 2 | 158597204 | 158597204 | 1 | 2_158597204 | ENSG00000144283 | PKP4 | 0 | INTRON | -5.1202229 | 3.05E-07 | 0.00424593 |
| 14 | 87583272 | 87583272 | 1 | 14_87583272 | ENSG00000258859 | LINC02296 | 10250 | Upstream | 5.11991812 | 3.06E-07 | 0.00424932 |
| 9 | 124902150 | 124902150 | 1 | 9_124902150 | ENSG00000136935 | GOLGA1 | 0 | INTRON | 5.11865 | 3.08E-07 | 0.0042745 |
| 2 | 74684958 | 74684958 | 1 | 2_74684958 | ENSG00000135622 | SEMA4F | 1105 | Downstream | 5.11814057 | 3.09E-07 | 0.00428144 |
| 10 | 2585584 | 2585584 | 1 | 10_2585584 | ENSG00000235281 | AL713851.1 | 0 | INTRON | -5.1180363 | 3.09E-07 | 0.00428144 |
| 21 | 29461927 | 29461927 | 1 | 21_29461927 | ENSG00000156273 | BACH1 | 0 | INTRON | -5.1177958 | 3.09E-07 | 0.00428341 |
| 1 | 36588069 | 36588069 | 1 | 1_36588069 | ENSG00000230214 | FTLP18 | 42265 | Upstream | -5.1171389 | 3.10E-07 | 0.00429153 |
| 5 | 1027372 | 1027372 | 1 | 5_1027372 | ENSG00000145506 | NKD2 | 0 | INTRON | 5.11713139 | 3.10E-07 | 0.00429153 |
| 6 | 165334467 | 165334467 | 1 | 6_165334467 | ENSG00000112541 | PDE10A | 0 | INTRON | -5.1158159 | 3.12E-07 | 0.00431336 |
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| 11 | 12062969 | 12062969 | 1 | 11_12062969 | ENSG00000254486 | LINC02547 | 1184 | Downstream | -5.1155611 | 3.13E-07 | 0.00431336 |
| 3 | 150240616 | 150240616 | 1 | 3_150240616 | ENSG00000244541 | LINC01213 | 0 | INTRON | 5.1153442 | 3.13E-07 | 0.00431482 |
| X | 14109811 | 14109811 | 1 | X_14109811 | ENSG00000046647 | GEMIN8 | 79918 | Upstream | 5.11502144 | 3.14E-07 | 0.00431516 |
| 4 | 47472008 | 47472008 | 1 | 4_47472008 | ENSG00000282904 | AC107398.4 | 1531 | Downstream | -5.1147559 | 3.14E-07 | 0.00431516 |
| 9 | 136564282 | 136564282 | 1 | 9_136564282 | ENSG00000237886 | NALT1 | 14389 | Downstream | 5.11475372 | 3.14E-07 | 0.00431516 |
| 15 | 63326099 | 63326099 | 1 | 15_63326099 | ENSG00000074410 | CA12 | 0 | 3UTR | 5.11456118 | 3.14E-07 | 0.00431516 |
| 2 | 27938422 | 27938422 | 1 | 2_27938422 | ENSG00000243147 | MRPL33 | 0 | INTRON | 5.11442201 | 3.15E-07 | 0.00431516 |
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| 6 | 96120427 | 96120427 | 1 | 6_96120427 | ENSG00000172461 | FUT9 | 0 | INTRON | -5.1139319 | 3.16E-07 | 0.0043188 |
| 7 | 143428574 | 143428574 | 1 | 7_143428574 | ENSG00000229153 | EPHA1-AS1 | 0 | INTRON | 5.11390876 | 3.16E-07 | 0.0043188 |
| 5 | 180387620 | 180387620 | 1 | 5_180387620 | ENSG00000250509 | AC034213.1 | 29328 | Upstream | 5.1137383 | 3.16E-07 | 0.0043188 |
| 7 | 101297987 | 101297987 | 1 | 7_101297987 | ENSG00000232301 | LNCPRESS1 | 1590 | Upstream | 5.11364778 | 3.16E-07 | 0.0043188 |
| 7 | 69634366 | 69634366 | 1 | 7_69634366 | ENSG00000158321 | AUTS2 | 0 | INTRON | 5.11339559 | 3.16E-07 | 0.0043211 |
| 16 | 46847117 | 46847117 | 1 | 16_46847117 | ENSG00000260889 | CKBP1 | 2499 | Upstream | -5.113193 | 3.17E-07 | 0.00432227 |
| 16 | 21415561 | 21415561 | 1 | 16_21415561 | ENSG00000169246 | NPIPB3 | 0 | INTRON | -5.1126022 | 3.18E-07 | 0.00433234 |
| 17 | 57774800 | 57774800 | 1 | 17_57774800 | ENSG00000265542 | AC015845.2 | 0 | INTRON | 5.11218546 | 3.18E-07 | 0.00433652 |
| 2 | 168410957 | 168410957 | 1 | 2_168410957 | ENSG00000241074 | RN7SL813P | 40366 | Upstream | 5.11211805 | 3.19E-07 | 0.00433652 |
| 19 | 52240818 | 52240818 | 1 | 19_52240818 | ENSG00000277562 | AC010320.5 | 946 | Downstream | 5.11130338 | 3.20E-07 | 0.00435178 |
| 14 | 70895609 | 70895609 | 1 | 14_70895609 | ENSG00000274818 | AC004825.2 | 11047 | Downstream | 5.1110196 | 3.20E-07 | 0.00435484 |
| 12 | 8021053 | 8021053 | 1 | 12_8021053 | ENSG00000282080 | AC006511.4 | 2046 | Upstream | 5.1104624 | 3.21E-07 | 0.00436247 |
| 2 | 111088417 | 111088417 | 1 | 2_111088417 | ENSG00000153093 | ACOXL | 0 | INTRON | 5.11038724 | 3.21E-07 | 0.00436247 |
| 3 | 79453510 | 79453510 | 1 | 3_79453510 | ENSG00000288105 | AC117461.1 | 0 | INTRON | -5.1099328 | 3.22E-07 | 0.0043695 |
| 12 | 5914588 | 5914588 | 1 | 12_5914588 | ENSG00000047617 | ANO2 | 0 | INTRON | 5.10910139 | 3.24E-07 | 0.00438527 |
| 14 | 87101353 | 87101353 | 1 | 14_87101353 | ENSG00000259061 | AL358292.1 | 112228 | Downstream | -5.1083794 | 3.25E-07 | 0.00439856 |
| 12 | 30952471 | 30952471 | 1 | 12_30952471 | ENSG00000110900 | TSPAN11 | 0 | INTRON | 5.10792565 | 3.26E-07 | 0.00440302 |
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| 19 | 31910895 | 31910895 | 1 | 19_31910895 | ENSG00000267489 | LINC01837 | 0 | INTRON | 5.10758839 | 3.26E-07 | 0.00440302 |
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| 13 | 98920731 | 98920731 | 1 | 13_98920731 | ENSG00000088387 | DOCK9 | 0 | INTRON | 5.10743741 | 3.27E-07 | 0.00440302 |
| 13 | 20636737 | 20636737 | 1 | 13_20636737 | ENSG00000032742 | IFT88 | 0 | INTRON | -5.106971 | 3.27E-07 | 0.0044104 |
| 4 | 129495276 | 129495276 | 1 | 4_129495276 | ENSG00000246876 | LINC02466 | 117053 | Downstream | 5.1066418 | 3.28E-07 | 0.00441121 |
| 12 | 50754638 | 50754638 | 1 | 12_50754638 | ENSG00000271018 | AC013244.1 | 2253 | Upstream | -5.106637 | 3.28E-07 | 0.00441121 |
| 7 | 58184612 | 58184612 | 1 | 7_58184612 | ENSG00000231484 | AC023141.7 | 347566 | Downstream | -5.1059956 | 3.29E-07 | 0.00441998 |
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| 13 | 26681182 | 26681182 | 1 | 13_26681182 | ENSG00000132970 | WASF3 | 0 | EXON | 5.10457793 | 3.32E-07 | 0.00444546 |
| 17 | 7475802 | 7475802 | 1 | 17_7475802 | ENSG00000174282 | ZBTB4 | 0 | INTRON | 5.104236 | 3.32E-07 | 0.00445 |
| 2 | 13051685 | 13051685 | 1 | 2_13051685 | ENSG00000285876 | AC093912.1 | 0 | INTRON | -5.1032463 | 3.34E-07 | 0.00446982 |
| 10 | 131754575 | 131754575 | 1 | 10_131754575 | ENSG00000189275 | LINC01164 | 17822 | Downstream | 5.1019146 | 3.36E-07 | 0.00449786 |
| 3 | 192626327 | 192626327 | 1 | 3_192626327 | ENSG00000114279 | FGF12 | 0 | INTRON | 5.10149314 | 3.37E-07 | 0.00450182 |
| 3 | 32094689 | 32094689 | 1 | 3_32094689 | ENSG00000152642 | GPD1L | 10999 | Upstream | -5.1013198 | 3.37E-07 | 0.00450182 |
| 6 | 160635587 | 160635587 | 1 | 6_160635587 | ENSG00000198670 | LPA | 0 | INTRON | -5.1013023 | 3.37E-07 | 0.00450182 |
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| 18 | 4104586 | 4104586 | 1 | 18_4104586 | ENSG00000170579 | DLGAP1 | 0 | INTRON | -5.1000032 | 3.40E-07 | 0.00452219 |
| 1 | 165396253 | 165396253 | 1 | 1_165396253 | ENSG00000143171 | RXRG | 4668 | Downstream | 5.09974919 | 3.40E-07 | 0.00452472 |
| 3 | 65953846 | 65953846 | 1 | 3_65953846 | ENSG00000272610 | MAGI1-IT1 | 0 | INTRON | -5.0991767 | 3.41E-07 | 0.00453488 |
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| 13 | 81749104 | 81749104 | 1 | 13_81749104 | ENSG00000214182 | PTMAP5 | 58032 | Downstream | 5.09459909 | 3.49E-07 | 0.00459912 |
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| 8 | 140218039 | 140218039 | 1 | 8_140218039 | ENSG00000167632 | TRAPPC9 | 0 | INTRON | 5.09365931 | 3.51E-07 | 0.00461485 |
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| 12 | 24328877 | 24328877 | 1 | 12_24328877 | ENSG00000134532 | SOX5 | 0 | INTRON | 5.09303444 | 3.52E-07 | 0.0046216 |
| 18 | 72737762 | 72737762 | 1 | 18_72737762 | ENSG00000166342 | NETO1 | 4551 | Downstream | -5.0929435 | 3.53E-07 | 0.0046216 |
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| 6 | 125073867 | 125073867 | 1 | 6_125073867 | ENSG00000146373 | RNF217 | 0 | INTRON | -5.091969 | 3.54E-07 | 0.00463828 |
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| 13 | 33662256 | 33662256 | 1 | 13_33662256 | ENSG00000230490 | AL139383.1 | 0 | INTRON | -5.0915787 | 3.55E-07 | 0.0046407 |
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| 2 | 128393878 | 128393878 | 1 | 2_128393878 | ENSG00000252742 | Y_RNA | 42951 | Upstream | 5.08934686 | 3.59E-07 | 0.00468127 |
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| 8 | 111000717 | 111000717 | 1 | 8_111000717 | ENSG00000253877 | LINC01608 | 0 | INTRON | 5.08835126 | 3.61E-07 | 0.00469871 |
| 9 | 15406070 | 15406070 | 1 | 9_15406070 | ENSG00000164975 | SNAPC3 | 16633 | Upstream | 5.08795588 | 3.62E-07 | 0.00470492 |
| 17 | 81084553 | 81084553 | 1 | 17_81084553 | ENSG00000175866 | BAIAP2 | 0 | INTRON | 5.08762294 | 3.63E-07 | 0.00470663 |
| X | 123770813 | 123770813 | 1 | X_123770813 | ENSG00000252178 | RNU7-69P | 1264 | Downstream | -5.0874501 | 3.63E-07 | 0.00470663 |
| 1 | 73666622 | 73666622 | 1 | 1_73666622 | ENSG00000223479 | LINC02238 | 0 | INTRON | -5.0873108 | 3.63E-07 | 0.00470663 |
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| 12 | 109824294 | 109824294 | 1 | 12_109824294 | ENSG00000111199 | TRPV4 | 0 | INTRON | 5.08667573 | 3.64E-07 | 0.00471433 |
| 19 | 19725696 | 19725696 | 1 | 19_19725696 | ENSG00000105708 | ZNF14 | 0 | INTRON | 5.08656479 | 3.65E-07 | 0.00471433 |
| 2 | 115672950 | 115672950 | 1 | 2_115672950 | ENSG00000175497 | DPP10 | 0 | INTRON | 5.08632551 | 3.65E-07 | 0.00471669 |
| 13 | 90344009 | 90344009 | 1 | 13_90344009 | ENSG00000224419 | KRT18P27 | 112327 | Downstream | -5.0856865 | 3.66E-07 | 0.00472901 |
| 18 | 604828 | 604828 | 1 | 18_604828 | ENSG00000079101 | CLUL1 | 0 | INTRON | 5.08484158 | 3.68E-07 | 0.00474649 |
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| 15 | 44349986 | 44349986 | 1 | 15_44349986 | ENSG00000166734 | CASC4 | 0 | INTRON | 5.08428997 | 3.69E-07 | 0.00475312 |
| 6 | 39256964 | 39256964 | 1 | 6_39256964 | ENSG00000164626 | KCNK5 | 27489 | Upstream | -5.084114 | 3.69E-07 | 0.00475393 |
| 7 | 130289930 | 130289930 | 1 | 7_130289930 | ENSG00000158516 | CPA2 | 132 | Downstream | 5.08375969 | 3.70E-07 | 0.00475921 |
| 5 | 132346116 | 132346116 | 1 | 5_132346116 | ENSG00000233006 | MIR3936HG | 0 | INTRON | 5.08349974 | 3.71E-07 | 0.00476213 |
| 1 | 17480104 | 17480104 | 1 | 1_17480104 | ENSG00000179051 | RCC2 | 40427 | Upstream | -5.0829437 | 3.72E-07 | 0.00477201 |
| 4 | 187139975 | 187139975 | 1 | 4_187139975 | ENSG00000287571 | AC108046.1 | 58242 | Downstream | -5.0828197 | 3.72E-07 | 0.00477201 |
| 2 | 233621962 | 233621962 | 1 | 2_233621962 | ENSG00000242366 | UGT1A8 | 0 | INTRON | -5.0825748 | 3.72E-07 | 0.00477208 |
| 6 | 129492461 | 129492461 | 1 | 6_129492461 | ENSG00000226149 | AL356124.1 | 0 | EXON | -5.0825309 | 3.72E-07 | 0.00477208 |
| 7 | 53591179 | 53591179 | 1 | 7_53591179 | ENSG00000228627 | AC009468.1 | 16624 | Upstream | -5.0823348 | 3.73E-07 | 0.00477341 |
| 1 | 160146600 | 160146600 | 1 | 1_160146600 | ENSG00000018625 | ATP1A2 | 3009 | Downstream | -5.0819394 | 3.74E-07 | 0.00477664 |
| 3 | 242801 | 242801 | 1 | 3_242801 | ENSG00000134121 | CHL1 | 0 | INTRON | 5.08184869 | 3.74E-07 | 0.00477664 |
| 2 | 16808955 | 16808955 | 1 | 2_16808955 | ENSG00000223536 | AC008164.1 | 39388 | Downstream | -5.0817257 | 3.74E-07 | 0.00477664 |
| 12 | 7124147 | 7124147 | 1 | 12_7124147 | ENSG00000139194 | RBP5 | 0 | EXON | -5.0816357 | 3.74E-07 | 0.00477664 |
| 15 | 24574716 | 24574716 | 1 | 15_24574716 | ENSG00000286110 | AC090983.2 | 0 | EXON | -5.0813301 | 3.75E-07 | 0.00478075 |
| 6 | 24852017 | 24852017 | 1 | 6_24852017 | ENSG00000111913 | RIPOR2 | 0 | INTRON | 5.08112041 | 3.75E-07 | 0.00478241 |
| 10 | 111117627 | 111117627 | 1 | 10_111117627 | ENSG00000213247 | AL355863.1 | 12379 | Downstream | -5.0809794 | 3.75E-07 | 0.00478241 |
| 6 | 59824639 | 59824639 | 1 | 6_59824639 | ENSG00000283453 | AC244258.1 | 456804 | Upstream | -5.0806895 | 3.76E-07 | 0.00478614 |
| 10 | 15409642 | 15409642 | 1 | 10_15409642 | ENSG00000148468 | FAM171A1 | 38353 | Upstream | -5.0795634 | 3.78E-07 | 0.00481099 |
| X | 100142336 | 100142336 | 1 | X_100142336 | ENSG00000236988 | AL359641.1 | 7446 | Downstream | 5.07891849 | 3.80E-07 | 0.00482374 |
| 10 | 124055780 | 124055780 | 1 | 10_124055780 | ENSG00000182022 | CHST15 | 0 | INTRON | 5.07837979 | 3.81E-07 | 0.00483039 |
| 2 | 26380506 | 26380506 | 1 | 2_26380506 | ENSG00000138018 | SELENOI | 0 | INTRON | -5.0783733 | 3.81E-07 | 0.00483039 |
| 2 | 200948192 | 200948192 | 1 | 2_200948192 | ENSG00000115942 | ORC2 | 0 | INTRON | 5.07782567 | 3.82E-07 | 0.00484072 |
| 5 | 132104363 | 132104363 | 1 | 5_132104363 | ENSG00000253067 | AC034216.1 | 24230 | Downstream | 5.07763198 | 3.82E-07 | 0.00484205 |
| 9 | 4281328 | 4281328 | 1 | 9_4281328 | ENSG00000107249 | GLIS3 | 0 | INTRON | 5.07712965 | 3.83E-07 | 0.00484593 |
| 13 | 47402558 | 47402558 | 1 | 13_47402558 | ENSG00000244521 | RN7SL700P | 56382 | Downstream | -5.0770892 | 3.83E-07 | 0.00484593 |
| 14 | 21354736 | 21354736 | 1 | 14_21354736 | ENSG00000092201 | SUPT16H | 0 | EXON | -5.0769924 | 3.83E-07 | 0.00484593 |
| 1 | 19111689 | 19111689 | 1 | 1_19111689 | ENSG00000127481 | UBR4 | 0 | 3UTR | -5.0769143 | 3.84E-07 | 0.00484593 |
| 18 | 11478824 | 11478824 | 1 | 18_11478824 | ENSG00000267564 | AP001109.1 | 0 | INTRON | 5.07664497 | 3.84E-07 | 0.0048489 |
| X | 77860738 | 77860738 | 1 | X_77860738 | ENSG00000102158 | MAGT1 | 0 | INTRON | 5.07651583 | 3.84E-07 | 0.0048489 |
| 8 | 28668400 | 28668400 | 1 | 8_28668400 | ENSG00000012232 | EXTL3 | 0 | INTRON | 5.07614751 | 3.85E-07 | 0.00485471 |
| 22 | 25007995 | 25007995 | 1 | 22_25007995 | ENSG00000197077 | KIAA1671 | 0 | INTRON | 5.07562791 | 3.86E-07 | 0.00486135 |
| 7 | 156956179 | 156956179 | 1 | 7_156956179 | ENSG00000146909 | NOM1 | 0 | INTRON | -5.0755656 | 3.86E-07 | 0.00486135 |
| 1 | 238604722 | 238604722 | 1 | 1_238604722 | ENSG00000231877 | AL359551.1 | 66417 | Downstream | 5.07546566 | 3.87E-07 | 0.00486135 |
| 2 | 45593421 | 45593421 | 1 | 2_45593421 | ENSG00000068784 | SRBD1 | 0 | INTRON | 5.07512267 | 3.87E-07 | 0.00486653 |
| 7 | 5042957 | 5042957 | 1 | 7_5042957 | ENSG00000272968 | RBAK-RBAKDN | 0 | INTRON | 5.07462153 | 3.88E-07 | 0.00487577 |
| 1 | 56523281 | 56523281 | 1 | 1_56523281 | ENSG00000284686 | AC119674.2 | 0 | INTRON | 5.0743213 | 3.89E-07 | 0.00487987 |
| 10 | 132823597 | 132823597 | 1 | 10_132823597 | ENSG00000171811 | CFAP46 | 0 | INTRON | 5.07357352 | 3.90E-07 | 0.00489482 |
| 3 | 51809417 | 51809417 | 1 | 3_51809417 | ENSG00000285749 | AC097636.2 | 0 | INTRON | 5.07334811 | 3.91E-07 | 0.00489482 |
| 11 | 92004675 | 92004675 | 1 | 11_92004675 | ENSG00000278859 | AP002799.1 | 11420 | Downstream | 5.0733192 | 3.91E-07 | 0.00489482 |
| 7 | 155871957 | 155871957 | 1 | 7_155871957 | ENSG00000164690 | SHH | 59494 | Upstream | -5.0730622 | 3.91E-07 | 0.00489783 |
| 10 | 99824149 | 99824149 | 1 | 10_99824149 | ENSG00000023839 | ABCC2 | 0 | INTRON | -5.0719853 | 3.94E-07 | 0.00492042 |
| 7 | 133793572 | 133793572 | 1 | 7_133793572 | ENSG00000131558 | EXOC4 | 0 | INTRON | 5.07190751 | 3.94E-07 | 0.00492042 |
| 6 | 43559024 | 43559024 | 1 | 6_43559024 | ENSG00000124571 | XPO5 | 0 | EXON | 5.07137787 | 3.95E-07 | 0.00493051 |
| 18 | 66587452 | 66587452 | 1 | 18_66587452 | ENSG00000071991 | CDH19 | 0 | INTRON | -5.0709827 | 3.96E-07 | 0.00493714 |
| 9 | 133192039 | 133192039 | 1 | 9_133192039 | ENSG00000171102 | OBP2B | 13237 | Downstream | 5.07032155 | 3.97E-07 | 0.00495069 |
| 8 | 55229982 | 55229982 | 1 | 8_55229982 | ENSG00000206579 | XKR4 | 0 | INTRON | -5.0697868 | 3.98E-07 | 0.00496099 |
| 7 | 44859165 | 44859165 | 1 | 7_44859165 | ENSG00000234183 | LINC01952 | 9597 | Downstream | 5.06936813 | 3.99E-07 | 0.00496828 |
| 16 | 5330624 | 5330624 | 1 | 16_5330624 | ENSG00000078328 | RBFOX1 | 0 | INTRON | -5.0690626 | 4.00E-07 | 0.00497262 |
| 1 | 40288944 | 40288944 | 1 | 1_40288944 | ENSG00000084073 | ZMPSTE24 | 0 | INTRON | -5.0688212 | 4.00E-07 | 0.00497379 |
| 3 | 124754927 | 124754927 | 1 | 3_124754927 | ENSG00000114491 | UMPS | 5654 | Downstream | 5.06870846 | 4.01E-07 | 0.00497379 |
| 20 | 12703626 | 12703626 | 1 | 20_12703626 | ENSG00000233048 | LINC01722 | 161575 | Downstream | -5.0685548 | 4.01E-07 | 0.00497379 |
| 11 | 108352448 | 108352448 | 1 | 11_108352448 | ENSG00000166323 | C11orf65 | 0 | INTRON | 5.06838495 | 4.01E-07 | 0.00497379 |
| 5 | 102733603 | 102733603 | 1 | 5_102733603 | ENSG00000286338 | AC099487.2 | 7005 | Downstream | -5.0683233 | 4.01E-07 | 0.00497379 |
| 2 | 133356004 | 133356004 | 1 | 2_133356004 | ENSG00000176771 | NCKAP5 | 0 | INTRON | -5.0680996 | 4.02E-07 | 0.00497439 |
| X | 68602459 | 68602459 | 1 | X_68602459 | ENSG00000236735 | RPL31P63 | 1986 | Downstream | 5.06802328 | 4.02E-07 | 0.00497439 |
| 7 | 77781227 | 77781227 | 1 | 7_77781227 | ENSG00000187257 | RSBN1L | 0 | 3UTR | 5.0678823 | 4.02E-07 | 0.00497446 |
| 22 | 12171806 | 12171806 | 1 | 22_12171806 | ENSG00000286406 | AC138776.1 | 261448 | Downstream | -5.0675586 | 4.03E-07 | 0.00497851 |
| 13 | 112867562 | 112867562 | 1 | 13_112867562 | ENSG00000068650 | ATP11A | 0 | INTRON | 5.06738769 | 4.03E-07 | 0.00497851 |
| 10 | 91189822 | 91189822 | 1 | 10_91189822 | ENSG00000180628 | PCGF5 | 0 | INTRON | -5.0673125 | 4.03E-07 | 0.00497851 |
| 4 | 98836365 | 98836365 | 1 | 4_98836365 | ENSG00000151247 | EIF4E | 35318 | Downstream | 5.06698011 | 4.04E-07 | 0.00498244 |
| 1 | 31510183 | 31510183 | 1 | 1_31510183 | ENSG00000284543 | LINC01226 | 0 | INTRON | 5.06671155 | 4.05E-07 | 0.00498244 |
| 20 | 60397259 | 60397259 | 1 | 20_60397259 | ENSG00000228340 | MIR646HG | 0 | INTRON | -5.066653 | 4.05E-07 | 0.00498244 |
| 12 | 24202718 | 24202718 | 1 | 12_24202718 | ENSG00000134532 | SOX5 | 0 | INTRON | -5.0666106 | 4.05E-07 | 0.00498244 |
| 7 | 66707795 | 66707795 | 1 | 7_66707795 | ENSG00000154710 | RABGEF1 | 0 | INTRON | 5.0663225 | 4.06E-07 | 0.00498638 |
| 10 | 4213056 | 4213056 | 1 | 10_4213056 | ENSG00000233117 | LINC00702 | 0 | INTRON | 5.06565628 | 4.07E-07 | 0.00500024 |
| 18 | 7882201 | 7882201 | 1 | 18_7882201 | ENSG00000173482 | PTPRM | 0 | INTRON | 5.06422451 | 4.10E-07 | 0.00503433 |
| 5 | 124105880 | 124105880 | 1 | 5_124105880 | ENSG00000253807 | LINC01170 | 0 | INTRON | -5.0639737 | 4.11E-07 | 0.00503732 |
| 3 | 195868001 | 195868001 | 1 | 3_195868001 | ENSG00000061938 | TNK2 | 0 | EXON | -5.0637209 | 4.11E-07 | 0.00504038 |
| 17 | 67347473 | 67347473 | 1 | 17_67347473 | ENSG00000197170 | PSMD12 | 0 | 3UTR | 5.06357575 | 4.11E-07 | 0.00504059 |
| 13 | 91774602 | 91774602 | 1 | 13_91774602 | ENSG00000179399 | GPC5 | 0 | INTRON | -5.0629951 | 4.13E-07 | 0.00505021 |
| 22 | 22596244 | 22596244 | 1 | 22_22596244 | ENSG00000211657 | IGLV3-32 | 1188 | Downstream | -5.0629381 | 4.13E-07 | 0.00505021 |
| 7 | 15328013 | 15328013 | 1 | 7_15328013 | ENSG00000187546 | AGMO | 0 | INTRON | 5.06249352 | 4.14E-07 | 0.00505837 |
| 2 | 144416159 | 144416159 | 1 | 2_144416159 | ENSG00000169554 | ZEB2 | 0 | INTRON | 5.06185351 | 4.15E-07 | 0.00506961 |
| 4 | 87111093 | 87111093 | 1 | 4_87111093 | ENSG00000172493 | AFF1 | 0 | INTRON | 5.06179657 | 4.15E-07 | 0.00506961 |
| 22 | 31596516 | 31596516 | 1 | 22_31596516 | ENSG00000198089 | SFI1 | 0 | INTRON | 5.06159028 | 4.16E-07 | 0.00507147 |
| 8 | 35892349 | 35892349 | 1 | 8_35892349 | ENSG00000253452 | AC124290.1 | 0 | INTRON | 5.06086898 | 4.17E-07 | 0.00508704 |
| 15 | 25927629 | 25927629 | 1 | 15_25927629 | ENSG00000206187 | LINC02346 | 0 | INTRON | 5.06059978 | 4.18E-07 | 0.00509059 |
| 1 | 163140555 | 163140555 | 1 | 1_163140555 | ENSG00000143248 | RGS5 | 0 | INTRON | -5.0603894 | 4.18E-07 | 0.00509219 |
| 12 | 8742049 | 8742049 | 1 | 12_8742049 | ENSG00000166532 | RIMKLB | 0 | INTRON | 5.06026687 | 4.19E-07 | 0.00509219 |
| 11 | 95431403 | 95431403 | 1 | 11_95431403 | ENSG00000250390 | AP001790.1 | 51002 | Upstream | -5.0599086 | 4.19E-07 | 0.00509813 |
| 11 | 77848482 | 77848482 | 1 | 11_77848482 | ENSG00000087884 | AAMDC | 0 | INTRON | 5.05970795 | 4.20E-07 | 0.00509985 |
| 11 | 57468495 | 57468495 | 1 | 11_57468495 | ENSG00000186907 | RTN4RL2 | 0 | INTRON | 5.05934851 | 4.21E-07 | 0.00510262 |
| 14 | 88598766 | 88598766 | 1 | 14_88598766 | ENSG00000100722 | ZC3H14 | 0 | INTRON | 5.05933256 | 4.21E-07 | 0.00510262 |
| 15 | 32292451 | 32292451 | 1 | 15_32292451 | ENSG00000207257 | RNU6-18P | 8193 | Downstream | 5.05913715 | 4.21E-07 | 0.00510382 |
| 6 | 47878671 | 47878671 | 1 | 6_47878671 | ENSG00000244694 | PTCHD4 | 0 | EXON | -5.05899 | 4.21E-07 | 0.00510382 |
| 4 | 45733903 | 45733903 | 1 | 4_45733903 | ENSG00000200720 | RNU6-931P | 253767 | Downstream | 5.05869931 | 4.22E-07 | 0.00510382 |
| 18 | 23382764 | 23382764 | 1 | 18_23382764 | ENSG00000134490 | TMEM241 | 0 | INTRON | 5.05858489 | 4.22E-07 | 0.00510382 |
| 21 | 42200243 | 42200243 | 1 | 21_42200243 | ENSG00000160179 | ABCG1 | 0 | INTRON | -5.0585199 | 4.23E-07 | 0.00510382 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 32663865 | 32663865 | 1 | 18_32663865 | ENSG00000285095 | AC025887.2 | 0 | INTRON | -5.0584738 | 4.23E-07 | 0.00510382 |
| 3 | 130281563 | 130281563 | 1 | 3_130281563 | ENSG00000228252 | COL6A4P2 | 7757 | Downstream | 5.05816093 | 4.23E-07 | 0.00510857 |
| 9 | 69863295 | 69863295 | 1 | 9_69863295 | ENSG00000204711 | C9orf135 | 0 | INTRON | -5.0578529 | 4.24E-07 | 0.0051132 |
| X | 130191669 | 130191669 | 1 | X_130191669 | ENSG00000134594 | RAB33A | 6799 | Downstream | -5.0574692 | 4.25E-07 | 0.00511702 |
| 11 | 22760513 | 22760513 | 1 | 11_22760513 | ENSG00000148935 | GAS2 | 0 | INTRON | 5.05744044 | 4.25E-07 | 0.00511702 |
| 7 | 153454596 | 153454596 | 1 | 7_153454596 | ENSG00000233489 | PAXBP1P1 | 4721 | Downstream | -5.057004 | 4.26E-07 | 0.00512511 |
| 2 | 196210247 | 196210247 | 1 | 2_196210247 | ENSG00000138411 | HECW2 | 0 | INTRON | 5.05667562 | 4.27E-07 | 0.00513031 |
| 11 | 134595624 | 134595624 | 1 | 11_134595624 | ENSG00000254573 | AP004550.1 | 22568 | Downstream | 5.05638544 | 4.27E-07 | 0.00513449 |
| 5 | 69385108 | 69385108 | 1 | 5_69385108 | ENSG00000152942 | RAD17 | 0 | INTRON | 5.05624244 | 4.28E-07 | 0.00513471 |
| X | 113212640 | 113212640 | 1 | X_113212640 | ENSG00000286072 | AC002072.1 | 454 | Downstream | 5.0558932 | 4.28E-07 | 0.00514037 |
| 20 | 31173475 | 31173475 | 1 | 20_31173475 | ENSG00000215547 | DEFB115 | 84188 | Upstream | 5.05532897 | 4.30E-07 | 0.00514037 |
| 14 | 25230654 | 25230654 | 1 | 14_25230654 | ENSG00000257179 | HMGN2P6 | 36409 | Downstream | 5.05530764 | 4.30E-07 | 0.00514037 |
| 7 | 28003398 | 28003398 | 1 | 7_28003398 | ENSG00000153814 | JAZF1 | 0 | INTRON | 5.05505707 | 4.30E-07 | 0.00514037 |
| 8 | 41250527 | 41250527 | 1 | 8_41250527 | ENSG00000104332 | SFRP1 | 11434 | Downstream | -5.0549339 | 4.31E-07 | 0.00514037 |
| X | 63933365 | 63933365 | 1 | X_63933365 | ENSG00000232794 | HNRNPDP1 | 110939 | Upstream | -5.0548664 | 4.31E-07 | 0.00514037 |
| 16 | 130532 | 130532 | 1 | 16_130532 | ENSG00000103148 | NPRL3 | 0 | 5UTR | -5.0548106 | 4.31E-07 | 0.00514037 |
| 13 | 89062503 | 89062503 | 1 | 13_89062503 | ENSG00000286422 | AL445242.1 | 79296 | Downstream | -5.0546338 | 4.31E-07 | 0.00514037 |
| 3 | 84362901 | 84362901 | 1 | 3_84362901 | ENSG00000242641 | LINC00971 | 275503 | Downstream | 5.05453811 | 4.31E-07 | 0.00514037 |
| 15 | 97701390 | 97701390 | 1 | 15_97701390 | ENSG00000251209 | LINC00923 | 0 | EXON | -5.054365 | 4.32E-07 | 0.00514037 |
| 7 | 69801330 | 69801330 | 1 | 7_69801330 | ENSG00000158321 | AUTS2 | 0 | INTRON | 5.0543007 | 4.32E-07 | 0.00514037 |
| 4 | 190187396 | 190187396 | 1 | 4_190187396 | ENSG00000260596 | DUX4 | 1454 | Downstream | 5.05416624 | 4.32E-07 | 0.00514037 |
| 6 | 12437661 | 12437661 | 1 | 6_12437661 | ENSG00000223321 | RN7SKP293 | 30880 | Upstream | 5.05410311 | 4.32E-07 | 0.00514037 |
| 8 | 15810965 | 15810965 | 1 | 8_15810965 | ENSG00000250483 | PPM1AP1 | 3682 | Upstream | -5.0540021 | 4.33E-07 | 0.00514037 |
| 10 | 46034304 | 46034304 | 1 | 10_46034304 | ENSG00000263639 | MSMB | 0 | INTRON | 5.05389029 | 4.33E-07 | 0.00514037 |
| 18 | 74835056 | 74835056 | 1 | 18_74835056 | ENSG00000215421 | ZNF407 | 0 | INTRON | 5.05388936 | 4.33E-07 | 0.00514037 |
| 17 | 70731304 | 70731304 | 1 | 17_70731304 | ENSG00000271239 | AC007423.1 | 47299 | Downstream | -5.0536806 | 4.33E-07 | 0.00514241 |
| 11 | 114777644 | 114777644 | 1 | 11_114777644 | ENSG00000204361 | NXPE2 | 70575 | Downstream | 5.05350873 | 4.34E-07 | 0.00514345 |
| X | 1088593 | 1088593 | 1 | X_1088593 | ENSG00000225661 | RPL14P5 | 78492 | Upstream | 5.05281666 | 4.35E-07 | 0.00515854 |
| 12 | 107392007 | 107392007 | 1 | 12_107392007 | ENSG00000151136 | BTBD11 | 0 | INTRON | 5.05225155 | 4.37E-07 | 0.00516242 |
| 14 | 58901711 | 58901711 | 1 | 14_58901711 | ENSG00000258583 | LINC01500 | 0 | INTRON | 5.05210343 | 4.37E-07 | 0.00516242 |
| 1 | 191312161 | 191312161 | 1 | 1_191312161 | ENSG00000233882 | LINC01680 | 83694 | Upstream | 5.05209077 | 4.37E-07 | 0.00516242 |
| 16 | 88909578 | 88909578 | 1 | 16_88909578 | ENSG00000129993 | CBFA2T3 | 0 | INTRON | 5.05208046 | 4.37E-07 | 0.00516242 |
| 11 | 129745997 | 129745997 | 1 | 11_129745997 | ENSG00000287426 | AP003327.2 | 15715 | Downstream | 5.0518893 | 4.37E-07 | 0.00516242 |
| 2 | 207141984 | 207141984 | 1 | 2_207141984 | ENSG00000118263 | KLF7 | 0 | INTRON | 5.05187671 | 4.37E-07 | 0.00516242 |
| 8 | 143862174 | 143862174 | 1 | 8_143862174 | ENSG00000261150 | EPPK1 | 0 | EXON | -5.0517296 | 4.38E-07 | 0.00516276 |
| 2 | 162336134 | 162336134 | 1 | 2_162336134 | ENSG00000115271 | GCA | 0 | INTRON | -5.0510311 | 4.39E-07 | 0.00516276 |
| 2 | 46380280 | 46380280 | 1 | 2_46380280 | ENSG00000116016 | EPAS1 | 0 | EXON | 5.05075835 | 4.40E-07 | 0.00516276 |
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| 11 | 19771626 | 19771626 | 1 | 11_19771626 | ENSG00000166833 | NAV2 | 0 | INTRON | 5.05050593 | 4.41E-07 | 0.00516276 |
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| 6 | 14964113 | 14964113 | 1 | 6_14964113 | ENSG00000234261 | AL138720.1 | 0 | INTRON | 5.05041797 | 4.41E-07 | 0.00516276 |
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| 7 | 97909650 | 97909650 | 1 | 7_97909650 | ENSG00000284707 | AC079781.5 | 0 | INTRON | -5.0502466 | 4.41E-07 | 0.00516276 |
| 9 | 61229251 | 61229251 | 1 | 9_61229251 | ENSG00000275676 | BX005040.1 | 661 | Downstream | 5.05019185 | 4.41E-07 | 0.00516276 |
| 1 | 56850391 | 56850391 | 1 | 1_56850391 | ENSG00000157131 | C8A | 4414 | Upstream | -5.0500955 | 4.42E-07 | 0.00516276 |
| 11 | 68992878 | 68992878 | 1 | 11_68992878 | ENSG00000261625 | AP003071.4 | 7886 | Downstream | 5.04999586 | 4.42E-07 | 0.00516276 |
| 10 | 95605657 | 95605657 | 1 | 10_95605657 | ENSG00000059573 | ALDH18A1 | 283 | Downstream | 5.04996217 | 4.42E-07 | 0.00516276 |
| 22 | 43260639 | 43260639 | 1 | 22_43260639 | ENSG00000159307 | SCUBE1 | 0 | INTRON | 5.04960961 | 4.43E-07 | 0.00516276 |
| 14 | 24818514 | 24818514 | 1 | 14_24818514 | ENSG00000288100 | AL161663.2 | 0 | EXON | 5.04958019 | 4.43E-07 | 0.00516276 |
| 15 | 43274568 | 43274568 | 1 | 15_43274568 | ENSG00000159495 | TGM7 | 1702 | Downstream | -5.0493642 | 4.43E-07 | 0.00516276 |
| 6 | 105259618 | 105259618 | 1 | 6_105259618 | ENSG00000085377 | PREP | 13601 | Downstream | 5.0492768 | 4.43E-07 | 0.00516276 |
| 9 | 73204479 | 73204479 | 1 | 9_73204479 | ENSG00000135046 | ANXA1 | 34086 | Downstream | -5.0491768 | 4.44E-07 | 0.00516276 |
| 5 | 1036922 | 1036922 | 1 | 5_1036922 | ENSG00000145506 | NKD2 | 0 | INTRON | 5.04913653 | 4.44E-07 | 0.00516276 |
| 7 | 18472607 | 18472607 | 1 | 7_18472607 | ENSG00000048052 | HDAC9 | 0 | INTRON | -5.0491229 | 4.44E-07 | 0.00516276 |
| 1 | 28512232 | 28512232 | 1 | 1_28512232 | ENSG00000180198 | RCC1 | 0 | INTRON | -5.0491025 | 4.44E-07 | 0.00516276 |
| 19 | 7207331 | 7207331 | 1 | 19_7207331 | ENSG00000171105 | INSR | 0 | INTRON | 5.04877693 | 4.45E-07 | 0.00516365 |
| X | 120418161 | 120418161 | 1 | X_120418161 | ENSG00000005893 | LAMP2 | 9665 | Downstream | 5.0487128 | 4.45E-07 | 0.00516365 |
| 5 | 78570713 | 78570713 | 1 | 5_78570713 | ENSG00000145685 | LHFPL2 | 0 | INTRON | -5.0486783 | 4.45E-07 | 0.00516365 |
| 13 | 40926579 | 40926579 | 1 | 13_40926579 | ENSG00000239827 | SUGT1P3 | 4805 | Upstream | -5.0483365 | 4.46E-07 | 0.0051648 |
| 1 | 94335466 | 94335466 | 1 | 1_94335466 | ENSG00000226835 | ARHGAP29-AS1 | 0 | EXON | -5.0483176 | 4.46E-07 | 0.0051648 |
| 11 | 115806415 | 115806415 | 1 | 11_115806415 | ENSG00000256717 | LINC02698 | 0 | INTRON | -5.048245 | 4.46E-07 | 0.0051648 |
| 12 | 9418321 | 9418321 | 1 | 12_9418321 | ENSG00000214826 | DDX12P | 351 | Downstream | 5.04810389 | 4.46E-07 | 0.0051651 |
| 4 | 189372388 | 189372388 | 1 | 4_189372388 | ENSG00000249877 | AC105924.1 | 81052 | Upstream | -5.0475627 | 4.47E-07 | 0.00517623 |
| 3 | 82270912 | 82270912 | 1 | 3_82270912 | ENSG00000239440 | LINC02008 | 0 | INTRON | 5.04726633 | 4.48E-07 | 0.00517757 |
| 11 | 117325623 | 117325623 | 1 | 11_117325623 | ENSG00000110274 | CEP164 | 0 | INTRON | -5.0472535 | 4.48E-07 | 0.00517757 |
| 5 | 173413581 | 173413581 | 1 | 5_173413581 | ENSG00000253968 | AC016573.1 | 0 | INTRON | -5.0470723 | 4.49E-07 | 0.00517896 |
| 16 | 983677 | 983677 | 1 | 16_983677 | ENSG00000005513 | SOX8 | 0 | EXON | 5.04582772 | 4.52E-07 | 0.00520284 |
| 20 | 35630018 | 35630018 | 1 | 20_35630018 | ENSG00000214078 | CPNE1 | 0 | INTRON | 5.04575262 | 4.52E-07 | 0.00520284 |
| 6 | 67992934 | 67992934 | 1 | 6_67992934 | ENSG00000287557 | AL713998.4 | 0 | INTRON | 5.04574483 | 4.52E-07 | 0.00520284 |
| 6 | 156348110 | 156348110 | 1 | 6_156348110 | ENSG00000287092 | AL589693.1 | 0 | INTRON | 5.04567519 | 4.52E-07 | 0.00520284 |
| 11 | 103380551 | 103380551 | 1 | 11_103380551 | ENSG00000187240 | DYNC2H1 | 0 | INTRON | 5.04553809 | 4.52E-07 | 0.00520305 |
| 13 | 34987353 | 34987353 | 1 | 13_34987353 | ENSG00000172915 | NBEA | 0 | INTRON | 5.04506694 | 4.53E-07 | 0.00520884 |
| 19 | 7416060 | 7416060 | 1 | 19_7416060 | ENSG00000268861 | AC008878.3 | 0 | INTRON | -5.0450669 | 4.53E-07 | 0.00520884 |
| 15 | 40146865 | 40146865 | 1 | 15_40146865 | ENSG00000259239 | AC021755.1 | 11651 | Upstream | 5.04481204 | 4.54E-07 | 0.00521227 |
| 19 | 40109464 | 40109464 | 1 | 19_40109464 | ENSG00000230086 | VN1R96P | 11846 | Downstream | 5.04433078 | 4.55E-07 | 0.00522188 |
| 19 | 9947295 | 9947295 | 1 | 19_9947295 | ENSG00000105088 | OLFM2 | 10743 | Upstream | -5.0437 | 4.57E-07 | 0.00523175 |
| 5 | 127054421 | 127054421 | 1 | 5_127054421 | ENSG00000164241 | C5orf63 | 0 | INTRON | 5.04364899 | 4.57E-07 | 0.00523175 |
| 12 | 95451099 | 95451099 | 1 | 12_95451099 | ENSG00000257943 | AC084879.1 | 8617 | Upstream | 5.04355524 | 4.57E-07 | 0.00523175 |
| 2 | 3285716 | 3285716 | 1 | 2_3285716 | ENSG00000032389 | EIPR1 | 0 | INTRON | -5.0432983 | 4.58E-07 | 0.00523175 |
| 3 | 109641143 | 109641143 | 1 | 3_109641143 | ENSG00000228980 | LINC01205 | 0 | INTRON | 5.04328009 | 4.58E-07 | 0.00523175 |
| 1 | 107556579 | 107556579 | 1 | 1_107556579 | ENSG00000134215 | VAV3 | 14581 | Downstream | -5.0430972 | 4.58E-07 | 0.00523175 |
| X | 39759183 | 39759183 | 1 | X_39759183 | ENSG00000264618 | RN7SL732P | 27340 | Downstream | -5.043069 | 4.58E-07 | 0.00523175 |
| 1 | 111441970 | 111441970 | 1 | 1_111441970 | ENSG00000116455 | WDR77 | 0 | INTRON | -5.042695 | 4.59E-07 | 0.00523848 |
| 22 | 24621065 | 24621065 | 1 | 22_24621065 | ENSG00000286070 | GGT1 | 0 | 3UTR | 5.04255772 | 4.59E-07 | 0.00523873 |
| 19 | 54519735 | 54519735 | 1 | 19_54519735 | ENSG00000213016 | AC245036.1 | 1987 | Upstream | 5.04240186 | 4.60E-07 | 0.00523948 |
| 10 | 123664365 | 123664365 | 1 | 10_123664365 | ENSG00000154478 | GPR26 | 1989 | Upstream | 5.04174035 | 4.61E-07 | 0.00525411 |
| 13 | 109624486 | 109624486 | 1 | 13_109624486 | ENSG00000285534 | AL163541.1 | 0 | INTRON | 5.04136599 | 4.62E-07 | 0.00525738 |
| 6 | 98755275 | 98755275 | 1 | 6_98755275 | ENSG00000187472 | AL589826.1 | 24981 | Downstream | -5.0413653 | 4.62E-07 | 0.00525738 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 22 | 49006824 | 49006824 | 1 | 22_49006824 | ENSG00000286381 | AL078622.1 | 40659 | Downstream | 5.04092028 | 4.63E-07 | 0.00526378 |
| 7 | 49065954 | 49065954 | 1 | 7_49065954 | ENSG00000218305 | CDC14C | 138500 | Downstream | -5.0407288 | 4.64E-07 | 0.00526378 |
| 17 | 26859195 | 26859195 | 1 | 17_26859195 | ENSG00000263433 | AC069061.1 | 122498 | Upstream | 5.0406881 | 4.64E-07 | 0.00526378 |
| 19 | 19752280 | 19752280 | 1 | 19_19752280 | ENSG00000271499 | AC011477.6 | 0 | EXON | 5.04062182 | 4.64E-07 | 0.00526378 |
| 13 | 24886304 | 24886304 | 1 | 13_24886304 | ENSG00000151849 | CENPJ | 0 | EXON | -5.0399367 | 4.66E-07 | 0.00527914 |
| 2 | 149082852 | 149082852 | 1 | 2_149082852 | ENSG00000150556 | LYPD6B | 0 | INTRON | 5.03936565 | 4.67E-07 | 0.00529139 |
| 3 | 76723518 | 76723518 | 1 | 3_76723518 | ENSG00000185008 | ROBO2 | 0 | INTRON | 5.03884545 | 4.68E-07 | 0.00529781 |
| 13 | 72249540 | 72249540 | 1 | 13_72249540 | ENSG00000212377 | AL139003.1 | 204361 | Downstream | -5.0387553 | 4.69E-07 | 0.00529781 |
| 2 | 197636214 | 197636214 | 1 | 2_197636214 | ENSG00000162944 | RFTN2 | 0 | INTRON | 5.03872847 | 4.69E-07 | 0.00529781 |
| 12 | 91625844 | 91625844 | 1 | 12_91625844 | ENSG00000274647 | AC126175.1 | 7067 | Downstream | -5.0385714 | 4.69E-07 | 0.00529781 |
| 3 | 58963062 | 58963062 | 1 | 3_58963062 | ENSG00000163689 | C3orf67 | 0 | INTRON | -5.0384974 | 4.69E-07 | 0.00529781 |
| 1 | 74575534 | 74575534 | 1 | 1_74575534 | ENSG00000178965 | ERICH3 | 0 | INTRON | -5.0381132 | 4.70E-07 | 0.00530493 |
| 9 | 68609975 | 68609975 | 1 | 9_68609975 | ENSG00000224025 | AL353616.1 | 0 | EXON | -5.0379354 | 4.71E-07 | 0.00530634 |
| 5 | 52878149 | 52878149 | 1 | 5_52878149 | ENSG00000213949 | ITGA1 | 0 | INTRON | 5.03759143 | 4.71E-07 | 0.00531236 |
| 7 | 40358328 | 40358328 | 1 | 7_40358328 | ENSG00000175600 | SUGCT | 0 | INTRON | -5.0364719 | 4.74E-07 | 0.00533998 |
| 8 | 140438809 | 140438809 | 1 | 8_140438809 | ENSG00000167632 | TRAPPC9 | 0 | INTRON | -5.0359485 | 4.75E-07 | 0.00535105 |
| 8 | 29736544 | 29736544 | 1 | 8_29736544 | ENSG00000251191 | LINC00589 | 0 | INTRON | 5.03519534 | 4.77E-07 | 0.0053624 |
| 14 | 85309223 | 85309223 | 1 | 14_85309223 | ENSG00000258902 | AL049775.2 | 53233 | Downstream | -5.0351755 | 4.77E-07 | 0.0053624 |
| 5 | 78321418 | 78321418 | 1 | 5_78321418 | ENSG00000206714 | Y_RNA | 4281 | Downstream | 5.03516288 | 4.77E-07 | 0.0053624 |
| 5 | 178163940 | 178163940 | 1 | 5_178163940 | ENSG00000251211 | AC136632.2 | 1761 | Upstream | -5.0349223 | 4.78E-07 | 0.00536349 |
| 1 | 75512703 | 75512703 | 1 | 1_75512703 | ENSG00000137968 | SLC44A5 | 0 | INTRON | -5.03477 | 4.78E-07 | 0.00536349 |
| 6 | 111322395 | 111322395 | 1 | 6_111322395 | ENSG00000173214 | MFSD4B | 0 | INTRON | -5.0346818 | 4.79E-07 | 0.00536349 |
| 3 | 54877448 | 54877448 | 1 | 3_54877448 | ENSG00000243715 | CACNA2D3-AS1 | 0 | INTRON | 5.03461896 | 4.79E-07 | 0.00536349 |
| 6 | 45372969 | 45372969 | 1 | 6_45372969 | ENSG00000196284 | SUPT3H | 0 | INTRON | -5.0343743 | 4.79E-07 | 0.00536398 |
| 18 | 9536616 | 9536616 | 1 | 18_9536616 | ENSG00000017797 | RALBP1 | 0 | 3UTR | 5.03422949 | 4.80E-07 | 0.00536398 |
| 19 | 6922835 | 6922835 | 1 | 19_6922835 | ENSG00000174837 | ADGRE1 | 0 | INTRON | 5.03422324 | 4.80E-07 | 0.00536398 |
| 4 | 111391997 | 111391997 | 1 | 4_111391997 | ENSG00000200963 | RNU6-289P | 60479 | Downstream | 5.03403121 | 4.80E-07 | 0.00536584 |
| 11 | 64675507 | 64675507 | 1 | 11_64675507 | ENSG00000110076 | NRXN2 | 0 | EXON | -5.0319987 | 4.85E-07 | 0.00541943 |
| 8 | 143116725 | 143116725 | 1 | 8_143116725 | ENSG00000261667 | LY6L | 33724 | Downstream | 5.03187519 | 4.86E-07 | 0.00541943 |
| 19 | 4887848 | 4887848 | 1 | 19_4887848 | ENSG00000205784 | ARRDC5 | 2588 | Downstream | 5.03129494 | 4.87E-07 | 0.0054323 |
| 15 | 87995768 | 87995768 | 1 | 15_87995768 | ENSG00000140538 | NTRK3 | 0 | INTRON | 5.03097167 | 4.88E-07 | 0.00543626 |
| 15 | 82480758 | 82480758 | 1 | 15_82480758 | ENSG00000255769 | GOLGA2P10 | 0 | INTRON | -5.0309041 | 4.88E-07 | 0.00543626 |
| 8 | 92905494 | 92905494 | 1 | 8_92905494 | ENSG00000253197 | AC117834.1 | 0 | INTRON | -5.0304525 | 4.89E-07 | 0.0054382 |
| 9 | 123294547 | 123294547 | 1 | 9_123294547 | ENSG00000165209 | STRBP | 25961 | Upstream | 5.03041533 | 4.89E-07 | 0.0054382 |
| 3 | 88098424 | 88098424 | 1 | 3_88098424 | ENSG00000163320 | CGGBP1 | 0 | INTRON | 5.03027267 | 4.90E-07 | 0.0054382 |
| 19 | 44393973 | 44393973 | 1 | 19_44393973 | ENSG00000267508 | ZNF285 | 0 | INTRON | 5.03022895 | 4.90E-07 | 0.0054382 |
| 1 | 234431903 | 234431903 | 1 | 1_234431903 | ENSG00000059588 | TARBP1 | 0 | INTRON | 5.03013177 | 4.90E-07 | 0.0054382 |
| 19 | 20405091 | 20405091 | 1 | 19_20405091 | ENSG00000231205 | ZNF826P | 0 | EXON | 5.03008455 | 4.90E-07 | 0.0054382 |
| 5 | 178238162 | 178238162 | 1 | 5_178238162 | ENSG00000050767 | COL23A1 | 0 | 3UTR | 5.02985932 | 4.91E-07 | 0.00544104 |
| 20 | 31264091 | 31264091 | 1 | 20_31264091 | ENSG00000215547 | DEFB115 | 4459 | Downstream | 5.02968799 | 4.91E-07 | 0.00544112 |
| 21 | 34883465 | 34883465 | 1 | 21_34883465 | ENSG00000286153 | AP000331.1 | 0 | INTRON | -5.0296067 | 4.91E-07 | 0.00544112 |
| 6 | 10097124 | 10097124 | 1 | 6_10097124 | ENSG00000181355 | OFCC1 | 0 | INTRON | 5.02934534 | 4.92E-07 | 0.005445 |
| 15 | 94151678 | 94151678 | 1 | 15_94151678 | ENSG00000258570 | AC110027.1 | 16670 | Upstream | 5.02916902 | 4.93E-07 | 0.00544647 |
| 13 | 23901466 | 23901466 | 1 | 13_23901466 | ENSG00000205863 | C1QTNF9B | 0 | INTRON | 5.02895987 | 4.93E-07 | 0.00544887 |
| 16 | 5133497 | 5133497 | 1 | 16_5133497 | ENSG00000285567 | AC074051.5 | 0 | INTRON | 5.02846044 | 4.94E-07 | 0.00545847 |
| 4 | 144795891 | 144795891 | 1 | 4_144795891 | ENSG00000285783 | AC098588.3 | 0 | INTRON | -5.0283736 | 4.95E-07 | 0.00545847 |
| 6 | 91472267 | 91472267 | 1 | 6_91472267 | ENSG00000263734 | MIR4643 | 49392 | Upstream | 5.02814368 | 4.95E-07 | 0.00546083 |
| 2 | 165031050 | 165031050 | 1 | 2_165031050 | ENSG00000236283 | AC019197.1 | 0 | INTRON | 5.02804216 | 4.96E-07 | 0.00546083 |
| 3 | 67613953 | 67613953 | 1 | 3_67613953 | ENSG00000172340 | SUCLG2 | 0 | INTRON | 5.02774194 | 4.96E-07 | 0.00546584 |
| 15 | 25710236 | 25710236 | 1 | 15_25710236 | ENSG00000274307 | AC023449.2 | 0 | EXON | 5.02703604 | 4.98E-07 | 0.00548244 |
| 1 | 84594859 | 84594859 | 1 | 1_84594859 | ENSG00000284882 | AL359762.1 | 11239 | Downstream | 5.02656327 | 4.99E-07 | 0.00548914 |
| 21 | 25360377 | 25360377 | 1 | 21_25360377 | ENSG00000222042 | AP001341.1 | 0 | INTRON | 5.02649136 | 5.00E-07 | 0.00548914 |
| 2 | 235014238 | 235014238 | 1 | 2_235014238 | ENSG00000130147 | SH3BP4 | 0 | INTRON | -5.0264297 | 5.00E-07 | 0.00548914 |
| 14 | 41756171 | 41756171 | 1 | 14_41756171 | ENSG00000165379 | LRFN5 | 0 | INTRON | 5.02615737 | 5.00E-07 | 0.00549258 |
| 3 | 95690174 | 95690174 | 1 | 3_95690174 | ENSG00000244681 | MTHFD2P1 | 6981 | Upstream | -5.0259462 | 5.01E-07 | 0.00549258 |
| 3 | 110890487 | 110890487 | 1 | 3_110890487 | ENSG00000242242 | NECTIN3-AS1 | 0 | INTRON | 5.02593835 | 5.01E-07 | 0.00549258 |
| 11 | 67475992 | 67475992 | 1 | 11_67475992 | ENSG00000172663 | TMEM134 | 6720 | Upstream | 5.02556233 | 5.02E-07 | 0.00549981 |
| 4 | 63537070 | 63537070 | 1 | 4_63537070 | ENSG00000250775 | AC093730.1 | 7309 | Upstream | 5.02533439 | 5.03E-07 | 0.00550281 |
| 3 | 43875496 | 43875496 | 1 | 3_43875496 | ENSG00000235886 | AC006055.1 | 95514 | Upstream | 5.02446341 | 5.05E-07 | 0.00552332 |
| 7 | 17539898 | 17539898 | 1 | 7_17539898 | ENSG00000236039 | AC019117.1 | 0 | INTRON | 5.02428541 | 5.05E-07 | 0.00552332 |
| 7 | 158354018 | 158354018 | 1 | 7_158354018 | ENSG00000155093 | PTPRN2 | 0 | INTRON | 5.02425011 | 5.05E-07 | 0.00552332 |
| 7 | 58112911 | 58112911 | 1 | 7_58112911 | ENSG00000231484 | AC023141.7 | 275865 | Downstream | 5.0238509 | 5.06E-07 | 0.00553127 |
| 9 | 61614297 | 61614297 | 1 | 9_61614297 | ENSG00000231248 | FAM242D | 1537 | Upstream | -5.0235452 | 5.07E-07 | 0.00553653 |
| 9 | 33042171 | 33042171 | 1 | 9_33042171 | ENSG00000122692 | SMU1 | 0 | 3UTR | 5.02303566 | 5.09E-07 | 0.00554768 |
| 19 | 56236949 | 56236949 | 1 | 19_56236949 | ENSG00000131848 | ZSCAN5A | 0 | INTRON | -5.0228608 | 5.09E-07 | 0.00554918 |
| 5 | 163737670 | 163737670 | 1 | 5_163737670 | ENSG00000224012 | AC116917.1 | 28156 | Upstream | -5.0226604 | 5.10E-07 | 0.00555142 |
| 10 | 42844400 | 42844400 | 1 | 10_42844400 | ENSG00000165733 | BMS1 | 9463 | Downstream | 5.02250924 | 5.10E-07 | 0.00555224 |
| 7 | 56791174 | 56791174 | 1 | 7_56791174 | ENSG00000277253 | AC118758.2 | 14161 | Upstream | 5.02162477 | 5.12E-07 | 0.00557431 |
| 17 | 67302373 | 67302373 | 1 | 17_67302373 | ENSG00000264093 | AC007448.2 | 26022 | Upstream | 5.02109103 | 5.14E-07 | 0.00558397 |
| 7 | 8005432 | 8005432 | 1 | 7_8005432 | ENSG00000106415 | GLCCI1 | 0 | INTRON | -5.0210466 | 5.14E-07 | 0.00558397 |
| 4 | 15432544 | 15432544 | 1 | 4_15432544 | ENSG00000163145 | C1QTNF7 | 0 | INTRON | -5.0206947 | 5.15E-07 | 0.00558729 |
| 13 | 77041047 | 77041047 | 1 | 13_77041047 | ENSG00000283208 | AC001226.2 | 0 | INTRON | -5.0206876 | 5.15E-07 | 0.00558729 |
| 13 | 37712481 | 37712481 | 1 | 13_37712481 | ENSG00000133107 | TRPC4 | 0 | INTRON | 5.02053122 | 5.15E-07 | 0.00558827 |
| 2 | 118761432 | 118761432 | 1 | 2_118761432 | ENSG00000258910 | LINC01956 | 5532 | Downstream | 5.01968768 | 5.18E-07 | 0.00560468 |
| 17 | 1361252 | 1361252 | 1 | 17_1361252 | ENSG00000108953 | YWHAE | 0 | EXON | 5.01967629 | 5.18E-07 | 0.00560468 |
| 2 | 152355928 | 152355928 | 1 | 2_152355928 | ENSG00000157827 | FMNL2 | 0 | INTRON | -5.019601 | 5.18E-07 | 0.00560468 |
| 15 | 44134701 | 44134701 | 1 | 15_44134701 | ENSG00000171877 | FRMD5 | 0 | INTRON | 5.01929752 | 5.19E-07 | 0.00560998 |
| 10 | 42070332 | 42070332 | 1 | 10_42070332 | ENSG00000229485 | KSR1P1 | 78977 | Downstream | -5.0181548 | 5.22E-07 | 0.00563985 |
| 6 | 16337446 | 16337446 | 1 | 6_16337446 | ENSG00000124788 | ATXN1 | 0 | INTRON | -5.0178844 | 5.22E-07 | 0.00564421 |
| 5 | 67257062 | 67257062 | 1 | 5_67257062 | ENSG00000251206 | AC010420.1 | 10959 | Upstream | -5.0174518 | 5.24E-07 | 0.00565334 |
| 17 | 56782187 | 56782187 | 1 | 17_56782187 | ENSG00000214226 | C17orf67 | 9725 | Downstream | 5.0169395 | 5.25E-07 | 0.00565871 |
| 7 | 150247042 | 150247042 | 1 | 7_150247042 | ENSG00000106526 | ACTR3C | 0 | 3UTR | 5.0169107 | 5.25E-07 | 0.00565871 |
| 4 | 168502769 | 168502769 | 1 | 4_168502769 | ENSG00000181381 | DDX60L | 0 | INTRON | -5.0169039 | 5.25E-07 | 0.00565871 |
| 16 | 51330505 | 51330505 | 1 | 16_51330505 | ENSG00000285367 | AC087564.1 | 0 | INTRON | 5.01622762 | 5.27E-07 | 0.00567506 |
| 7 | 138305446 | 138305446 | 1 | 7_138305446 | ENSG00000213238 | AC008155.1 | 6962 | Upstream | 5.01602499 | 5.28E-07 | 0.00567745 |
| 8 | 52747719 | 52747719 | 1 | 8_52747719 | ENSG00000023287 | RB1CC1 | 1876 | Upstream | 5.0153594 | 5.29E-07 | 0.00569066 |
| 5 | 91213779 | 91213779 | 1 | 5_91213779 | ENSG00000248323 | LUCAT1 | 0 | INTRON | -5.0153353 | 5.29E-07 | 0.00569066 |
| 2 | 168209634 | 168209634 | 1 | 2_168209634 | ENSG00000198648 | STK39 | 0 | INTRON | -5.0147414 | 5.31E-07 | 0.00570268 |

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| 9 | 95980295 | 95980295 | 1 | 9_95980295 | ENSG00000182150 | ERCC6L2 | 0 | INTRON | 5.01468669 | 5.31E-07 | 0.00570268 |
| 16 | 83682553 | 83682553 | 1 | 16_83682553 | ENSG00000140945 | CDH13 | 0 | INTRON | 5.01344839 | 5.35E-07 | 0.00572953 |
| 13 | 54219155 | 54219155 | 1 | 13_54219155 | ENSG00000234787 | LINC00458 | 76836 | Upstream | 5.01343784 | 5.35E-07 | 0.00572953 |
| 1 | 24334532 | 24334532 | 1 | 1_24334532 | ENSG00000158055 | GRHL3 | 0 | INTRON | 5.0133589 | 5.35E-07 | 0.00572953 |
| 2 | 229488339 | 229488339 | 1 | 2_229488339 | ENSG00000187957 | DNER | 0 | INTRON | 5.0132986 | 5.35E-07 | 0.00572953 |
| 18 | 46647726 | 46647726 | 1 | 18_46647726 | ENSG00000167210 | LOXHD1 | 0 | INTRON | 5.01261298 | 5.37E-07 | 0.00574638 |
| 2 | 24510135 | 24510135 | 1 | 2_24510135 | ENSG00000084676 | NCOA1 | 0 | INTRON | 5.01226421 | 5.38E-07 | 0.00575319 |
| X | 30776313 | 30776313 | 1 | X_30776313 | ENSG00000198814 | GK | 44857 | Downstream | 5.01201252 | 5.39E-07 | 0.00575441 |
| 3 | 189059106 | 189059106 | 1 | 3_189059106 | ENSG00000188001 | TPRG1 | 0 | INTRON | -5.0118837 | 5.39E-07 | 0.00575441 |
| 12 | 118488469 | 118488469 | 1 | 12_118488469 | ENSG00000275409 | AC026367.2 | 57770 | Downstream | -5.011861 | 5.39E-07 | 0.00575441 |
| 20 | 63884399 | 63884399 | 1 | 20_63884399 | ENSG00000101150 | TPD52L2 | 0 | INTRON | 5.01101847 | 5.41E-07 | 0.00577604 |
| 15 | 55462945 | 55462945 | 1 | 15_55462945 | ENSG00000261771 | DNAAF4-CCPG1 | 0 | INTRON | -5.0107179 | 5.42E-07 | 0.00578144 |
| 1 | 161463807 | 161463807 | 1 | 1_161463807 | ENSG00000283360 | AL592295.3 | 0 | INTRON | 5.01045813 | 5.43E-07 | 0.00578563 |
| 3 | 63571915 | 63571915 | 1 | 3_63571915 | ENSG00000163630 | SYNPR | 0 | INTRON | -5.0100865 | 5.44E-07 | 0.00579318 |
| 6 | 137252448 | 137252448 | 1 | 6_137252448 | ENSG00000027697 | IFNGR1 | 32999 | Upstream | 5.00979394 | 5.45E-07 | 0.00579837 |
| 8 | 29300324 | 29300324 | 1 | 8_29300324 | ENSG00000120875 | DUSP4 | 32739 | Downstream | -5.0096057 | 5.45E-07 | 0.00580041 |
| 1 | 152521626 | 152521626 | 1 | 1_152521626 | ENSG00000169509 | CRCT1 | 5618 | Downstream | 5.00944053 | 5.46E-07 | 0.00580177 |
| 12 | 125706768 | 125706768 | 1 | 12_125706768 | ENSG00000139364 | TMEM132B | 44391 | Downstream | -5.0087897 | 5.48E-07 | 0.00581779 |
| 5 | 365214 | 365214 | 1 | 5_365214 | ENSG00000286169 | AHRR | 0 | INTRON | -5.0082113 | 5.49E-07 | 0.00583165 |
| 8 | 110758761 | 110758761 | 1 | 8_110758761 | ENSG00000253717 | AP005357.1 | 8101 | Upstream | -5.0080873 | 5.50E-07 | 0.00583177 |
| 22 | 46202794 | 46202794 | 1 | 22_46202794 | ENSG00000186951 | PPARA | 0 | INTRON | 5.00794673 | 5.50E-07 | 0.00583239 |
| 15 | 55839173 | 55839173 | 1 | 15_55839173 | ENSG00000069869 | NEDD4 | 0 | INTRON | -5.0074309 | 5.52E-07 | 0.00583791 |
| 15 | 61831082 | 61831082 | 1 | 15_61831082 | ENSG00000259564 | AC009554.1 | 3599 | Upstream | -5.0073397 | 5.52E-07 | 0.00583791 |
| 8 | 143864351 | 143864351 | 1 | 8_143864351 | ENSG00000261150 | EPPK1 | 0 | EXON | -5.0072897 | 5.52E-07 | 0.00583791 |
| 1 | 231577903 | 231577903 | 1 | 1_231577903 | ENSG00000270106 | TSNAX-DISC1 | 0 | INTRON | 5.00728556 | 5.52E-07 | 0.00583791 |
| 5 | 167628243 | 167628243 | 1 | 5_167628243 | ENSG00000145934 | TENM2 | 0 | INTRON | -5.0071352 | 5.52E-07 | 0.00583884 |
| 13 | 37725972 | 37725972 | 1 | 13_37725972 | ENSG00000133107 | TRPC4 | 0 | INTRON | 5.00689961 | 5.53E-07 | 0.00584236 |
| 5 | 143182788 | 143182788 | 1 | 5_143182788 | ENSG00000145819 | ARHGAP26 | 0 | INTRON | 5.0067436 | 5.54E-07 | 0.00584347 |
| 5 | 18344916 | 18344916 | 1 | 5_18344916 | ENSG00000212278 | SNORD81 | 108720 | Downstream | -5.0060696 | 5.56E-07 | 0.00586032 |
| 4 | 81177559 | 81177559 | 1 | 4_81177559 | ENSG00000251059 | AC139722.1 | 0 | INTRON | 5.00593265 | 5.56E-07 | 0.00586085 |
| 8 | 4306742 | 4306742 | 1 | 8_4306742 | ENSG00000183117 | CSMD1 | 0 | INTRON | -5.0057027 | 5.57E-07 | 0.00586421 |
| 12 | 85708890 | 85708890 | 1 | 12_85708890 | ENSG00000258206 | AC137768.1 | 73001 | Downstream | -5.0055839 | 5.57E-07 | 0.00586421 |
| 6 | 111990461 | 111990461 | 1 | 6_111990461 | ENSG00000112761 | CCN6 | 63610 | Upstream | -5.0050057 | 5.59E-07 | 0.00587479 |
| 6 | 51453618 | 51453618 | 1 | 6_51453618 | ENSG00000212532 | AL365219.1 | 11071 | Upstream | 5.00499828 | 5.59E-07 | 0.00587479 |
| 1 | 116099495 | 116099495 | 1 | 1_116099495 | ENSG00000173212 | MAB21L3 | 12259 | Upstream | -5.004766 | 5.59E-07 | 0.00587825 |
| 16 | 56300086 | 56300086 | 1 | 16_56300086 | ENSG00000087258 | GNAO1 | 0 | INTRON | 5.00454284 | 5.60E-07 | 0.00587984 |
| 20 | 19077175 | 19077175 | 1 | 20_19077175 | ENSG00000274863 | AL135936.1 | 20379 | Upstream | -5.004476 | 5.60E-07 | 0.00587984 |
| 11 | 120598088 | 120598088 | 1 | 11_120598088 | ENSG00000149403 | GRIK4 | 0 | INTRON | 5.00424395 | 5.61E-07 | 0.00588312 |
| 9 | 41278113 | 41278113 | 1 | 9_41278113 | ENSG00000275450 | AL845472.1 | 0 | INTRON | -5.004131 | 5.61E-07 | 0.00588312 |
| 18 | 23338017 | 23338017 | 1 | 18_23338017 | ENSG00000134490 | TMEM241 | 0 | INTRON | 5.00371065 | 5.62E-07 | 0.00589234 |
| 3 | 142609907 | 142609907 | 1 | 3_142609907 | ENSG00000120756 | PLS1 | 0 | INTRON | -5.0033697 | 5.63E-07 | 0.00589915 |
| 6 | 99077210 | 99077210 | 1 | 6_99077210 | ENSG00000271042 | AL078603.1 | 5238 | Upstream | 5.00311847 | 5.64E-07 | 0.00590321 |
| 7 | 116599792 | 116599792 | 1 | 7_116599792 | ENSG00000231210 | LINC01510 | 0 | INTRON | 5.00297632 | 5.65E-07 | 0.00590393 |
| 10 | 1411271 | 1411271 | 1 | 10_1411271 | ENSG00000185736 | ADARB2 | 0 | INTRON | 5.00278631 | 5.65E-07 | 0.00590613 |
| 7 | 155908754 | 155908754 | 1 | 7_155908754 | ENSG00000204876 | AC021218.1 | 53877 | Upstream | 5.00167557 | 5.68E-07 | 0.00593662 |
| 1 | 228628182 | 228628182 | 1 | 1_228628182 | ENSG00000201321 | RNA5S9 | 0 | EXON | 5.00142939 | 5.69E-07 | 0.00594056 |
| 2 | 189523622 | 189523622 | 1 | 2_189523622 | ENSG00000287418 | AC013439.2 | 13761 | Downstream | -5.0008367 | 5.71E-07 | 0.00595176 |
| 1 | 225576550 | 225576550 | 1 | 1_225576550 | ENSG00000154380 | ENAH | 0 | INTRON | 5.00066582 | 5.71E-07 | 0.00595176 |
| 10 | 518330 | 518330 | 1 | 10_518330 | ENSG00000151240 | DIP2C | 0 | INTRON | 5.00057049 | 5.72E-07 | 0.00595176 |
| 2 | 114649441 | 114649441 | 1 | 2_114649441 | ENSG00000175497 | DPP10 | 0 | INTRON | -5.0002568 | 5.73E-07 | 0.00595176 |
| 1 | 109358431 | 109358431 | 1 | 1_109358431 | ENSG00000134243 | SORT1 | 0 | INTRON | -5.0002508 | 5.73E-07 | 0.00595176 |
| 6 | 125577473 | 125577473 | 1 | 6_125577473 | ENSG00000237742 | AL365259.1 | 71 | Downstream | -5.0001632 | 5.73E-07 | 0.00595176 |
| 10 | 1646528 | 1646528 | 1 | 10_1646528 | ENSG00000185736 | ADARB2 | 0 | INTRON | 5.00009528 | 5.73E-07 | 0.00595176 |
| 9 | 17292950 | 17292950 | 1 | 9_17292950 | ENSG00000044459 | CNTLN | 0 | INTRON | -5.0000426 | 5.73E-07 | 0.00595176 |
| 19 | 15628380 | 15628380 | 1 | 19_15628380 | ENSG00000186526 | CYP4F8 | 0 | 3UTR | 5.00000474 | 5.73E-07 | 0.00595176 |
| X | 23974073 | 23974073 | 1 | X_23974073 | ENSG00000174010 | KLHL15 | 9646 | Downstream | 4.99968128 | 5.74E-07 | 0.00595622 |
| 5 | 159186052 | 159186052 | 1 | 5_159186052 | ENSG00000145860 | RNF145 | 0 | INTRON | -4.9995655 | 5.75E-07 | 0.00595622 |
| 13 | 83823626 | 83823626 | 1 | 13_83823626 | ENSG00000178235 | SLITRK1 | 53578 | Downstream | 4.99941478 | 5.75E-07 | 0.00595622 |
| 4 | 148736577 | 148736577 | 1 | 4_148736577 | ENSG00000287292 | AC002460.2 | 0 | INTRON | -4.9993903 | 5.75E-07 | 0.00595622 |
| 9 | 65063886 | 65063886 | 1 | 9_65063886 | ENSG00000287988 | FO082814.1 | 79171 | Upstream | 4.99920423 | 5.76E-07 | 0.00595834 |
| 12 | 63902112 | 63902112 | 1 | 12_63902112 | ENSG00000196935 | SRGAP1 | 0 | INTRON | 4.99883844 | 5.77E-07 | 0.00596385 |
| 15 | 78721064 | 78721064 | 1 | 15_78721064 | ENSG00000261303 | AC022748.2 | 0 | INTRON | -4.9987916 | 5.77E-07 | 0.00596385 |
| 1 | 234956964 | 234956964 | 1 | 1_234956964 | ENSG00000237520 | AL391832.1 | 266 | Upstream | -4.998547 | 5.78E-07 | 0.00596779 |
| 22 | 15636691 | 15636691 | 1 | 22_15636691 | ENSG00000234381 | MED15P7 | 0 | EXON | -4.9981894 | 5.79E-07 | 0.00597009 |
| 7 | 49306678 | 49306678 | 1 | 7_49306678 | ENSG00000270763 | DDX43P2 | 46832 | Upstream | -4.9981518 | 5.79E-07 | 0.00597009 |
| 2 | 118816714 | 118816714 | 1 | 2_118816714 | ENSG00000258910 | LINC01956 | 0 | INTRON | -4.9981218 | 5.79E-07 | 0.00597009 |
| 9 | 111918817 | 111918817 | 1 | 9_111918817 | ENSG00000148154 | UGCG | 0 | INTRON | 4.99780185 | 5.80E-07 | 0.00597638 |
| 9 | 9190559 | 9190559 | 1 | 9_9190559 | ENSG00000153707 | PTPRD | 0 | INTRON | 4.99743393 | 5.81E-07 | 0.00598416 |
| 5 | 619540 | 619540 | 1 | 5_619540 | ENSG00000112877 | CEP72 | 0 | INTRON | 4.99718293 | 5.82E-07 | 0.00598833 |
| 5 | 87006530 | 87006530 | 1 | 5_87006530 | ENSG00000249061 | AC109492.1 | 0 | INTRON | -4.9969249 | 5.83E-07 | 0.00598995 |
| 8 | 68929666 | 68929666 | 1 | 8_68929666 | ENSG00000253658 | LINC01592 | 0 | INTRON | -4.9968976 | 5.83E-07 | 0.00598995 |
| 5 | 93094248 | 93094248 | 1 | 5_93094248 | ENSG00000286509 | AC026408.1 | 2480 | Downstream | 4.9967436 | 5.83E-07 | 0.00599111 |
| 17 | 49841966 | 49841966 | 1 | 17_49841966 | ENSG00000176358 | TAC4 | 0 | INTRON | 4.99620036 | 5.85E-07 | 0.00600438 |
| 10 | 123613965 | 123613965 | 1 | 10_123613965 | ENSG00000234542 | AL357127.1 | 30198 | Downstream | 4.99595833 | 5.85E-07 | 0.00600829 |
| 3 | 151210953 | 151210953 | 1 | 3_151210953 | ENSG00000144893 | MED12L | 0 | INTRON | 4.99563286 | 5.86E-07 | 0.0060148 |
| 5 | 176076367 | 176076367 | 1 | 5_176076367 | ENSG00000182230 | FAM153B | 0 | INTRON | 4.99517657 | 5.88E-07 | 0.00602541 |
| 3 | 52399814 | 52399814 | 1 | 3_52399814 | ENSG00000114841 | DNAH1 | 0 | INTRON | 4.99488705 | 5.89E-07 | 0.00603011 |
| 19 | 18675798 | 18675798 | 1 | 19_18675798 | ENSG00000167487 | KLHL26 | 4077 | Downstream | 4.99477767 | 5.89E-07 | 0.00603011 |
| 13 | 73358460 | 73358460 | 1 | 13_73358460 | ENSG00000279754 | AL162376.1 | 40570 | Upstream | -4.9946775 | 5.89E-07 | 0.00603011 |
| 1 | 4015701 | 4015701 | 1 | 1_4015701 | ENSG00000284703 | AL805961.1 | 0 | EXON | 4.99389481 | 5.92E-07 | 0.00604755 |
| 9 | 69606791 | 69606791 | 1 | 9_69606791 | ENSG00000107282 | APBA1 | 0 | INTRON | 4.99388815 | 5.92E-07 | 0.00604755 |
| 17 | 7271706 | 7271706 | 1 | 17_7271706 | ENSG00000202251 | Y_RNA | 5540 | Upstream | 4.99371416 | 5.92E-07 | 0.00604937 |
| 2 | 21734977 | 21734977 | 1 | 2_21734977 | ENSG00000233005 | AC018742.1 | 0 | INTRON | -4.9934513 | 5.93E-07 | 0.00605398 |
| 14 | 73675783 | 73675783 | 1 | 14_73675783 | ENSG00000119661 | DNAL1 | 0 | INTRON | 4.99318997 | 5.94E-07 | 0.00605855 |
| 13 | 20273396 | 20273396 | 1 | 13_20273396 | ENSG00000121742 | GJB6 | 41031 | Upstream | -4.9926458 | 5.96E-07 | 0.00607089 |
| 2 | 109155386 | 109155386 | 1 | 2_109155386 | ENSG00000172985 | SH3RF3 | 0 | INTRON | 4.99248463 | 5.96E-07 | 0.00607089 |
| 10 | 61930668 | 61930668 | 1 | 10_61930668 | ENSG00000150347 | ARID5B | 0 | INTRON | 4.99238597 | 5.96E-07 | 0.00607089 |
| 20 | 30605077 | 30605077 | 1 | 20_30605077 | ENSG00000277112 | ANKRD20A21P | 50955 | Downstream | -4.9923345 | 5.97E-07 | 0.00607089 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
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| 4 | 166876290 | 166876290 | 1 | 4_166876290 | ENSG00000196104 | SPOCK3 | 0 | INTRON | 4.99181746 | 5.98E-07 | 0.00608353 |
| 12 | 95357260 | 95357260 | 1 | 12_95357260 | ENSG00000257943 | AC084879.1 | 0 | INTRON | -4.9912017 | 6.00E-07 | 0.006097 |
| 15 | 50809003 | 50809003 | 1 | 15_50809003 | ENSG00000241130 | AC012100.1 | 10052 | Downstream | 4.99115962 | 6.00E-07 | 0.006097 |
| 5 | 177420929 | 177420929 | 1 | 5_177420929 | ENSG00000198055 | GRK6 | 0 | INTRON | 4.99079402 | 6.01E-07 | 0.00610491 |
| 1 | 215826308 | 215826308 | 1 | 1_215826308 | ENSG00000042781 | USH2A | 0 | INTRON | -4.9905741 | 6.02E-07 | 0.00610822 |
| 10 | 71807670 | 71807670 | 1 | 10_71807670 | ENSG00000107736 | CDH23 | 0 | 3UTR | -4.9902142 | 6.03E-07 | 0.00611597 |
| 14 | 73546653 | 73546653 | 1 | 14_73546653 | ENSG00000187105 | HEATR4 | 0 | INTRON | -4.9898096 | 6.04E-07 | 0.00611932 |
| 8 | 64054312 | 64054312 | 1 | 8_64054312 | ENSG00000253554 | LINC01414 | 0 | INTRON | -4.9897765 | 6.04E-07 | 0.00611932 |
| 5 | 138856241 | 138856241 | 1 | 5_138856241 | ENSG00000044115 | CTNNA1 | 0 | INTRON | 4.98976321 | 6.05E-07 | 0.00611932 |
| 9 | 137913282 | 137913282 | 1 | 9_137913282 | ENSG00000148408 | CACNA1B | 0 | INTRON | 4.98918996 | 6.06E-07 | 0.00613053 |
| 16 | 3912742 | 3912742 | 1 | 16_3912742 | ENSG00000262185 | AC005736.1 | 18063 | Downstream | 4.98917995 | 6.06E-07 | 0.00613053 |
| 20 | 17957413 | 17957413 | 1 | 20_17957413 | ENSG00000125850 | OVOL2 | 0 | INTRON | -4.988933 | 6.07E-07 | 0.00613117 |
| 1 | 89921705 | 89921705 | 1 | 1_89921705 | ENSG00000171492 | LRRC8D | 0 | INTRON | -4.9888525 | 6.07E-07 | 0.00613117 |
| 4 | 150925850 | 150925850 | 1 | 4_150925850 | ENSG00000198589 | LRBA | 0 | INTRON | -4.9888159 | 6.08E-07 | 0.00613117 |
| 9 | 124358735 | 124358735 | 1 | 9_124358735 | ENSG00000136930 | PSMB7 | 0 | INTRON | -4.9885913 | 6.08E-07 | 0.00613466 |
| 8 | 123955386 | 123955386 | 1 | 8_123955386 | ENSG00000214814 | FER1L6 | 0 | INTRON | 4.98825318 | 6.09E-07 | 0.00614067 |
| 4 | 104663528 | 104663528 | 1 | 4_104663528 | ENSG00000245384 | CXXC4-AS1 | 0 | INTRON | 4.98817306 | 6.10E-07 | 0.00614067 |
| 4 | 179551170 | 179551170 | 1 | 4_179551170 | ENSG00000250993 | AC020551.1 | 85865 | Upstream | -4.9880309 | 6.10E-07 | 0.00614155 |
| 2 | 240160426 | 240160426 | 1 | 2_240160426 | ENSG00000178602 | OTOS | 15864 | Upstream | 4.98755629 | 6.11E-07 | 0.00615301 |
| 9 | 138097571 | 138097571 | 1 | 9_138097571 | ENSG00000148408 | CACNA1B | 0 | INTRON | 4.98740945 | 6.12E-07 | 0.00615405 |
| 21 | 30138533 | 30138533 | 1 | 21_30138533 | ENSG00000156282 | CLDN17 | 27031 | Downstream | -4.9871398 | 6.13E-07 | 0.00615803 |
| 1 | 8082731 | 8082731 | 1 | 1_8082731 | ENSG00000238290 | AL034417.2 | 0 | INTRON | 4.98697949 | 6.13E-07 | 0.00615803 |
| 14 | 80309926 | 80309926 | 1 | 14_80309926 | ENSG00000211448 | DIO2 | 0 | INTRON | 4.98687458 | 6.14E-07 | 0.00615803 |
| 12 | 50756449 | 50756449 | 1 | 12_50756449 | ENSG00000271018 | AC013244.1 | 442 | Upstream | -4.9867849 | 6.14E-07 | 0.00615803 |
| 9 | 17048430 | 17048430 | 1 | 9_17048430 | ENSG00000237153 | AL162725.2 | 0 | INTRON | -4.9867143 | 6.14E-07 | 0.00615803 |
| 10 | 67507314 | 67507314 | 1 | 10_67507314 | ENSG00000183230 | CTNNA3 | 0 | INTRON | -4.9864913 | 6.15E-07 | 0.00616151 |
| 3 | 128071520 | 128071520 | 1 | 3_128071520 | ENSG00000058262 | SEC61A1 | 0 | 3UTR | 4.98630048 | 6.15E-07 | 0.00616396 |
| 2 | 29085462 | 29085462 | 1 | 2_29085462 | ENSG00000229224 | AC105398.1 | 3186 | Downstream | -4.9857186 | 6.17E-07 | 0.00617677 |
| 17 | 75083490 | 75083490 | 1 | 17_75083490 | ENSG00000232724 | TRIM80P | 3941 | Downstream | -4.9856438 | 6.18E-07 | 0.00617677 |
| 2 | 169457019 | 169457019 | 1 | 2_169457019 | ENSG00000251569 | AC093899.2 | 22460 | Upstream | 4.98555827 | 6.18E-07 | 0.00617677 |
| 20 | 43415410 | 43415410 | 1 | 20_43415410 | ENSG00000233711 | EIF4EBP2P1 | 7785 | Downstream | 4.98539749 | 6.18E-07 | 0.00617822 |
| 10 | 132687331 | 132687331 | 1 | 10_132687331 | ENSG00000068383 | INPP5A | 0 | INTRON | 4.98528574 | 6.19E-07 | 0.00617822 |
| X | 71079391 | 71079391 | 1 | X_71079391 | ENSG00000147164 | SNX12 | 5965 | Upstream | 4.98492619 | 6.20E-07 | 0.00618609 |
| 14 | 104276019 | 104276019 | 1 | 14_104276019 | ENSG00000258913 | LINC02691 | 0 | INTRON | 4.98461128 | 6.21E-07 | 0.00618909 |
| 16 | 64614256 | 64614256 | 1 | 16_64614256 | ENSG00000259846 | AC092131.1 | 14009 | Downstream | 4.98460581 | 6.21E-07 | 0.00618909 |
| 6 | 107318131 | 107318131 | 1 | 6_107318131 | ENSG00000164494 | PDSS2 | 0 | INTRON | 4.98397566 | 6.23E-07 | 0.00620565 |
| 22 | 21202737 | 21202737 | 1 | 22_21202737 | ENSG00000283972 | AP000550.4 | 0 | INTRON | 4.98289843 | 6.26E-07 | 0.00623666 |
| 2 | 112986418 | 112986418 | 1 | 2_112986418 | ENSG00000136688 | IL36G | 760 | Downstream | -4.9826298 | 6.27E-07 | 0.00624168 |
| 6 | 26601248 | 26601248 | 1 | 6_26601248 | ENSG00000146109 | ABT1 | 509 | Downstream | -4.9821392 | 6.29E-07 | 0.00624805 |
| 17 | 79505463 | 79505463 | 1 | 17_79505463 | ENSG00000167281 | RBFOX3 | 0 | INTRON | 4.98207162 | 6.29E-07 | 0.00624805 |
| 5 | 74964729 | 74964729 | 1 | 5_74964729 | ENSG00000249856 | AC116337.3 | 0 | INTRON | -4.9820646 | 6.29E-07 | 0.00624805 |
| 1 | 90036815 | 90036815 | 1 | 1_90036815 | ENSG00000162664 | ZNF326 | 1282 | Downstream | -4.9819306 | 6.30E-07 | 0.00624805 |
| 5 | 126628533 | 126628533 | 1 | 5_126628533 | ENSG00000230929 | AC099513.1 | 214 | Upstream | 4.98167891 | 6.30E-07 | 0.00624805 |
| 15 | 78028631 | 78028631 | 1 | 15_78028631 | ENSG00000167202 | TBC1D2B | 0 | INTRON | -4.9816727 | 6.30E-07 | 0.00624805 |
| 9 | 97137077 | 97137077 | 1 | 9_97137077 | ENSG00000213612 | FAM220CP | 14588 | Downstream | 4.98164204 | 6.30E-07 | 0.00624805 |
| 5 | 116289273 | 116289273 | 1 | 5_116289273 | ENSG00000145781 | COMMD10 | 0 | INTRON | -4.9811914 | 6.32E-07 | 0.00625628 |
| 15 | 94652264 | 94652264 | 1 | 15_94652264 | ENSG00000259331 | AC009432.1 | 51443 | Downstream | 4.98116205 | 6.32E-07 | 0.00625628 |
| 7 | 130102812 | 130102812 | 1 | 7_130102812 | ENSG00000128607 | KLHDC10 | 0 | INTRON | 4.98087919 | 6.33E-07 | 0.00626179 |
| 4 | 109782810 | 109782810 | 1 | 4_109782810 | ENSG00000285330 | AC126283.2 | 0 | INTRON | 4.98034117 | 6.35E-07 | 0.00627513 |
| 3 | 134604431 | 134604431 | 1 | 3_134604431 | ENSG00000174611 | KY | 0 | 3UTR | 4.98003937 | 6.36E-07 | 0.00627513 |
| 17 | 33344042 | 33344042 | 1 | 17_33344042 | ENSG00000108684 | ASIC2 | 0 | INTRON | 4.98002448 | 6.36E-07 | 0.00627513 |
| 17 | 6208734 | 6208734 | 1 | 17_6208734 | ENSG00000206618 | RNU6-1264P | 1465 | Downstream | -4.9800179 | 6.36E-07 | 0.00627513 |
| 16 | 17717345 | 17717345 | 1 | 16_17717345 | ENSG00000261555 | AC025277.1 | 107906 | Upstream | 4.97954522 | 6.37E-07 | 0.00628683 |
| 15 | 30815930 | 30815930 | 1 | 15_30815930 | ENSG00000259845 | HERC2P10 | 0 | INTRON | -4.9794224 | 6.38E-07 | 0.00628718 |
| 12 | 90531341 | 90531341 | 1 | 12_90531341 | ENSG00000286021 | LINC02822 | 45060 | Upstream | -4.9791521 | 6.39E-07 | 0.00629066 |
| 8 | 74878187 | 74878187 | 1 | 8_74878187 | ENSG00000253706 | AC011632.1 | 11248 | Upstream | 4.97909107 | 6.39E-07 | 0.00629066 |
| 10 | 127331811 | 127331811 | 1 | 10_127331811 | ENSG00000150760 | DOCK1 | 0 | INTRON | -4.9787845 | 6.40E-07 | 0.00629699 |
| 14 | 98518957 | 98518957 | 1 | 14_98518957 | ENSG00000258795 | AL132719.1 | 4159 | Downstream | -4.9785957 | 6.40E-07 | 0.00629762 |
| 6 | 166406578 | 166406578 | 1 | 6_166406578 | ENSG00000071242 | RPS6KA2 | 2785 | Downstream | 4.97848 | 6.41E-07 | 0.00629762 |
| 17 | 65048745 | 65048745 | 1 | 17_65048745 | ENSG00000120063 | GNA13 | 0 | INTRON | 4.97841449 | 6.41E-07 | 0.00629762 |
| 17 | 53638122 | 53638122 | 1 | 17_53638122 | ENSG00000285939 | AC034268.2 | 0 | INTRON | -4.9783176 | 6.41E-07 | 0.00629762 |
| 7 | 63857836 | 63857836 | 1 | 7_63857836 | ENSG00000236574 | AC092634.5 | 14331 | Downstream | -4.9781684 | 6.42E-07 | 0.00629884 |
| 1 | 118282750 | 118282750 | 1 | 1_118282750 | ENSG00000222209 | RNA5SP56 | 18261 | Upstream | 4.97804618 | 6.42E-07 | 0.00629919 |
| 2 | 210849984 | 210849984 | 1 | 2_210849984 | ENSG00000021826 | CPS1 | 170877 | Downstream | -4.9776156 | 6.44E-07 | 0.00630638 |
| 17 | 12470229 | 12470229 | 1 | 17_12470229 | ENSG00000286617 | AC084167.1 | 75052 | Upstream | 4.97753148 | 6.44E-07 | 0.00630638 |
| 10 | 15021764 | 15021764 | 1 | 10_15021764 | ENSG00000237470 | DCLRE1CP1 | 0 | INTRON | -4.9774908 | 6.44E-07 | 0.00630638 |
| 1 | 10702987 | 10702987 | 1 | 1_10702987 | ENSG00000130940 | CASZ1 | 0 | INTRON | 4.97720213 | 6.45E-07 | 0.0063121 |
| 4 | 7730348 | 7730348 | 1 | 4_7730348 | ENSG00000184985 | SORCS2 | 0 | INTRON | 4.97706407 | 6.46E-07 | 0.0063121 |
| 3 | 81593952 | 81593952 | 1 | 3_81593952 | ENSG00000114480 | GBE1 | 0 | EXON | -4.9769814 | 6.46E-07 | 0.0063121 |
| 2 | 44550607 | 44550607 | 1 | 2_44550607 | ENSG00000143919 | CAMKMT | 0 | INTRON | -4.9768619 | 6.46E-07 | 0.00631237 |
| 2 | 197174257 | 197174257 | 1 | 2_197174257 | ENSG00000065413 | ANKRD44 | 0 | INTRON | 4.97645223 | 6.48E-07 | 0.00632114 |
| 19 | 10945940 | 10945940 | 1 | 19_10945940 | ENSG00000142444 | TIMM29 | 12405 | Downstream | 4.97637071 | 6.48E-07 | 0.00632114 |
| 3 | 93653477 | 93653477 | 1 | 3_93653477 | ENSG00000251727 | RNU6-488P | 190286 | Upstream | -4.9761973 | 6.48E-07 | 0.00632187 |
| 5 | 141547327 | 141547327 | 1 | 5_141547327 | ENSG00000131504 | DIAPH1 | 0 | INTRON | -4.9760459 | 6.49E-07 | 0.00632187 |
| 4 | 147542183 | 147542183 | 1 | 4_147542183 | ENSG00000151617 | EDNRA | 0 | INTRON | 4.97596167 | 6.49E-07 | 0.00632187 |
| 7 | 3587584 | 3587584 | 1 | 7_3587584 | ENSG00000146555 | SDK1 | 0 | INTRON | -4.9759045 | 6.49E-07 | 0.00632187 |
| 11 | 14609012 | 14609012 | 1 | 11_14609012 | ENSG00000129084 | PSMA1 | 0 | INTRON | -4.9756164 | 6.50E-07 | 0.00632767 |
| 3 | 73236167 | 73236167 | 1 | 3_73236167 | ENSG00000252937 | RNU6-1270P | 5621 | Downstream | 4.97539436 | 6.51E-07 | 0.0063313 |
| 4 | 86639052 | 86639052 | 1 | 4_86639052 | ENSG00000163629 | PTPN13 | 0 | INTRON | 4.97523403 | 6.52E-07 | 0.00633293 |
| 9 | 66794065 | 66794065 | 1 | 9_66794065 | ENSG00000276457 | FKBP4P8 | 48136 | Upstream | -4.975089 | 6.52E-07 | 0.00633405 |
| 14 | 83739972 | 83739972 | 1 | 14_83739972 | ENSG00000238561 | RNU6ATAC28P | 10411 | Upstream | -4.9748817 | 6.53E-07 | 0.00633696 |
| 5 | 167753130 | 167753130 | 1 | 5_167753130 | ENSG00000145934 | TENM2 | 0 | INTRON | -4.9747791 | 6.53E-07 | 0.00633696 |
| 13 | 76912627 | 76912627 | 1 | 13_76912627 | ENSG00000118903 | BTF3P11 | 15438 | Upstream | 4.97456148 | 6.54E-07 | 0.00633832 |
| 4 | 187907506 | 187907506 | 1 | 4_187907506 | ENSG00000286641 | AC108073.3 | 34657 | Downstream | 4.97451684 | 6.54E-07 | 0.00633832 |
| 3 | 91288223 | 91288223 | 1 | 3_91288223 | ENSG00000283367 | ABBA01000933.1 | 68531 | Upstream | -4.973948 | 6.56E-07 | 0.00635334 |
| 10 | 52681311 | 52681311 | 1 | 10_52681311 | ENSG00000231131 | LNCAROD | 0 | INTRON | -4.9736703 | 6.57E-07 | 0.00635883 |
| 2 | 21665557 | 21665557 | 1 | 2_21665557 | ENSG00000233005 | AC018742.1 | 0 | INTRON | 4.97321634 | 6.59E-07 | 0.00636606 |
| 11 | 64786193 | 64786193 | 1 | 11_64786193 | ENSG00000168067 | MAP4K2 | 0 | 3UTR | -4.9731181 | 6.59E-07 | 0.00636606 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 130833922 | 130833922 | 1 | 2_130833922 | ENSG00000233221 | AC133785.1 | 0 | INTRON | 4.97303384 | 6.59E-07 | 0.00636606 |
| 16 | 88278909 | 88278909 | 1 | 16_88278909 | ENSG00000261273 | AC138512.1 | 0 | INTRON | 4.97300992 | 6.59E-07 | 0.00636606 |
| 20 | 33481392 | 33481392 | 1 | 20_33481392 | ENSG00000078699 | CBFA2T2 | 8682 | Upstream | 4.97288316 | 6.60E-07 | 0.00636661 |
| 4 | 100949892 | 100949892 | 1 | 4_100949892 | ENSG00000164035 | EMCN | 69766 | Upstream | 4.97254524 | 6.61E-07 | 0.0063741 |
| 10 | 30120721 | 30120721 | 1 | 10_30120721 | ENSG00000165757 | JCAD | 5227 | Upstream | -4.9716408 | 6.64E-07 | 0.00640029 |
| 3 | 6852766 | 6852766 | 1 | 3_6852766 | ENSG00000196277 | GRM7 | 0 | INTRON | -4.9714616 | 6.65E-07 | 0.00640258 |
| 2 | 98048245 | 98048245 | 1 | 2_98048245 | ENSG00000168658 | VWA3B | 38870 | Upstream | 4.9711314 | 6.66E-07 | 0.00640634 |
| 5 | 98000450 | 98000450 | 1 | 5_98000450 | ENSG00000249101 | AC008834.1 | 25514 | Upstream | 4.97112856 | 6.66E-07 | 0.00640634 |
| 18 | 23550744 | 23550744 | 1 | 18_23550744 | ENSG00000141458 | NPC1 | 0 | INTRON | 4.97089406 | 6.66E-07 | 0.00641046 |
| 4 | 162230218 | 162230218 | 1 | 4_162230218 | ENSG00000168843 | FSTL5 | 66214 | Upstream | 4.97077462 | 6.67E-07 | 0.00641079 |
| 4 | 88878014 | 88878014 | 1 | 4_88878014 | ENSG00000138640 | FAM13A | 0 | INTRON | 4.97040351 | 6.68E-07 | 0.00641945 |
| 20 | 61824143 | 61824143 | 1 | 20_61824143 | ENSG00000179242 | CDH4 | 0 | INTRON | -4.970179 | 6.69E-07 | 0.00642124 |
| 8 | 89304995 | 89304995 | 1 | 8_89304995 | ENSG00000253621 | RPSAP74 | 61202 | Upstream | 4.97013053 | 6.69E-07 | 0.00642124 |
| 4 | 19294193 | 19294193 | 1 | 4_19294193 | ENSG00000248238 | LINC02438 | 0 | INTRON | 4.96957306 | 6.71E-07 | 0.00643181 |
| 3 | 59076711 | 59076711 | 1 | 3_59076711 | ENSG00000243295 | AC126121.3 | 0 | INTRON | -4.9694785 | 6.71E-07 | 0.00643181 |
| 17 | 38260581 | 38260581 | 1 | 17_38260581 | ENSG00000274487 | AC244154.1 | 3389 | Upstream | 4.9692832 | 6.72E-07 | 0.00643181 |
| 8 | 118563342 | 118563342 | 1 | 8_118563342 | ENSG00000177570 | SAMD12 | 0 | INTRON | -4.9692819 | 6.72E-07 | 0.00643181 |
| 18 | 15134778 | 15134778 | 1 | 18_15134778 | ENSG00000286815 | AP005242.5 | 4476 | Downstream | -4.969242 | 6.72E-07 | 0.00643181 |
| 4 | 85789608 | 85789608 | 1 | 4_85789608 | ENSG00000138639 | ARHGAP24 | 0 | INTRON | 4.96915665 | 6.72E-07 | 0.00643181 |
| 13 | 81986660 | 81986660 | 1 | 13_81986660 | ENSG00000214182 | PTMAP5 | 295588 | Downstream | 4.96895973 | 6.73E-07 | 0.00643472 |
| 9 | 26977447 | 26977447 | 1 | 9_26977447 | ENSG00000096872 | IFT74 | 0 | INTRON | -4.968616 | 6.74E-07 | 0.00644252 |
| 12 | 99825791 | 99825791 | 1 | 12_99825791 | ENSG00000185046 | ANKS1B | 0 | INTRON | 4.96823871 | 6.76E-07 | 0.00644443 |
| 9 | 34083669 | 34083669 | 1 | 9_34083669 | ENSG00000228352 | AL354989.1 | 662 | Upstream | -4.9681736 | 6.76E-07 | 0.00644443 |
| 8 | 41511505 | 41511505 | 1 | 8_41511505 | ENSG00000253133 | AC009630.1 | 0 | EXON | 4.96813747 | 6.76E-07 | 0.00644443 |
| 3 | 119621832 | 119621832 | 1 | 3_119621832 | ENSG00000144837 | PLA1A | 0 | INTRON | -4.9681235 | 6.76E-07 | 0.00644443 |
| 17 | 63183973 | 63183973 | 1 | 17_63183973 | ENSG00000170921 | TANC2 | 0 | INTRON | 4.96796447 | 6.77E-07 | 0.0064461 |
| 9 | 68448369 | 68448369 | 1 | 9_68448369 | ENSG00000154330 | PGM5 | 0 | INTRON | 4.96781927 | 6.77E-07 | 0.00644732 |
| 5 | 181449225 | 181449225 | 1 | 5_181449225 | ENSG00000213285 | RPL23AP45 | 22737 | Upstream | -4.9675353 | 6.78E-07 | 0.00644856 |
| 8 | 102441104 | 102441104 | 1 | 8_102441104 | ENSG00000271612 | HSPE1P14 | 10658 | Upstream | -4.9674901 | 6.78E-07 | 0.00644856 |
| X | 154461148 | 154461148 | 1 | X_154461148 | ENSG00000130827 | PLXNA3 | 0 | EXON | 4.96739331 | 6.79E-07 | 0.00644856 |
| 2 | 213360424 | 213360424 | 1 | 2_213360424 | ENSG00000144451 | SPAG16 | 0 | INTRON | 4.96734807 | 6.79E-07 | 0.00644856 |
| 10 | 76460529 | 76460529 | 1 | 10_76460529 | ENSG00000148655 | LRMDA | 0 | INTRON | -4.9672386 | 6.79E-07 | 0.0064486 |
| 5 | 770842 | 770842 | 1 | 5_770842 | ENSG00000206077 | ZDHHC11B | 0 | INTRON | 4.96654528 | 6.82E-07 | 0.00646785 |
| 1 | 19431589 | 19431589 | 1 | 1_19431589 | ENSG00000077549 | CAPZB | 0 | INTRON | 4.96633567 | 6.82E-07 | 0.00646785 |
| 6 | 16335405 | 16335405 | 1 | 6_16335405 | ENSG00000124788 | ATXN1 | 0 | INTRON | 4.96620403 | 6.83E-07 | 0.00646785 |
| 14 | 93687598 | 93687598 | 1 | 14_93687598 | ENSG00000133958 | UNC79 | 0 | INTRON | 4.96618284 | 6.83E-07 | 0.00646785 |
| 4 | 7726826 | 7726826 | 1 | 4_7726826 | ENSG00000184985 | SORCS2 | 0 | EXON | -4.9660477 | 6.83E-07 | 0.00646785 |
| 4 | 105718605 | 105718605 | 1 | 4_105718605 | ENSG00000138780 | GSTCD | 0 | INTRON | -4.9660119 | 6.83E-07 | 0.00646785 |
| 21 | 32240545 | 32240545 | 1 | 21_32240545 | ENSG00000261610 | AP000265.1 | 19258 | Downstream | 4.96589364 | 6.84E-07 | 0.00646818 |
| 1 | 189024218 | 189024218 | 1 | 1_189024218 | ENSG00000226486 | LINC01035 | 0 | INTRON | -4.9657064 | 6.85E-07 | 0.00646818 |
| 9 | 76891663 | 76891663 | 1 | 9_76891663 | ENSG00000106772 | PRUNE2 | 0 | INTRON | 4.96563488 | 6.85E-07 | 0.00646818 |
| 15 | 78693108 | 78693108 | 1 | 15_78693108 | ENSG00000117971 | CHRNB4 | 0 | INTRON | 4.96557071 | 6.85E-07 | 0.00646818 |
| 3 | 14880677 | 14880677 | 1 | 3_14880677 | ENSG00000154783 | FGD5 | 0 | INTRON | 4.96519266 | 6.86E-07 | 0.0064772 |
| 11 | 28663880 | 28663880 | 1 | 11_28663880 | ENSG00000248990 | LINC02758 | 15302 | Upstream | -4.9648385 | 6.88E-07 | 0.00648286 |
| 2 | 148312294 | 148312294 | 1 | 2_148312294 | ENSG00000204406 | MBD5 | 0 | INTRON | 4.96467867 | 6.88E-07 | 0.00648286 |
| 12 | 80921551 | 80921551 | 1 | 12_80921551 | ENSG00000111052 | LIN7A | 0 | INTRON | 4.96467175 | 6.88E-07 | 0.00648286 |
| 14 | 63469420 | 63469420 | 1 | 14_63469420 | ENSG00000154001 | PPP2R5E | 0 | INTRON | -4.9645662 | 6.89E-07 | 0.00648286 |
| 2 | 201284403 | 201284403 | 1 | 2_201284403 | ENSG00000064012 | CASP8 | 0 | INTRON | -4.9644856 | 6.89E-07 | 0.00648286 |
| 2 | 12474879 | 12474879 | 1 | 2_12474879 | ENSG00000224184 | MIR3681HG | 0 | INTRON | -4.9641123 | 6.90E-07 | 0.00649175 |
| 2 | 226271140 | 226271140 | 1 | 2_226271140 | ENSG00000235070 | AC062015.1 | 85769 | Upstream | -4.9632992 | 6.93E-07 | 0.0065154 |
| 5 | 132671496 | 132671496 | 1 | 5_132671496 | ENSG00000113520 | IL4 | 2489 | Upstream | -4.9628289 | 6.95E-07 | 0.00652759 |
| 22 | 42415135 | 42415135 | 1 | 22_42415135 | ENSG00000235568 | NFAM1 | 0 | INTRON | 4.96263903 | 6.95E-07 | 0.00653037 |
| 5 | 76110694 | 76110694 | 1 | 5_76110694 | ENSG00000122012 | SV2C | 0 | INTRON | -4.9620695 | 6.97E-07 | 0.00654595 |
| X | 124128793 | 124128793 | 1 | X_124128793 | ENSG00000101972 | STAG2 | 0 | INTRON | -4.9618777 | 6.98E-07 | 0.0065488 |
| 16 | 79614461 | 79614461 | 1 | 16_79614461 | ENSG00000275040 | AC009159.1 | 5007 | Upstream | 4.96091723 | 7.02E-07 | 0.00657299 |
| 8 | 24905138 | 24905138 | 1 | 8_24905138 | ENSG00000253535 | AC120193.1 | 0 | INTRON | 4.96091013 | 7.02E-07 | 0.00657299 |
| 10 | 71783338 | 71783338 | 1 | 10_71783338 | ENSG00000107736 | CDH23 | 0 | INTRON | 4.96084084 | 7.02E-07 | 0.00657299 |
| X | 56026971 | 56026971 | 1 | X_56026971 | ENSG00000227486 | AL050309.1 | 0 | INTRON | 4.96022184 | 7.04E-07 | 0.00658927 |
| 11 | 44081691 | 44081691 | 1 | 11_44081691 | ENSG00000110455 | ACCS | 0 | INTRON | 4.96014673 | 7.04E-07 | 0.00658927 |
| 10 | 11127190 | 11127190 | 1 | 10_11127190 | ENSG00000048740 | CELF2 | 0 | INTRON | 4.96001708 | 7.05E-07 | 0.00659004 |
| 19 | 1521292 | 1521292 | 1 | 19_1521292 | ENSG00000185988 | PLK5 | 2784 | Upstream | 4.95987758 | 7.05E-07 | 0.00659115 |
| 5 | 64234685 | 64234685 | 1 | 5_64234685 | ENSG00000164197 | RNF180 | 0 | INTRON | 4.95912448 | 7.08E-07 | 0.00661237 |
| 14 | 22462380 | 22462380 | 1 | 14_22462380 | ENSG00000251002 | AC244502.1 | 0 | INTRON | 4.95903997 | 7.08E-07 | 0.00661237 |
| 1 | 24721686 | 24721686 | 1 | 1_24721686 | ENSG00000284699 | AL445648.1 | 4090 | Downstream | 4.95861093 | 7.10E-07 | 0.00662242 |
| 5 | 116993315 | 116993315 | 1 | 5_116993315 | ENSG00000250650 | AC093534.1 | 26232 | Downstream | 4.95853187 | 7.10E-07 | 0.00662242 |
| 19 | 4226810 | 4226810 | 1 | 19_4226810 | ENSG00000089847 | ANKRD24 | 1996 | Downstream | 4.95835952 | 7.11E-07 | 0.00662467 |
| 14 | 95929700 | 95929700 | 1 | 14_95929700 | ENSG00000250366 | TUNAR | 4129 | Downstream | -4.9578351 | 7.13E-07 | 0.00663334 |
| Y | 10790780 | 10790780 | 1 | Y_10790780 | ENSG00000273858 | AC140113.4 | 251941 | Downstream | 4.95782388 | 7.13E-07 | 0.00663334 |
| 5 | 164558716 | 164558716 | 1 | 5_164558716 | ENSG00000241956 | AC109466.1 | 0 | INTRON | 4.95764784 | 7.14E-07 | 0.00663334 |
| 21 | 25585171 | 25585171 | 1 | 21_25585171 | ENSG00000154719 | MRPL39 | 484 | Downstream | 4.95759629 | 7.14E-07 | 0.00663334 |
| 12 | 104356323 | 104356323 | 1 | 12_104356323 | ENSG00000198431 | TXNRD1 | 6016 | Downstream | 4.95757382 | 7.14E-07 | 0.00663334 |
| X | 123797074 | 123797074 | 1 | X_123797074 | ENSG00000226902 | CHCHD2P1 | 11623 | Downstream | 4.9572689 | 7.15E-07 | 0.00663687 |
| 17 | 16455439 | 16455439 | 1 | 17_16455439 | ENSG00000175061 | SNHG29 | 0 | INTRON | -4.9572404 | 7.15E-07 | 0.00663687 |
| 13 | 49058237 | 49058237 | 1 | 13_49058237 | ENSG00000102531 | FNDC3A | 0 | INTRON | -4.9571501 | 7.15E-07 | 0.00663687 |
| 16 | 72548863 | 72548863 | 1 | 16_72548863 | ENSG00000261008 | LINC01572 | 0 | INTRON | 4.95698378 | 7.16E-07 | 0.00663687 |
| 1 | 9924377 | 9924377 | 1 | 1_9924377 | ENSG00000162441 | LZIC | 0 | INTRON | 4.95690446 | 7.16E-07 | 0.00663687 |
| 18 | 78793163 | 78793163 | 1 | 18_78793163 | ENSG00000266273 | AC044873.1 | 2448 | Downstream | -4.9567404 | 7.17E-07 | 0.00663687 |
| 1 | 59464926 | 59464926 | 1 | 1_59464926 | ENSG00000172456 | FGGY | 0 | INTRON | 4.95651678 | 7.18E-07 | 0.00663687 |
| 1 | 243967221 | 243967221 | 1 | 1_243967221 | ENSG00000226828 | LINC02774 | 0 | INTRON | -4.9564898 | 7.18E-07 | 0.00663687 |
| 15 | 29714517 | 29714517 | 1 | 15_29714517 | ENSG00000104067 | TJP1 | 0 | INTRON | 4.95639839 | 7.18E-07 | 0.00663687 |
| 9 | 81746604 | 81746604 | 1 | 9_81746604 | ENSG00000233926 | AL591368.1 | 0 | INTRON | -4.9562759 | 7.19E-07 | 0.00663687 |
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| 3 | 115693416 | 115693416 | 1 | 3_115693416 | ENSG00000172020 | GAP43 | 0 | INTRON | 4.95620071 | 7.19E-07 | 0.00663687 |
| 20 | 61562343 | 61562343 | 1 | 20_61562343 | ENSG00000179242 | CDH4 | 0 | INTRON | 4.95600988 | 7.20E-07 | 0.00663979 |
| 9 | 33348601 | 33348601 | 1 | 9_33348601 | ENSG00000086102 | NFX1 | 0 | 3UTR | 4.95578655 | 7.20E-07 | 0.00664355 |
| 2 | 37104088 | 37104088 | 1 | 2_37104088 | ENSG00000055332 | EIF2AK2 | 0 | 3UTR | 4.95563591 | 7.21E-07 | 0.00664355 |
| 21 | 38972197 | 38972197 | 1 | 21_38972197 | ENSG00000232837 | LINC01700 | 2231 | Downstream | -4.9555836 | 7.21E-07 | 0.00664355 |
| 3 | 185404819 | 185404819 | 1 | 3_185404819 | ENSG00000073803 | MAP3K13 | 0 | INTRON | 4.95515485 | 7.23E-07 | 0.00664476 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | 196166560 | 196166560 | 1 | 3_196166560 | ENSG00000224652 | LINC00885 | 5667 | Downstream | 4.95515177 | 7.23E-07 | 0.00664476 |
| 15 | 52305860 | 52305860 | 1 | 15_52305860 | ENSG00000197535 | MYO5A | 1422 | Downstream | 4.95503843 | 7.23E-07 | 0.00664476 |
| 17 | 65990899 | 65990899 | 1 | 17_65990899 | ENSG00000154240 | CEP112 | 0 | INTRON | 4.95498234 | 7.23E-07 | 0.00664476 |
| 10 | 109424590 | 109424590 | 1 | 10_109424590 | ENSG00000232728 | PHB2P1 | 103528 | Upstream | 4.95497649 | 7.23E-07 | 0.00664476 |
| 1 | 18883370 | 18883370 | 1 | 1_18883370 | ENSG00000159423 | ALDH4A1 | 0 | EXON | -4.9548903 | 7.24E-07 | 0.00664476 |
| 22 | 31741069 | 31741069 | 1 | 22_31741069 | ENSG00000183530 | PRR14L | 0 | INTRON | 4.9547801 | 7.24E-07 | 0.00664476 |
| 3 | 150675505 | 150675505 | 1 | 3_150675505 | ENSG00000163645 | ERICH6 | 0 | INTRON | -4.9547079 | 7.24E-07 | 0.00664476 |
| 16 | 66525546 | 66525546 | 1 | 16_66525546 | ENSG00000166548 | TK2 | 0 | INTRON | -4.9545808 | 7.25E-07 | 0.00664552 |
| 13 | 60859561 | 60859561 | 1 | 13_60859561 | ENSG00000225249 | LINC00378 | 0 | INTRON | 4.9540624 | 7.27E-07 | 0.00665653 |
| X | 100556102 | 100556102 | 1 | X_100556102 | ENSG00000000005 | TNMD | 28833 | Upstream | 4.95393628 | 7.27E-07 | 0.00665653 |
| 15 | 41826424 | 41826424 | 1 | 15_41826424 | ENSG00000137802 | MAPKBP1 | 0 | 3UTR | -4.9538914 | 7.27E-07 | 0.00665653 |
| 3 | 83120297 | 83120297 | 1 | 3_83120297 | ENSG00000288004 | AC023503.1 | 264147 | Upstream | -4.9538403 | 7.28E-07 | 0.00665653 |
| 15 | 96068964 | 96068964 | 1 | 15_96068964 | ENSG00000275443 | AC012409.2 | 0 | INTRON | -4.9536998 | 7.28E-07 | 0.00665733 |
| 15 | 93641813 | 93641813 | 1 | 15_93641813 | ENSG00000258631 | AC110023.1 | 0 | INTRON | -4.9536079 | 7.28E-07 | 0.00665733 |
| X | 47461387 | 47461387 | 1 | X_47461387 | ENSG00000147124 | ZNF41 | 0 | INTRON | -4.9534283 | 7.29E-07 | 0.00665991 |
| 17 | 64751026 | 64751026 | 1 | 17_64751026 | ENSG00000265298 | AC132812.1 | 0 | EXON | -4.9530815 | 7.30E-07 | 0.00666702 |
| 8 | 106547135 | 106547135 | 1 | 8_106547135 | ENSG00000253582 | AC090579.1 | 0 | INTRON | 4.95301201 | 7.31E-07 | 0.00666702 |
| 5 | 14881382 | 14881382 | 1 | 5_14881382 | ENSG00000250662 | HNRNPKP5 | 3463 | Upstream | 4.95253013 | 7.33E-07 | 0.00667753 |
| 8 | 6553724 | 6553724 | 1 | 8_6553724 | ENSG00000091879 | ANGPT2 | 0 | INTRON | -4.9524771 | 7.33E-07 | 0.00667753 |
| 6 | 17388060 | 17388060 | 1 | 6_17388060 | ENSG00000112186 | CAP2 | 5444 | Upstream | -4.9523071 | 7.33E-07 | 0.00667753 |
| 2 | 19065230 | 19065230 | 1 | 2_19065230 | ENSG00000236204 | LINC01376 | 0 | INTRON | -4.9522506 | 7.34E-07 | 0.00667753 |
| 20 | 64056430 | 64056430 | 1 | 20_64056430 | ENSG00000171703 | TCEA2 | 0 | INTRON | 4.95218451 | 7.34E-07 | 0.00667753 |
| 11 | 25816680 | 25816680 | 1 | 11_25816680 | ENSG00000254456 | LINC02699 | 34663 | Downstream | -4.9517272 | 7.36E-07 | 0.00668967 |
| 20 | 13713403 | 13713403 | 1 | 20_13713403 | ENSG00000089048 | ESF1 | 918 | Downstream | -4.951304 | 7.37E-07 | 0.00669977 |
| 2 | 3237134 | 3237134 | 1 | 2_3237134 | ENSG00000032389 | EIPR1 | 0 | INTRON | 4.95118758 | 7.38E-07 | 0.00669977 |
| 19 | 3711048 | 3711048 | 1 | 19_3711048 | ENSG00000105289 | TJP3 | 0 | INTRON | -4.9511219 | 7.38E-07 | 0.00669977 |
| X | 69260729 | 69260729 | 1 | X_69260729 | ENSG00000215162 | LINC00269 | 50805 | Downstream | 4.95084135 | 7.39E-07 | 0.00670265 |
| 1 | 6549188 | 6549188 | 1 | 1_6549188 | ENSG00000162408 | NOL9 | 0 | INTRON | 4.95079426 | 7.39E-07 | 0.00670265 |
| 12 | 71153924 | 71153924 | 1 | 12_71153924 | ENSG00000127324 | TSPAN8 | 0 | INTRON | -4.9507271 | 7.39E-07 | 0.00670265 |
| 15 | 30964665 | 30964665 | 1 | 15_30964665 | ENSG00000166912 | MTMR10 | 0 | INTRON | 4.95059755 | 7.40E-07 | 0.00670354 |
| 4 | 26045337 | 26045337 | 1 | 4_26045337 | ENSG00000283314 | LINC02357 | 25416 | Upstream | 4.94961063 | 7.44E-07 | 0.00673404 |
| 4 | 6295600 | 6295600 | 1 | 4_6295600 | ENSG00000109501 | WFS1 | 0 | INTRON | -4.9493343 | 7.45E-07 | 0.00674002 |
| 16 | 34930353 | 34930353 | 1 | 16_34930353 | ENSG00000279165 | AC135776.4 | 11623 | Upstream | -4.9491768 | 7.45E-07 | 0.00674189 |
| 4 | 4503127 | 4503127 | 1 | 4_4503127 | ENSG00000168818 | STX18 | 0 | INTRON | 4.94889259 | 7.46E-07 | 0.00674757 |
| 14 | 47274589 | 47274589 | 1 | 14_47274589 | ENSG00000139915 | MDGA2 | 0 | INTRON | -4.9488059 | 7.47E-07 | 0.00674757 |
| 5 | 113679132 | 113679132 | 1 | 5_113679132 | ENSG00000286839 | AC093240.1 | 58973 | Downstream | 4.94868559 | 7.47E-07 | 0.00674816 |
| 9 | 124309724 | 124309724 | 1 | 9_124309724 | ENSG00000119408 | NEK6 | 0 | INTRON | 4.94823906 | 7.49E-07 | 0.00676007 |
| 11 | 86095448 | 86095448 | 1 | 11_86095448 | ENSG00000073921 | PICALM | 25566 | Upstream | 4.94797331 | 7.50E-07 | 0.00676059 |
| 2 | 216827160 | 216827160 | 1 | 2_216827160 | ENSG00000236886 | AC007563.2 | 0 | INTRON | 4.94793873 | 7.50E-07 | 0.00676059 |
| 15 | 51788541 | 51788541 | 1 | 15_51788541 | ENSG00000128872 | TMOD2 | 0 | INTRON | 4.94781289 | 7.51E-07 | 0.00676059 |
| X | 32960532 | 32960532 | 1 | X_32960532 | ENSG00000198947 | DMD | 0 | INTRON | 4.94776762 | 7.51E-07 | 0.00676059 |
| 4 | 16454257 | 16454257 | 1 | 4_16454257 | ENSG00000248138 | AC097515.1 | 0 | INTRON | 4.94770819 | 7.51E-07 | 0.00676059 |
| 10 | 95060500 | 95060500 | 1 | 10_95060500 | ENSG00000138115 | CYP2C8 | 0 | INTRON | 4.94755554 | 7.52E-07 | 0.00676084 |
| 9 | 15488028 | 15488028 | 1 | 9_15488028 | ENSG00000164985 | PSIP1 | 0 | INTRON | 4.9473645 | 7.52E-07 | 0.00676084 |
| 16 | 16239158 | 16239158 | 1 | 16_16239158 | ENSG00000103226 | NOMO3 | 0 | INTRON | 4.94726028 | 7.53E-07 | 0.00676084 |
| 4 | 510188 | 510188 | 1 | 4_510188 | ENSG00000174227 | PIGG | 0 | INTRON | 4.94710436 | 7.53E-07 | 0.00676084 |
| X | 44471743 | 44471743 | 1 | X_44471743 | ENSG00000224054 | AL022163.1 | 2788 | Downstream | -4.9470504 | 7.53E-07 | 0.00676084 |
| 13 | 76735957 | 76735957 | 1 | 13_76735957 | ENSG00000285572 | AL136441.1 | 0 | INTRON | 4.94705003 | 7.53E-07 | 0.00676084 |
| 5 | 126985492 | 126985492 | 1 | 5_126985492 | ENSG00000173926 | 3-Mar | 0 | INTRON | 4.94698128 | 7.54E-07 | 0.00676084 |
| 6 | 15533185 | 15533185 | 1 | 6_15533185 | ENSG00000047579 | DTNBP1 | 0 | INTRON | 4.94683582 | 7.54E-07 | 0.00676232 |
| 8 | 41334001 | 41334001 | 1 | 8_41334001 | ENSG00000104332 | SFRP1 | 24528 | Upstream | 4.94664798 | 7.55E-07 | 0.00676528 |
| 1 | 81384637 | 81384637 | 1 | 1_81384637 | ENSG00000117114 | ADGRL2 | 0 | INTRON | -4.9464611 | 7.56E-07 | 0.00676821 |
| 16 | 80513931 | 80513931 | 1 | 16_80513931 | ENSG00000259867 | AC105411.1 | 0 | INTRON | -4.9460464 | 7.57E-07 | 0.00677907 |
| 16 | 82379926 | 82379926 | 1 | 16_82379926 | ENSG00000259873 | AC009117.1 | 54901 | Upstream | -4.945711 | 7.59E-07 | 0.00678719 |
| X | 24045419 | 24045419 | 1 | X_24045419 | ENSG00000130741 | EIF2S3 | 9526 | Upstream | 4.94557175 | 7.59E-07 | 0.00678847 |
| 4 | 121001178 | 121001178 | 1 | 4_121001178 | ENSG00000173376 | NDNF | 34434 | Downstream | 4.94537921 | 7.60E-07 | 0.00678891 |
| 2 | 156971295 | 156971295 | 1 | 2_156971295 | ENSG00000286530 | AC108057.1 | 62541 | Upstream | 4.94535456 | 7.60E-07 | 0.00678891 |
| 2 | 19306330 | 19306330 | 1 | 2_19306330 | ENSG00000236204 | LINC01376 | 0 | INTRON | 4.94516652 | 7.61E-07 | 0.0067919 |
| 9 | 124377069 | 124377069 | 1 | 9_124377069 | ENSG00000136930 | PSMB7 | 0 | INTRON | 4.94489328 | 7.62E-07 | 0.00679787 |
| 18 | 4947634 | 4947634 | 1 | 18_4947634 | ENSG00000266268 | AP005203.1 | 0 | INTRON | 4.94444792 | 7.64E-07 | 0.00680455 |
| 3 | 144574066 | 144574066 | 1 | 3_144574066 | ENSG00000280397 | AC011592.1 | 128222 | Upstream | -4.944413 | 7.64E-07 | 0.00680455 |
| 19 | 18739251 | 18739251 | 1 | 19_18739251 | ENSG00000105662 | CRTC1 | 0 | INTRON | 4.9443956 | 7.64E-07 | 0.00680455 |
| 13 | 37996409 | 37996409 | 1 | 13_37996409 | ENSG00000274317 | LINC02334 | 0 | INTRON | -4.9437754 | 7.66E-07 | 0.00682268 |
| 15 | 50903418 | 50903418 | 1 | 15_50903418 | ENSG00000273674 | AC021752.1 | 0 | INTRON | -4.9435533 | 7.67E-07 | 0.00682688 |
| 22 | 28490779 | 28490779 | 1 | 22_28490779 | ENSG00000100154 | TTC28 | 0 | INTRON | 4.9433091 | 7.68E-07 | 0.00683135 |
| 2 | 30954423 | 30954423 | 1 | 2_30954423 | ENSG00000158089 | GALNT14 | 0 | INTRON | 4.9431778 | 7.69E-07 | 0.00683135 |
| 7 | 151823811 | 151823811 | 1 | 7_151823811 | ENSG00000106617 | PRKAG2 | 0 | INTRON | 4.94290758 | 7.70E-07 | 0.00683135 |
| 15 | 23330222 | 23330222 | 1 | 15_23330222 | ENSG00000273756 | AC100756.3 | 0 | INTRON | -4.9428012 | 7.70E-07 | 0.00683135 |
| 2 | 204138520 | 204138520 | 1 | 2_204138520 | ENSG00000234714 | AC009965.1 | 28671 | Downstream | 4.94273593 | 7.70E-07 | 0.00683135 |
| 3 | 168570033 | 168570033 | 1 | 3_168570033 | ENSG00000206120 | EGFEM1P | 0 | INTRON | 4.9427189 | 7.70E-07 | 0.00683135 |
| 17 | 72277278 | 72277278 | 1 | 17_72277278 | ENSG00000227036 | LINC00511 | 12812 | Downstream | -4.9427115 | 7.70E-07 | 0.00683135 |
| 16 | 7581501 | 7581501 | 1 | 16_7581501 | ENSG00000078328 | RBFOX1 | 0 | INTRON | 4.94256394 | 7.71E-07 | 0.00683135 |
| 2 | 121070436 | 121070436 | 1 | 2_121070436 | ENSG00000234455 | AC067960.1 | 11000 | Downstream | 4.94251073 | 7.71E-07 | 0.00683135 |
| 2 | 189512954 | 189512954 | 1 | 2_189512954 | ENSG00000287418 | AC013439.2 | 24429 | Downstream | 4.94199785 | 7.73E-07 | 0.00684578 |
| 10 | 3717710 | 3717710 | 1 | 10_3717710 | ENSG00000229672 | AL450322.2 | 31255 | Upstream | -4.9415528 | 7.75E-07 | 0.00685399 |
| 3 | 4579948 | 4579948 | 1 | 3_4579948 | ENSG00000150995 | ITPR1 | 0 | INTRON | 4.94153762 | 7.75E-07 | 0.00685399 |
| 4 | 45561388 | 45561388 | 1 | 4_45561388 | ENSG00000200720 | RNU6-931P | 81252 | Downstream | -4.9414106 | 7.76E-07 | 0.00685399 |
| 1 | 36228024 | 36228024 | 1 | 1_36228024 | ENSG00000054118 | THRAP3 | 0 | INTRON | -4.941265 | 7.76E-07 | 0.00685399 |
| 21 | 43743931 | 43743931 | 1 | 21_43743931 | ENSG00000160209 | PDXK | 0 | INTRON | -4.9412578 | 7.76E-07 | 0.00685399 |
| 12 | 71582228 | 71582228 | 1 | 12_71582228 | ENSG00000139292 | LGR5 | 0 | INTRON | 4.94093046 | 7.78E-07 | 0.00685858 |
| 9 | 17593194 | 17593194 | 1 | 9_17593194 | ENSG00000107295 | SH3GL2 | 0 | INTRON | -4.9407423 | 7.78E-07 | 0.00685858 |
| 8 | 17889481 | 17889481 | 1 | 8_17889481 | ENSG00000104760 | FGL1 | 0 | INTRON | 4.94073949 | 7.78E-07 | 0.00685858 |
| 1 | 236643704 | 236643704 | 1 | 1_236643704 | ENSG00000077522 | ACTN2 | 20436 | Upstream | -4.9407231 | 7.78E-07 | 0.00685858 |
| 3 | 9341676 | 9341676 | 1 | 3_9341676 | ENSG00000254485 | AC026191.1 | 0 | INTRON | -4.9405027 | 7.79E-07 | 0.00686048 |
| X | 30612289 | 30612289 | 1 | X_30612289 | ENSG00000178556 | CKS1BP6 | 5164 | Upstream | 4.94043261 | 7.79E-07 | 0.00686048 |
| 12 | 23105488 | 23105488 | 1 | 12_23105488 | ENSG00000256995 | AC084816.1 | 0 | INTRON | 4.94036645 | 7.80E-07 | 0.00686048 |
| 8 | 66016428 | 66016428 | 1 | 8_66016428 | ENSG00000147570 | DNAJC5B | 5124 | Upstream | 4.9401738 | 7.81E-07 | 0.00686339 |
| 12 | 81330236 | 81330236 | 1 | 12_81330236 | ENSG00000139220 | PPFIA2 | 0 | INTRON | -4.9400209 | 7.81E-07 | 0.00686339 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 62404142 | 62404142 | 1 | 1_62404142 | ENSG00000162607 | USP1 | 32154 | Upstream | -4.9399816 | 7.81E-07 | 0.00686339 |
| 5 | 62453930 | 62453930 | 1 | 5_62453930 | ENSG00000068796 | KIF2A | 0 | INTRON | 4.93985415 | 7.82E-07 | 0.00686433 |
| 5 | 138760645 | 138760645 | 1 | 5_138760645 | ENSG00000044115 | CTNNA1 | 0 | INTRON | 4.9392686 | 7.84E-07 | 0.00688142 |
| 10 | 133098783 | 133098783 | 1 | 10_133098783 | ENSG00000197177 | ADGRA1 | 0 | INTRON | 4.93915717 | 7.85E-07 | 0.00688181 |
| 10 | 39254299 | 39254299 | 1 | 10_39254299 | ENSG00000233832 | AL590623.1 | 471191 | Downstream | 4.93895906 | 7.85E-07 | 0.00688525 |
| 1 | 50921892 | 50921892 | 1 | 1_50921892 | ENSG00000185104 | FAF1 | 0 | INTRON | 4.93867572 | 7.87E-07 | 0.00689171 |
| 15 | 100789944 | 100789944 | 1 | 15_100789944 | ENSG00000259579 | AC087762.1 | 0 | INTRON | -4.9385223 | 7.87E-07 | 0.00689359 |
| 2 | 156632693 | 156632693 | 1 | 2_156632693 | ENSG00000115159 | GPD2 | 18958 | Downstream | 4.93794996 | 7.89E-07 | 0.00690823 |
| 6 | 63655889 | 63655889 | 1 | 6_63655889 | ENSG00000118482 | PHF3 | 0 | INTRON | 4.93790773 | 7.90E-07 | 0.00690823 |
| 20 | 62030200 | 62030200 | 1 | 20_62030200 | ENSG00000130699 | TAF4 | 0 | INTRON | 4.93759414 | 7.91E-07 | 0.00691579 |
| 2 | 6277904 | 6277904 | 1 | 2_6277904 | ENSG00000234275 | AC017053.1 | 0 | INTRON | 4.93742947 | 7.92E-07 | 0.00691807 |
| 22 | 20412358 | 20412358 | 1 | 22_20412358 | ENSG00000185252 | ZNF74 | 3897 | Downstream | 4.93709228 | 7.93E-07 | 0.00692648 |
| 7 | 81145189 | 81145189 | 1 | 7_81145189 | ENSG00000237896 | AC005008.2 | 30318 | Upstream | -4.9364235 | 7.96E-07 | 0.0069467 |
| 16 | 66159265 | 66159265 | 1 | 16_66159265 | ENSG00000201999 | RNA5SP428 | 142543 | Upstream | 4.93606611 | 7.97E-07 | 0.00695587 |
| 16 | 70033337 | 70033337 | 1 | 16_70033337 | ENSG00000255185 | PDXDC2P | 0 | INTRON | 4.93561806 | 7.99E-07 | 0.00696354 |
| 2 | 167502987 | 167502987 | 1 | 2_167502987 | ENSG00000228222 | AC073050.1 | 0 | INTRON | -4.9355715 | 7.99E-07 | 0.00696354 |
| 1 | 63095909 | 63095909 | 1 | 1_63095909 | ENSG00000229225 | AL162400.2 | 16878 | Upstream | -4.935551 | 7.99E-07 | 0.00696354 |
| 14 | 34732249 | 34732249 | 1 | 14_34732249 | ENSG00000243824 | RPL12P6 | 8086 | Downstream | -4.9352178 | 8.01E-07 | 0.00696723 |
| 4 | 42812468 | 42812468 | 1 | 4_42812468 | ENSG00000252595 | RN7SKP82 | 79927 | Upstream | 4.93518112 | 8.01E-07 | 0.00696723 |
| 14 | 100126630 | 100126630 | 1 | 14_100126630 | ENSG00000196405 | EVL | 0 | INTRON | 4.93510459 | 8.01E-07 | 0.00696723 |
| 10 | 101367347 | 101367347 | 1 | 10_101367347 | ENSG00000166167 | BTRC | 0 | INTRON | 4.93504821 | 8.01E-07 | 0.00696723 |
| 11 | 87224139 | 87224139 | 1 | 11_87224139 | ENSG00000166575 | TMEM135 | 0 | INTRON | -4.9347935 | 8.02E-07 | 0.00697083 |
| 5 | 8386460 | 8386460 | 1 | 5_8386460 | ENSG00000245729 | LINC02226 | 0 | INTRON | 4.93474804 | 8.03E-07 | 0.00697083 |
| 21 | 35368954 | 35368954 | 1 | 21_35368954 | ENSG00000159216 | RUNX1 | 0 | INTRON | 4.93442723 | 8.04E-07 | 0.00697403 |
| 3 | 155916088 | 155916088 | 1 | 3_155916088 | ENSG00000163655 | GMPS | 0 | EXON | 4.9343821 | 8.04E-07 | 0.00697403 |
| 3 | 192888096 | 192888096 | 1 | 3_192888096 | ENSG00000180611 | MB21D2 | 0 | INTRON | 4.93435989 | 8.04E-07 | 0.00697403 |
| 14 | 31359491 | 31359491 | 1 | 14_31359491 | ENSG00000203546 | AL139353.1 | 0 | INTRON | -4.9342011 | 8.05E-07 | 0.00697606 |
| X | 22157039 | 22157039 | 1 | X_22157039 | ENSG00000102174 | PHEX | 0 | INTRON | 4.93410399 | 8.05E-07 | 0.00697606 |
| 10 | 59938217 | 59938217 | 1 | 10_59938217 | ENSG00000235931 | LINC01553 | 17212 | Downstream | -4.9337821 | 8.07E-07 | 0.00698394 |
| 20 | 3742127 | 3742127 | 1 | 20_3742127 | ENSG00000132622 | HSPA12B | 0 | INTRON | 4.93367904 | 8.07E-07 | 0.00698394 |
| 16 | 14439875 | 14439875 | 1 | 16_14439875 | ENSG00000140694 | PARN | 0 | INTRON | 4.9335856 | 8.07E-07 | 0.00698394 |
| 2 | 108157584 | 108157584 | 1 | 2_108157584 | ENSG00000225328 | LINC01594 | 9540 | Downstream | 4.93336136 | 8.08E-07 | 0.00698516 |
| 5 | 54939339 | 54939339 | 1 | 5_54939339 | ENSG00000249016 | AC112198.3 | 16895 | Downstream | -4.9332544 | 8.09E-07 | 0.00698516 |
| 1 | 153636396 | 153636396 | 1 | 1_153636396 | ENSG00000160679 | CHTOP | 0 | INTRON | 4.93325404 | 8.09E-07 | 0.00698516 |
| 3 | 168771677 | 168771677 | 1 | 3_168771677 | ENSG00000206120 | EGFEM1P | 0 | INTRON | -4.9331495 | 8.09E-07 | 0.00698536 |
| 4 | 90967309 | 90967309 | 1 | 4_90967309 | ENSG00000184305 | CCSER1 | 0 | INTRON | 4.93282737 | 8.10E-07 | 0.00699334 |
| 10 | 9201863 | 9201863 | 1 | 10_9201863 | ENSG00000230014 | LINC00709 | 73969 | Upstream | -4.9325863 | 8.11E-07 | 0.00699518 |
| 6 | 28471869 | 28471869 | 1 | 6_28471869 | ENSG00000287804 | Z98745.2 | 5126 | Downstream | -4.9325782 | 8.12E-07 | 0.00699518 |
| 11 | 101903351 | 101903351 | 1 | 11_101903351 | ENSG00000187151 | ANGPTL5 | 0 | INTRON | 4.93231831 | 8.13E-07 | 0.00700002 |
| X | 18950212 | 18950212 | 1 | X_18950212 | ENSG00000044446 | PHKA2 | 0 | INTRON | -4.932202 | 8.13E-07 | 0.00700002 |
| 14 | 57741290 | 57741290 | 1 | 14_57741290 | ENSG00000151812 | SLC35F4 | 0 | INTRON | -4.9319046 | 8.14E-07 | 0.00700002 |
| 4 | 190119685 | 190119685 | 1 | 4_190119685 | ENSG00000280457 | DUX4L2 | 27406 | Downstream | -4.9318732 | 8.14E-07 | 0.00700002 |
| 6 | 165862505 | 165862505 | 1 | 6_165862505 | ENSG00000112541 | PDE10A | 0 | INTRON | 4.93171373 | 8.15E-07 | 0.00700002 |
| 8 | 68306114 | 68306114 | 1 | 8_68306114 | ENSG00000248801 | C8orf34-AS1 | 0 | INTRON | -4.9316925 | 8.15E-07 | 0.00700002 |
| 13 | 106107698 | 106107698 | 1 | 13_106107698 | ENSG00000287923 | AL138701.2 | 43629 | Upstream | 4.93166735 | 8.15E-07 | 0.00700002 |
| 12 | 15595857 | 15595857 | 1 | 12_15595857 | ENSG00000151490 | PTPRO | 0 | 3UTR | -4.9316139 | 8.16E-07 | 0.00700002 |
| 2 | 182202418 | 182202418 | 1 | 2_182202418 | ENSG00000115252 | PDE1A | 0 | INTRON | 4.93150682 | 8.16E-07 | 0.00700002 |
| 2 | 112998925 | 112998925 | 1 | 2_112998925 | ENSG00000232090 | AC016724.1 | 2988 | Downstream | 4.93145641 | 8.16E-07 | 0.00700002 |
| 3 | 71461629 | 71461629 | 1 | 3_71461629 | ENSG00000114861 | FOXP1 | 0 | INTRON | 4.93134304 | 8.17E-07 | 0.00700055 |
| Y | 11478017 | 11478017 | 1 | Y_11478017 | ENSG00000271375 | AC134879.2 | 3780 | Upstream | 4.93115191 | 8.17E-07 | 0.00700244 |
| 1 | 37728750 | 37728750 | 1 | 1_37728750 | ENSG00000183317 | EPHA10 | 0 | INTRON | 4.93102163 | 8.18E-07 | 0.00700244 |
| 2 | 225328360 | 225328360 | 1 | 2_225328360 | ENSG00000144460 | NYAP2 | 71349 | Upstream | -4.9309662 | 8.18E-07 | 0.00700244 |
| 3 | 152831198 | 152831198 | 1 | 3_152831198 | ENSG00000169860 | P2RY1 | 3932 | Upstream | 4.9308972 | 8.19E-07 | 0.00700244 |
| 6 | 108720677 | 108720677 | 1 | 6_108720677 | ENSG00000203801 | LINC00222 | 30976 | Upstream | 4.93022106 | 8.21E-07 | 0.00702319 |
| 5 | 93953678 | 93953678 | 1 | 5_93953678 | ENSG00000113391 | FAM172A | 0 | INTRON | 4.92998805 | 8.22E-07 | 0.00702792 |
| 3 | 192814725 | 192814725 | 1 | 3_192814725 | ENSG00000180611 | MB21D2 | 0 | INTRON | -4.9298931 | 8.23E-07 | 0.00702792 |
| 6 | 49804717 | 49804717 | 1 | 6_49804717 | ENSG00000235122 | AL121974.1 | 0 | INTRON | -4.9295687 | 8.24E-07 | 0.00703607 |
| 7 | 120959880 | 120959880 | 1 | 7_120959880 | ENSG00000071243 | ING3 | 0 | INTRON | 4.9293408 | 8.25E-07 | 0.00703915 |
| 17 | 57390444 | 57390444 | 1 | 17_57390444 | ENSG00000153944 | MSI2 | 0 | INTRON | -4.9292872 | 8.25E-07 | 0.00703915 |
| 18 | 69929607 | 69929607 | 1 | 18_69929607 | ENSG00000150637 | CD226 | 0 | INTRON | -4.9289666 | 8.27E-07 | 0.00704718 |
| 16 | 50242632 | 50242632 | 1 | 16_50242632 | ENSG00000121281 | ADCY7 | 3504 | Upstream | -4.9284701 | 8.29E-07 | 0.00706157 |
| 5 | 843378 | 843378 | 1 | 5_843378 | ENSG00000188818 | ZDHHC11 | 0 | EXON | -4.9282998 | 8.29E-07 | 0.00706419 |
| 6 | 68601109 | 68601109 | 1 | 6_68601109 | ENSG00000218834 | AL606923.1 | 2716 | Upstream | 4.92800899 | 8.31E-07 | 0.00707117 |
| 2 | 203987015 | 203987015 | 1 | 2_203987015 | ENSG00000163600 | ICOS | 25438 | Downstream | -4.9277255 | 8.32E-07 | 0.00707709 |
| 19 | 37290068 | 37290068 | 1 | 19_37290068 | ENSG00000267605 | AC016590.1 | 0 | INTRON | 4.92765013 | 8.32E-07 | 0.00707709 |
| 8 | 125546882 | 125546882 | 1 | 8_125546882 | ENSG00000253111 | AC091114.1 | 5509 | Downstream | 4.92723539 | 8.34E-07 | 0.00708686 |
| 8 | 144514086 | 144514086 | 1 | 8_144514086 | ENSG00000160957 | RECQL4 | 0 | EXON | 4.92718144 | 8.34E-07 | 0.00708686 |
| 16 | 65442801 | 65442801 | 1 | 16_65442801 | ENSG00000261742 | LINC00922 | 0 | INTRON | -4.9270877 | 8.35E-07 | 0.00708686 |
| 1 | 234916572 | 234916572 | 1 | 1_234916572 | ENSG00000286263 | AL391832.4 | 0 | INTRON | 4.92656406 | 8.37E-07 | 0.00710232 |
| 11 | 44202326 | 44202326 | 1 | 11_44202326 | ENSG00000151348 | EXT2 | 0 | INTRON | 4.92599597 | 8.39E-07 | 0.00710948 |
| 10 | 15256139 | 15256139 | 1 | 10_15256139 | ENSG00000148468 | FAM171A1 | 0 | INTRON | -4.925954 | 8.39E-07 | 0.00710948 |
| 1 | 59650961 | 59650961 | 1 | 1_59650961 | ENSG00000172456 | FGGY | 0 | INTRON | 4.92592658 | 8.40E-07 | 0.00710948 |
| 16 | 71819722 | 71819722 | 1 | 16_71819722 | ENSG00000166747 | AP1G1 | 10521 | Upstream | 4.92591423 | 8.40E-07 | 0.00710948 |
| 9 | 134370904 | 134370904 | 1 | 9_134370904 | ENSG00000186350 | RXRA | 0 | INTRON | -4.9258802 | 8.40E-07 | 0.00710948 |
| 2 | 185299875 | 185299875 | 1 | 2_185299875 | ENSG00000286797 | AC009315.1 | 125187 | Upstream | 4.92568258 | 8.41E-07 | 0.00711301 |
| 18 | 78017304 | 78017304 | 1 | 18_78017304 | ENSG00000199728 | RNU6-655P | 19434 | Upstream | -4.9255079 | 8.41E-07 | 0.00711301 |
| 6 | 130106671 | 130106671 | 1 | 6_130106671 | ENSG00000198945 | L3MBTL3 | 0 | INTRON | 4.92542058 | 8.42E-07 | 0.00711301 |
| 16 | 55271345 | 55271345 | 1 | 16_55271345 | ENSG00000259283 | AC109462.1 | 0 | INTRON | 4.92539456 | 8.42E-07 | 0.00711301 |
| 12 | 3895552 | 3895552 | 1 | 12_3895552 | ENSG00000256862 | AC005842.1 | 0 | INTRON | 4.9251311 | 8.43E-07 | 0.00711736 |
| 19 | 46269929 | 46269929 | 1 | 19_46269929 | ENSG00000268238 | IGFL1P2 | 9071 | Upstream | -4.9250808 | 8.43E-07 | 0.00711736 |
| 14 | 29909062 | 29909062 | 1 | 14_29909062 | ENSG00000184304 | PRKD1 | 0 | INTRON | 4.92458168 | 8.45E-07 | 0.00712639 |
| 1 | 168974320 | 168974320 | 1 | 1_168974320 | ENSG00000285622 | AL135926.1 | 0 | INTRON | 4.92454406 | 8.46E-07 | 0.00712639 |
| 8 | 66634172 | 66634172 | 1 | 8_66634172 | ENSG00000175073 | VCPIP1 | 0 | 3UTR | -4.9244951 | 8.46E-07 | 0.00712639 |
| 10 | 99494457 | 99494457 | 1 | 10_99494457 | ENSG00000224934 | AL391684.1 | 31198 | Downstream | 4.92444538 | 8.46E-07 | 0.00712639 |
| 8 | 6866021 | 6866021 | 1 | 8_6866021 | ENSG00000245857 | AF233439.1 | 0 | INTRON | 4.92394295 | 8.48E-07 | 0.00713775 |
| 10 | 74996130 | 74996130 | 1 | 10_74996130 | ENSG00000156650 | KAT6B | 0 | INTRON | 4.92391258 | 8.48E-07 | 0.00713775 |
| 3 | 30884624 | 30884624 | 1 | 3_30884624 | ENSG00000144644 | GADL1 | 0 | INTRON | -4.9238078 | 8.49E-07 | 0.00713775 |
| 12 | 92424437 | 92424437 | 1 | 12_92424437 | ENSG00000257127 | CLLU1 | 0 | EXON | 4.92374698 | 8.49E-07 | 0.00713775 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | 38588358 | 38588358 | 1 | 3_38588358 | ENSG00000183873 | SCN5A | 0 | INTRON | 4.92359232 | 8.50E-07 | 0.00713987 |
| 1 | 77532142 | 77532142 | 1 | 1_77532142 | ENSG00000154027 | AK5 | 0 | 5UTR | 4.92337488 | 8.51E-07 | 0.00714421 |
| 16 | 1520360 | 1520360 | 1 | 16_1520360 | ENSG00000187535 | IFT140 | 0 | INTRON | 4.92328032 | 8.51E-07 | 0.00714421 |
| 20 | 29671882 | 29671882 | 1 | 20_29671882 | ENSG00000282921 | CFTRP2 | 29906 | Downstream | 4.92317242 | 8.52E-07 | 0.00714462 |
| 2 | 115907164 | 115907164 | 1 | 2_115907164 | ENSG00000287451 | AC016721.1 | 0 | INTRON | -4.9230489 | 8.52E-07 | 0.00714561 |
| 7 | 23519464 | 23519464 | 1 | 7_23519464 | ENSG00000164548 | TRA2A | 0 | INTRON | 4.92247869 | 8.55E-07 | 0.00716073 |
| 8 | 85762639 | 85762639 | 1 | 8_85762639 | ENSG00000271381 | REXO1L9P | 269 | Downstream | -4.9224 | 8.55E-07 | 0.00716073 |
| 5 | 123713939 | 123713939 | 1 | 5_123713939 | ENSG00000235275 | KRT18P16 | 76536 | Downstream | -4.9223414 | 8.55E-07 | 0.00716073 |
| 22 | 38910217 | 38910217 | 1 | 22_38910217 | ENSG00000288106 | AL022318.5 | 6423 | Downstream | 4.92225018 | 8.56E-07 | 0.00716073 |
| 12 | 11869707 | 11869707 | 1 | 12_11869707 | ENSG00000139083 | ETV6 | 0 | EXON | 4.92189665 | 8.57E-07 | 0.00717015 |
| 18 | 31864754 | 31864754 | 1 | 18_31864754 | ENSG00000153339 | TRAPPC8 | 0 | EXON | 4.92146535 | 8.59E-07 | 0.00718197 |
| 3 | 2278207 | 2278207 | 1 | 3_2278207 | ENSG00000144619 | CNTN4 | 0 | INTRON | 4.92138218 | 8.59E-07 | 0.00718197 |
| 6 | 82969372 | 82969372 | 1 | 6_82969372 | ENSG00000118420 | UBE3D | 0 | INTRON | 4.9209979 | 8.61E-07 | 0.00719256 |
| 21 | 44549143 | 44549143 | 1 | 21_44549143 | ENSG00000175894 | TSPEAR | 0 | INTRON | 4.92031926 | 8.64E-07 | 0.007214 |
| 5 | 166188578 | 166188578 | 1 | 5_166188578 | ENSG00000254171 | AC114321.1 | 33139 | Downstream | 4.92019972 | 8.65E-07 | 0.00721487 |
| 4 | 20635414 | 20635414 | 1 | 4_20635414 | ENSG00000145147 | SLIT2 | 14853 | Downstream | 4.92005482 | 8.65E-07 | 0.00721667 |
| 19 | 43838167 | 43838167 | 1 | 19_43838167 | ENSG00000167637 | ZNF283 | 0 | INTRON | 4.91991347 | 8.66E-07 | 0.00721835 |
| 16 | 19139293 | 19139293 | 1 | 16_19139293 | ENSG00000261427 | AC099518.3 | 0 | INTRON | -4.9198116 | 8.66E-07 | 0.00721857 |
| 12 | 32645567 | 32645567 | 1 | 12_32645567 | ENSG00000139132 | FGD4 | 0 | 3UTR | -4.9196336 | 8.67E-07 | 0.0072216 |
| 15 | 54746948 | 54746948 | 1 | 15_54746948 | ENSG00000137766 | UNC13C | 113534 | Downstream | 4.91946002 | 8.68E-07 | 0.00722426 |
| 2 | 154050914 | 154050914 | 1 | 2_154050914 | ENSG00000144278 | GALNT13 | 0 | INTRON | 4.91936985 | 8.68E-07 | 0.00722426 |
| 4 | 176881007 | 176881007 | 1 | 4_176881007 | ENSG00000250263 | LINC02509 | 0 | INTRON | -4.9192648 | 8.69E-07 | 0.00722461 |
| 20 | 16176383 | 16176383 | 1 | 20_16176383 | ENSG00000287410 | AL161941.1 | 1549 | Downstream | -4.9191325 | 8.69E-07 | 0.00722596 |
| 10 | 124105847 | 124105847 | 1 | 10_124105847 | ENSG00000182022 | CHST15 | 12249 | Upstream | -4.9187069 | 8.71E-07 | 0.00723815 |
| 14 | 65812118 | 65812118 | 1 | 14_65812118 | ENSG00000258629 | AL391261.1 | 67473 | Downstream | 4.91782184 | 8.75E-07 | 0.0072674 |
| 15 | 88331129 | 88331129 | 1 | 15_88331129 | ENSG00000260305 | NTRK3-AS1 | 60063 | Downstream | -4.9174851 | 8.77E-07 | 0.00727635 |
| 22 | 40633415 | 40633415 | 1 | 22_40633415 | ENSG00000196588 | MRTFA | 0 | INTRON | -4.9170738 | 8.78E-07 | 0.0072881 |
| 22 | 43226559 | 43226559 | 1 | 22_43226559 | ENSG00000159307 | SCUBE1 | 0 | INTRON | 4.91682823 | 8.80E-07 | 0.00729016 |
| 11 | 43613284 | 43613284 | 1 | 11_43613284 | ENSG00000283217 | AC068205.1 | 0 | INTRON | -4.9167839 | 8.80E-07 | 0.00729016 |
| 7 | 67611923 | 67611923 | 1 | 7_67611923 | ENSG00000226392 | MTATP6P21 | 15907 | Upstream | 4.91670966 | 8.80E-07 | 0.00729016 |
| 2 | 189183849 | 189183849 | 1 | 2_189183849 | ENSG00000204262 | COL5A2 | 0 | INTRON | 4.91663688 | 8.80E-07 | 0.00729016 |
| 12 | 49518687 | 49518687 | 1 | 12_49518687 | ENSG00000123352 | SPATS2 | 0 | INTRON | -4.9161002 | 8.83E-07 | 0.00730038 |
| 1 | 204697550 | 204697550 | 1 | 1_204697550 | ENSG00000252650 | RNA5SP75 | 9769 | Downstream | -4.9160946 | 8.83E-07 | 0.00730038 |
| 2 | 183135756 | 183135756 | 1 | 2_183135756 | ENSG00000163002 | NUP35 | 0 | INTRON | 4.91583235 | 8.84E-07 | 0.00730038 |
| 10 | 25530505 | 25530505 | 1 | 10_25530505 | ENSG00000151025 | GPR158 | 0 | INTRON | 4.91581438 | 8.84E-07 | 0.00730038 |
| 8 | 4382983 | 4382983 | 1 | 8_4382983 | ENSG00000183117 | CSMD1 | 0 | INTRON | -4.9154295 | 8.86E-07 | 0.00730038 |
| 19 | 10951257 | 10951257 | 1 | 19_10951257 | ENSG00000127616 | SMARCA4 | 9567 | Upstream | 4.91535199 | 8.86E-07 | 0.00730038 |
| 4 | 3136784 | 3136784 | 1 | 4_3136784 | ENSG00000197386 | HTT | 0 | INTRON | 4.91527769 | 8.87E-07 | 0.00730038 |
| 6 | 73540792 | 73540792 | 1 | 6_73540792 | ENSG00000229862 | AL121972.1 | 0 | INTRON | -4.9152624 | 8.87E-07 | 0.00730038 |
| X | 17676723 | 17676723 | 1 | X_17676723 | ENSG00000188158 | NHS | 0 | INTRON | -4.9152513 | 8.87E-07 | 0.00730038 |
| 3 | 54425305 | 54425305 | 1 | 3_54425305 | ENSG00000157445 | CACNA2D3 | 0 | INTRON | -4.9152444 | 8.87E-07 | 0.00730038 |
| 1 | 42941164 | 42941164 | 1 | 1_42941164 | ENSG00000117394 | SLC2A1 | 0 | INTRON | 4.91522816 | 8.87E-07 | 0.00730038 |
| 2 | 194075235 | 194075235 | 1 | 2_194075235 | ENSG00000224670 | AC068135.1 | 47071 | Downstream | -4.9152203 | 8.87E-07 | 0.00730038 |
| 20 | 46924450 | 46924450 | 1 | 20_46924450 | ENSG00000064655 | EYA2 | 0 | INTRON | 4.91512723 | 8.87E-07 | 0.00730038 |
| 6 | 149785902 | 149785902 | 1 | 6_149785902 | ENSG00000120265 | PCMT1 | 0 | INTRON | 4.91464622 | 8.89E-07 | 0.00731478 |
| 17 | 37626761 | 37626761 | 1 | 17_37626761 | ENSG00000278053 | DDX52 | 0 | INTRON | 4.91452086 | 8.90E-07 | 0.00731593 |
| 21 | 10119493 | 10119493 | 1 | 21_10119493 | ENSG00000270533 | CR382285.1 | 184 | Upstream | 4.91440386 | 8.91E-07 | 0.00731677 |
| 2 | 60812029 | 60812029 | 1 | 2_60812029 | ENSG00000115421 | PAPOLG | 9943 | Downstream | -4.914283 | 8.91E-07 | 0.00731775 |
| 5 | 24294031 | 24294031 | 1 | 5_24294031 | ENSG00000286134 | AC114930.1 | 22168 | Upstream | -4.9140179 | 8.92E-07 | 0.00732165 |
| 6 | 119709125 | 119709125 | 1 | 6_119709125 | ENSG00000265725 | MIR3144 | 306053 | Upstream | -4.9139894 | 8.92E-07 | 0.00732165 |
| 5 | 27089109 | 27089109 | 1 | 5_27089109 | ENSG00000113100 | CDH9 | 0 | INTRON | -4.9133354 | 8.95E-07 | 0.00734259 |
| 16 | 47876534 | 47876534 | 1 | 16_47876534 | ENSG00000261231 | LINC02133 | 0 | INTRON | -4.9131907 | 8.96E-07 | 0.00734447 |
| 3 | 20046229 | 20046229 | 1 | 3_20046229 | ENSG00000114166 | KAT2B | 0 | INTRON | 4.91280392 | 8.98E-07 | 0.00735544 |
| 8 | 51678773 | 51678773 | 1 | 8_51678773 | ENSG00000147485 | PXDNL | 0 | INTRON | 4.91239903 | 9.00E-07 | 0.0073671 |
| 1 | 114443516 | 114443516 | 1 | 1_114443516 | ENSG00000197323 | TRIM33 | 0 | INTRON | 4.91216643 | 9.01E-07 | 0.0073723 |
| 1 | 112900977 | 112900977 | 1 | 1_112900977 | ENSG00000228040 | AL390729.1 | 10055 | Upstream | 4.91203956 | 9.01E-07 | 0.00737353 |
| 17 | 30722465 | 30722465 | 1 | 17_30722465 | ENSG00000264538 | SUZ12P1 | 0 | INTRON | 4.91133708 | 9.05E-07 | 0.00739644 |
| 22 | 47442300 | 47442300 | 1 | 22_47442300 | ENSG00000218357 | LINC01644 | 18998 | Downstream | 4.91124024 | 9.05E-07 | 0.00739654 |
| 7 | 2002303 | 2002303 | 1 | 7_2002303 | ENSG00000286192 | AC069288.1 | 0 | INTRON | 4.91108167 | 9.06E-07 | 0.00739657 |
| 9 | 98841866 | 98841866 | 1 | 9_98841866 | ENSG00000119514 | GALNT12 | 0 | INTRON | 4.91100005 | 9.06E-07 | 0.00739657 |
| 7 | 69634362 | 69634362 | 1 | 7_69634362 | ENSG00000158321 | AUTS2 | 0 | INTRON | 4.91095722 | 9.06E-07 | 0.00739657 |
| 7 | 95824125 | 95824125 | 1 | 7_95824125 | ENSG00000158560 | DYNC1I1 | 0 | INTRON | -4.9107104 | 9.07E-07 | 0.00740233 |
| 12 | 14288748 | 14288748 | 1 | 12_14288748 | ENSG00000255749 | GNAI2P1 | 33522 | Downstream | 4.91039651 | 9.09E-07 | 0.00741064 |
| 8 | 40758336 | 40758336 | 1 | 8_40758336 | ENSG00000165061 | ZMAT4 | 0 | INTRON | -4.9099144 | 9.11E-07 | 0.00742533 |
| 15 | 23299236 | 23299236 | 1 | 15_23299236 | ENSG00000259414 | AC242376.1 | 5569 | Upstream | -4.909788 | 9.12E-07 | 0.00742656 |
| 3 | 15556120 | 15556120 | 1 | 3_15556120 | ENSG00000131373 | HACL1 | 4578 | Downstream | 4.90960619 | 9.13E-07 | 0.00742989 |
| 12 | 132524502 | 132524502 | 1 | 12_132524502 | ENSG00000112787 | FBRSL1 | 0 | INTRON | 4.90898719 | 9.15E-07 | 0.00744981 |
| 5 | 91764857 | 91764857 | 1 | 5_91764857 | ENSG00000286121 | AC093298.2 | 0 | INTRON | 4.90875301 | 9.17E-07 | 0.00745219 |
| 1 | 35040202 | 35040202 | 1 | 1_35040202 | ENSG00000197056 | ZMYM1 | 0 | INTRON | 4.90864531 | 9.17E-07 | 0.00745219 |
| 1 | 147758211 | 147758211 | 1 | 1_147758211 | ENSG00000265107 | GJA5 | 0 | EXON | -4.9086434 | 9.17E-07 | 0.00745219 |
| 1 | 77075711 | 77075711 | 1 | 1_77075711 | ENSG00000230498 | AL035409.1 | 0 | INTRON | -4.9084399 | 9.18E-07 | 0.00745577 |
| 3 | 58550271 | 58550271 | 1 | 3_58550271 | ENSG00000168306 | ACOX2 | 12988 | Upstream | 4.9082972 | 9.19E-07 | 0.00745577 |
| 17 | 69271950 | 69271950 | 1 | 17_69271950 | ENSG00000154265 | ABCA5 | 0 | INTRON | 4.90826846 | 9.19E-07 | 0.00745577 |
| 7 | 40110420 | 40110420 | 1 | 7_40110420 | ENSG00000273444 | AC006023.2 | 2966 | Downstream | 4.90806748 | 9.20E-07 | 0.00745985 |
| 8 | 141938310 | 141938310 | 1 | 8_141938310 | ENSG00000254183 | AC104417.1 | 29780 | Downstream | 4.90747593 | 9.23E-07 | 0.00747881 |
| 5 | 10033717 | 10033717 | 1 | 5_10033717 | ENSG00000279011 | AC091905.2 | 23784 | Upstream | -4.9070762 | 9.24E-07 | 0.00748516 |
| 2 | 71854224 | 71854224 | 1 | 2_71854224 | ENSG00000233971 | RPS20P10 | 129957 | Downstream | 4.90704452 | 9.25E-07 | 0.00748516 |
| 10 | 9382085 | 9382085 | 1 | 10_9382085 | ENSG00000287120 | AL138773.1 | 72313 | Upstream | 4.90702931 | 9.25E-07 | 0.00748516 |
| 9 | 86410172 | 86410172 | 1 | 9_86410172 | ENSG00000235819 | AL158828.1 | 4028 | Upstream | 4.90676446 | 9.26E-07 | 0.00749171 |
| 2 | 112311845 | 112311845 | 1 | 2_112311845 | ENSG00000188177 | ZC3H6 | 0 | EXON | -4.9064505 | 9.27E-07 | 0.00750013 |
| 11 | 129944509 | 129944509 | 1 | 11_129944509 | ENSG00000170325 | PRDM10 | 0 | INTRON | -4.9063004 | 9.28E-07 | 0.00750231 |
| 10 | 114530602 | 114530602 | 1 | 10_114530602 | ENSG00000099204 | ABLIM1 | 0 | INTRON | 4.90587045 | 9.30E-07 | 0.00751493 |
| 7 | 101071453 | 101071453 | 1 | 7_101071453 | ENSG00000169876 | MUC17 | 12594 | Downstream | 4.90578317 | 9.31E-07 | 0.00751493 |
| 5 | 153034177 | 153034177 | 1 | 5_153034177 | ENSG00000249484 | LINC01470 | 0 | INTRON | -4.905691 | 9.31E-07 | 0.00751493 |
| 12 | 2637846 | 2637846 | 1 | 12_2637846 | ENSG00000151067 | CACNA1C | 0 | INTRON | 4.90535778 | 9.33E-07 | 0.00752413 |
| 1 | 65406358 | 65406358 | 1 | 1_65406358 | ENSG00000116675 | DNAJC6 | 0 | INTRON | 4.90520904 | 9.33E-07 | 0.00752508 |
| 3 | 125225027 | 125225027 | 1 | 3_125225027 | ENSG00000163848 | ZNF148 | 533 | Downstream | -4.9051328 | 9.34E-07 | 0.00752508 |
| 8 | 142095682 | 142095682 | 1 | 8_142095682 | ENSG00000261710 | AC104417.2 | 4063 | Downstream | 4.90492037 | 9.35E-07 | 0.00752508 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | 47729985 | 47729985 | 1 | 3_47729985 | ENSG00000173473 | SMARCC1 | 0 | INTRON | 4.90487173 | 9.35E-07 | 0.00752508 |
| 6 | 106823580 | 106823580 | 1 | 6_106823580 | ENSG00000235142 | LINC02532 | 35432 | Upstream | 4.90479177 | 9.35E-07 | 0.00752508 |
| 10 | 99100749 | 99100749 | 1 | 10_99100749 | ENSG00000172987 | HPSE2 | 0 | INTRON | 4.90473147 | 9.36E-07 | 0.00752508 |
| 5 | 162976127 | 162976127 | 1 | 5_162976127 | ENSG00000254186 | AC113414.1 | 0 | INTRON | 4.9046826 | 9.36E-07 | 0.00752508 |
| 2 | 172861763 | 172861763 | 1 | 2_172861763 | ENSG00000091428 | RAPGEF4 | 0 | INTRON | -4.9043807 | 9.37E-07 | 0.00753112 |
| 4 | 8142074 | 8142074 | 1 | 4_8142074 | ENSG00000163995 | ABLIM2 | 0 | INTRON | -4.9043396 | 9.37E-07 | 0.00753112 |
| 9 | 124508293 | 124508293 | 1 | 9_124508293 | ENSG00000136931 | NR5A1 | 873 | Upstream | 4.90409562 | 9.39E-07 | 0.00753513 |
| 13 | 31506402 | 31506402 | 1 | 13_31506402 | ENSG00000277319 | AL161616.1 | 22703 | Upstream | 4.90404381 | 9.39E-07 | 0.00753513 |
| 4 | 177372483 | 177372483 | 1 | 4_177372483 | ENSG00000109674 | NEIL3 | 9547 | Downstream | -4.9038684 | 9.40E-07 | 0.00753513 |
| 18 | 78731346 | 78731346 | 1 | 18_78731346 | ENSG00000266273 | AC044873.1 | 64265 | Downstream | 4.90385768 | 9.40E-07 | 0.00753513 |
| 17 | 9970950 | 9970950 | 1 | 17_9970950 | ENSG00000007237 | GAS7 | 0 | INTRON | -4.9037723 | 9.40E-07 | 0.00753513 |
| 1 | 167507559 | 167507559 | 1 | 1_167507559 | ENSG00000198821 | CD247 | 0 | INTRON | 4.90350419 | 9.41E-07 | 0.00754187 |
| 11 | 25002452 | 25002452 | 1 | 11_25002452 | ENSG00000187398 | LUZP2 | 0 | INTRON | 4.90245738 | 9.46E-07 | 0.0075772 |
| 1 | 28388764 | 28388764 | 1 | 1_28388764 | ENSG00000204138 | PHACTR4 | 0 | INTRON | 4.90240178 | 9.47E-07 | 0.0075772 |
| 5 | 149625023 | 149625023 | 1 | 5_149625023 | ENSG00000183111 | ARHGEF37 | 0 | INTRON | -4.9021433 | 9.48E-07 | 0.00758361 |
| 5 | 118445442 | 118445442 | 1 | 5_118445442 | ENSG00000250891 | LINC02208 | 0 | INTRON | 4.90204364 | 9.48E-07 | 0.0075839 |
| 3 | 125237811 | 125237811 | 1 | 3_125237811 | ENSG00000163848 | ZNF148 | 0 | INTRON | 4.90194955 | 9.49E-07 | 0.00758397 |
| 19 | 53926378 | 53926378 | 1 | 19_53926378 | ENSG00000105605 | CACNG7 | 0 | INTRON | 4.90178204 | 9.50E-07 | 0.00758687 |
| 19 | 7280258 | 7280258 | 1 | 19_7280258 | ENSG00000171105 | INSR | 0 | INTRON | 4.90130888 | 9.52E-07 | 0.0076016 |
| 12 | 67154107 | 67154107 | 1 | 12_67154107 | ENSG00000255976 | RAB11AP2 | 21902 | Upstream | 4.90108789 | 9.53E-07 | 0.00760659 |
| 2 | 9970033 | 9970033 | 1 | 2_9970033 | ENSG00000134317 | GRHL1 | 0 | INTRON | 4.90068976 | 9.55E-07 | 0.00761603 |
| 2 | 99301761 | 99301761 | 1 | 2_99301761 | ENSG00000241962 | AC079447.1 | 0 | INTRON | 4.90063687 | 9.55E-07 | 0.00761603 |
| 17 | 71732729 | 71732729 | 1 | 17_71732729 | ENSG00000286387 | AC007432.1 | 0 | INTRON | -4.900501 | 9.56E-07 | 0.00761603 |
| 9 | 86695653 | 86695653 | 1 | 9_86695653 | ENSG00000285686 | LINC02834 | 0 | INTRON | -4.900476 | 9.56E-07 | 0.00761603 |
| 21 | 21490988 | 21490988 | 1 | 21_21490988 | ENSG00000154654 | NCAM2 | 0 | INTRON | -4.9003585 | 9.57E-07 | 0.00761702 |
| 19 | 54939757 | 54939757 | 1 | 19_54939757 | ENSG00000167634 | NLRP7 | 0 | EXON | -4.9001126 | 9.58E-07 | 0.007623 |
| 16 | 13240213 | 13240213 | 1 | 16_13240213 | ENSG00000237515 | SHISA9 | 0 | 3UTR | -4.8998479 | 9.59E-07 | 0.0076297 |
| 8 | 133728087 | 133728087 | 1 | 8_133728087 | ENSG00000253970 | MTND2P7 | 26723 | Upstream | -4.899384 | 9.61E-07 | 0.00763581 |
| 1 | 117696208 | 117696208 | 1 | 1_117696208 | ENSG00000270719 | AL390877.2 | 3820 | Downstream | 4.89933975 | 9.62E-07 | 0.00763581 |
| 2 | 94874469 | 94874469 | 1 | 2_94874469 | ENSG00000259848 | AC097374.1 | 0 | INTRON | -4.8993029 | 9.62E-07 | 0.00763581 |
| 16 | 79935231 | 79935231 | 1 | 16_79935231 | ENSG00000260237 | AC092130.1 | 105430 | Upstream | -4.8992416 | 9.62E-07 | 0.00763581 |
| 22 | 27891698 | 27891698 | 1 | 22_27891698 | ENSG00000180957 | PITPNB | 0 | INTRON | 4.89914028 | 9.63E-07 | 0.00763581 |
| 1 | 5795323 | 5795323 | 1 | 1_5795323 | ENSG00000264101 | MIR4689 | 67348 | Downstream | 4.89914021 | 9.63E-07 | 0.00763581 |
| 7 | 101731832 | 101731832 | 1 | 7_101731832 | ENSG00000257923 | CUX1 | 84071 | Upstream | -4.8989093 | 9.64E-07 | 0.00764123 |
| 2 | 31060607 | 31060607 | 1 | 2_31060607 | ENSG00000158089 | GALNT14 | 0 | INTRON | 4.89835203 | 9.66E-07 | 0.00765936 |
| 5 | 155526314 | 155526314 | 1 | 5_155526314 | ENSG00000270442 | AC008725.1 | 32716 | Downstream | -4.8981217 | 9.68E-07 | 0.00766477 |
| 8 | 136554992 | 136554992 | 1 | 8_136554992 | ENSG00000254101 | LINC02055 | 0 | INTRON | 4.89787232 | 9.69E-07 | 0.0076696 |
| 16 | 48971934 | 48971934 | 1 | 16_48971934 | ENSG00000260067 | MTND4LP25 | 94632 | Downstream | -4.897815 | 9.69E-07 | 0.0076696 |
| 5 | 118208473 | 118208473 | 1 | 5_118208473 | ENSG00000249797 | LINC02147 | 0 | INTRON | 4.89753133 | 9.70E-07 | 0.00767408 |
| 4 | 77735609 | 77735609 | 1 | 4_77735609 | ENSG00000138767 | CNOT6L | 0 | INTRON | -4.8975175 | 9.71E-07 | 0.00767408 |
| 15 | 28169151 | 28169151 | 1 | 15_28169151 | ENSG00000128731 | HERC2 | 0 | INTRON | -4.8973636 | 9.71E-07 | 0.00767652 |
| 15 | 96261019 | 96261019 | 1 | 15_96261019 | ENSG00000247809 | NR2F2-AS1 | 0 | INTRON | -4.8972007 | 9.72E-07 | 0.00767932 |
| 13 | 100870970 | 100870970 | 1 | 13_100870970 | ENSG00000233009 | NALCN-AS1 | 0 | INTRON | 4.897047 | 9.73E-07 | 0.00767992 |
| 3 | 180999226 | 180999226 | 1 | 3_180999226 | ENSG00000242808 | SOX2-OT | 0 | INTRON | -4.8968638 | 9.74E-07 | 0.00767992 |
| 1 | 155295732 | 155295732 | 1 | 1_155295732 | ENSG00000143627 | PKLR | 0 | EXON | 4.89682857 | 9.74E-07 | 0.00767992 |
| 20 | 47300753 | 47300753 | 1 | 20_47300753 | ENSG00000101040 | ZMYND8 | 0 | INTRON | 4.89682063 | 9.74E-07 | 0.00767992 |
| 5 | 81796650 | 81796650 | 1 | 5_81796650 | ENSG00000287938 | AC026726.2 | 20880 | Upstream | 4.8966113 | 9.75E-07 | 0.00768454 |
| 22 | 27819561 | 27819561 | 1 | 22_27819561 | ENSG00000169184 | MN1 | 17805 | Upstream | -4.896362 | 9.76E-07 | 0.00769073 |
| 10 | 13633277 | 13633277 | 1 | 10_13633277 | ENSG00000239665 | AL157392.3 | 0 | INTRON | 4.89594726 | 9.78E-07 | 0.0077034 |
| 12 | 7041664 | 7041664 | 1 | 12_7041664 | ENSG00000182326 | C1S | 0 | INTRON | 4.8957262 | 9.79E-07 | 0.0077085 |
| 9 | 137310992 | 137310992 | 1 | 9_137310992 | ENSG00000187609 | EXD3 | 0 | INTRON | 4.89539506 | 9.81E-07 | 0.00771185 |
| 12 | 54290846 | 54290846 | 1 | 12_54290846 | ENSG00000258344 | AC078778.1 | 0 | INTRON | 4.895365 | 9.81E-07 | 0.00771185 |
| 18 | 80194596 | 80194596 | 1 | 18_80194596 | ENSG00000267251 | AC139100.1 | 0 | INTRON | 4.89529114 | 9.82E-07 | 0.00771185 |
| 20 | 8584759 | 8584759 | 1 | 20_8584759 | ENSG00000182621 | PLCB1 | 0 | INTRON | -4.8952774 | 9.82E-07 | 0.00771185 |
| 2 | 79962799 | 79962799 | 1 | 2_79962799 | ENSG00000066032 | CTNNA2 | 0 | INTRON | -4.8950847 | 9.83E-07 | 0.00771585 |
| 12 | 104160298 | 104160298 | 1 | 12_104160298 | ENSG00000257193 | LINC02385 | 10096 | Upstream | -4.8946568 | 9.85E-07 | 0.00772855 |
| 16 | 6842035 | 6842035 | 1 | 16_6842035 | ENSG00000078328 | RBFOX1 | 0 | INTRON | -4.8945798 | 9.85E-07 | 0.00772855 |
| 10 | 1501928 | 1501928 | 1 | 10_1501928 | ENSG00000185736 | ADARB2 | 0 | INTRON | -4.894349 | 9.86E-07 | 0.00773406 |
| X | 52297532 | 52297532 | 1 | X_52297532 | ENSG00000276474 | AC231759.1 | 28633 | Upstream | 4.89400427 | 9.88E-07 | 0.00774405 |
| 12 | 32925122 | 32925122 | 1 | 12_32925122 | ENSG00000057294 | PKP2 | 28282 | Upstream | 4.89375777 | 9.89E-07 | 0.00774809 |
| 11 | 38737880 | 38737880 | 1 | 11_38737880 | ENSG00000254562 | LINC01493 | 51557 | Downstream | 4.89360603 | 9.90E-07 | 0.00774809 |
| 17 | 66246471 | 66246471 | 1 | 17_66246471 | ENSG00000091583 | APOH | 0 | INTRON | 4.89346186 | 9.91E-07 | 0.00774809 |
| 5 | 148819289 | 148819289 | 1 | 5_148819289 | ENSG00000169252 | ADRB2 | 5955 | Upstream | -4.8933955 | 9.91E-07 | 0.00774809 |
| 22 | 48547799 | 48547799 | 1 | 22_48547799 | ENSG00000219438 | TAFA5 | 0 | INTRON | -4.8933479 | 9.91E-07 | 0.00774809 |
| 10 | 102909803 | 102909803 | 1 | 10_102909803 | ENSG00000286575 | AL356608.3 | 0 | INTRON | 4.8931928 | 9.92E-07 | 0.00774809 |
| 3 | 58791884 | 58791884 | 1 | 3_58791884 | ENSG00000163689 | C3orf67 | 0 | INTRON | -4.8931128 | 9.93E-07 | 0.00774809 |
| 1 | 211080304 | 211080304 | 1 | 1_211080304 | ENSG00000143473 | KCNH1 | 0 | INTRON | 4.89308286 | 9.93E-07 | 0.00774809 |
| 11 | 134639252 | 134639252 | 1 | 11_134639252 | ENSG00000286374 | AP001999.3 | 16516 | Upstream | 4.89300838 | 9.93E-07 | 0.00774809 |
| 20 | 55004126 | 55004126 | 1 | 20_55004126 | ENSG00000185834 | RPL12P4 | 70517 | Upstream | 4.8929978 | 9.93E-07 | 0.00774809 |
| 17 | 38135236 | 38135236 | 1 | 17_38135236 | ENSG00000278599 | TBC1D3E | 0 | INTRON | -4.8925354 | 9.95E-07 | 0.00776276 |
| 21 | 9997245 | 9997245 | 1 | 21_9997245 | ENSG00000270533 | CR382285.1 | 0 | INTRON | 4.89237166 | 9.96E-07 | 0.00776567 |
| 3 | 49810563 | 49810563 | 1 | 3_49810563 | ENSG00000182179 | UBA7 | 0 | TSS | 4.89183651 | 9.99E-07 | 0.00778045 |
| 2 | 17913973 | 17913973 | 1 | 2_17913973 | ENSG00000170745 | KCNS3 | 0 | INTRON | -4.8918172 | 9.99E-07 | 0.00778045 |
| 15 | 28240274 | 28240274 | 1 | 15_28240274 | ENSG00000128731 | HERC2 | 0 | INTRON | 4.89155028 | 1.00E-06 | 0.00778225 |
| 14 | 78333014 | 78333014 | 1 | 14_78333014 | ENSG00000021645 | NRXN3 | 0 | INTRON | -4.891508 | 1.00E-06 | 0.00778225 |
| 5 | 62311266 | 62311266 | 1 | 5_62311266 | ENSG00000068796 | KIF2A | 0 | INTRON | -4.8915016 | 1.00E-06 | 0.00778225 |
| 6 | 165873343 | 165873343 | 1 | 6_165873343 | ENSG00000112541 | PDE10A | 0 | INTRON | -4.8908084 | 1.00E-06 | 0.00780615 |
| 5 | 60340189 | 60340189 | 1 | 5_60340189 | ENSG00000113448 | PDE4D | 0 | INTRON | 4.89058365 | 1.01E-06 | 0.00781052 |
| X | 838408 | 838408 | 1 | X_838408 | ENSG00000237531 | AL672277.1 | 151812 | Upstream | 4.89051839 | 1.01E-06 | 0.00781052 |
| 8 | 29733748 | 29733748 | 1 | 8_29733748 | ENSG00000251191 | LINC00589 | 0 | INTRON | 4.89016935 | 1.01E-06 | 0.00782081 |
| 9 | 69128615 | 69128615 | 1 | 9_69128615 | ENSG00000119139 | TJP2 | 0 | INTRON | 4.88969955 | 1.01E-06 | 0.00783299 |
| 7 | 94640899 | 94640899 | 1 | 7_94640899 | ENSG00000127990 | SGCE | 0 | EXON | 4.88960827 | 1.01E-06 | 0.00783299 |
| 2 | 139440659 | 139440659 | 1 | 2_139440659 | ENSG00000229131 | AC016710.1 | 29115 | Upstream | 4.88955186 | 1.01E-06 | 0.00783299 |
| 4 | 67188124 | 67188124 | 1 | 4_67188124 | ENSG00000250075 | AC104806.2 | 229180 | Downstream | 4.88950424 | 1.01E-06 | 0.00783299 |
| 7 | 95198472 | 95198472 | 1 | 7_95198472 | ENSG00000158528 | PPP1R9A | 0 | EXON | 4.88887904 | 1.01E-06 | 0.00784895 |
| 7 | 145039152 | 145039152 | 1 | 7_145039152 | ENSG00000225918 | RPL7P59 | 846 | Downstream | 4.88860552 | 1.02E-06 | 0.00784895 |
| 3 | 184290369 | 184290369 | 1 | 3_184290369 | ENSG00000284917 | EEF1AKMT4-ECE2 | 0 | INTRON | -4.8885967 | 1.02E-06 | 0.00784895 |
| 5 | 74799083 | 74799083 | 1 | 5_74799083 | ENSG00000250071 | AC093214.1 | 0 | EXON | 4.88853015 | 1.02E-06 | 0.00784895 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 | 117292416 | 117292416 | 1 | 7_117292416 | ENSG00000105989 | WNT2 | 0 | INTRON | -4.8884652 | 1.02E-06 | 0.00784895 |
| 10 | 96056900 | 96056900 | 1 | 10_96056900 | ENSG00000107443 | CCNJ | 0 | EXON | -4.888423 | 1.02E-06 | 0.00784895 |
| 7 | 91591445 | 91591445 | 1 | 7_91591445 | ENSG00000235450 | AC079760.1 | 34597 | Upstream | 4.88832206 | 1.02E-06 | 0.00784895 |
| 14 | 104074682 | 104074682 | 1 | 14_104074682 | ENSG00000166183 | ASPG | 11003 | Upstream | 4.88828468 | 1.02E-06 | 0.00784895 |
| 1 | 243684727 | 243684727 | 1 | 1_243684727 | ENSG00000117020 | AKT3 | 0 | INTRON | 4.88814168 | 1.02E-06 | 0.00784895 |
| 4 | 179381305 | 179381305 | 1 | 4_179381305 | ENSG00000250993 | AC020551.1 | 7828 | Downstream | -4.8879317 | 1.02E-06 | 0.00784895 |
| 5 | 113986399 | 113986399 | 1 | 5_113986399 | ENSG00000080709 | KCNN2 | 69145 | Upstream | -4.8878809 | 1.02E-06 | 0.00784895 |
| 10 | 114137065 | 114137065 | 1 | 10_114137065 | ENSG00000165813 | CCDC186 | 0 | INTRON | 4.88783238 | 1.02E-06 | 0.00784895 |
| 3 | 67568841 | 67568841 | 1 | 3_67568841 | ENSG00000172340 | SUCLG2 | 0 | INTRON | -4.8877752 | 1.02E-06 | 0.00784895 |
| 17 | 37343169 | 37343169 | 1 | 17_37343169 | ENSG00000278540 | ACACA | 0 | INTRON | 4.88777097 | 1.02E-06 | 0.00784895 |
| 9 | 68398050 | 68398050 | 1 | 9_68398050 | ENSG00000233178 | AL161457.2 | 0 | EXON | -4.8877631 | 1.02E-06 | 0.00784895 |
| 8 | 144887416 | 144887416 | 1 | 8_144887416 | ENSG00000196150 | ZNF250 | 0 | INTRON | 4.88762119 | 1.02E-06 | 0.00785106 |
| 1 | 234425048 | 234425048 | 1 | 1_234425048 | ENSG00000059588 | TARBP1 | 0 | INTRON | 4.88723634 | 1.02E-06 | 0.00786286 |
| 12 | 124981133 | 124981133 | 1 | 12_124981133 | ENSG00000150990 | DHX37 | 0 | INTRON | 4.88697306 | 1.02E-06 | 0.00786982 |
| 18 | 10711784 | 10711784 | 1 | 18_10711784 | ENSG00000154864 | PIEZO2 | 0 | INTRON | -4.8865302 | 1.03E-06 | 0.00788398 |
| 1 | 46030529 | 46030529 | 1 | 1_46030529 | ENSG00000086015 | MAST2 | 0 | INTRON | -4.8862128 | 1.03E-06 | 0.00789313 |
| 12 | 98545979 | 98545979 | 1 | 12_98545979 | ENSG00000120802 | TMPO | 0 | INTRON | 4.88610265 | 1.03E-06 | 0.00789398 |
| 20 | 20965558 | 20965558 | 1 | 20_20965558 | ENSG00000234104 | AL133465.1 | 4889 | Upstream | -4.8858924 | 1.03E-06 | 0.00789885 |
| 5 | 13495408 | 13495408 | 1 | 5_13495408 | ENSG00000248462 | NENFP3 | 58245 | Downstream | -4.8857496 | 1.03E-06 | 0.00790101 |
| 3 | 118321079 | 118321079 | 1 | 3_118321079 | ENSG00000243276 | AC068633.1 | 0 | INTRON | 4.88548861 | 1.03E-06 | 0.00790792 |
| 11 | 68410593 | 68410593 | 1 | 11_68410593 | ENSG00000162337 | LRP5 | 0 | INTRON | 4.88524278 | 1.03E-06 | 0.00791173 |
| 8 | 768198 | 768198 | 1 | 8_768198 | ENSG00000198010 | DLGAP2 | 0 | INTRON | 4.8852163 | 1.03E-06 | 0.00791173 |
| 17 | 31499458 | 31499458 | 1 | 17_31499458 | ENSG00000131242 | RAB11FIP4 | 0 | INTRON | -4.8850665 | 1.03E-06 | 0.00791188 |
| 9 | 65295299 | 65295299 | 1 | 9_65295299 | ENSG00000204778 | CBWD4P | 0 | INTRON | -4.8850353 | 1.03E-06 | 0.00791188 |
| 3 | 91571937 | 91571937 | 1 | 3_91571937 | ENSG00000283544 | ABBA01000935.2 | 58162 | Upstream | 4.88486498 | 1.03E-06 | 0.00791516 |
| 3 | 128162998 | 128162998 | 1 | 3_128162998 | ENSG00000132394 | EEFSEC | 0 | INTRON | -4.8846354 | 1.04E-06 | 0.00791707 |
| 14 | 80888361 | 80888361 | 1 | 14_80888361 | ENSG00000100629 | CEP128 | 0 | INTRON | 4.88462479 | 1.04E-06 | 0.00791707 |
| 21 | 16842099 | 16842099 | 1 | 21_16842099 | ENSG00000232886 | AF212831.1 | 20775 | Downstream | 4.8844964 | 1.04E-06 | 0.00791707 |
| 8 | 30770350 | 30770350 | 1 | 8_30770350 | ENSG00000104691 | UBXN8 | 3344 | Downstream | 4.88446353 | 1.04E-06 | 0.00791707 |
| 17 | 63398442 | 63398442 | 1 | 17_63398442 | ENSG00000263644 | AC005828.3 | 0 | INTRON | 4.8842557 | 1.04E-06 | 0.00791867 |
| 2 | 177401564 | 177401564 | 1 | 2_177401564 | ENSG00000018510 | AGPS | 0 | INTRON | 4.8842471 | 1.04E-06 | 0.00791867 |
| 20 | 55728746 | 55728746 | 1 | 20_55728746 | ENSG00000287478 | AL109829.1 | 0 | INTRON | -4.8841193 | 1.04E-06 | 0.00792026 |
| 8 | 23664211 | 23664211 | 1 | 8_23664211 | ENSG00000167034 | NKX3-1 | 14485 | Downstream | 4.88370914 | 1.04E-06 | 0.00792946 |
| 1 | 90791534 | 90791534 | 1 | 1_90791534 | ENSG00000233593 | LINC02609 | 0 | INTRON | 4.88368898 | 1.04E-06 | 0.00792946 |
| 12 | 79850789 | 79850789 | 1 | 12_79850789 | ENSG00000058272 | PPP1R12A | 0 | INTRON | 4.88362564 | 1.04E-06 | 0.00792946 |
| 18 | 27868223 | 27868223 | 1 | 18_27868223 | ENSG00000286426 | AC090936.1 | 72586 | Downstream | -4.8832726 | 1.04E-06 | 0.00794013 |
| 12 | 93220689 | 93220689 | 1 | 12_93220689 | ENSG00000257322 | AC138123.1 | 5010 | Upstream | -4.882878 | 1.05E-06 | 0.00794603 |
| 12 | 92468478 | 92468478 | 1 | 12_92468478 | ENSG00000266923 | AC063949.2 | 0 | INTRON | -4.8828377 | 1.05E-06 | 0.00794603 |
| 2 | 28667877 | 28667877 | 1 | 2_28667877 | ENSG00000230730 | AC074011.1 | 3337 | Upstream | 4.88278801 | 1.05E-06 | 0.00794603 |
| 3 | 49519643 | 49519643 | 1 | 3_49519643 | ENSG00000173402 | DAG1 | 0 | INTRON | -4.8827505 | 1.05E-06 | 0.00794603 |
| 10 | 7934131 | 7934131 | 1 | 10_7934131 | ENSG00000165632 | TAF3 | 0 | INTRON | -4.8826662 | 1.05E-06 | 0.00794603 |
| 4 | 83862358 | 83862358 | 1 | 4_83862358 | ENSG00000250546 | AC079160.1 | 0 | INTRON | -4.8825978 | 1.05E-06 | 0.00794603 |
| 4 | 157550334 | 157550334 | 1 | 4_157550334 | ENSG00000286133 | AC093817.2 | 18396 | Downstream | -4.8824304 | 1.05E-06 | 0.00794655 |
| 17 | 44750098 | 44750098 | 1 | 17_44750098 | ENSG00000161692 | DBF4B | 0 | 3UTR | 4.88240926 | 1.05E-06 | 0.00794655 |
| 19 | 46721651 | 46721651 | 1 | 19_46721651 | ENSG00000090372 | STRN4 | 0 | EXON | 4.88223961 | 1.05E-06 | 0.00794956 |
| 1 | 8096463 | 8096463 | 1 | 1_8096463 | ENSG00000238290 | AL034417.2 | 0 | INTRON | 4.88207324 | 1.05E-06 | 0.00794956 |
| 6 | 168574713 | 168574713 | 1 | 6_168574713 | ENSG00000112562 | SMOC2 | 0 | INTRON | 4.88206936 | 1.05E-06 | 0.00794956 |
| 3 | 65405884 | 65405884 | 1 | 3_65405884 | ENSG00000151276 | MAGI1 | 0 | INTRON | 4.8819425 | 1.05E-06 | 0.00794956 |
| 1 | 75177456 | 75177456 | 1 | 1_75177456 | ENSG00000206999 | RNU6-622P | 5588 | Upstream | 4.88179122 | 1.05E-06 | 0.00794956 |
| 13 | 52249920 | 52249920 | 1 | 13_52249920 | ENSG00000272281 | TPTE2P2 | 0 | INTRON | -4.8817415 | 1.05E-06 | 0.00794956 |
| 16 | 20260652 | 20260652 | 1 | 16_20260652 | ENSG00000227624 | SNRPEP3 | 21405 | Upstream | 4.88172066 | 1.05E-06 | 0.00794956 |
| 9 | 27072513 | 27072513 | 1 | 9_27072513 | ENSG00000096872 | IFT74 | 9583 | Downstream | 4.88148652 | 1.05E-06 | 0.00795547 |
| 22 | 35881536 | 35881536 | 1 | 22_35881536 | ENSG00000100320 | RBFOX2 | 0 | INTRON | -4.8813554 | 1.05E-06 | 0.00795723 |
| 3 | 113406548 | 113406548 | 1 | 3_113406548 | ENSG00000243849 | CFAP44-AS1 | 0 | INTRON | 4.8808121 | 1.06E-06 | 0.00797564 |
| 22 | 20907851 | 20907851 | 1 | 22_20907851 | ENSG00000099942 | CRKL | 9555 | Upstream | -4.8803626 | 1.06E-06 | 0.00798302 |
| 10 | 26651077 | 26651077 | 1 | 10_26651077 | ENSG00000231976 | FAM238B | 0 | INTRON | 4.88029924 | 1.06E-06 | 0.00798302 |
| 19 | 6129252 | 6129252 | 1 | 19_6129252 | ENSG00000087903 | RFX2 | 0 | INTRON | 4.88020409 | 1.06E-06 | 0.00798302 |
| 2 | 202405019 | 202405019 | 1 | 2_202405019 | ENSG00000204217 | BMPR2 | 0 | INTRON | -4.8801962 | 1.06E-06 | 0.00798302 |
| 9 | 70823478 | 70823478 | 1 | 9_70823478 | ENSG00000083067 | TRPM3 | 0 | INTRON | -4.8801492 | 1.06E-06 | 0.00798302 |
| 7 | 154044285 | 154044285 | 1 | 7_154044285 | ENSG00000130226 | DPP6 | 0 | INTRON | -4.880035 | 1.06E-06 | 0.00798302 |
| 16 | 3980610 | 3980610 | 1 | 16_3980610 | ENSG00000162104 | ADCY9 | 0 | INTRON | 4.88001841 | 1.06E-06 | 0.00798302 |
| 1 | 66518343 | 66518343 | 1 | 1_66518343 | ENSG00000118473 | SGIP1 | 15039 | Upstream | -4.8799107 | 1.06E-06 | 0.0079838 |
| 20 | 29319246 | 29319246 | 1 | 20_29319246 | ENSG00000283069 | DUX4L32 | 0 | EXON | -4.8798246 | 1.06E-06 | 0.0079838 |
| 19 | 16128656 | 16128656 | 1 | 19_16128656 | ENSG00000167461 | RAB8A | 0 | INTRON | 4.87948405 | 1.06E-06 | 0.00799309 |
| 6 | 93380506 | 93380506 | 1 | 6_93380506 | ENSG00000135333 | EPHA7 | 0 | INTRON | -4.8794211 | 1.06E-06 | 0.00799309 |
| 20 | 48179840 | 48179840 | 1 | 20_48179840 | ENSG00000287107 | AL136102.1 | 42996 | Downstream | -4.8790782 | 1.07E-06 | 0.00800346 |
| 12 | 65612629 | 65612629 | 1 | 12_65612629 | ENSG00000250748 | AC025419.1 | 0 | INTRON | -4.8788561 | 1.07E-06 | 0.00800398 |
| 17 | 78890185 | 78890185 | 1 | 17_78890185 | ENSG00000035862 | TIMP2 | 0 | INTRON | 4.8788123 | 1.07E-06 | 0.00800398 |
| 5 | 132156795 | 132156795 | 1 | 5_132156795 | ENSG00000235775 | AC063976.4 | 6807 | Downstream | -4.878562 | 1.07E-06 | 0.00800398 |
| 3 | 91573105 | 91573105 | 1 | 3_91573105 | ENSG00000283544 | ABBA01000935.2 | 59330 | Upstream | -4.87854 | 1.07E-06 | 0.00800398 |
| 4 | 168146478 | 168146478 | 1 | 4_168146478 | ENSG00000109511 | ANXA10 | 0 | INTRON | 4.87847358 | 1.07E-06 | 0.00800398 |
| 20 | 9658636 | 9658636 | 1 | 20_9658636 | ENSG00000101349 | PAK5 | 0 | INTRON | -4.8784407 | 1.07E-06 | 0.00800398 |
| 13 | 104292047 | 104292047 | 1 | 13_104292047 | ENSG00000287734 | AL136524.1 | 157790 | Downstream | -4.8784359 | 1.07E-06 | 0.00800398 |
| X | 57283999 | 57283999 | 1 | X_57283999 | ENSG00000165591 | FAAH2 | 2706 | Upstream | 4.8782838 | 1.07E-06 | 0.00800398 |
| 5 | 180120659 | 180120659 | 1 | 5_180120659 | ENSG00000146090 | RASGEF1C | 0 | INTRON | 4.87828358 | 1.07E-06 | 0.00800398 |
| 7 | 134365679 | 134365679 | 1 | 7_134365679 | ENSG00000273297 | AC009275.1 | 3057 | Downstream | -4.8780787 | 1.07E-06 | 0.00800808 |
| 3 | 51459158 | 51459158 | 1 | 3_51459158 | ENSG00000145041 | DCAF1 | 0 | INTRON | 4.87800534 | 1.07E-06 | 0.00800808 |
| 2 | 82029081 | 82029081 | 1 | 2_82029081 | ENSG00000231781 | AC079896.1 | 23381 | Upstream | -4.8779224 | 1.07E-06 | 0.00800808 |
| Y | 56847324 | 56847324 | 1 | Y_56847324 | ENSG00000235857 | CTBP2P1 | 7919 | Upstream | -4.8777289 | 1.07E-06 | 0.00801022 |
| 16 | 49514902 | 49514902 | 1 | 16_49514902 | ENSG00000102935 | ZNF423 | 0 | INTRON | -4.8776965 | 1.07E-06 | 0.00801022 |
| 2 | 210437812 | 210437812 | 1 | 2_210437812 | ENSG00000115365 | LANCL1 | 0 | EXON | 4.87739096 | 1.07E-06 | 0.00801884 |
| 19 | 3834377 | 3834377 | 1 | 19_3834377 | ENSG00000105278 | ZFR2 | 0 | INTRON | 4.87728589 | 1.08E-06 | 0.00801884 |
| 2 | 221261381 | 221261381 | 1 | 2_221261381 | ENSG00000286170 | AC011233.2 | 44908 | Downstream | -4.8772138 | 1.08E-06 | 0.00801884 |
| 10 | 14352149 | 14352149 | 1 | 10_14352149 | ENSG00000151474 | FRMD4A | 0 | INTRON | -4.8771385 | 1.08E-06 | 0.00801884 |
| 10 | 37692911 | 37692911 | 1 | 10_37692911 | ENSG00000226578 | AL132657.1 | 82459 | Downstream | -4.8769784 | 1.08E-06 | 0.00802004 |
| 10 | 109423798 | 109423798 | 1 | 10_109423798 | ENSG00000232728 | PHB2P1 | 104320 | Upstream | 4.87688168 | 1.08E-06 | 0.00802004 |
| 5 | 153349298 | 153349298 | 1 | 5_153349298 | ENSG00000249484 | LINC01470 | 125755 | Upstream | -4.8768402 | 1.08E-06 | 0.00802004 |
| 3 | 32217999 | 32217999 | 1 | 3_32217999 | ENSG00000261572 | AC097639.1 | 18688 | Downstream | -4.8767636 | 1.08E-06 | 0.00802004 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 202550291 | 202550291 | 1 | 2_202550291 | ENSG00000204217 | BMPR2 | 0 | INTRON | -4.8765044 | 1.08E-06 | 0.00802489 |
| 7 | 1500086 | 1500086 | 1 | 7_1500086 | ENSG00000164880 | INTS1 | 0 | INTRON | -4.876472 | 1.08E-06 | 0.00802489 |
| 11 | 109885319 | 109885319 | 1 | 11_109885319 | ENSG00000137710 | RDX | 0 | INTRON | -4.8760072 | 1.08E-06 | 0.00803959 |
| 8 | 17751338 | 17751338 | 1 | 8_17751338 | ENSG00000129422 | MTUS1 | 0 | INTRON | 4.87593854 | 1.08E-06 | 0.00803959 |
| 8 | 87168573 | 87168573 | 1 | 8_87168573 | ENSG00000176571 | CNBD1 | 0 | INTRON | 4.87578045 | 1.08E-06 | 0.008042 |
| 4 | 7684975 | 7684975 | 1 | 4_7684975 | ENSG00000184985 | SORCS2 | 0 | INTRON | 4.87570709 | 1.08E-06 | 0.008042 |
| 11 | 178373 | 178373 | 1 | 11_178373 | ENSG00000255229 | AC069287.3 | 0 | INTRON | 4.87542241 | 1.09E-06 | 0.00804217 |
| 14 | 92042640 | 92042640 | 1 | 14_92042640 | ENSG00000100815 | TRIP11 | 1744 | Upstream | -4.8754172 | 1.09E-06 | 0.00804217 |
| 2 | 130829935 | 130829935 | 1 | 2_130829935 | ENSG00000233221 | AC133785.1 | 1042 | Downstream | -4.8754136 | 1.09E-06 | 0.00804217 |
| 8 | 137945355 | 137945355 | 1 | 8_137945355 | ENSG00000254361 | AC046195.2 | 0 | INTRON | -4.8753592 | 1.09E-06 | 0.00804217 |
| 1 | 154321175 | 154321175 | 1 | 1_154321175 | ENSG00000143595 | AQP10 | 0 | EXON | 4.87509637 | 1.09E-06 | 0.00804874 |
| 3 | 73995253 | 73995253 | 1 | 3_73995253 | ENSG00000239454 | LINC02047 | 4551 | Upstream | -4.8750041 | 1.09E-06 | 0.00804874 |
| X | 48947430 | 48947430 | 1 | X_48947430 | ENSG00000068308 | OTUD5 | 0 | INTRON | -4.8748712 | 1.09E-06 | 0.00804874 |
| 4 | 58032206 | 58032206 | 1 | 4_58032206 | ENSG00000248660 | SRIP1 | 70940 | Upstream | 4.87476289 | 1.09E-06 | 0.00804874 |
| 18 | 26183117 | 26183117 | 1 | 18_26183117 | ENSG00000154611 | PSMA8 | 0 | INTRON | 4.87464851 | 1.09E-06 | 0.00804874 |
| 9 | 87276805 | 87276805 | 1 | 9_87276805 | ENSG00000212421 | AL136367.1 | 16220 | Downstream | -4.8746368 | 1.09E-06 | 0.00804874 |
| 1 | 32473597 | 32473597 | 1 | 1_32473597 | ENSG00000273274 | ZBTB8B | 0 | INTRON | 4.87459739 | 1.09E-06 | 0.00804874 |
| Y | 12002867 | 12002867 | 1 | Y_12002867 | ENSG00000235649 | MXRA5Y | 15481 | Downstream | -4.8745112 | 1.09E-06 | 0.00804876 |
| 13 | 67903492 | 67903492 | 1 | 13_67903492 | ENSG00000231667 | OR7E111P | 271 | Downstream | -4.8744209 | 1.09E-06 | 0.00804896 |
| 14 | 83655020 | 83655020 | 1 | 14_83655020 | ENSG00000238561 | RNU6ATAC28P | 95363 | Upstream | 4.87424121 | 1.09E-06 | 0.0080528 |
| 14 | 98239653 | 98239653 | 1 | 14_98239653 | ENSG00000259097 | AL163932.1 | 34510 | Upstream | -4.8739792 | 1.09E-06 | 0.00806 |
| 2 | 64619204 | 64619204 | 1 | 2_64619204 | ENSG00000233694 | LINC02579 | 2648 | Downstream | 4.87378184 | 1.09E-06 | 0.00806456 |
| 5 | 180228569 | 180228569 | 1 | 5_180228569 | ENSG00000229721 | AC104115.1 | 1569 | Upstream | 4.87362394 | 1.10E-06 | 0.00806752 |
| 18 | 53081998 | 53081998 | 1 | 18_53081998 | ENSG00000187323 | DCC | 0 | INTRON | -4.8734696 | 1.10E-06 | 0.00807034 |
| 22 | 22434319 | 22434319 | 1 | 22_22434319 | ENSG00000211655 | IGLV1-36 | 1854 | Downstream | 4.87277407 | 1.10E-06 | 0.0080921 |
| 19 | 727272 | 727272 | 1 | 19_727272 | ENSG00000099864 | PALM | 0 | INTRON | 4.87276709 | 1.10E-06 | 0.0080921 |
| 3 | 54768252 | 54768252 | 1 | 3_54768252 | ENSG00000157445 | CACNA2D3 | 0 | INTRON | 4.872662 | 1.10E-06 | 0.00809291 |
| 5 | 134027125 | 134027125 | 1 | 5_134027125 | ENSG00000271737 | AC008608.2 | 21563 | Downstream | 4.872442 | 1.10E-06 | 0.00809585 |
| 20 | 5592428 | 5592428 | 1 | 20_5592428 | ENSG00000125772 | GPCPD1 | 0 | INTRON | -4.8723846 | 1.10E-06 | 0.00809585 |
| 14 | 73547237 | 73547237 | 1 | 14_73547237 | ENSG00000187105 | HEATR4 | 0 | INTRON | -4.8723346 | 1.10E-06 | 0.00809585 |
| 16 | 25826783 | 25826783 | 1 | 16_25826783 | ENSG00000285882 | AC093516.1 | 0 | INTRON | 4.87213957 | 1.10E-06 | 0.00810035 |
| 6 | 155693887 | 155693887 | 1 | 6_155693887 | ENSG00000238789 | RNU7-152P | 38861 | Upstream | -4.8713796 | 1.11E-06 | 0.00812807 |
| 4 | 17172173 | 17172173 | 1 | 4_17172173 | ENSG00000250819 | LINC02493 | 0 | EXON | -4.8711996 | 1.11E-06 | 0.00813197 |
| 14 | 59517901 | 59517901 | 1 | 14_59517901 | ENSG00000151838 | CCDC175 | 0 | INTRON | 4.87077682 | 1.11E-06 | 0.00814589 |
| 11 | 43367557 | 43367557 | 1 | 11_43367557 | ENSG00000052841 | TTC17 | 0 | INTRON | -4.8700705 | 1.12E-06 | 0.00816936 |
| X | 46259316 | 46259316 | 1 | X_46259316 | ENSG00000236751 | LINC01186 | 0 | INTRON | 4.87000424 | 1.12E-06 | 0.00816936 |
| 18 | 45240879 | 45240879 | 1 | 18_45240879 | ENSG00000132874 | SLC14A2 | 0 | INTRON | -4.8699532 | 1.12E-06 | 0.00816936 |
| 8 | 106927781 | 106927781 | 1 | 8_106927781 | ENSG00000275905 | AP003789.1 | 53185 | Downstream | 4.86986683 | 1.12E-06 | 0.00816942 |
| 10 | 102102012 | 102102012 | 1 | 10_102102012 | ENSG00000198728 | LDB1 | 5547 | Downstream | 4.86951843 | 1.12E-06 | 0.00817941 |
| 1 | 76642281 | 76642281 | 1 | 1_76642281 | ENSG00000272855 | AC104458.1 | 4942 | Downstream | -4.8693708 | 1.12E-06 | 0.00817941 |
| 6 | 153344906 | 153344906 | 1 | 6_153344906 | ENSG00000213121 | AL590867.1 | 0 | INTRON | 4.86936555 | 1.12E-06 | 0.00817941 |
| 3 | 58691319 | 58691319 | 1 | 3_58691319 | ENSG00000198643 | FAM3D | 24485 | Upstream | -4.8692856 | 1.12E-06 | 0.00817941 |
| 7 | 66161710 | 66161710 | 1 | 7_66161710 | ENSG00000234185 | AC068533.3 | 0 | INTRON | 4.86891877 | 1.12E-06 | 0.00818526 |
| 4 | 122017081 | 122017081 | 1 | 4_122017081 | ENSG00000237868 | AC097533.1 | 60758 | Downstream | 4.86883749 | 1.12E-06 | 0.00818526 |
| 2 | 111416798 | 111416798 | 1 | 2_111416798 | ENSG00000172965 | MIR4435-2HG | 0 | INTRON | 4.86880486 | 1.12E-06 | 0.00818526 |
| 3 | 129199404 | 129199404 | 1 | 3_129199404 | ENSG00000169714 | CNBP | 15482 | Upstream | 4.86876053 | 1.12E-06 | 0.00818526 |
| 3 | 65780875 | 65780875 | 1 | 3_65780875 | ENSG00000151276 | MAGI1 | 0 | INTRON | 4.86872084 | 1.12E-06 | 0.00818526 |
| 8 | 2984273 | 2984273 | 1 | 8_2984273 | ENSG00000183117 | CSMD1 | 0 | INTRON | -4.8683999 | 1.13E-06 | 0.00819505 |
| 16 | 10011791 | 10011791 | 1 | 16_10011791 | ENSG00000183454 | GRIN2A | 0 | INTRON | 4.86807508 | 1.13E-06 | 0.00820354 |
| 2 | 176313952 | 176313952 | 1 | 2_176313952 | ENSG00000128654 | MTX2 | 0 | INTRON | 4.86797199 | 1.13E-06 | 0.00820354 |
| 17 | 38194706 | 38194706 | 1 | 17_38194706 | ENSG00000274487 | AC244154.1 | 996 | Downstream | -4.8679368 | 1.13E-06 | 0.00820354 |
| 2 | 126294858 | 126294858 | 1 | 2_126294858 | ENSG00000235774 | AC023347.1 | 13635 | Upstream | 4.86785709 | 1.13E-06 | 0.00820354 |
| 5 | 151729409 | 151729409 | 1 | 5_151729409 | ENSG00000249035 | CLMAT3 | 3936 | Downstream | 4.86692476 | 1.13E-06 | 0.00823846 |
| 20 | 20645652 | 20645652 | 1 | 20_20645652 | ENSG00000188559 | RALGAPA2 | 0 | INTRON | -4.8668484 | 1.13E-06 | 0.00823846 |
| 12 | 110914739 | 110914739 | 1 | 12_110914739 | ENSG00000111245 | MYL2 | 0 | INTRON | 4.86676159 | 1.13E-06 | 0.00823856 |
| 17 | 80931861 | 80931861 | 1 | 17_80931861 | ENSG00000141564 | RPTOR | 0 | INTRON | 4.86666134 | 1.13E-06 | 0.00823922 |
| 19 | 2872142 | 2872142 | 1 | 19_2872142 | ENSG00000172000 | ZNF556 | 0 | INTRON | -4.8663372 | 1.14E-06 | 0.00824922 |
| 11 | 69648302 | 69648302 | 1 | 11_69648302 | ENSG00000110092 | CCND1 | 0 | INTRON | 4.86600237 | 1.14E-06 | 0.00825968 |
| 7 | 21253537 | 21253537 | 1 | 7_21253537 | ENSG00000225308 | ASS1P11 | 32109 | Upstream | -4.8658332 | 1.14E-06 | 0.00826017 |
| 1 | 56907156 | 56907156 | 1 | 1_56907156 | ENSG00000157131 | C8A | 0 | INTRON | -4.8656569 | 1.14E-06 | 0.00826017 |
| 9 | 89053432 | 89053432 | 1 | 9_89053432 | ENSG00000148082 | SHC3 | 0 | INTRON | 4.86565144 | 1.14E-06 | 0.00826017 |
| 9 | 98987204 | 98987204 | 1 | 9_98987204 | ENSG00000204291 | COL15A1 | 0 | INTRON | 4.865601 | 1.14E-06 | 0.00826017 |
| 9 | 5198536 | 5198536 | 1 | 9_5198536 | ENSG00000237553 | AL133547.1 | 4978 | Upstream | 4.86556957 | 1.14E-06 | 0.00826017 |
| 8 | 143864314 | 143864314 | 1 | 8_143864314 | ENSG00000261150 | EPPK1 | 0 | EXON | -4.8651392 | 1.14E-06 | 0.00827384 |
| 11 | 41100522 | 41100522 | 1 | 11_41100522 | ENSG00000148948 | LRRC4C | 0 | INTRON | -4.8650742 | 1.14E-06 | 0.00827384 |
| 5 | 124716872 | 124716872 | 1 | 5_124716872 | ENSG00000168916 | ZNF608 | 0 | INTRON | 4.86492203 | 1.15E-06 | 0.00827446 |
| 15 | 77983615 | 77983615 | 1 | 15_77983615 | ENSG00000261143 | ADAMTS7P3 | 0 | INTRON | -4.864826 | 1.15E-06 | 0.00827446 |
| 3 | 196385414 | 196385414 | 1 | 3_196385414 | ENSG00000163960 | UBXN7 | 0 | INTRON | 4.86466215 | 1.15E-06 | 0.00827446 |
| 13 | 49350153 | 49350153 | 1 | 13_49350153 | ENSG00000102547 | CAB39L | 0 | INTRON | 4.86454824 | 1.15E-06 | 0.00827446 |
| 21 | 33710994 | 33710994 | 1 | 21_33710994 | ENSG00000205726 | ITSN1 | 0 | INTRON | -4.8644957 | 1.15E-06 | 0.00827446 |
| 12 | 101255910 | 101255910 | 1 | 12_101255910 | ENSG00000120800 | UTP20 | 24194 | Upstream | 4.86446624 | 1.15E-06 | 0.00827446 |
| 6 | 38214367 | 38214367 | 1 | 6_38214367 | ENSG00000183826 | BTBD9 | 0 | INTRON | 4.86426867 | 1.15E-06 | 0.00827446 |
| 4 | 167361306 | 167361306 | 1 | 4_167361306 | ENSG00000240772 | RN7SL776P | 39188 | Downstream | 4.86426308 | 1.15E-06 | 0.00827446 |
| 13 | 112487488 | 112487488 | 1 | 13_112487488 | ENSG00000126216 | TUBGCP3 | 0 | INTRON | 4.86417007 | 1.15E-06 | 0.00827446 |
| 5 | 125423293 | 125423293 | 1 | 5_125423293 | ENSG00000248752 | AC116362.1 | 0 | INTRON | -4.8641483 | 1.15E-06 | 0.00827446 |
| 5 | 149710109 | 149710109 | 1 | 5_149710109 | ENSG00000242928 | RN7SL868P | 11960 | Upstream | -4.864137 | 1.15E-06 | 0.00827446 |
| 4 | 175713479 | 175713479 | 1 | 4_175713479 | ENSG00000150625 | GPM6A | 0 | INTRON | -4.8638756 | 1.15E-06 | 0.0082819 |
| 16 | 81920968 | 81920968 | 1 | 16_81920968 | ENSG00000197943 | PLCG2 | 0 | INTRON | -4.8636387 | 1.15E-06 | 0.00828831 |
| 11 | 132929565 | 132929565 | 1 | 11_132929565 | ENSG00000183715 | OPCML | 0 | INTRON | -4.8633217 | 1.15E-06 | 0.0082929 |
| 5 | 81824075 | 81824075 | 1 | 5_81824075 | ENSG00000287938 | AC026726.2 | 0 | INTRON | 4.86329076 | 1.15E-06 | 0.0082929 |
| 5 | 121472949 | 121472949 | 1 | 5_121472949 | ENSG00000244088 | RPL23AP44 | 102898 | Downstream | -4.8631987 | 1.16E-06 | 0.0082929 |
| 18 | 64087671 | 64087671 | 1 | 18_64087671 | ENSG00000179676 | LINC00305 | 0 | INTRON | 4.86319519 | 1.16E-06 | 0.0082929 |
| 12 | 13869791 | 13869791 | 1 | 12_13869791 | ENSG00000273079 | GRIN2B | 0 | INTRON | 4.8627826 | 1.16E-06 | 0.0083067 |
| 5 | 161873094 | 161873094 | 1 | 5_161873094 | ENSG00000022355 | GABRA1 | 0 | 3UTR | -4.8625931 | 1.16E-06 | 0.0083091 |
| 11 | 69238027 | 69238027 | 1 | 11_69238027 | ENSG00000172927 | MYEOV | 56123 | Upstream | 4.86255854 | 1.16E-06 | 0.0083091 |
| 1 | 108368385 | 108368385 | 1 | 1_108368385 | ENSG00000243967 | NBPF5P | 7452 | Upstream | 4.86192752 | 1.16E-06 | 0.00833213 |
| 1 | 37395477 | 37395477 | 1 | 1_37395477 | ENSG00000233621 | LINC01137 | 0 | INTRON | 4.86176391 | 1.16E-06 | 0.00833228 |
| 2 | 67004688 | 67004688 | 1 | 2_67004688 | ENSG00000230525 | LINC01799 | 33226 | Downstream | -4.8617573 | 1.16E-06 | 0.00833228 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 176853746 | 176853746 | 1 | 1_176853746 | ENSG00000152092 | ASTN1 | 3555 | Downstream | -4.861592 | 1.16E-06 | 0.00833574 |
| 7 | 113969774 | 113969774 | 1 | 7_113969774 | ENSG00000154415 | PPP1R3A | 0 | INTRON | 4.86120783 | 1.17E-06 | 0.00834842 |
| 18 | 42933932 | 42933932 | 1 | 18_42933932 | ENSG00000152214 | RIT2 | 0 | INTRON | 4.8609861 | 1.17E-06 | 0.00835426 |
| 2 | 115760953 | 115760953 | 1 | 2_115760953 | ENSG00000175497 | DPP10 | 0 | INTRON | 4.86066683 | 1.17E-06 | 0.00836423 |
| 22 | 35728469 | 35728469 | 1 | 22_35728469 | ENSG00000128313 | APOL5 | 0 | INTRON | -4.8603614 | 1.17E-06 | 0.00836771 |
| 12 | 95357174 | 95357174 | 1 | 12_95357174 | ENSG00000257943 | AC084879.1 | 0 | INTRON | -4.860318 | 1.17E-06 | 0.00836771 |
| X | 34158860 | 34158860 | 1 | X_34158860 | ENSG00000233928 | AL591501.1 | 0 | INTRON | 4.86028681 | 1.17E-06 | 0.00836771 |
| 5 | 114227651 | 114227651 | 1 | 5_114227651 | ENSG00000080709 | KCNN2 | 0 | INTRON | 4.86025219 | 1.17E-06 | 0.00836771 |
| 16 | 71432765 | 71432765 | 1 | 16_71432765 | ENSG00000260734 | TLE7 | 0 | INTRON | 4.86001413 | 1.17E-06 | 0.00837426 |
| 4 | 55277990 | 55277990 | 1 | 4_55277990 | ENSG00000206839 | RNU6-746P | 16499 | Upstream | 4.85991726 | 1.17E-06 | 0.00837481 |
| 5 | 126811199 | 126811199 | 1 | 5_126811199 | ENSG00000113368 | LMNB1 | 0 | INTRON | -4.8598353 | 1.17E-06 | 0.00837481 |
| 8 | 99980808 | 99980808 | 1 | 8_99980808 | ENSG00000132554 | RGS22 | 0 | INTRON | 4.85971246 | 1.18E-06 | 0.00837522 |
| 3 | 42972903 | 42972903 | 1 | 3_42972903 | ENSG00000273291 | AC092042.3 | 0 | INTRON | 4.85965969 | 1.18E-06 | 0.00837522 |
| 10 | 16613085 | 16613085 | 1 | 10_16613085 | ENSG00000148484 | RSU1 | 0 | INTRON | 4.85925404 | 1.18E-06 | 0.00838889 |
| 10 | 124838847 | 124838847 | 1 | 10_124838847 | ENSG00000165660 | ABRAXAS2 | 2180 | Downstream | 4.85909566 | 1.18E-06 | 0.00839018 |
| 20 | 55637811 | 55637811 | 1 | 20_55637811 | ENSG00000235166 | LINC01440 | 0 | INTRON | -4.8590579 | 1.18E-06 | 0.00839018 |
| 3 | 184106963 | 184106963 | 1 | 3_184106963 | ENSG00000186038 | HTR3E | 0 | 3UTR | -4.858814 | 1.18E-06 | 0.00839701 |
| 18 | 3336173 | 3336173 | 1 | 18_3336173 | ENSG00000266578 | AP001025.1 | 5189 | Downstream | -4.8586924 | 1.18E-06 | 0.00839866 |
| 14 | 43628913 | 43628913 | 1 | 14_43628913 | ENSG00000258894 | AL358913.2 | 32230 | Downstream | -4.8585109 | 1.18E-06 | 0.00840285 |
| 17 | 61383138 | 61383138 | 1 | 17_61383138 | ENSG00000266934 | AC005746.1 | 0 | EXON | 4.85834701 | 1.18E-06 | 0.00840602 |
| 2 | 103531389 | 103531389 | 1 | 2_103531389 | ENSG00000221849 | AC018880.1 | 2128 | Downstream | 4.85820343 | 1.18E-06 | 0.00840602 |
| 1 | 244595238 | 244595238 | 1 | 1_244595238 | ENSG00000179397 | CATSPERE | 0 | INTRON | 4.85810063 | 1.19E-06 | 0.00840602 |
| 3 | 50953682 | 50953682 | 1 | 3_50953682 | ENSG00000088538 | DOCK3 | 0 | INTRON | 4.85800368 | 1.19E-06 | 0.00840602 |
| 1 | 118041803 | 118041803 | 1 | 1_118041803 | ENSG00000155761 | SPAG17 | 0 | EXON | 4.85795239 | 1.19E-06 | 0.00840602 |
| 4 | 16185631 | 16185631 | 1 | 4_16185631 | ENSG00000169762 | TAPT1 | 0 | INTRON | -4.8579407 | 1.19E-06 | 0.00840602 |
| 6 | 54971993 | 54971993 | 1 | 6_54971993 | ENSG00000168143 | FAM83B | 26894 | Downstream | -4.8577616 | 1.19E-06 | 0.00841012 |
| 5 | 167570674 | 167570674 | 1 | 5_167570674 | ENSG00000145934 | TENM2 | 0 | INTRON | -4.8575825 | 1.19E-06 | 0.00841423 |
| 5 | 114774373 | 114774373 | 1 | 5_114774373 | ENSG00000246316 | AC010230.1 | 105963 | Upstream | -4.8573797 | 1.19E-06 | 0.00841799 |
| 6 | 88295258 | 88295258 | 1 | 6_88295258 | ENSG00000234426 | AL139042.1 | 0 | INTRON | 4.85732913 | 1.19E-06 | 0.00841799 |
| 11 | 31166606 | 31166606 | 1 | 11_31166606 | ENSG00000170959 | DCDC1 | 0 | INTRON | 4.85719922 | 1.19E-06 | 0.00842001 |
| 9 | 75322393 | 75322393 | 1 | 9_75322393 | ENSG00000235707 | AL158073.1 | 79495 | Downstream | -4.8570016 | 1.19E-06 | 0.00842492 |
| 11 | 107520386 | 107520386 | 1 | 11_107520386 | ENSG00000137760 | ALKBH8 | 0 | INTRON | 4.85676999 | 1.19E-06 | 0.00843127 |
| 3 | 67423178 | 67423178 | 1 | 3_67423178 | ENSG00000172340 | SUCLG2 | 0 | INTRON | 4.85655234 | 1.19E-06 | 0.00843304 |
| 15 | 29217444 | 29217444 | 1 | 15_29217444 | ENSG00000104059 | FAM189A1 | 0 | INTRON | 4.85653268 | 1.19E-06 | 0.00843304 |
| 11 | 116140779 | 116140779 | 1 | 11_116140779 | ENSG00000239600 | AP000797.1 | 189288 | Upstream | 4.85625586 | 1.20E-06 | 0.00843304 |
| 12 | 54634150 | 54634150 | 1 | 12_54634150 | ENSG00000135413 | LACRT | 0 | INTRON | 4.856227 | 1.20E-06 | 0.00843304 |
| 13 | 29718317 | 29718317 | 1 | 13_29718317 | ENSG00000122042 | UBL3 | 46053 | Downstream | -4.8562043 | 1.20E-06 | 0.00843304 |
| 15 | 42857571 | 42857571 | 1 | 15_42857571 | ENSG00000128881 | TTBK2 | 0 | INTRON | 4.85619623 | 1.20E-06 | 0.00843304 |
| 7 | 66876921 | 66876921 | 1 | 7_66876921 | ENSG00000230295 | GTF2IP23 | 3786 | Upstream | 4.85610164 | 1.20E-06 | 0.00843304 |
| X | 118280314 | 118280314 | 1 | X_118280314 | ENSG00000270619 | AL391358.1 | 0 | INTRON | 4.85607141 | 1.20E-06 | 0.00843304 |
| 10 | 127418909 | 127418909 | 1 | 10_127418909 | ENSG00000150760 | DOCK1 | 0 | INTRON | 4.85596945 | 1.20E-06 | 0.00843389 |
| 19 | 55988076 | 55988076 | 1 | 19_55988076 | ENSG00000179709 | NLRP8 | 0 | 3UTR | -4.8558866 | 1.20E-06 | 0.00843393 |
| 16 | 80113284 | 80113284 | 1 | 16_80113284 | ENSG00000260706 | AC022166.1 | 0 | INTRON | -4.8557731 | 1.20E-06 | 0.00843527 |
| 20 | 32306116 | 32306116 | 1 | 20_32306116 | ENSG00000101350 | KIF3B | 0 | INTRON | 4.85549779 | 1.20E-06 | 0.00844019 |
| 18 | 79480480 | 79480480 | 1 | 18_79480480 | ENSG00000131196 | NFATC1 | 0 | INTRON | 4.85545744 | 1.20E-06 | 0.00844019 |
| 5 | 39028424 | 39028424 | 1 | 5_39028424 | ENSG00000164327 | RICTOR | 0 | INTRON | 4.85541201 | 1.20E-06 | 0.00844019 |
| 3 | 76838740 | 76838740 | 1 | 3_76838740 | ENSG00000185008 | ROBO2 | 0 | INTRON | 4.85526966 | 1.20E-06 | 0.00844277 |
| 10 | 7036458 | 7036458 | 1 | 10_7036458 | ENSG00000287277 | AL392086.3 | 0 | INTRON | 4.85513811 | 1.20E-06 | 0.00844489 |
| 17 | 21737253 | 21737253 | 1 | 17_21737253 | ENSG00000260458 | KCNJ18 | 32641 | Downstream | 4.85490013 | 1.20E-06 | 0.00845155 |
| 19 | 46692754 | 46692754 | 1 | 19_46692754 | ENSG00000105287 | PRKD2 | 0 | INTRON | 4.85479413 | 1.21E-06 | 0.00845259 |
| 22 | 21481572 | 21481572 | 1 | 22_21481572 | ENSG00000183506 | PI4KAP2 | 0 | INTRON | -4.854641 | 1.21E-06 | 0.00845564 |
| 16 | 27563432 | 27563432 | 1 | 16_27563432 | ENSG00000047578 | KIAA0556 | 0 | INTRON | 4.85448868 | 1.21E-06 | 0.00845865 |
| 2 | 29296765 | 29296765 | 1 | 2_29296765 | ENSG00000171094 | ALK | 0 | INTRON | -4.8543931 | 1.21E-06 | 0.00845925 |
| 9 | 133978932 | 133978932 | 1 | 9_133978932 | ENSG00000160293 | VAV2 | 0 | INTRON | 4.85422269 | 1.21E-06 | 0.00846304 |
| 3 | 60792192 | 60792192 | 1 | 3_60792192 | ENSG00000189283 | FHIT | 0 | INTRON | -4.8541385 | 1.21E-06 | 0.00846316 |
| 3 | 89531581 | 89531581 | 1 | 3_89531581 | ENSG00000044524 | EPHA3 | 49447 | Downstream | -4.8539651 | 1.21E-06 | 0.00846708 |
| 1 | 22886546 | 22886546 | 1 | 1_22886546 | ENSG00000133216 | EPHB2 | 0 | INTRON | 4.8533893 | 1.21E-06 | 0.00848822 |
| 6 | 83230329 | 83230329 | 1 | 6_83230329 | ENSG00000065833 | ME1 | 0 | INTRON | 4.85315211 | 1.22E-06 | 0.00849246 |
| 12 | 116185915 | 116185915 | 1 | 12_116185915 | ENSG00000123066 | MED13L | 0 | INTRON | 4.85312751 | 1.22E-06 | 0.00849246 |
| 2 | 55163338 | 55163338 | 1 | 2_55163338 | ENSG00000162994 | CLHC1 | 9208 | Downstream | 4.85296169 | 1.22E-06 | 0.00849607 |
| 7 | 95587451 | 95587451 | 1 | 7_95587451 | ENSG00000004799 | PDK4 | 0 | EXON | 4.85272074 | 1.22E-06 | 0.00850292 |
| 9 | 69128647 | 69128647 | 1 | 9_69128647 | ENSG00000285130 | AL358113.1 | 0 | INTRON | 4.85262338 | 1.22E-06 | 0.0085036 |
| 11 | 19832522 | 19832522 | 1 | 11_19832522 | ENSG00000166833 | NAV2 | 0 | EXON | -4.852333 | 1.22E-06 | 0.00851012 |
| 11 | 76784947 | 76784947 | 1 | 11_76784947 | ENSG00000182704 | TSKU | 0 | INTRON | 4.85227105 | 1.22E-06 | 0.00851012 |
| 1 | 158679338 | 158679338 | 1 | 1_158679338 | ENSG00000163554 | SPTA1 | 0 | INTRON | -4.8522144 | 1.22E-06 | 0.00851012 |
| 8 | 6437377 | 6437377 | 1 | 8_6437377 | ENSG00000147316 | MCPH1 | 0 | INTRON | 4.851977 | 1.22E-06 | 0.00851012 |
| 3 | 127479062 | 127479062 | 1 | 3_127479062 | ENSG00000239921 | LINC01471 | 1627 | Downstream | -4.851911 | 1.22E-06 | 0.00851012 |
| 10 | 80017199 | 80017199 | 1 | 10_80017199 | ENSG00000229616 | AL356095.1 | 513 | Downstream | 4.85182907 | 1.22E-06 | 0.00851012 |
| 15 | 90596025 | 90596025 | 1 | 15_90596025 | ENSG00000259212 | AC103739.1 | 0 | EXON | -4.8518281 | 1.22E-06 | 0.00851012 |
| 11 | 8638537 | 8638537 | 1 | 11_8638537 | ENSG00000166436 | TRIM66 | 0 | INTRON | 4.85179484 | 1.22E-06 | 0.00851012 |
| 15 | 86236012 | 86236012 | 1 | 15_86236012 | ENSG00000273540 | AGBL1 | 0 | INTRON | -4.8517409 | 1.22E-06 | 0.00851012 |
| 6 | 30184840 | 30184840 | 1 | 6_30184840 | ENSG00000234127 | TRIM26 | 0 | 3UTR | 4.85120857 | 1.23E-06 | 0.00852678 |
| 1 | 63981730 | 63981730 | 1 | 1_63981730 | ENSG00000185483 | ROR1 | 0 | INTRON | 4.85119119 | 1.23E-06 | 0.00852678 |
| 1 | 189107360 | 189107360 | 1 | 1_189107360 | ENSG00000226196 | GAPDHP75 | 24989 | Downstream | -4.8510602 | 1.23E-06 | 0.00852893 |
| 11 | 101339981 | 101339981 | 1 | 11_101339981 | ENSG00000137672 | TRPC6 | 111582 | Downstream | -4.8508288 | 1.23E-06 | 0.00853193 |
| 19 | 37954622 | 37954622 | 1 | 19_37954622 | ENSG00000105738 | SIPA1L3 | 0 | INTRON | -4.8508286 | 1.23E-06 | 0.00853193 |
| 1 | 37615064 | 37615064 | 1 | 1_37615064 | ENSG00000169218 | RSPO1 | 0 | INTRON | 4.85056481 | 1.23E-06 | 0.0085327 |
| 5 | 69533685 | 69533685 | 1 | 5_69533685 | ENSG00000197822 | OCLN | 0 | INTRON | -4.8505362 | 1.23E-06 | 0.0085327 |
| 1 | 92095067 | 92095067 | 1 | 1_92095067 | ENSG00000189195 | BTBD8 | 0 | INTRON | 4.85052656 | 1.23E-06 | 0.0085327 |
| 14 | 103198211 | 103198211 | 1 | 14_103198211 | ENSG00000251533 | LINC00605 | 9183 | Upstream | 4.8504874 | 1.23E-06 | 0.0085327 |
| 15 | 75831305 | 75831305 | 1 | 15_75831305 | ENSG00000140367 | UBE2Q2 | 12001 | Upstream | -4.8498265 | 1.24E-06 | 0.0085542 |
| 9 | 72173393 | 72173393 | 1 | 9_72173393 | ENSG00000119125 | GDA | 0 | INTRON | -4.8497599 | 1.24E-06 | 0.0085542 |
| 8 | 71766170 | 71766170 | 1 | 8_71766170 | ENSG00000253287 | AC104012.1 | 13434 | Downstream | 4.84974617 | 1.24E-06 | 0.0085542 |
| 3 | 114375147 | 114375147 | 1 | 3_114375147 | ENSG00000241560 | ZBTB20-AS1 | 0 | INTRON | 4.84954913 | 1.24E-06 | 0.00855693 |
| Y | 21656744 | 21656744 | 1 | Y_21656744 | ENSG00000237023 | USP9YP3 | 5181 | Upstream | 4.84952159 | 1.24E-06 | 0.00855693 |
| 6 | 35915331 | 35915331 | 1 | 6_35915331 | ENSG00000096063 | SRPK1 | 0 | INTRON | -4.8492078 | 1.24E-06 | 0.00856518 |
| 17 | 62154452 | 62154452 | 1 | 17_62154452 | ENSG00000266066 | POLRMTP1 | 13813 | Upstream | -4.8491692 | 1.24E-06 | 0.00856518 |
| 2 | 156618246 | 156618246 | 1 | 2_156618246 | ENSG00000115159 | GPD2 | 4511 | Downstream | 4.84907528 | 1.24E-06 | 0.00856576 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 21579168 | 21579168 | 1 | 9_21579168 | ENSG00000171889 | MIR31HG | 19268 | Upstream | 4.84883437 | 1.24E-06 | 0.00857269 |
| 9 | 33846471 | 33846471 | 1 | 9_33846471 | ENSG00000107341 | UBE2R2 | 0 | INTRON | 4.84868698 | 1.24E-06 | 0.0085737 |
| 6 | 170485810 | 170485810 | 1 | 6_170485810 | ENSG00000008018 | PSMB1 | 49309 | Downstream | 4.84865009 | 1.24E-06 | 0.0085737 |
| 1 | 3542508 | 3542508 | 1 | 1_3542508 | ENSG00000162591 | MEGF6 | 0 | INTRON | -4.8484624 | 1.24E-06 | 0.00857834 |
| 3 | 55439049 | 55439049 | 1 | 3_55439049 | ENSG00000114251 | WNT5A | 26665 | Downstream | -4.8478759 | 1.25E-06 | 0.00860024 |
| 8 | 19830951 | 19830951 | 1 | 8_19830951 | ENSG00000104613 | INTS10 | 0 | INTRON | 4.84764661 | 1.25E-06 | 0.0086067 |
| 1 | 21823288 | 21823288 | 1 | 1_21823288 | ENSG00000187942 | LDLRAD2 | 0 | 3UTR | 4.84753529 | 1.25E-06 | 0.00860805 |
| 11 | 129510384 | 129510384 | 1 | 11_129510384 | ENSG00000240121 | RPS27P20 | 27484 | Upstream | -4.8473328 | 1.25E-06 | 0.00861055 |
| 22 | 11025190 | 11025190 | 1 | 22_11025190 | ENSG00000279973 | CU104787.1 | 41227 | Upstream | 4.84728153 | 1.25E-06 | 0.00861055 |
| 1 | 155809061 | 155809061 | 1 | 1_155809061 | ENSG00000116580 | GON4L | 0 | INTRON | 4.84723672 | 1.25E-06 | 0.00861055 |
| 9 | 121172469 | 121172469 | 1 | 9_121172469 | ENSG00000119397 | CNTRL | 0 | INTRON | -4.8469928 | 1.25E-06 | 0.00861717 |
| 1 | 106949100 | 106949100 | 1 | 1_106949100 | ENSG00000237460 | LINC01661 | 83784 | Downstream | -4.8468939 | 1.25E-06 | 0.00861717 |
| 17 | 9555692 | 9555692 | 1 | 17_9555692 | ENSG00000271851 | AC087501.4 | 0 | EXON | 4.84677307 | 1.25E-06 | 0.00861717 |
| 20 | 55932984 | 55932984 | 1 | 20_55932984 | ENSG00000054803 | CBLN4 | 64372 | Downstream | 4.84661527 | 1.26E-06 | 0.00861717 |
| 14 | 99525857 | 99525857 | 1 | 14_99525857 | ENSG00000090061 | CCNK | 0 | INTRON | 4.84661397 | 1.26E-06 | 0.00861717 |
| 14 | 34471650 | 34471650 | 1 | 14_34471650 | ENSG00000129521 | EGLN3 | 8876 | Upstream | -4.8466035 | 1.26E-06 | 0.00861717 |
| 8 | 42986815 | 42986815 | 1 | 8_42986815 | ENSG00000168172 | HOOK3 | 0 | INTRON | 4.84630841 | 1.26E-06 | 0.00862565 |
| 1 | 54247103 | 54247103 | 1 | 1_54247103 | ENSG00000157216 | SSBP3 | 0 | INTRON | 4.84624826 | 1.26E-06 | 0.00862565 |
| 12 | 120245719 | 120245719 | 1 | 12_120245719 | ENSG00000089159 | PXN | 0 | INTRON | 4.84613241 | 1.26E-06 | 0.00862721 |
| 14 | 31618956 | 31618956 | 1 | 14_31618956 | ENSG00000151413 | NUBPL | 0 | INTRON | 4.84599988 | 1.26E-06 | 0.0086295 |
| 17 | 51298662 | 51298662 | 1 | 17_51298662 | ENSG00000011260 | UTP18 | 726 | Downstream | -4.8454466 | 1.26E-06 | 0.0086501 |
| 6 | 37877433 | 37877433 | 1 | 6_37877433 | ENSG00000156639 | ZFAND3 | 0 | INTRON | -4.8452788 | 1.26E-06 | 0.00865393 |
| 3 | 60249329 | 60249329 | 1 | 3_60249329 | ENSG00000189283 | FHIT | 0 | INTRON | 4.84496008 | 1.27E-06 | 0.00866435 |
| 12 | 129042873 | 129042873 | 1 | 12_129042873 | ENSG00000256581 | NLRP9P1 | 26210 | Downstream | -4.8447067 | 1.27E-06 | 0.00866844 |
| 5 | 173736230 | 173736230 | 1 | 5_173736230 | ENSG00000253686 | LINC01484 | 0 | INTRON | 4.84466535 | 1.27E-06 | 0.00866844 |
| 16 | 67742099 | 67742099 | 1 | 16_67742099 | ENSG00000141084 | RANBP10 | 0 | INTRON | 4.8446269 | 1.27E-06 | 0.00866844 |
| 16 | 49852662 | 49852662 | 1 | 16_49852662 | ENSG00000102935 | ZNF423 | 0 | INTRON | -4.8444625 | 1.27E-06 | 0.00867075 |
| 16 | 14316427 | 14316427 | 1 | 16_14316427 | ENSG00000262454 | MIR193BHG | 0 | INTRON | 4.84440438 | 1.27E-06 | 0.00867075 |
| 7 | 108657322 | 108657322 | 1 | 7_108657322 | ENSG00000225647 | AC005487.1 | 17973 | Downstream | 4.84433495 | 1.27E-06 | 0.00867075 |
| 1 | 18145223 | 18145223 | 1 | 1_18145223 | ENSG00000117154 | IGSF21 | 0 | INTRON | 4.84413902 | 1.27E-06 | 0.00867583 |
| 1 | 161626044 | 161626044 | 1 | 1_161626044 | ENSG00000162747 | FCGR3B | 0 | INTRON | -4.8439715 | 1.27E-06 | 0.00867789 |
| 3 | 13893748 | 13893748 | 1 | 3_13893748 | ENSG00000154764 | WNT7A | 13677 | Upstream | -4.8439326 | 1.27E-06 | 0.00867789 |
| 6 | 139348820 | 139348820 | 1 | 6_139348820 | ENSG00000226571 | AL592429.2 | 0 | INTRON | -4.8437401 | 1.27E-06 | 0.0086799 |
| 5 | 112711 | 112711 | 1 | 5_112711 | ENSG00000153404 | PLEKHG4B | 0 | INTRON | -4.8437277 | 1.27E-06 | 0.0086799 |
| 5 | 89050142 | 89050142 | 1 | 5_89050142 | ENSG00000248309 | MEF2C-AS1 | 0 | INTRON | 4.84352064 | 1.28E-06 | 0.00868548 |
| 2 | 18080753 | 18080753 | 1 | 2_18080753 | ENSG00000170745 | KCNS3 | 0 | INTRON | -4.8430904 | 1.28E-06 | 0.00869808 |
| 1 | 151609357 | 151609357 | 1 | 1_151609357 | ENSG00000143376 | SNX27 | 2648 | Upstream | 4.84307388 | 1.28E-06 | 0.00869808 |
| 4 | 185204836 | 185204836 | 1 | 4_185204836 | ENSG00000164323 | CFAP97 | 0 | INTRON | 4.84294123 | 1.28E-06 | 0.00870041 |
| 11 | 128722999 | 128722999 | 1 | 11_128722999 | ENSG00000151702 | FLI1 | 0 | INTRON | -4.8427286 | 1.28E-06 | 0.00870625 |
| 6 | 70402418 | 70402418 | 1 | 6_70402418 | ENSG00000237643 | AL365226.2 | 0 | EXON | 4.84262552 | 1.28E-06 | 0.00870729 |
| 7 | 94991712 | 94991712 | 1 | 7_94991712 | ENSG00000158528 | PPP1R9A | 0 | INTRON | 4.84232475 | 1.28E-06 | 0.008717 |
| 12 | 95357256 | 95357256 | 1 | 12_95357256 | ENSG00000257943 | AC084879.1 | 0 | INTRON | -4.842084 | 1.28E-06 | 0.00872409 |
| 9 | 103860656 | 103860656 | 1 | 9_103860656 | ENSG00000285483 | AL590381.1 | 139098 | Upstream | 4.84177106 | 1.29E-06 | 0.00873436 |
| 5 | 181148387 | 181148387 | 1 | 5_181148387 | ENSG00000182613 | OR2V2 | 0 | INTRON | 4.84143659 | 1.29E-06 | 0.00874301 |
| 1 | 15689485 | 15689485 | 1 | 1_15689485 | ENSG00000116786 | PLEKHM2 | 0 | INTRON | 4.84141597 | 1.29E-06 | 0.00874301 |
| X | 56798634 | 56798634 | 1 | X_56798634 | ENSG00000204272 | NBDY | 0 | INTRON | 4.84119902 | 1.29E-06 | 0.00874907 |
| 14 | 73497042 | 73497042 | 1 | 14_73497042 | ENSG00000187105 | HEATR4 | 0 | INTRON | 4.8410607 | 1.29E-06 | 0.00875168 |
| 17 | 38176140 | 38176140 | 1 | 17_38176140 | ENSG00000274611 | TBC1D3 | 5518 | Downstream | 4.84076685 | 1.29E-06 | 0.00876114 |
| 8 | 122379986 | 122379986 | 1 | 8_122379986 | ENSG00000255364 | SMILR | 34345 | Downstream | 4.84059878 | 1.29E-06 | 0.00876506 |
| 9 | 7074836 | 7074836 | 1 | 9_7074836 | ENSG00000107077 | KDM4C | 0 | INTRON | 4.84013949 | 1.30E-06 | 0.0087735 |
| 6 | 72361352 | 72361352 | 1 | 6_72361352 | ENSG00000079841 | RIMS1 | 0 | INTRON | 4.84007404 | 1.30E-06 | 0.0087735 |
| 6 | 1618298 | 1618298 | 1 | 6_1618298 | ENSG00000054598 | FOXC1 | 4401 | Downstream | -4.8400439 | 1.30E-06 | 0.0087735 |
| 11 | 61513907 | 61513907 | 1 | 11_61513907 | ENSG00000011347 | SYT7 | 1405 | Downstream | 4.84004244 | 1.30E-06 | 0.0087735 |
| 19 | 41834039 | 41834039 | 1 | 19_41834039 | ENSG00000278239 | AC243967.3 | 0 | EXON | -4.8400127 | 1.30E-06 | 0.0087735 |
| 4 | 55700716 | 55700716 | 1 | 4_55700716 | ENSG00000109255 | NMU | 64018 | Upstream | -4.8398779 | 1.30E-06 | 0.00877596 |
| 3 | 82805194 | 82805194 | 1 | 3_82805194 | ENSG00000241095 | CYP51A1P1 | 1320 | Downstream | -4.8394688 | 1.30E-06 | 0.00879056 |
| 20 | 46350676 | 46350676 | 1 | 20_46350676 | ENSG00000080189 | SLC35C2 | 0 | EXON | 4.83891694 | 1.31E-06 | 0.00880927 |
| 2 | 46222172 | 46222172 | 1 | 2_46222172 | ENSG00000171132 | PRKCE | 34182 | Downstream | 4.83871533 | 1.31E-06 | 0.00880927 |
| 10 | 35204124 | 35204124 | 1 | 10_35204124 | ENSG00000095794 | CREM | 0 | INTRON | -4.8386748 | 1.31E-06 | 0.00880927 |
| 17 | 43428137 | 43428137 | 1 | 17_43428137 | ENSG00000251763 | RNU6-470P | 15607 | Downstream | -4.8386689 | 1.31E-06 | 0.00880927 |
| 2 | 168746466 | 168746466 | 1 | 2_168746466 | ENSG00000172292 | CERS6 | 0 | INTRON | -4.8386523 | 1.31E-06 | 0.00880927 |
| 4 | 25746292 | 25746292 | 1 | 4_25746292 | ENSG00000091490 | SEL1L3 | 1140 | Downstream | 4.8383849 | 1.31E-06 | 0.00881481 |
| 3 | 136380304 | 136380304 | 1 | 3_136380304 | ENSG00000118007 | STAG1 | 0 | INTRON | -4.8383698 | 1.31E-06 | 0.00881481 |
| 3 | 143249775 | 143249775 | 1 | 3_143249775 | ENSG00000181804 | SLC9A9 | 15446 | Downstream | -4.8380752 | 1.31E-06 | 0.00882439 |
| 20 | 38145001 | 38145001 | 1 | 20_38145001 | ENSG00000198959 | TGM2 | 0 | INTRON | 4.83712973 | 1.32E-06 | 0.00886295 |
| 19 | 1158033 | 1158033 | 1 | 19_1158033 | ENSG00000064932 | SBNO2 | 0 | INTRON | 4.83601087 | 1.32E-06 | 0.00890492 |
| 19 | 15295177 | 15295177 | 1 | 19_15295177 | ENSG00000141867 | BRD4 | 0 | INTRON | -4.8359846 | 1.32E-06 | 0.00890492 |
| 19 | 10784537 | 10784537 | 1 | 19_10784537 | ENSG00000079805 | DNM2 | 0 | INTRON | -4.8359082 | 1.33E-06 | 0.00890492 |
| 11 | 16530679 | 16530679 | 1 | 11_16530679 | ENSG00000110693 | SOX6 | 0 | INTRON | 4.83581541 | 1.33E-06 | 0.00890492 |
| 20 | 62319276 | 62319276 | 1 | 20_62319276 | ENSG00000130702 | LAMA5 | 0 | INTRON | 4.83579745 | 1.33E-06 | 0.00890492 |
| 7 | 78219298 | 78219298 | 1 | 7_78219298 | ENSG00000187391 | MAGI2 | 0 | INTRON | 4.83542478 | 1.33E-06 | 0.0089181 |
| 11 | 117299057 | 117299057 | 1 | 11_117299057 | ENSG00000186318 | BACE1 | 0 | INTRON | -4.8353416 | 1.33E-06 | 0.00891831 |
| 13 | 21729114 | 21729114 | 1 | 13_21729114 | ENSG00000102678 | FGF9 | 24616 | Downstream | -4.8350066 | 1.33E-06 | 0.00892982 |
| 2 | 109597023 | 109597023 | 1 | 2_109597023 | ENSG00000186522 | SEPTIN10 | 0 | INTRON | 4.83479329 | 1.33E-06 | 0.00893335 |
| 14 | 101991700 | 101991700 | 1 | 14_101991700 | ENSG00000197102 | DYNC1H1 | 0 | INTRON | 4.83473344 | 1.33E-06 | 0.00893335 |
| 1 | 94852324 | 94852324 | 1 | 1_94852324 | ENSG00000143036 | SLC44A3 | 0 | INTRON | 4.83469285 | 1.33E-06 | 0.00893335 |
| 4 | 98166972 | 98166972 | 1 | 4_98166972 | ENSG00000163116 | STPG2 | 23496 | Upstream | -4.8346019 | 1.33E-06 | 0.00893392 |
| 15 | 60914964 | 60914964 | 1 | 15_60914964 | ENSG00000069667 | RORA | 0 | INTRON | 4.83441922 | 1.34E-06 | 0.00893861 |
| 9 | 80486131 | 80486131 | 1 | 9_80486131 | ENSG00000232981 | MTCO1P51 | 77439 | Downstream | 4.83384735 | 1.34E-06 | 0.008958 |
| 5 | 44878827 | 44878827 | 1 | 5_44878827 | ENSG00000272335 | AC093297.2 | 50235 | Downstream | -4.8338316 | 1.34E-06 | 0.008958 |
| 20 | 15180587 | 15180587 | 1 | 20_15180587 | ENSG00000172264 | MACROD2 | 0 | INTRON | -4.8336684 | 1.34E-06 | 0.00896113 |
| 19 | 37796058 | 37796058 | 1 | 19_37796058 | ENSG00000189144 | ZNF573 | 0 | INTRON | -4.8335289 | 1.34E-06 | 0.00896113 |
| 11 | 44966362 | 44966362 | 1 | 11_44966362 | ENSG00000254654 | LINC02685 | 7407 | Upstream | -4.8335209 | 1.34E-06 | 0.00896113 |
| X | 75572711 | 75572711 | 1 | X_75572711 | ENSG00000224775 | BRAFP1 | 9964 | Upstream | 4.83344937 | 1.34E-06 | 0.00896113 |
| 15 | 20251871 | 20251871 | 1 | 15_20251871 | ENSG00000258628 | AC126603.1 | 0 | INTRON | 4.83332145 | 1.34E-06 | 0.00896113 |
| 3 | 119931337 | 119931337 | 1 | 3_119931337 | ENSG00000082701 | GSK3B | 0 | INTRON | 4.83329338 | 1.34E-06 | 0.00896113 |
| 2 | 11689053 | 11689053 | 1 | 2_11689053 | ENSG00000134324 | LPIN1 | 0 | INTRON | -4.8327051 | 1.35E-06 | 0.00898413 |
| 2 | 165506622 | 165506622 | 1 | 2_165506622 | ENSG00000178662 | CSRNP3 | 0 | INTRON | -4.8324871 | 1.35E-06 | 0.00899046 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | 22684644 | 22684644 | 1 | 10_22684644 | ENSG00000150867 | PIP4K2A | 0 | INTRON | 4.83226839 | 1.35E-06 | 0.00899682 |
| 7 | 152934169 | 152934169 | 1 | 7_152934169 | ENSG00000286565 | AC006348.1 | 0 | INTRON | 4.83218293 | 1.35E-06 | 0.00899716 |
| 16 | 23481360 | 23481360 | 1 | 16_23481360 | ENSG00000103365 | GGA2 | 0 | INTRON | 4.83187634 | 1.35E-06 | 0.0090075 |
| 19 | 5365529 | 5365529 | 1 | 19_5365529 | ENSG00000105426 | PTPRS | 24726 | Upstream | -4.8316315 | 1.35E-06 | 0.00901506 |
| 4 | 190187365 | 190187365 | 1 | 4_190187365 | ENSG00000260596 | DUX4 | 1423 | Downstream | 4.83151358 | 1.35E-06 | 0.00901687 |
| 2 | 196146163 | 196146163 | 1 | 2_196146163 | ENSG00000081320 | STK17B | 0 | INTRON | 4.83030703 | 1.36E-06 | 0.00906523 |
| 14 | 51184108 | 51184108 | 1 | 14_51184108 | ENSG00000139921 | TMX1 | 56053 | Upstream | -4.8302631 | 1.36E-06 | 0.00906523 |
| 3 | 32287666 | 32287666 | 1 | 3_32287666 | ENSG00000170293 | CMTM8 | 0 | INTRON | 4.83021539 | 1.36E-06 | 0.00906523 |
| 8 | 118228818 | 118228818 | 1 | 8_118228818 | ENSG00000177570 | SAMD12 | 0 | INTRON | -4.8300777 | 1.36E-06 | 0.00906796 |
| 8 | 108109652 | 108109652 | 1 | 8_108109652 | ENSG00000230948 | AP001331.1 | 21447 | Downstream | 4.82995235 | 1.37E-06 | 0.00907012 |
| 7 | 74862079 | 74862079 | 1 | 7_74862079 | ENSG00000277072 | STAG3L2 | 0 | INTRON | 4.82954037 | 1.37E-06 | 0.00908536 |
| 1 | 59362110 | 59362110 | 1 | 1_59362110 | ENSG00000172456 | FGGY | 0 | INTRON | 4.82932932 | 1.37E-06 | 0.00909145 |
| 2 | 235665727 | 235665727 | 1 | 2_235665727 | ENSG00000157985 | AGAP1 | 0 | INTRON | 4.82891593 | 1.37E-06 | 0.00910594 |
| 10 | 9034620 | 9034620 | 1 | 10_9034620 | ENSG00000223808 | AC044784.1 | 61152 | Downstream | 4.82881249 | 1.37E-06 | 0.00910594 |
| 13 | 60190543 | 60190543 | 1 | 13_60190543 | ENSG00000202151 | RNY4P28 | 2713 | Upstream | -4.8287536 | 1.37E-06 | 0.00910594 |
| 2 | 80419575 | 80419575 | 1 | 2_80419575 | ENSG00000066032 | CTNNA2 | 0 | EXON | -4.8287016 | 1.37E-06 | 0.00910594 |
| 1 | 243351000 | 243351000 | 1 | 1_243351000 | ENSG00000054282 | SDCCAG8 | 0 | INTRON | 4.82853071 | 1.38E-06 | 0.00910622 |
| 5 | 5357332 | 5357332 | 1 | 5_5357332 | ENSG00000251568 | ALG3P1 | 18390 | Downstream | -4.8285017 | 1.38E-06 | 0.00910622 |
| 11 | 11396613 | 11396613 | 1 | 11_11396613 | ENSG00000110328 | GALNT18 | 0 | INTRON | -4.8282406 | 1.38E-06 | 0.00910622 |
| X | 118271876 | 118271876 | 1 | X_118271876 | ENSG00000270619 | AL391358.1 | 6282 | Upstream | -4.8281562 | 1.38E-06 | 0.00910622 |
| 6 | 7793305 | 7793305 | 1 | 6_7793305 | ENSG00000153162 | BMP6 | 0 | INTRON | -4.8281048 | 1.38E-06 | 0.00910622 |
| 1 | 156317991 | 156317991 | 1 | 1_156317991 | ENSG00000163468 | CCT3 | 0 | INTRON | 4.82800771 | 1.38E-06 | 0.00910622 |
| 4 | 2823011 | 2823011 | 1 | 4_2823011 | ENSG00000087266 | SH3BP2 | 0 | EXON | 4.82794737 | 1.38E-06 | 0.00910622 |
| 6 | 60582416 | 60582416 | 1 | 6_60582416 | ENSG00000283453 | AC244258.1 | 35756 | Downstream | 4.82794674 | 1.38E-06 | 0.00910622 |
| 5 | 94559027 | 94559027 | 1 | 5_94559027 | ENSG00000185261 | KIAA0825 | 0 | INTRON | 4.82789548 | 1.38E-06 | 0.00910622 |
| 6 | 24676947 | 24676947 | 1 | 6_24676947 | ENSG00000112304 | ACOT13 | 0 | INTRON | 4.82787671 | 1.38E-06 | 0.00910622 |
| 6 | 139230164 | 139230164 | 1 | 6_139230164 | ENSG00000231329 | AL031772.1 | 0 | INTRON | -4.8278442 | 1.38E-06 | 0.00910622 |
| 5 | 141564953 | 141564953 | 1 | 5_141564953 | ENSG00000246422 | AC008781.2 | 0 | EXON | -4.8276321 | 1.38E-06 | 0.00910752 |
| 16 | 89400450 | 89400450 | 1 | 16_89400450 | ENSG00000167522 | ANKRD11 | 0 | INTRON | -4.8276054 | 1.38E-06 | 0.00910752 |
| X | 56634960 | 56634960 | 1 | X_56634960 | ENSG00000230105 | AL354793.1 | 10502 | Downstream | -4.8275551 | 1.38E-06 | 0.00910752 |
| 1 | 239820300 | 239820300 | 1 | 1_239820300 | ENSG00000133019 | CHRM3 | 0 | INTRON | 4.82750706 | 1.38E-06 | 0.00910752 |
| 12 | 107748271 | 107748271 | 1 | 12_107748271 | ENSG00000258136 | AC007622.2 | 0 | INTRON | 4.8274144 | 1.38E-06 | 0.00910823 |
| 1 | 203015044 | 203015044 | 1 | 1_203015044 | ENSG00000163444 | TMEM183A | 0 | EXON | 4.82728585 | 1.38E-06 | 0.00911058 |
| 22 | 19425392 | 19425392 | 1 | 22_19425392 | ENSG00000100084 | HIRA | 0 | INTRON | 4.82716573 | 1.38E-06 | 0.00911255 |
| 3 | 48679091 | 48679091 | 1 | 3_48679091 | ENSG00000213672 | NCKIPSD | 0 | EXON | 4.82704043 | 1.39E-06 | 0.00911476 |
| 18 | 75761670 | 75761670 | 1 | 18_75761670 | ENSG00000261194 | LINC01898 | 48819 | Upstream | -4.8268839 | 1.39E-06 | 0.00911562 |
| 20 | 35185435 | 35185435 | 1 | 20_35185435 | ENSG00000101000 | PROCR | 0 | INTRON | 4.82683904 | 1.39E-06 | 0.00911562 |
| 9 | 5981488 | 5981488 | 1 | 9_5981488 | ENSG00000183354 | KIAA2026 | 0 | INTRON | -4.8267404 | 1.39E-06 | 0.00911562 |
| 3 | 13117382 | 13117382 | 1 | 3_13117382 | ENSG00000144711 | IQSEC1 | 0 | INTRON | -4.8266619 | 1.39E-06 | 0.00911562 |
| 1 | 125180985 | 125180985 | 1 | 1_125180985 | ENSG00000224857 | LINC01691 | 3600461 | Upstream | -4.8266369 | 1.39E-06 | 0.00911562 |
| 1 | 212403667 | 212403667 | 1 | 1_212403667 | ENSG00000065600 | PACC1 | 0 | INTRON | 4.82654762 | 1.39E-06 | 0.00911619 |
| 19 | 4872716 | 4872716 | 1 | 19_4872716 | ENSG00000105355 | PLIN3 | 5022 | Upstream | 4.826361 | 1.39E-06 | 0.0091162 |
| 2 | 175395870 | 175395870 | 1 | 2_175395870 | ENSG00000229066 | AC093459.1 | 0 | INTRON | 4.82635402 | 1.39E-06 | 0.0091162 |
| 5 | 4973845 | 4973845 | 1 | 5_4973845 | ENSG00000250481 | AC010451.1 | 844 | Downstream | 4.82631698 | 1.39E-06 | 0.0091162 |
| 8 | 143864330 | 143864330 | 1 | 8_143864330 | ENSG00000261150 | EPPK1 | 0 | EXON | -4.826239 | 1.39E-06 | 0.00911626 |
| 22 | 29513116 | 29513116 | 1 | 22_29513116 | ENSG00000100296 | THOC5 | 0 | INTRON | 4.82597612 | 1.39E-06 | 0.00912298 |
| 18 | 69698904 | 69698904 | 1 | 18_69698904 | ENSG00000206052 | DOK6 | 0 | INTRON | -4.8259388 | 1.39E-06 | 0.00912298 |
| 7 | 83052594 | 83052594 | 1 | 7_83052594 | ENSG00000186472 | PCLO | 0 | INTRON | 4.82560834 | 1.40E-06 | 0.00913131 |
| 2 | 241708308 | 241708308 | 1 | 2_241708308 | ENSG00000168395 | ING5 | 0 | INTRON | -4.8256036 | 1.40E-06 | 0.00913131 |
| 22 | 35854008 | 35854008 | 1 | 22_35854008 | ENSG00000100320 | RBFOX2 | 0 | INTRON | -4.825425 | 1.40E-06 | 0.00913512 |
| 1 | 52908275 | 52908275 | 1 | 1_52908275 | ENSG00000121310 | ECHDC2 | 0 | INTRON | 4.82523162 | 1.40E-06 | 0.00913512 |
| 9 | 138283705 | 138283705 | 1 | 9_138283705 | ENSG00000250210 | FO082796.1 | 2542 | Upstream | 4.82521737 | 1.40E-06 | 0.00913512 |
| 16 | 38266784 | 38266784 | 1 | 16_38266784 | ENSG00000261084 | PPP1R1AP2 | 2354268 | Downstream | 4.82521422 | 1.40E-06 | 0.00913512 |
| 17 | 43727349 | 43727349 | 1 | 17_43727349 | ENSG00000267253 | WHSC1L2P | 6913 | Upstream | 4.82489078 | 1.40E-06 | 0.00914233 |
| 2 | 154867878 | 154867878 | 1 | 2_154867878 | ENSG00000162989 | KCNJ3 | 9524 | Downstream | 4.82478283 | 1.40E-06 | 0.00914233 |
| 8 | 30178279 | 30178279 | 1 | 8_30178279 | ENSG00000104671 | DCTN6 | 0 | INTRON | 4.82477147 | 1.40E-06 | 0.00914233 |
| 7 | 156484885 | 156484885 | 1 | 7_156484885 | ENSG00000182648 | LINC01006 | 0 | INTRON | -4.8247512 | 1.40E-06 | 0.00914233 |
| 4 | 95525873 | 95525873 | 1 | 4_95525873 | ENSG00000182168 | UNC5C | 0 | INTRON | 4.82446569 | 1.40E-06 | 0.00915193 |
| 1 | 49304644 | 49304644 | 1 | 1_49304644 | ENSG00000186094 | AGBL4 | 0 | INTRON | -4.8242073 | 1.41E-06 | 0.00915562 |
| 4 | 130409400 | 130409400 | 1 | 4_130409400 | ENSG00000251326 | LINC02479 | 0 | INTRON | -4.8241863 | 1.41E-06 | 0.00915562 |
| 2 | 9801596 | 9801596 | 1 | 2_9801596 | ENSG00000243491 | AC082651.3 | 31255 | Upstream | 4.82410272 | 1.41E-06 | 0.00915562 |
| 14 | 58290758 | 58290758 | 1 | 14_58290758 | ENSG00000257621 | PSMA3-AS1 | 0 | INTRON | -4.8240618 | 1.41E-06 | 0.00915562 |
| 9 | 107723148 | 107723148 | 1 | 9_107723148 | ENSG00000202308 | RNU6-996P | 59902 | Upstream | 4.82400378 | 1.41E-06 | 0.00915562 |
| 1 | 145052149 | 145052149 | 1 | 1_145052149 | ENSG00000196369 | SRGAP2B | 0 | INTRON | 4.82385568 | 1.41E-06 | 0.00915892 |
| 9 | 17678204 | 17678204 | 1 | 9_17678204 | ENSG00000107295 | SH3GL2 | 0 | INTRON | 4.82369009 | 1.41E-06 | 0.00916042 |
| 17 | 57808731 | 57808731 | 1 | 17_57808731 | ENSG00000265542 | AC015845.2 | 0 | INTRON | -4.8236707 | 1.41E-06 | 0.00916042 |
| 13 | 97226079 | 97226079 | 1 | 13_97226079 | ENSG00000139793 | MBNL2 | 0 | INTRON | 4.8233681 | 1.41E-06 | 0.00917083 |
| 20 | 62667638 | 62667638 | 1 | 20_62667638 | ENSG00000101187 | SLCO4A1 | 0 | INTRON | 4.82313177 | 1.41E-06 | 0.0091782 |
| 18 | 14018115 | 14018115 | 1 | 18_14018115 | ENSG00000279352 | AC006557.6 | 7198 | Downstream | 4.82294887 | 1.41E-06 | 0.00917985 |
| 6 | 72458520 | 72458520 | 1 | 6_72458520 | ENSG00000079841 | RIMS1 | 55377 | Downstream | -4.8228688 | 1.42E-06 | 0.00917985 |
| 8 | 143864202 | 143864202 | 1 | 8_143864202 | ENSG00000261150 | EPPK1 | 0 | EXON | -4.8228679 | 1.42E-06 | 0.00917985 |
| 12 | 31550526 | 31550526 | 1 | 12_31550526 | ENSG00000170456 | DENND5B | 0 | INTRON | 4.82275842 | 1.42E-06 | 0.00917989 |
| 22 | 39116736 | 39116736 | 1 | 22_39116736 | ENSG00000100307 | CBX7 | 3430 | Downstream | -4.822715 | 1.42E-06 | 0.00917989 |
| 19 | 50283409 | 50283409 | 1 | 19_50283409 | ENSG00000105357 | MYH14 | 0 | INTRON | 4.82258994 | 1.42E-06 | 0.00918215 |
| 5 | 180200855 | 180200855 | 1 | 5_180200855 | ENSG00000146090 | RASGEF1C | 0 | INTRON | -4.8223835 | 1.42E-06 | 0.00918816 |
| 16 | 77967840 | 77967840 | 1 | 16_77967840 | ENSG00000171724 | VAT1L | 0 | INTRON | 4.82191117 | 1.42E-06 | 0.00920645 |
| 7 | 37900492 | 37900492 | 1 | 7_37900492 | ENSG00000086289 | EPDR1 | 0 | INTRON | 4.82169667 | 1.42E-06 | 0.00921193 |
| 17 | 8760797 | 8760797 | 1 | 17_8760797 | ENSG00000183318 | SPDYE4 | 2238 | Upstream | 4.82164064 | 1.42E-06 | 0.00921193 |
| 2 | 5367176 | 5367176 | 1 | 2_5367176 | ENSG00000228585 | AC073143.1 | 53042 | Upstream | -4.8212612 | 1.43E-06 | 0.00922597 |
| 9 | 6682962 | 6682962 | 1 | 9_6682962 | ENSG00000232946 | AL354707.2 | 7348 | Downstream | -4.8210142 | 1.43E-06 | 0.00923129 |
| 22 | 47196073 | 47196073 | 1 | 22_47196073 | ENSG00000054611 | TBC1D22A | 20374 | Downstream | -4.8209734 | 1.43E-06 | 0.00923129 |
| 22 | 38781904 | 38781904 | 1 | 22_38781904 | ENSG00000100246 | DNAL4 | 0 | INTRON | 4.82091879 | 1.43E-06 | 0.00923129 |
| 4 | 66258172 | 66258172 | 1 | 4_66258172 | ENSG00000287383 | AC110809.1 | 0 | INTRON | 4.82073054 | 1.43E-06 | 0.0092365 |
| 17 | 61680669 | 61680669 | 1 | 17_61680669 | ENSG00000136492 | BRIP1 | 596 | Downstream | -4.8206302 | 1.43E-06 | 0.00923765 |
| 3 | 35148151 | 35148151 | 1 | 3_35148151 | ENSG00000228767 | KRT8P18 | 67553 | Downstream | -4.8204846 | 1.43E-06 | 0.00924089 |
| 9 | 36773032 | 36773032 | 1 | 9_36773032 | ENSG00000287514 | AL450267.2 | 0 | INTRON | 4.82040649 | 1.43E-06 | 0.009241 |
| 22 | 18362247 | 18362247 | 1 | 22_18362247 | ENSG00000274044 | FAM230J | 0 | EXON | 4.82013992 | 1.43E-06 | 0.00924926 |
| 5 | 64621874 | 64621874 | 1 | 5_64621874 | ENSG00000186479 | RGS7BP | 9555 | Downstream | 4.82007713 | 1.44E-06 | 0.00924926 |

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| 10 | 20842727 | 20842727 | 1 | 10_20842727 | ENSG00000078114 | NEBL | 0 | INTRON | 4.81980714 | 1.44E-06 | 0.00925457 |
| 1 | 35777860 | 35777860 | 1 | 1_35777860 | ENSG00000092853 | CLSPN | 7882 | Upstream | 4.81970472 | 1.44E-06 | 0.00925457 |
| 20 | 53402679 | 53402679 | 1 | 20_53402679 | ENSG00000271774 | AL109930.1 | 0 | INTRON | 4.8196908 | 1.44E-06 | 0.00925457 |
| 11 | 38173548 | 38173548 | 1 | 11_38173548 | ENSG00000254784 | LRRC6P1 | 37840 | Upstream | -4.8196606 | 1.44E-06 | 0.00925457 |
| 5 | 151634501 | 151634501 | 1 | 5_151634501 | ENSG00000260581 | AC011374.1 | 17773 | Upstream | 4.81951519 | 1.44E-06 | 0.00925781 |
| 9 | 83641059 | 83641059 | 1 | 9_83641059 | ENSG00000148057 | IDNK | 0 | INTRON | -4.819424 | 1.44E-06 | 0.00925788 |
| 9 | 90810961 | 90810961 | 1 | 9_90810961 | ENSG00000165025 | SYK | 0 | INTRON | 4.81933857 | 1.44E-06 | 0.00925788 |
| 21 | 43829055 | 43829055 | 1 | 21_43829055 | ENSG00000215458 | AATBC | 16488 | Upstream | 4.81924142 | 1.44E-06 | 0.00925788 |
| 18 | 59757692 | 59757692 | 1 | 18_59757692 | ENSG00000224161 | RPS26P54 | 3865 | Upstream | 4.81914892 | 1.44E-06 | 0.00925788 |
| 10 | 84136369 | 84136369 | 1 | 10_84136369 | ENSG00000271933 | AL603756.1 | 2050 | Downstream | 4.81912335 | 1.44E-06 | 0.00925788 |
| 20 | 30208075 | 30208075 | 1 | 20_30208075 | ENSG00000204555 | CFTRP3 | 6689 | Downstream | 4.81904786 | 1.44E-06 | 0.00925788 |
| 17 | 70448675 | 70448675 | 1 | 17_70448675 | ENSG00000267109 | AC011990.1 | 79759 | Upstream | -4.8189761 | 1.44E-06 | 0.00925788 |
| 3 | 41533732 | 41533732 | 1 | 3_41533732 | ENSG00000168038 | ULK4 | 0 | INTRON | 4.81882552 | 1.44E-06 | 0.00925788 |
| 5 | 31384603 | 31384603 | 1 | 5_31384603 | ENSG00000113360 | DROSHA | 15893 | Downstream | -4.818803 | 1.44E-06 | 0.00925788 |
| 13 | 48059025 | 48059025 | 1 | 13_48059025 | ENSG00000136146 | MED4 | 0 | INTRON | 4.81876085 | 1.44E-06 | 0.00925788 |
| 12 | 24662580 | 24662580 | 1 | 12_24662580 | ENSG00000244662 | AC087312.1 | 19414 | Downstream | 4.81864773 | 1.45E-06 | 0.00925964 |
| 3 | 61441724 | 61441724 | 1 | 3_61441724 | ENSG00000144724 | PTPRG | 119844 | Upstream | 4.81856913 | 1.45E-06 | 0.0092598 |
| 4 | 160515577 | 160515577 | 1 | 4_160515577 | ENSG00000250997 | AC093853.1 | 6251 | Downstream | 4.81837456 | 1.45E-06 | 0.00926535 |
| 9 | 116168960 | 116168960 | 1 | 9_116168960 | ENSG00000182752 | PAPPA | 0 | INTRON | -4.8182458 | 1.45E-06 | 0.00926549 |
| 15 | 55364596 | 55364596 | 1 | 15_55364596 | ENSG00000260916 | CCPG1 | 0 | INTRON | 4.81822145 | 1.45E-06 | 0.00926549 |
| 17 | 17991486 | 17991486 | 1 | 17_17991486 | ENSG00000171962 | DRC3 | 0 | INTRON | 4.81804431 | 1.45E-06 | 0.00927023 |
| 8 | 1739839 | 1739839 | 1 | 8_1739839 | ENSG00000254265 | AC100810.2 | 8387 | Downstream | 4.81789291 | 1.45E-06 | 0.00927378 |
| 13 | 32619022 | 32619022 | 1 | 13_32619022 | ENSG00000083642 | PDS5B | 0 | INTRON | -4.8178119 | 1.45E-06 | 0.00927406 |
| X | 115638360 | 115638360 | 1 | X_115638360 | ENSG00000102024 | PLS3 | 0 | INTRON | -4.8174663 | 1.45E-06 | 0.00928166 |
| 18 | 5903764 | 5903764 | 1 | 18_5903764 | ENSG00000264449 | AP001021.1 | 0 | INTRON | -4.8173708 | 1.45E-06 | 0.00928166 |
| 1 | 145065681 | 145065681 | 1 | 1_145065681 | ENSG00000196369 | SRGAP2B | 0 | INTRON | 4.81728079 | 1.46E-06 | 0.00928166 |
| 1 | 206719952 | 206719952 | 1 | 1_206719952 | ENSG00000162889 | MAPKAPK2 | 0 | INTRON | 4.81712967 | 1.46E-06 | 0.00928166 |
| 3 | 112632838 | 112632838 | 1 | 3_112632838 | ENSG00000091986 | CCDC80 | 0 | INTRON | 4.8170709 | 1.46E-06 | 0.00928166 |
| 17 | 27448595 | 27448595 | 1 | 17_27448595 | ENSG00000141068 | KSR1 | 7874 | Upstream | -4.8170192 | 1.46E-06 | 0.00928166 |
| X | 31576872 | 31576872 | 1 | X_31576872 | ENSG00000198947 | DMD | 0 | INTRON | 4.816996 | 1.46E-06 | 0.00928166 |
| 22 | 29342192 | 29342192 | 1 | 22_29342192 | ENSG00000100280 | AP1B1 | 0 | INTRON | 4.81697045 | 1.46E-06 | 0.00928166 |
| 22 | 33926081 | 33926081 | 1 | 22_33926081 | ENSG00000133424 | LARGE1 | 3240 | Upstream | 4.81692759 | 1.46E-06 | 0.00928166 |
| 10 | 118744949 | 118744949 | 1 | 10_118744949 | ENSG00000151893 | CACUL1 | 0 | INTRON | -4.8169002 | 1.46E-06 | 0.00928166 |
| 1 | 176360105 | 176360105 | 1 | 1_176360105 | ENSG00000236021 | AL591043.2 | 0 | INTRON | -4.8167769 | 1.46E-06 | 0.00928393 |
| 1 | 724201 | 724201 | 1 | 1_724201 | ENSG00000229376 | CICP3 | 0 | EXON | 4.81617603 | 1.46E-06 | 0.00930843 |
| 7 | 13136350 | 13136350 | 1 | 7_13136350 | ENSG00000229618 | AC011287.1 | 0 | INTRON | 4.81597269 | 1.46E-06 | 0.00931264 |
| 1 | 199355764 | 199355764 | 1 | 1_199355764 | ENSG00000231718 | LINC02789 | 0 | INTRON | 4.81593642 | 1.47E-06 | 0.00931264 |
| 10 | 95654384 | 95654384 | 1 | 10_95654384 | ENSG00000059573 | ALDH18A1 | 0 | INTRON | 4.81570595 | 1.47E-06 | 0.00931458 |
| 10 | 121428585 | 121428585 | 1 | 10_121428585 | ENSG00000222979 | RN7SKP167 | 17385 | Downstream | -4.8155977 | 1.47E-06 | 0.00931458 |
| 1 | 151416327 | 151416327 | 1 | 1_151416327 | ENSG00000143442 | POGZ | 0 | INTRON | -4.815447 | 1.47E-06 | 0.00931458 |
| 6 | 84540745 | 84540745 | 1 | 6_84540745 | ENSG00000231776 | LINC01611 | 0 | INTRON | 4.8154125 | 1.47E-06 | 0.00931458 |
| 20 | 53689227 | 53689227 | 1 | 20_53689227 | ENSG00000238468 | RNU7-14P | 20469 | Upstream | 4.81536463 | 1.47E-06 | 0.00931458 |
| 1 | 48410325 | 48410325 | 1 | 1_48410325 | ENSG00000132122 | SPATA6 | 0 | INTRON | -4.8152935 | 1.47E-06 | 0.00931458 |
| 19 | 2498854 | 2498854 | 1 | 19_2498854 | ENSG00000252962 | RNU6-993P | 4192 | Downstream | 4.81526252 | 1.47E-06 | 0.00931458 |
| 18 | 11391750 | 11391750 | 1 | 18_11391750 | ENSG00000273119 | AP005229.2 | 1021 | Upstream | 4.8152492 | 1.47E-06 | 0.00931458 |
| 8 | 126456714 | 126456714 | 1 | 8_126456714 | ENSG00000253427 | AC084116.2 | 17474 | Upstream | 4.81508691 | 1.47E-06 | 0.00931458 |
| 19 | 28569899 | 28569899 | 1 | 19_28569899 | ENSG00000266893 | AC005394.1 | 0 | INTRON | 4.81503617 | 1.47E-06 | 0.00931458 |
| 8 | 108590711 | 108590711 | 1 | 8_108590711 | ENSG00000253949 | AC022634.2 | 0 | INTRON | -4.8150031 | 1.47E-06 | 0.00931458 |
| 18 | 13009827 | 13009827 | 1 | 18_13009827 | ENSG00000101639 | CEP192 | 0 | INTRON | 4.8150019 | 1.47E-06 | 0.00931458 |
| 10 | 51899462 | 51899462 | 1 | 10_51899462 | ENSG00000185532 | PRKG1 | 0 | INTRON | 4.81477945 | 1.47E-06 | 0.0093205 |
| 1 | 208994820 | 208994820 | 1 | 1_208994820 | ENSG00000278684 | AC104465.1 | 6517 | Upstream | -4.8146981 | 1.47E-06 | 0.0093205 |
| 12 | 77101488 | 77101488 | 1 | 12_77101488 | ENSG00000286476 | AC079030.1 | 27689 | Upstream | -4.8146522 | 1.47E-06 | 0.0093205 |
| 9 | 89025010 | 89025010 | 1 | 9_89025010 | ENSG00000148082 | SHC3 | 0 | INTRON | 4.81454883 | 1.48E-06 | 0.00932187 |
| X | 141257122 | 141257122 | 1 | X_141257122 | ENSG00000277215 | SPANXA2-OT1 | 0 | INTRON | 4.81433372 | 1.48E-06 | 0.00932845 |
| 11 | 89254324 | 89254324 | 1 | 11_89254324 | ENSG00000077498 | TYR | 0 | INTRON | 4.81417777 | 1.48E-06 | 0.00933088 |
| 15 | 87615468 | 87615468 | 1 | 15_87615468 | ENSG00000259560 | AC020687.1 | 0 | INTRON | 4.81413353 | 1.48E-06 | 0.00933088 |
| 21 | 35571477 | 35571477 | 1 | 21_35571477 | ENSG00000159216 | RUNX1 | 0 | INTRON | 4.81403749 | 1.48E-06 | 0.00933112 |
| 5 | 92659842 | 92659842 | 1 | 5_92659842 | ENSG00000249776 | AC124854.1 | 0 | INTRON | -4.8139802 | 1.48E-06 | 0.00933112 |
| 2 | 202630968 | 202630968 | 1 | 2_202630968 | ENSG00000138439 | FAM117B | 4000 | Upstream | -4.81352 | 1.48E-06 | 0.00934918 |
| 8 | 139415826 | 139415826 | 1 | 8_139415826 | ENSG00000254258 | AC087354.1 | 44235 | Downstream | 4.81334523 | 1.48E-06 | 0.0093539 |
| 9 | 108027477 | 108027477 | 1 | 9_108027477 | ENSG00000213557 | AC068050.1 | 12735 | Upstream | 4.81306992 | 1.49E-06 | 0.00936314 |
| 5 | 24275934 | 24275934 | 1 | 5_24275934 | ENSG00000286134 | AC114930.1 | 4071 | Upstream | -4.8129985 | 1.49E-06 | 0.00936314 |
| 4 | 129352756 | 129352756 | 1 | 4_129352756 | ENSG00000287748 | AC082650.2 | 10154 | Downstream | 4.81286708 | 1.49E-06 | 0.00936314 |
| 9 | 117702664 | 117702664 | 1 | 9_117702664 | ENSG00000285082 | AL160272.2 | 1492 | Upstream | 4.8128523 | 1.49E-06 | 0.00936314 |
| 17 | 1432515 | 1432515 | 1 | 17_1432515 | ENSG00000167193 | CRK | 0 | INTRON | 4.81246964 | 1.49E-06 | 0.00937762 |
| 1 | 212357619 | 212357619 | 1 | 1_212357619 | ENSG00000229832 | AL360091.1 | 0 | INTRON | -4.8122318 | 1.49E-06 | 0.00938351 |
| 16 | 82063032 | 82063032 | 1 | 16_82063032 | ENSG00000261235 | AC092142.1 | 0 | INTRON | -4.8121304 | 1.49E-06 | 0.00938351 |
| 10 | 15563652 | 15563652 | 1 | 10_15563652 | ENSG00000077943 | ITGA8 | 0 | INTRON | 4.81204579 | 1.49E-06 | 0.00938351 |
| 19 | 19888086 | 19888086 | 1 | 19_19888086 | ENSG00000256771 | ZNF253 | 0 | INTRON | 4.81197699 | 1.49E-06 | 0.00938351 |
| 6 | 157410845 | 157410845 | 1 | 6_157410845 | ENSG00000175048 | ZDHHC14 | 0 | INTRON | 4.81197512 | 1.49E-06 | 0.00938351 |
| 4 | 89601549 | 89601549 | 1 | 4_89601549 | ENSG00000251095 | AC093866.1 | 0 | INTRON | -4.8113441 | 1.50E-06 | 0.00940395 |
| 5 | 81258011 | 81258011 | 1 | 5_81258011 | ENSG00000247572 | CKMT2-AS1 | 0 | INTRON | 4.81128126 | 1.50E-06 | 0.00940395 |
| 3 | 71929771 | 71929771 | 1 | 3_71929771 | ENSG00000241163 | LINC00877 | 13820 | Downstream | 4.81122892 | 1.50E-06 | 0.00940395 |
| 4 | 119433527 | 119433527 | 1 | 4_119433527 | ENSG00000283050 | GTF2IP12 | 0 | INTRON | 4.81120208 | 1.50E-06 | 0.00940395 |
| 7 | 67148518 | 67148518 | 1 | 7_67148518 | ENSG00000198874 | TYW1 | 0 | INTRON | -4.8111722 | 1.50E-06 | 0.00940395 |
| 1 | 97947873 | 97947873 | 1 | 1_97947873 | ENSG00000225206 | MIR137HG | 0 | INTRON | -4.8108843 | 1.50E-06 | 0.00941404 |
| 10 | 2943993 | 2943993 | 1 | 10_2943993 | ENSG00000231743 | AC026396.1 | 7552 | Downstream | 4.81053323 | 1.51E-06 | 0.0094238 |
| 13 | 50733035 | 50733035 | 1 | 13_50733035 | ENSG00000186047 | DLEU7 | 0 | INTRON | -4.81053 | 1.51E-06 | 0.0094238 |
| 3 | 29258399 | 29258399 | 1 | 3_29258399 | ENSG00000144642 | RBMS3 | 0 | INTRON | 4.81036385 | 1.51E-06 | 0.00942817 |
| 11 | 104451329 | 104451329 | 1 | 11_104451329 | ENSG00000256422 | LINC02552 | 0 | INTRON | 4.81012163 | 1.51E-06 | 0.009436 |
| 7 | 36278405 | 36278405 | 1 | 7_36278405 | ENSG00000122547 | EEPD1 | 0 | INTRON | 4.81005088 | 1.51E-06 | 0.009436 |
| 13 | 27088308 | 27088308 | 1 | 13_27088308 | ENSG00000152484 | USP12 | 0 | INTRON | -4.8097494 | 1.51E-06 | 0.00944677 |
| 8 | 7457123 | 7457123 | 1 | 8_7457123 | ENSG00000164871 | SPAG11B | 0 | INTRON | -4.8094077 | 1.51E-06 | 0.00945862 |
| 13 | 49709293 | 49709293 | 1 | 13_49709293 | ENSG00000102753 | KPNA3 | 0 | INTRON | 4.80929382 | 1.51E-06 | 0.00945862 |
| 7 | 35868089 | 35868089 | 1 | 7_35868089 | ENSG00000122545 | SEPTIN7 | 0 | INTRON | -4.8092501 | 1.51E-06 | 0.00945862 |
| 3 | 143184790 | 143184790 | 1 | 3_143184790 | ENSG00000244171 | PBX2P1 | 7173 | Downstream | 4.80920518 | 1.52E-06 | 0.00945862 |
| 4 | 63796619 | 63796619 | 1 | 4_63796619 | ENSG00000250775 | AC093730.1 | 266858 | Upstream | -4.8087007 | 1.52E-06 | 0.00947615 |
| 15 | 31481387 | 31481387 | 1 | 15_31481387 | ENSG00000169918 | OTUD7A | 0 | 3UTR | -4.8084849 | 1.52E-06 | 0.00947615 |

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| 1 | 228183494 | 228183494 | 1 | 1_228183494 | ENSG00000181873 | IBA57 | 1237 | Downstream | 4.80840256 | 1.52E-06 | 0.00947615 |
| 6 | 168072135 | 168072135 | 1 | 6_168072135 | ENSG00000153303 | FRMD1 | 0 | INTRON | 4.8083599 | 1.52E-06 | 0.00947615 |
| 8 | 140152619 | 140152619 | 1 | 8_140152619 | ENSG00000167632 | TRAPPC9 | 0 | INTRON | 4.80826766 | 1.52E-06 | 0.00947615 |
| 19 | 43786592 | 43786592 | 1 | 19_43786592 | ENSG00000159871 | LYPD5 | 0 | INTRON | -4.8081989 | 1.52E-06 | 0.00947615 |
| 15 | 54229148 | 54229148 | 1 | 15_54229148 | ENSG00000137766 | UNC13C | 0 | INTRON | -4.8081672 | 1.52E-06 | 0.00947615 |
| 9 | 91050433 | 91050433 | 1 | 9_91050433 | ENSG00000237422 | AL158071.4 | 26704 | Downstream | 4.80814776 | 1.52E-06 | 0.00947615 |
| 3 | 54025035 | 54025035 | 1 | 3_54025035 | ENSG00000288029 | AC115282.2 | 8952 | Upstream | 4.80808559 | 1.52E-06 | 0.00947615 |
| 19 | 34513318 | 34513318 | 1 | 19_34513318 | ENSG00000142279 | WTIP | 1014 | Downstream | 4.80798521 | 1.52E-06 | 0.00947615 |
| 12 | 6003940 | 6003940 | 1 | 12_6003940 | ENSG00000110799 | VWF | 0 | INTRON | 4.80792098 | 1.53E-06 | 0.00947615 |
| 14 | 45101835 | 45101835 | 1 | 14_45101835 | ENSG00000185246 | PRPF39 | 0 | INTRON | 4.80788377 | 1.53E-06 | 0.00947615 |
| 15 | 82549169 | 82549169 | 1 | 15_82549169 | ENSG00000278013 | AC245033.2 | 0 | INTRON | -4.8077219 | 1.53E-06 | 0.00948036 |
| 1 | 67991856 | 67991856 | 1 | 1_67991856 | ENSG00000232284 | GNG12-AS1 | 0 | INTRON | -4.8073525 | 1.53E-06 | 0.00949379 |
| 7 | 95106403 | 95106403 | 1 | 7_95106403 | ENSG00000158528 | PPP1R9A | 0 | INTRON | 4.80729296 | 1.53E-06 | 0.00949379 |
| 3 | 53312790 | 53312790 | 1 | 3_53312790 | ENSG00000272886 | DCP1A | 0 | INTRON | -4.8071242 | 1.53E-06 | 0.00949834 |
| 13 | 88642845 | 88642845 | 1 | 13_88642845 | ENSG00000261666 | LINC00560 | 12448 | Downstream | 4.80673195 | 1.53E-06 | 0.00951352 |
| 15 | 79523117 | 79523117 | 1 | 15_79523117 | ENSG00000259493 | AC023968.2 | 36138 | Downstream | -4.8065681 | 1.54E-06 | 0.00951785 |
| 4 | 111221943 | 111221943 | 1 | 4_111221943 | ENSG00000200963 | RNU6-289P | 109468 | Upstream | 4.80638389 | 1.54E-06 | 0.00951872 |
| 3 | 73172784 | 73172784 | 1 | 3_73172784 | ENSG00000182921 | CCDC75P1 | 9716 | Downstream | 4.80633529 | 1.54E-06 | 0.00951872 |
| 16 | 11611811 | 11611811 | 1 | 16_11611811 | ENSG00000189067 | LITAF | 0 | INTRON | 4.80626698 | 1.54E-06 | 0.00951872 |
| 10 | 9612525 | 9612525 | 1 | 10_9612525 | ENSG00000235838 | HSP90AB7P | 109437 | Downstream | -4.8062003 | 1.54E-06 | 0.00951872 |
| 12 | 120968347 | 120968347 | 1 | 12_120968347 | ENSG00000241388 | HNF1A-AS1 | 0 | INTRON | 4.80618577 | 1.54E-06 | 0.00951872 |
| 6 | 42135435 | 42135435 | 1 | 6_42135435 | ENSG00000188112 | C6orf132 | 0 | INTRON | 4.80585691 | 1.54E-06 | 0.00952822 |
| 5 | 154845878 | 154845878 | 1 | 5_154845878 | ENSG00000170271 | FAXDC2 | 0 | INTRON | 4.80583945 | 1.54E-06 | 0.00952822 |
| 6 | 37229283 | 37229283 | 1 | 6_37229283 | ENSG00000286105 | AL353579.1 | 0 | INTRON | -4.8057234 | 1.54E-06 | 0.00952822 |
| 20 | 60815754 | 60815754 | 1 | 20_60815754 | ENSG00000261035 | AL139348.1 | 1543 | Upstream | 4.8056954 | 1.54E-06 | 0.00952822 |
| 12 | 89109544 | 89109544 | 1 | 12_89109544 | ENSG00000246363 | LINC02458 | 0 | INTRON | -4.8056229 | 1.54E-06 | 0.00952822 |
| 16 | 27274586 | 27274586 | 1 | 16_27274586 | ENSG00000245888 | NSMCE1-DT | 0 | INTRON | 4.80552052 | 1.54E-06 | 0.00952949 |
| 22 | 26666461 | 26666461 | 1 | 22_26666461 | ENSG00000225783 | MIAT | 0 | EXON | -4.805451 | 1.54E-06 | 0.00952949 |
| 2 | 201974580 | 201974580 | 1 | 2_201974580 | ENSG00000212184 | RNU6-440P | 47037 | Downstream | -4.8049665 | 1.55E-06 | 0.00954617 |
| 21 | 29811102 | 29811102 | 1 | 21_29811102 | ENSG00000171189 | GRIK1 | 0 | INTRON | -4.8049561 | 1.55E-06 | 0.00954617 |
| 1 | 25564541 | 25564541 | 1 | 1_25564541 | ENSG00000157978 | LDLRAP1 | 0 | EXON | 4.80482388 | 1.55E-06 | 0.00954902 |
| 9 | 24435548 | 24435548 | 1 | 9_24435548 | ENSG00000205442 | IZUMO3 | 107403 | Downstream | 4.80457606 | 1.55E-06 | 0.00955739 |
| 2 | 10657985 | 10657985 | 1 | 2_10657985 | ENSG00000115761 | NOL10 | 0 | INTRON | -4.8045012 | 1.55E-06 | 0.00955751 |
| 9 | 129247206 | 129247206 | 1 | 9_129247206 | ENSG00000235007 | AL161785.2 | 11147 | Upstream | -4.8039049 | 1.56E-06 | 0.00958256 |
| 11 | 131547750 | 131547750 | 1 | 11_131547750 | ENSG00000182667 | NTM | 0 | INTRON | 4.80369196 | 1.56E-06 | 0.00958929 |
| 10 | 119578776 | 119578776 | 1 | 10_119578776 | ENSG00000151923 | TIAL1 | 0 | 3UTR | -4.8035333 | 1.56E-06 | 0.00959192 |
| 11 | 30623846 | 30623846 | 1 | 11_30623846 | ENSG00000254489 | MPPED2-AS1 | 0 | INTRON | -4.8034619 | 1.56E-06 | 0.00959192 |
| 9 | 132385566 | 132385566 | 1 | 9_132385566 | ENSG00000125482 | TTF1 | 0 | INTRON | 4.8032671 | 1.56E-06 | 0.00959192 |
| 3 | 165878799 | 165878799 | 1 | 3_165878799 | ENSG00000244128 | LINC01322 | 32280 | Downstream | 4.80325066 | 1.56E-06 | 0.00959192 |
| 8 | 98413648 | 98413648 | 1 | 8_98413648 | ENSG00000253468 | AP003355.1 | 0 | EXON | -4.8032304 | 1.56E-06 | 0.00959192 |
| 7 | 99837175 | 99837175 | 1 | 7_99837175 | ENSG00000021461 | CYP3A43 | 0 | INTRON | -4.8032031 | 1.56E-06 | 0.00959192 |
| 1 | 238928113 | 238928113 | 1 | 1_238928113 | ENSG00000287177 | AL583825.1 | 79998 | Downstream | -4.8031001 | 1.56E-06 | 0.00959339 |
| 6 | 22219125 | 22219125 | 1 | 6_22219125 | ENSG00000272168 | CASC15 | 0 | INTRON | 4.80284108 | 1.56E-06 | 0.00959921 |
| 1 | 234236757 | 234236757 | 1 | 1_234236757 | ENSG00000183780 | SLC35F3 | 0 | INTRON | 4.80283428 | 1.56E-06 | 0.00959921 |
| 10 | 71009213 | 71009213 | 1 | 10_71009213 | ENSG00000285300 | AC073176.2 | 0 | INTRON | 4.80275974 | 1.56E-06 | 0.00959933 |
| 7 | 6493450 | 6493450 | 1 | 7_6493450 | ENSG00000231359 | AC072052.1 | 2352 | Upstream | 4.80264958 | 1.57E-06 | 0.00960115 |
| 11 | 65208557 | 65208557 | 1 | 11_65208557 | ENSG00000014216 | CAPN1 | 0 | EXON | 4.80253351 | 1.57E-06 | 0.00960326 |
| 15 | 81319325 | 81319325 | 1 | 15_81319325 | ENSG00000286488 | AC103858.3 | 0 | EXON | 4.80233104 | 1.57E-06 | 0.00960952 |
| 15 | 56989939 | 56989939 | 1 | 15_56989939 | ENSG00000140262 | TCF12 | 0 | INTRON | 4.80216352 | 1.57E-06 | 0.0096141 |
| 7 | 100258348 | 100258348 | 1 | 7_100258348 | ENSG00000239521 | CASTOR3 | 0 | INTRON | 4.80179443 | 1.57E-06 | 0.00962064 |
| 13 | 52591661 | 52591661 | 1 | 13_52591661 | ENSG00000244471 | AL137058.1 | 4566 | Downstream | -4.8017823 | 1.57E-06 | 0.00962064 |
| 2 | 180914557 | 180914557 | 1 | 2_180914557 | ENSG00000281131 | SCHLAP1 | 0 | INTRON | 4.80177868 | 1.57E-06 | 0.00962064 |
| X | 73929550 | 73929550 | 1 | X_73929550 | ENSG00000230590 | FTX | 10884 | Downstream | -4.8017394 | 1.57E-06 | 0.00962064 |
| 11 | 64541770 | 64541770 | 1 | 11_64541770 | ENSG00000237363 | AP006288.1 | 8800 | Downstream | 4.80159159 | 1.57E-06 | 0.00962428 |
| 7 | 148421102 | 148421102 | 1 | 7_148421102 | ENSG00000174469 | CNTNAP2 | 104 | Downstream | -4.8014041 | 1.58E-06 | 0.00962972 |
| 1 | 160092366 | 160092366 | 1 | 1_160092366 | ENSG00000162729 | IGSF8 | 0 | EXON | 4.8013347 | 1.58E-06 | 0.00962972 |
| 12 | 12374398 | 12374398 | 1 | 12_12374398 | ENSG00000165714 | BORCS5 | 0 | INTRON | -4.8012285 | 1.58E-06 | 0.00963137 |
| 11 | 12264134 | 12264134 | 1 | 11_12264134 | ENSG00000133816 | MICAL2 | 0 | INTRON | 4.80104892 | 1.58E-06 | 0.00963655 |
| 3 | 120491813 | 120491813 | 1 | 3_120491813 | ENSG00000286735 | AC126182.3 | 0 | INTRON | -4.8009352 | 1.58E-06 | 0.00963857 |
| 15 | 75266401 | 75266401 | 1 | 15_75266401 | ENSG00000167195 | GOLGA6C | 0 | EXON | -4.8007045 | 1.58E-06 | 0.00964348 |
| 7 | 1484043 | 1484043 | 1 | 7_1484043 | ENSG00000164880 | INTS1 | 0 | EXON | 4.80068963 | 1.58E-06 | 0.00964348 |
| 11 | 79942162 | 79942162 | 1 | 11_79942162 | ENSG00000279295 | AP001541.1 | 24642 | Upstream | -4.8005824 | 1.58E-06 | 0.00964519 |
| 18 | 54338625 | 54338625 | 1 | 18_54338625 | ENSG00000174448 | STARD6 | 0 | INTRON | -4.8004636 | 1.58E-06 | 0.00964745 |
| 13 | 77318708 | 77318708 | 1 | 13_77318708 | ENSG00000005810 | MYCBP2 | 0 | INTRON | 4.80025382 | 1.58E-06 | 0.00965411 |
| 7 | 140686469 | 140686469 | 1 | 7_140686469 | ENSG00000133597 | ADCK2 | 0 | INTRON | 4.79978856 | 1.59E-06 | 0.0096731 |
| 11 | 102052398 | 102052398 | 1 | 11_102052398 | ENSG00000137691 | CFAP300 | 0 | INTRON | -4.79947 | 1.59E-06 | 0.00967513 |
| 5 | 109913782 | 109913782 | 1 | 5_109913782 | ENSG00000253224 | PGAM5P1 | 28359 | Upstream | 4.79942213 | 1.59E-06 | 0.00967513 |
| 19 | 38865194 | 38865194 | 1 | 19_38865194 | ENSG00000187994 | RINL | 2635 | Downstream | 4.79938839 | 1.59E-06 | 0.00967513 |
| 6 | 147573984 | 147573984 | 1 | 6_147573984 | ENSG00000203727 | SAMD5 | 0 | INTRON | -4.799363 | 1.59E-06 | 0.00967513 |
| 12 | 94343744 | 94343744 | 1 | 12_94343744 | ENSG00000173588 | CEP83 | 0 | INTRON | 4.79931815 | 1.59E-06 | 0.00967513 |
| 3 | 49958507 | 49958507 | 1 | 3_49958507 | ENSG00000004534 | RBM6 | 0 | INTRON | -4.799275 | 1.59E-06 | 0.00967513 |
| 10 | 33191149 | 33191149 | 1 | 10_33191149 | ENSG00000099250 | NRP1 | 0 | INTRON | -4.7991781 | 1.59E-06 | 0.00967513 |
| 2 | 216067950 | 216067950 | 1 | 2_216067950 | ENSG00000115425 | PECR | 0 | INTRON | 4.79917383 | 1.59E-06 | 0.00967513 |
| 1 | 237219136 | 237219136 | 1 | 1_237219136 | ENSG00000198626 | RYR2 | 0 | INTRON | -4.7990238 | 1.59E-06 | 0.00967892 |
| 8 | 32067318 | 32067318 | 1 | 8_32067318 | ENSG00000253974 | NRG1-IT1 | 0 | INTRON | 4.79829142 | 1.60E-06 | 0.00971091 |
| 8 | 89412661 | 89412661 | 1 | 8_89412661 | ENSG00000248231 | KRT8P4 | 0 | EXON | 4.79808607 | 1.60E-06 | 0.00971309 |
| 15 | 59119001 | 59119001 | 1 | 15_59119001 | ENSG00000157456 | CCNB2 | 0 | INTRON | -4.7980543 | 1.60E-06 | 0.00971309 |
| 12 | 22317660 | 22317660 | 1 | 12_22317660 | ENSG00000111728 | ST8SIA1 | 0 | INTRON | -4.7979852 | 1.60E-06 | 0.00971309 |
| 13 | 52200009 | 52200009 | 1 | 13_52200009 | ENSG00000217576 | AL158066.1 | 0 | INTRON | 4.79779503 | 1.60E-06 | 0.00971309 |
| 9 | 112108349 | 112108349 | 1 | 9_112108349 | ENSG00000106868 | SUSD1 | 0 | INTRON | -4.7977164 | 1.60E-06 | 0.00971309 |
| 4 | 42910509 | 42910509 | 1 | 4_42910509 | ENSG00000215203 | GRXCR1 | 0 | INTRON | -4.7976943 | 1.61E-06 | 0.00971309 |
| 18 | 3118928 | 3118928 | 1 | 18_3118928 | ENSG00000101605 | MYOM1 | 0 | INTRON | 4.79766077 | 1.61E-06 | 0.00971309 |
| 19 | 11146681 | 11146681 | 1 | 19_11146681 | ENSG00000161888 | SPC24 | 0 | 3UTR | 4.7975884 | 1.61E-06 | 0.00971309 |
| 16 | 63132369 | 63132369 | 1 | 16_63132369 | ENSG00000261502 | AC040174.1 | 2715 | Upstream | -4.797492 | 1.61E-06 | 0.00971309 |
| 6 | 114425493 | 114425493 | 1 | 6_114425493 | ENSG00000228624 | HDAC2-AS2 | 0 | INTRON | 4.7974747 | 1.61E-06 | 0.00971309 |
| 7 | 76781342 | 76781342 | 1 | 7_76781342 | ENSG00000285666 | AC006972.1 | 37034 | Downstream | 4.79746205 | 1.61E-06 | 0.00971309 |
| 17 | 75834474 | 75834474 | 1 | 17_75834474 | ENSG00000092929 | UNC13D | 0 | EXON | 4.79722558 | 1.61E-06 | 0.00972111 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 16091227 | 16091227 | 1 | 2_16091227 | ENSG00000236989 | AC130710.1 | 0 | INTRON | -4.7970823 | 1.61E-06 | 0.00972461 |
| 2 | 102228033 | 102228033 | 1 | 2_102228033 | ENSG00000115598 | IL1RL2 | 0 | INTRON | -4.7968076 | 1.61E-06 | 0.00972998 |
| 7 | 95590005 | 95590005 | 1 | 7_95590005 | ENSG00000231170 | AC002451.1 | 0 | INTRON | -4.7967836 | 1.61E-06 | 0.00972998 |
| 16 | 55248654 | 55248654 | 1 | 16_55248654 | ENSG00000259283 | AC109462.1 | 11314 | Downstream | -4.796739 | 1.61E-06 | 0.00972998 |
| 13 | 107469933 | 107469933 | 1 | 13_107469933 | ENSG00000204442 | FAM155A | 0 | INTRON | 4.7966154 | 1.61E-06 | 0.00972998 |
| 6 | 32699722 | 32699722 | 1 | 6_32699722 | ENSG00000235040 | MTCO3P1 | 6401 | Downstream | -4.7965949 | 1.61E-06 | 0.00972998 |
| 4 | 119920469 | 119920469 | 1 | 4_119920469 | ENSG00000250183 | AC097173.1 | 17087 | Upstream | 4.79654518 | 1.61E-06 | 0.00972998 |
| 6 | 120522392 | 120522392 | 1 | 6_120522392 | ENSG00000286540 | AL096854.1 | 0 | INTRON | 4.79633881 | 1.62E-06 | 0.00973656 |
| 22 | 23812587 | 23812587 | 1 | 22_23812587 | ENSG00000099956 | SMARCB1 | 0 | INTRON | -4.7962016 | 1.62E-06 | 0.00973978 |
| 3 | 107790010 | 107790010 | 1 | 3_107790010 | ENSG00000114439 | BBX | 0 | INTRON | -4.7960968 | 1.62E-06 | 0.00974142 |
| 1 | 182915867 | 182915867 | 1 | 1_182915867 | ENSG00000157060 | SHCBP1L | 0 | INTRON | -4.7959339 | 1.62E-06 | 0.00974589 |
| 3 | 49191060 | 49191060 | 1 | 3_49191060 | ENSG00000236980 | C3orf84 | 0 | INTRON | 4.79580322 | 1.62E-06 | 0.00974786 |
| 5 | 265505 | 265505 | 1 | 5_265505 | ENSG00000286001 | AC021087.5 | 0 | INTRON | 4.79561982 | 1.62E-06 | 0.00974786 |
| 9 | 8589868 | 8589868 | 1 | 9_8589868 | ENSG00000153707 | PTPRD | 0 | INTRON | 4.79560706 | 1.62E-06 | 0.00974786 |
| 11 | 77657039 | 77657039 | 1 | 11_77657039 | ENSG00000048649 | RSF1 | 2956 | Downstream | 4.79543158 | 1.62E-06 | 0.00974786 |
| 11 | 13160438 | 13160438 | 1 | 11_13160438 | ENSG00000255018 | AC022878.1 | 8090 | Downstream | 4.79527804 | 1.62E-06 | 0.00974786 |
| 3 | 195221970 | 195221970 | 1 | 3_195221970 | ENSG00000173950 | XXYLT1 | 0 | INTRON | 4.7952163 | 1.62E-06 | 0.00974786 |
| 13 | 110078484 | 110078484 | 1 | 13_110078484 | ENSG00000275830 | AL390755.1 | 0 | INTRON | 4.79516168 | 1.63E-06 | 0.00974786 |
| 16 | 24364422 | 24364422 | 1 | 16_24364422 | ENSG00000006116 | CACNG3 | 1621 | Downstream | 4.79509151 | 1.63E-06 | 0.00974786 |
| 21 | 42850231 | 42850231 | 1 | 21_42850231 | ENSG00000160193 | WDR4 | 0 | EXON | 4.7950618 | 1.63E-06 | 0.00974786 |
| 16 | 33143113 | 33143113 | 1 | 16_33143113 | ENSG00000261536 | ABHD17AP9 | 0 | INTRON | 4.79503138 | 1.63E-06 | 0.00974786 |
| 13 | 42014247 | 42014247 | 1 | 13_42014247 | ENSG00000226093 | RPS28P8 | 10610 | Downstream | 4.79501161 | 1.63E-06 | 0.00974786 |
| 3 | 6951047 | 6951047 | 1 | 3_6951047 | ENSG00000196277 | GRM7 | 0 | INTRON | 4.79498208 | 1.63E-06 | 0.00974786 |
| 1 | 30704696 | 30704696 | 1 | 1_30704696 | ENSG00000162510 | MATN1 | 6580 | Downstream | 4.79497382 | 1.63E-06 | 0.00974786 |
| 11 | 23979460 | 23979460 | 1 | 11_23979460 | ENSG00000277803 | AC099842.1 | 85903 | Downstream | 4.79476213 | 1.63E-06 | 0.00975473 |
| 1 | 202322626 | 202322626 | 1 | 1_202322626 | ENSG00000133067 | LGR6 | 2845 | Downstream | -4.794638 | 1.63E-06 | 0.00975733 |
| 5 | 178158199 | 178158199 | 1 | 5_178158199 | ENSG00000145912 | NHP2 | 4232 | Upstream | -4.7944753 | 1.63E-06 | 0.00976182 |
| 4 | 22419391 | 22419391 | 1 | 4_22419391 | ENSG00000152990 | ADGRA3 | 0 | INTRON | -4.7943494 | 1.63E-06 | 0.00976452 |
| 7 | 111501366 | 111501366 | 1 | 7_111501366 | ENSG00000184903 | IMMP2L | 0 | INTRON | 4.79420448 | 1.63E-06 | 0.00976814 |
| 10 | 12590824 | 12590824 | 1 | 10_12590824 | ENSG00000183049 | CAMK1D | 0 | INTRON | 4.79402332 | 1.63E-06 | 0.00977354 |
| 9 | 71759762 | 71759762 | 1 | 9_71759762 | ENSG00000135048 | CEMIP2 | 0 | INTRON | 4.79390516 | 1.64E-06 | 0.00977586 |
| 7 | 104338289 | 104338289 | 1 | 7_104338289 | ENSG00000187416 | LHFPL3 | 0 | INTRON | -4.7937173 | 1.64E-06 | 0.00978159 |
| 8 | 108270077 | 108270077 | 1 | 8_108270077 | ENSG00000104408 | EIF3E | 0 | INTRON | 4.79350188 | 1.64E-06 | 0.00978867 |
| 12 | 120591696 | 120591696 | 1 | 12_120591696 | ENSG00000242137 | RPL11P5 | 2318 | Downstream | 4.7934204 | 1.64E-06 | 0.00978921 |
| 14 | 96202194 | 96202194 | 1 | 14_96202194 | ENSG00000168398 | BDKRB2 | 2484 | Upstream | -4.7931497 | 1.64E-06 | 0.009799 |
| 6 | 51402653 | 51402653 | 1 | 6_51402653 | ENSG00000232702 | AL158050.1 | 7427 | Downstream | -4.7930374 | 1.64E-06 | 0.00980105 |
| 7 | 108246120 | 108246120 | 1 | 7_108246120 | ENSG00000091129 | NRCAM | 0 | INTRON | 4.79295376 | 1.64E-06 | 0.00980138 |
| 1 | 233016982 | 233016982 | 1 | 1_233016982 | ENSG00000135749 | PCNX2 | 0 | 3UTR | -4.7928899 | 1.64E-06 | 0.00980138 |
| 17 | 52682832 | 52682832 | 1 | 17_52682832 | ENSG00000263317 | LINC01982 | 147131 | Downstream | 4.79267391 | 1.65E-06 | 0.00980851 |
| 12 | 1717428 | 1717428 | 1 | 12_1717428 | ENSG00000006831 | ADIPOR2 | 0 | INTRON | 4.7924559 | 1.65E-06 | 0.00981396 |
| 17 | 59840601 | 59840601 | 1 | 17_59840601 | ENSG00000062716 | VMP1 | 0 | 3UTR | -4.7924221 | 1.65E-06 | 0.00981396 |
| 4 | 54263875 | 54263875 | 1 | 4_54263875 | ENSG00000134853 | PDGFRA | 0 | EXON | 4.79196222 | 1.65E-06 | 0.00983167 |
| X | 96538192 | 96538192 | 1 | X_96538192 | ENSG00000229693 | AL606530.1 | 82461 | Upstream | 4.79192017 | 1.65E-06 | 0.00983167 |
| 3 | 36650036 | 36650036 | 1 | 3_36650036 | ENSG00000231382 | NBPF21P | 12579 | Upstream | -4.791624 | 1.65E-06 | 0.00984275 |
| 12 | 49810870 | 49810870 | 1 | 12_49810870 | ENSG00000167566 | NCKAP5L | 0 | INTRON | 4.79153819 | 1.66E-06 | 0.00984352 |
| 6 | 99785962 | 99785962 | 1 | 6_99785962 | ENSG00000152034 | MCHR2 | 133947 | Downstream | -4.7913872 | 1.66E-06 | 0.00984438 |
| 6 | 101946639 | 101946639 | 1 | 6_101946639 | ENSG00000164418 | GRIK2 | 0 | INTRON | -4.7913805 | 1.66E-06 | 0.00984438 |
| 17 | 11402824 | 11402824 | 1 | 17_11402824 | ENSG00000188803 | SHISA6 | 0 | INTRON | 4.79119846 | 1.66E-06 | 0.00984988 |
| 12 | 122095904 | 122095904 | 1 | 12_122095904 | ENSG00000175727 | MLXIP | 0 | INTRON | -4.7908842 | 1.66E-06 | 0.00985767 |
| 2 | 131944354 | 131944354 | 1 | 2_131944354 | ENSG00000244337 | AJ239322.2 | 13922 | Upstream | 4.79088048 | 1.66E-06 | 0.00985767 |
| 8 | 14505906 | 14505906 | 1 | 8_14505906 | ENSG00000185053 | SGCZ | 0 | INTRON | -4.7908298 | 1.66E-06 | 0.00985767 |
| 6 | 35288736 | 35288736 | 1 | 6_35288736 | ENSG00000065029 | ZNF76 | 0 | INTRON | 4.79060114 | 1.66E-06 | 0.00986386 |
| 2 | 9368427 | 9368427 | 1 | 2_9368427 | ENSG00000151693 | ASAP2 | 0 | EXON | 4.79056382 | 1.66E-06 | 0.00986386 |
| 16 | 86400490 | 86400490 | 1 | 16_86400490 | ENSG00000268473 | AC092327.1 | 34339 | Downstream | 4.79029601 | 1.67E-06 | 0.00987337 |
| 13 | 110439489 | 110439489 | 1 | 13_110439489 | ENSG00000134871 | COL4A2 | 0 | INTRON | -4.7902307 | 1.67E-06 | 0.00987337 |
| 12 | 124384526 | 124384526 | 1 | 12_124384526 | ENSG00000196498 | NCOR2 | 0 | INTRON | 4.78983016 | 1.67E-06 | 0.00988966 |
| 3 | 24804892 | 24804892 | 1 | 3_24804892 | ENSG00000237838 | AC092422.1 | 0 | INTRON | -4.789683 | 1.67E-06 | 0.00989346 |
| 16 | 80535928 | 80535928 | 1 | 16_80535928 | ENSG00000259867 | AC105411.1 | 0 | INTRON | 4.78957103 | 1.67E-06 | 0.00989403 |
| 17 | 49696633 | 49696633 | 1 | 17_49696633 | ENSG00000121073 | SLC35B1 | 4300 | Downstream | 4.78953196 | 1.67E-06 | 0.00989403 |
| 10 | 128505742 | 128505742 | 1 | 10_128505742 | ENSG00000234640 | AL390763.1 | 185528 | Upstream | 4.7893742 | 1.67E-06 | 0.00989589 |
| 15 | 50549701 | 50549701 | 1 | 15_50549701 | ENSG00000092439 | TRPM7 | 2771 | Downstream | -4.7893547 | 1.67E-06 | 0.00989589 |
| 1 | 6589646 | 6589646 | 1 | 1_6589646 | ENSG00000204859 | ZBTB48 | 366 | Downstream | 4.78923336 | 1.67E-06 | 0.00989843 |
| 4 | 143592141 | 143592141 | 1 | 4_143592141 | ENSG00000251600 | AC107223.1 | 0 | INTRON | 4.78912912 | 1.68E-06 | 0.00989898 |
| 22 | 38428045 | 38428045 | 1 | 22_38428045 | ENSG00000168135 | KCNJ4 | 0 | EXON | 4.78908282 | 1.68E-06 | 0.00989898 |
| X | 153535790 | 153535790 | 1 | X_153535790 | ENSG00000067842 | ATP2B3 | 0 | INTRON | -4.7889018 | 1.68E-06 | 0.00990447 |
| 7 | 68181360 | 68181360 | 1 | 7_68181360 | ENSG00000226829 | AC093655.1 | 0 | INTRON | -4.7887144 | 1.68E-06 | 0.00991028 |
| 18 | 61484451 | 61484451 | 1 | 18_61484451 | ENSG00000101542 | CDH20 | 0 | INTRON | -4.7884872 | 1.68E-06 | 0.00991649 |
| 1 | 231018519 | 231018519 | 1 | 1_231018519 | ENSG00000182118 | FAM89A | 438 | Downstream | 4.7884483 | 1.68E-06 | 0.00991649 |
| 5 | 27259735 | 27259735 | 1 | 5_27259735 | ENSG00000250337 | PURPL | 0 | INTRON | -4.7883799 | 1.68E-06 | 0.00991649 |
| 6 | 108070615 | 108070615 | 1 | 6_108070615 | ENSG00000081087 | OSTM1 | 0 | INTRON | 4.78813488 | 1.68E-06 | 0.00992256 |
| 13 | 43100624 | 43100624 | 1 | 13_43100624 | ENSG00000120675 | DNAJC15 | 0 | INTRON | 4.78811803 | 1.68E-06 | 0.00992256 |
| 14 | 68644151 | 68644151 | 1 | 14_68644151 | ENSG00000182185 | RAD51B | 0 | INTRON | 4.78803615 | 1.68E-06 | 0.00992317 |
| 1 | 105318739 | 105318739 | 1 | 1_105318739 | ENSG00000225036 | CDK4P1 | 115254 | Upstream | -4.7878919 | 1.69E-06 | 0.00992687 |
| 2 | 227019730 | 227019730 | 1 | 2_227019730 | ENSG00000081052 | COL4A4 | 0 | INTRON | -4.7877906 | 1.69E-06 | 0.00992844 |
| 21 | 42440900 | 42440900 | 1 | 21_42440900 | ENSG00000160185 | UBASH3A | 0 | INTRON | 4.78748574 | 1.69E-06 | 0.00993282 |
| 4 | 54682787 | 54682787 | 1 | 4_54682787 | ENSG00000157404 | KIT | 0 | INTRON | 4.78745845 | 1.69E-06 | 0.00993282 |
| 8 | 111542656 | 111542656 | 1 | 8_111542656 | ENSG00000253434 | LINC02237 | 0 | INTRON | -4.7873852 | 1.69E-06 | 0.00993282 |
| 4 | 101651694 | 101651694 | 1 | 4_101651694 | ENSG00000153064 | BANK1 | 0 | INTRON | 4.78737032 | 1.69E-06 | 0.00993282 |
| 11 | 108033230 | 108033230 | 1 | 11_108033230 | ENSG00000166266 | CUL5 | 0 | INTRON | 4.78735512 | 1.69E-06 | 0.00993282 |
| 5 | 173728562 | 173728562 | 1 | 5_173728562 | ENSG00000253686 | LINC01484 | 0 | INTRON | 4.78698913 | 1.69E-06 | 0.0099475 |
| 8 | 100617715 | 100617715 | 1 | 8_100617715 | ENSG00000174226 | SNX31 | 0 | EXON | 4.78666984 | 1.70E-06 | 0.0099599 |
| X | 136878461 | 136878461 | 1 | X_136878461 | ENSG00000147274 | RBMX | 0 | INTRON | 4.78633962 | 1.70E-06 | 0.00996941 |
| 19 | 13791602 | 13791602 | 1 | 19_13791602 | ENSG00000132003 | ZSWIM4 | 3857 | Upstream | -4.7862931 | 1.70E-06 | 0.00996941 |
| 4 | 111892702 | 111892702 | 1 | 4_111892702 | ENSG00000249815 | AC004704.1 | 0 | INTRON | 4.78619815 | 1.70E-06 | 0.00996941 |
| 4 | 114148897 | 114148897 | 1 | 4_114148897 | ENSG00000248716 | AC093815.1 | 44672 | Downstream | 4.78616184 | 1.70E-06 | 0.00996941 |
| 1 | 163440558 | 163440558 | 1 | 1_163440558 | ENSG00000225122 | AL603841.1 | 17394 | Upstream | -4.7860364 | 1.70E-06 | 0.00996941 |
| 10 | 11146859 | 11146859 | 1 | 10_11146859 | ENSG00000048740 | CELF2 | 0 | INTRON | -4.7859759 | 1.70E-06 | 0.00996941 |
| 5 | 93151939 | 93151939 | 1 | 5_93151939 | ENSG00000286509 | AC026408.1 | 60171 | Downstream | 4.78596923 | 1.70E-06 | 0.00996941 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 21 | 26081604 | 26081604 | 1 | 21_26081604 | ENSG00000142192 | APP | 0 | INTRON | 4.78592444 | 1.70E-06 | 0.00996941 |
| 2 | 126809120 | 126809120 | 1 | 2_126809120 | ENSG00000237524 | TEX51 | 89743 | Upstream | -4.7856663 | 1.70E-06 | 0.00997665 |
| 5 | 122123410 | 122123410 | 1 | 5_122123410 | ENSG00000247311 | AC010255.1 | 0 | INTRON | -4.7856405 | 1.70E-06 | 0.00997665 |
| 4 | 70107901 | 70107901 | 1 | 4_70107901 | ENSG00000234124 | CSN1S2AP | 22611 | Downstream | 4.78549289 | 1.71E-06 | 0.00998055 |
| 6 | 57590438 | 57590438 | 1 | 6_57590438 | ENSG00000146143 | PRIM2 | 0 | INTRON | -4.7852205 | 1.71E-06 | 0.00998744 |
| 13 | 65799199 | 65799199 | 1 | 13_65799199 | ENSG00000236565 | HNRNPA3P5 | 10435 | Upstream | -4.7851508 | 1.71E-06 | 0.00998744 |
| 15 | 84796030 | 84796030 | 1 | 15_84796030 | ENSG00000166716 | ZNF592 | 0 | INTRON | -4.7851472 | 1.71E-06 | 0.00998744 |
| 12 | 9755935 | 9755935 | 1 | 12_9755935 | ENSG00000110848 | CD69 | 0 | INTRON | -4.7850212 | 1.71E-06 | 0.00999028 |
| 2 | 150802458 | 150802458 | 1 | 2_150802458 | ENSG00000224048 | LINC02612 | 166640 | Downstream | -4.7846795 | 1.71E-06 | 0.01000146 |
| 18 | 22648720 | 22648720 | 1 | 18_22648720 | ENSG00000206827 | RNU6-1032P | 1032 | Downstream | 4.78465856 | 1.71E-06 | 0.01000146 |
| 7 | 156518610 | 156518610 | 1 | 7_156518610 | ENSG00000182648 | LINC01006 | 0 | INTRON | 4.78455348 | 1.71E-06 | 0.01000326 |
| 1 | 228690742 | 228690742 | 1 | 1_228690742 | ENSG00000234975 | FTH1P2 | 2916 | Downstream | 4.78402747 | 1.72E-06 | 0.01001807 |
| 1 | 174982208 | 174982208 | 1 | 1_174982208 | ENSG00000152061 | RABGAP1L | 0 | INTRON | 4.78399981 | 1.72E-06 | 0.01001807 |
| 14 | 34644275 | 34644275 | 1 | 14_34644275 | ENSG00000129515 | SNX6 | 14115 | Upstream | 4.78399129 | 1.72E-06 | 0.01001807 |
| 13 | 60276549 | 60276549 | 1 | 13_60276549 | ENSG00000238213 | TARDBPP2 | 543 | Downstream | -4.7839445 | 1.72E-06 | 0.01001807 |
| 19 | 422253 | 422253 | 1 | 19_422253 | ENSG00000129946 | SHC2 | 0 | 3UTR | -4.783912 | 1.72E-06 | 0.01001807 |
| 2 | 55377841 | 55377841 | 1 | 2_55377841 | ENSG00000115355 | CCDC88A | 0 | INTRON | -4.7837202 | 1.72E-06 | 0.01002421 |
| 16 | 9522962 | 9522962 | 1 | 16_9522962 | ENSG00000260071 | AC012178.1 | 4637 | Downstream | 4.78364312 | 1.72E-06 | 0.01002462 |
| 12 | 13640578 | 13640578 | 1 | 12_13640578 | ENSG00000273079 | GRIN2B | 0 | INTRON | -4.7835306 | 1.72E-06 | 0.0100268 |
| 5 | 89377985 | 89377985 | 1 | 5_89377985 | ENSG00000248309 | MEF2C-AS1 | 0 | INTRON | -4.783256 | 1.72E-06 | 0.01003431 |
| 19 | 13712085 | 13712085 | 1 | 19_13712085 | ENSG00000104957 | CCDC130 | 19674 | Upstream | 4.78324279 | 1.72E-06 | 0.01003431 |
| 9 | 45516854 | 45516854 | 1 | 9_45516854 | ENSG00000286916 | ABBA01045074.1 | 2271867 | Upstream | -4.7830098 | 1.73E-06 | 0.01004252 |
| 12 | 9289876 | 9289876 | 1 | 12_9289876 | ENSG00000111788 | AC009533.1 | 0 | INTRON | -4.7828647 | 1.73E-06 | 0.01004634 |
| 5 | 72861486 | 72861486 | 1 | 5_72861486 | ENSG00000083312 | TNPO1 | 0 | INTRON | -4.7827655 | 1.73E-06 | 0.01004787 |
| 5 | 160072723 | 160072723 | 1 | 5_160072723 | ENSG00000170234 | PWWP2A | 0 | INTRON | -4.7823932 | 1.73E-06 | 0.01005996 |
| 1 | 234037892 | 234037892 | 1 | 1_234037892 | ENSG00000183780 | SLC35F3 | 0 | INTRON | 4.78233705 | 1.73E-06 | 0.01005996 |
| 19 | 40378337 | 40378337 | 1 | 19_40378337 | ENSG00000105223 | PLD3 | 0 | 3UTR | 4.78231812 | 1.73E-06 | 0.01005996 |
| 2 | 1018023 | 1018023 | 1 | 2_1018023 | ENSG00000172554 | SNTG2 | 0 | INTRON | -4.7819627 | 1.74E-06 | 0.01007433 |
| 12 | 56015139 | 56015139 | 1 | 12_56015139 | ENSG00000123411 | IKZF4 | 0 | INTRON | 4.78173358 | 1.74E-06 | 0.01008238 |
| 2 | 138541576 | 138541576 | 1 | 2_138541576 | ENSG00000144228 | SPOPL | 0 | INTRON | 4.78159036 | 1.74E-06 | 0.01008613 |
| 7 | 79161366 | 79161366 | 1 | 7_79161366 | ENSG00000281120 | AC006355.2 | 0 | INTRON | -4.7812967 | 1.74E-06 | 0.01009354 |
| 3 | 16492931 | 16492931 | 1 | 3_16492931 | ENSG00000131378 | RFTN1 | 0 | INTRON | -4.7812794 | 1.74E-06 | 0.01009354 |
| 8 | 15904046 | 15904046 | 1 | 8_15904046 | ENSG00000287476 | AC018437.3 | 0 | INTRON | -4.7812303 | 1.74E-06 | 0.01009354 |
| 14 | 62252759 | 62252759 | 1 | 14_62252759 | ENSG00000270852 | AL390816.3 | 100501 | Upstream | 4.78116885 | 1.74E-06 | 0.01009354 |
| 15 | 52541283 | 52541283 | 1 | 15_52541283 | ENSG00000128989 | ARPP19 | 5761 | Downstream | 4.78108264 | 1.74E-06 | 0.01009444 |
| 15 | 69686114 | 69686114 | 1 | 15_69686114 | ENSG00000245750 | DRAIC | 0 | INTRON | 4.78093792 | 1.74E-06 | 0.01009562 |
| 8 | 117053530 | 117053530 | 1 | 8_117053530 | ENSG00000164756 | SLC30A8 | 0 | INTRON | 4.78092234 | 1.74E-06 | 0.01009562 |
| X | 71676935 | 71676935 | 1 | X_71676935 | ENSG00000283599 | BX276092.9 | 5411 | Downstream | -4.7807107 | 1.75E-06 | 0.01010046 |
| 4 | 72624072 | 72624072 | 1 | 4_72624072 | ENSG00000156140 | ADAMTS3 | 54851 | Upstream | -4.7806894 | 1.75E-06 | 0.01010046 |
| 3 | 183413567 | 183413567 | 1 | 3_183413567 | ENSG00000053524 | MCF2L2 | 0 | INTRON | 4.78061552 | 1.75E-06 | 0.01010074 |
| 14 | 58693771 | 58693771 | 1 | 14_58693771 | ENSG00000258583 | LINC01500 | 0 | INTRON | 4.78006693 | 1.75E-06 | 0.0101249 |
| 8 | 81284417 | 81284417 | 1 | 8_81284417 | ENSG00000164687 | FABP5 | 0 | INTRON | 4.77986683 | 1.75E-06 | 0.01013154 |
| 7 | 4505542 | 4505542 | 1 | 7_4505542 | ENSG00000261809 | CYP3A54P | 6416 | Downstream | -4.7796149 | 1.76E-06 | 0.01013807 |
| 16 | 33059979 | 33059979 | 1 | 16_33059979 | ENSG00000260900 | AC145350.3 | 0 | EXON | -4.779601 | 1.76E-06 | 0.01013807 |
| 17 | 43352923 | 43352923 | 1 | 17_43352923 | ENSG00000188825 | LINC00910 | 0 | INTRON | -4.7792265 | 1.76E-06 | 0.01015352 |
| 14 | 61451755 | 61451755 | 1 | 14_61451755 | ENSG00000027075 | PRKCH | 0 | INTRON | -4.7790957 | 1.76E-06 | 0.01015403 |
| 7 | 341217 | 341217 | 1 | 7_341217 | ENSG00000287342 | AC188616.1 | 8045 | Upstream | 4.77908012 | 1.76E-06 | 0.01015403 |
| 5 | 63878047 | 63878047 | 1 | 5_63878047 | ENSG00000248285 | AC122707.1 | 79845 | Downstream | 4.77882442 | 1.76E-06 | 0.01016106 |
| 11 | 4822778 | 4822778 | 1 | 11_4822778 | ENSG00000167346 | MMP26 | 0 | INTRON | -4.7788047 | 1.76E-06 | 0.01016106 |
| 22 | 20708273 | 20708273 | 1 | 22_20708273 | ENSG00000241973 | PI4KA | 0 | INTRON | 4.77856336 | 1.77E-06 | 0.01016625 |
| 20 | 56650781 | 56650781 | 1 | 20_56650781 | ENSG00000087510 | TFAP2C | 11498 | Downstream | 4.77843263 | 1.77E-06 | 0.01016625 |
| 13 | 19506394 | 19506394 | 1 | 13_19506394 | ENSG00000132958 | TPTE2 | 0 | INTRON | 4.77837748 | 1.77E-06 | 0.01016625 |
| 13 | 44636021 | 44636021 | 1 | 13_44636021 | ENSG00000237585 | LINC00407 | 15790 | Upstream | 4.77835709 | 1.77E-06 | 0.01016625 |
| 15 | 65992068 | 65992068 | 1 | 15_65992068 | ENSG00000157890 | MEGF11 | 0 | INTRON | 4.77834126 | 1.77E-06 | 0.01016625 |
| 11 | 65660993 | 65660993 | 1 | 11_65660993 | ENSG00000173039 | RELA | 0 | INTRON | -4.7782938 | 1.77E-06 | 0.01016625 |
| 4 | 138093572 | 138093572 | 1 | 4_138093572 | ENSG00000248307 | LINC00616 | 0 | INTRON | 4.77792644 | 1.77E-06 | 0.01018139 |
| 6 | 111501355 | 111501355 | 1 | 6_111501355 | ENSG00000231889 | TRAF3IP2-AS1 | 0 | INTRON | -4.7777501 | 1.77E-06 | 0.01018662 |
| 7 | 2806686 | 2806686 | 1 | 7_2806686 | ENSG00000146535 | GNA12 | 0 | INTRON | -4.7776875 | 1.77E-06 | 0.01018662 |
| 2 | 150114049 | 150114049 | 1 | 2_150114049 | ENSG00000286081 | AC016682.1 | 36583 | Downstream | 4.77755025 | 1.77E-06 | 0.01019013 |
| 15 | 48596501 | 48596501 | 1 | 15_48596501 | ENSG00000166147 | FBN1 | 0 | INTRON | -4.7773589 | 1.78E-06 | 0.01019638 |
| 17 | 63184001 | 63184001 | 1 | 17_63184001 | ENSG00000170921 | TANC2 | 0 | INTRON | 4.77707587 | 1.78E-06 | 0.01020449 |
| 22 | 20803563 | 20803563 | 1 | 22_20803563 | ENSG00000241973 | PI4KA | 0 | INTRON | 4.77706345 | 1.78E-06 | 0.01020449 |
| 8 | 144283054 | 144283054 | 1 | 8_144283054 | ENSG00000261236 | BOP1 | 0 | INTRON | -4.7769952 | 1.78E-06 | 0.01020451 |
| 17 | 70024081 | 70024081 | 1 | 17_70024081 | ENSG00000230258 | AC005208.1 | 0 | INTRON | 4.77686418 | 1.78E-06 | 0.01020772 |
| 1 | 96693930 | 96693930 | 1 | 1_96693930 | ENSG00000223229 | RN7SKP270 | 1925 | Downstream | 4.77658304 | 1.78E-06 | 0.01021855 |
| 19 | 46111653 | 46111653 | 1 | 19_46111653 | ENSG00000268053 | AC007785.2 | 0 | EXON | 4.77634231 | 1.79E-06 | 0.01022734 |
| 14 | 39775642 | 39775642 | 1 | 14_39775642 | ENSG00000258526 | AL049828.1 | 0 | INTRON | -4.7759759 | 1.79E-06 | 0.01023862 |
| X | 54285446 | 54285446 | 1 | X_54285446 | ENSG00000196632 | WNK3 | 0 | INTRON | -4.775763 | 1.79E-06 | 0.01023862 |
| 11 | 40851864 | 40851864 | 1 | 11_40851864 | ENSG00000148948 | LRRC4C | 0 | INTRON | -4.7757422 | 1.79E-06 | 0.01023862 |
| 7 | 17676359 | 17676359 | 1 | 7_17676359 | ENSG00000228675 | AC006482.1 | 3189 | Upstream | 4.77570105 | 1.79E-06 | 0.01023862 |
| 11 | 128872094 | 128872094 | 1 | 11_128872094 | ENSG00000151704 | KCNJ1 | 4721 | Upstream | 4.77565256 | 1.79E-06 | 0.01023862 |
| 3 | 93852567 | 93852567 | 1 | 3_93852567 | ENSG00000251727 | RNU6-488P | 8705 | Downstream | 4.77565123 | 1.79E-06 | 0.01023862 |
| 4 | 7075186 | 7075186 | 1 | 4_7075186 | ENSG00000109519 | GRPEL1 | 7122 | Upstream | 4.77564682 | 1.79E-06 | 0.01023862 |
| 2 | 13726051 | 13726051 | 1 | 2_13726051 | ENSG00000227718 | AC016730.1 | 0 | INTRON | -4.7755691 | 1.79E-06 | 0.01023901 |
| 9 | 18571564 | 18571564 | 1 | 9_18571564 | ENSG00000178031 | ADAMTSL1 | 0 | INTRON | 4.77550399 | 1.79E-06 | 0.01023901 |
| 6 | 151076774 | 151076774 | 1 | 6_151076774 | ENSG00000120254 | MTHFD1L | 0 | INTRON | -4.7753115 | 1.79E-06 | 0.01023932 |
| 12 | 100092255 | 100092255 | 1 | 12_100092255 | ENSG00000111647 | UHRF1BP1L | 0 | INTRON | 4.77531018 | 1.79E-06 | 0.01023932 |
| 19 | 4689336 | 4689336 | 1 | 19_4689336 | ENSG00000142002 | DPP9 | 0 | INTRON | 4.77529543 | 1.79E-06 | 0.01023932 |
| 11 | 50441031 | 50441031 | 1 | 11_50441031 | ENSG00000214883 | AC024405.1 | 18715 | Downstream | 4.77464408 | 1.80E-06 | 0.01026907 |
| 3 | 194716370 | 194716370 | 1 | 3_194716370 | ENSG00000233987 | AC106706.1 | 0 | INTRON | 4.77445515 | 1.80E-06 | 0.01027442 |
| 5 | 23927906 | 23927906 | 1 | 5_23927906 | ENSG00000248874 | C5orf17 | 23441 | Upstream | 4.77440424 | 1.80E-06 | 0.01027442 |
| 1 | 101171861 | 101171861 | 1 | 1_101171861 | ENSG00000271578 | AC119501.1 | 18658 | Upstream | -4.7738966 | 1.81E-06 | 0.01029692 |
| 11 | 130771873 | 130771873 | 1 | 11_130771873 | ENSG00000288013 | AP003486.2 | 0 | EXON | 4.77377229 | 1.81E-06 | 0.01029838 |
| 17 | 36549241 | 36549241 | 1 | 17_36549241 | ENSG00000278311 | GGNBP2 | 0 | INTRON | -4.7737334 | 1.81E-06 | 0.01029838 |
| 3 | 48593273 | 48593273 | 1 | 3_48593273 | ENSG00000114270 | COL7A1 | 0 | INTRON | -4.7735878 | 1.81E-06 | 0.01029895 |
| 19 | 54155813 | 54155813 | 1 | 19_54155813 | ENSG00000105617 | LENG1 | 0 | EXON | 4.77358758 | 1.81E-06 | 0.01029895 |
| 3 | 130165226 | 130165226 | 1 | 3_130165226 | ENSG00000249846 | LINC02021 | 0 | INTRON | -4.7732689 | 1.81E-06 | 0.01031181 |
| 17 | 3207014 | 3207014 | 1 | 17_3207014 | ENSG00000172146 | OR1A1 | 524 | Upstream | 4.77289703 | 1.82E-06 | 0.01032415 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 90630186 | 90630186 | 1 | 5_90630186 | ENSG00000164199 | ADGRV1 | 0 | EXON | 4.77287498 | 1.82E-06 | 0.01032415 |
| X | 104016872 | 104016872 | 1 | X_104016872 | ENSG00000123569 | H2BFWT | 3185 | Upstream | -4.7728264 | 1.82E-06 | 0.01032415 |
| 12 | 105454237 | 105454237 | 1 | 12_105454237 | ENSG00000235162 | C12orf75 | 58140 | Downstream | -4.772606 | 1.82E-06 | 0.01032904 |
| 9 | 22238822 | 22238822 | 1 | 9_22238822 | ENSG00000236921 | AL157937.1 | 24150 | Upstream | 4.77259656 | 1.82E-06 | 0.01032904 |
| 7 | 156881623 | 156881623 | 1 | 7_156881623 | ENSG00000105983 | LMBR1 | 0 | INTRON | 4.7724501 | 1.82E-06 | 0.01033237 |
| 10 | 131076196 | 131076196 | 1 | 10_131076196 | ENSG00000176769 | TCERG1L | 16194 | Downstream | 4.7723961 | 1.82E-06 | 0.01033237 |
| 1 | 10136791 | 10136791 | 1 | 1_10136791 | ENSG00000130939 | UBE4B | 0 | INTRON | 4.77232419 | 1.82E-06 | 0.01033237 |
| 1 | 9734467 | 9734467 | 1 | 1_9734467 | ENSG00000171603 | CLSTN1 | 0 | INTRON | 4.77220555 | 1.82E-06 | 0.01033237 |
| 7 | 74731840 | 74731840 | 1 | 7_74731840 | ENSG00000263001 | GTF2I | 0 | INTRON | -4.7721594 | 1.82E-06 | 0.01033237 |
| 16 | 87851360 | 87851360 | 1 | 16_87851360 | ENSG00000103257 | SLC7A5 | 0 | INTRON | 4.77208261 | 1.82E-06 | 0.01033237 |
| 13 | 104442053 | 104442053 | 1 | 13_104442053 | ENSG00000287734 | AL136524.1 | 307796 | Downstream | -4.7720109 | 1.82E-06 | 0.01033237 |
| 3 | 66380334 | 66380334 | 1 | 3_66380334 | ENSG00000144741 | SLC25A26 | 0 | 3UTR | -4.7719947 | 1.82E-06 | 0.01033237 |
| 3 | 183800123 | 183800123 | 1 | 3_183800123 | ENSG00000163872 | YEATS2 | 0 | INTRON | -4.7718752 | 1.83E-06 | 0.01033507 |
| X | 154468503 | 154468503 | 1 | X_154468503 | ENSG00000130827 | PLXNA3 | 0 | EXON | -4.771729 | 1.83E-06 | 0.01033856 |
| 17 | 58979913 | 58979913 | 1 | 17_58979913 | ENSG00000175175 | PPM1E | 0 | INTRON | -4.771663 | 1.83E-06 | 0.01033856 |
| 11 | 113961296 | 113961296 | 1 | 11_113961296 | ENSG00000149305 | HTR3B | 12218 | Downstream | 4.77160618 | 1.83E-06 | 0.01033856 |
| 2 | 232724455 | 232724455 | 1 | 2_232724455 | ENSG00000204120 | GIGYF2 | 0 | INTRON | -4.7713942 | 1.83E-06 | 0.01034199 |
| 2 | 74686350 | 74686350 | 1 | 2_74686350 | ENSG00000135622 | SEMA4F | 2497 | Downstream | 4.77136 | 1.83E-06 | 0.01034199 |
| 11 | 12195189 | 12195189 | 1 | 11_12195189 | ENSG00000133816 | MICAL2 | 0 | INTRON | 4.77133864 | 1.83E-06 | 0.01034199 |
| 16 | 7325742 | 7325742 | 1 | 16_7325742 | ENSG00000078328 | RBFOX1 | 0 | INTRON | -4.7712207 | 1.83E-06 | 0.01034461 |
| 17 | 43827506 | 43827506 | 1 | 17_43827506 | ENSG00000161647 | MPP3 | 0 | INTRON | 4.77114793 | 1.83E-06 | 0.01034492 |
| 2 | 29588961 | 29588961 | 1 | 2_29588961 | ENSG00000171094 | ALK | 0 | INTRON | -4.7709809 | 1.83E-06 | 0.01035007 |
| 5 | 51478406 | 51478406 | 1 | 5_51478406 | ENSG00000288035 | AC022433.1 | 0 | INTRON | -4.7706941 | 1.84E-06 | 0.01036089 |
| 2 | 201284431 | 201284431 | 1 | 2_201284431 | ENSG00000064012 | CASP8 | 0 | INTRON | -4.7706368 | 1.84E-06 | 0.01036089 |
| 16 | 88755569 | 88755569 | 1 | 16_88755569 | ENSG00000103335 | PIEZO1 | 0 | INTRON | 4.77056072 | 1.84E-06 | 0.01036137 |
| 15 | 91904069 | 91904069 | 1 | 15_91904069 | ENSG00000176463 | SLCO3A1 | 0 | INTRON | 4.77046629 | 1.84E-06 | 0.01036279 |
| 3 | 35478901 | 35478901 | 1 | 3_35478901 | ENSG00000172995 | ARPP21 | 160043 | Upstream | -4.7703087 | 1.84E-06 | 0.01036726 |
| 2 | 62692021 | 62692021 | 1 | 2_62692021 | ENSG00000115504 | EHBP1 | 0 | INTRON | 4.77019744 | 1.84E-06 | 0.01036726 |
| 10 | 132122316 | 132122316 | 1 | 10_132122316 | ENSG00000188385 | JAKMIP3 | 0 | INTRON | 4.77010937 | 1.84E-06 | 0.01036726 |
| 8 | 143384437 | 143384437 | 1 | 8_143384437 | ENSG00000158106 | RHPN1 | 216 | Downstream | 4.77006506 | 1.84E-06 | 0.01036726 |
| 5 | 15965678 | 15965678 | 1 | 5_15965678 | ENSG00000183580 | FBXL7 | 25883 | Downstream | 4.77004595 | 1.84E-06 | 0.01036726 |
| 6 | 60832797 | 60832797 | 1 | 6_60832797 | ENSG00000287598 | AL512427.2 | 0 | INTRON | 4.76992931 | 1.84E-06 | 0.01036984 |
| 21 | 23665600 | 23665600 | 1 | 21_23665600 | ENSG00000288094 | AP000961.1 | 38659 | Upstream | -4.7696931 | 1.85E-06 | 0.01037857 |
| 20 | 494119 | 494119 | 1 | 20_494119 | ENSG00000101266 | CSNK2A1 | 0 | INTRON | 4.76945498 | 1.85E-06 | 0.01038741 |
| 8 | 143864334 | 143864334 | 1 | 8_143864334 | ENSG00000261150 | EPPK1 | 0 | EXON | -4.7693315 | 1.85E-06 | 0.01039035 |
| 2 | 149767820 | 149767820 | 1 | 2_149767820 | ENSG00000162947 | LINC01931 | 0 | EXON | 4.76905549 | 1.85E-06 | 0.01040116 |
| 1 | 194032219 | 194032219 | 1 | 1_194032219 | ENSG00000227240 | AL136456.1 | 0 | INTRON | 4.76889114 | 1.85E-06 | 0.01040621 |
| 1 | 205684275 | 205684275 | 1 | 1_205684275 | ENSG00000275213 | Metazoa_SRP | 0 | EXON | -4.7687976 | 1.85E-06 | 0.0104076 |
| 2 | 41301236 | 41301236 | 1 | 2_41301236 | ENSG00000237442 | HNRNPA1P57 | 143681 | Downstream | -4.7686298 | 1.85E-06 | 0.01040945 |
| 3 | 158771077 | 158771077 | 1 | 3_158771077 | ENSG00000240207 | AC080013.1 | 0 | EXON | -4.7685779 | 1.86E-06 | 0.01040945 |
| 12 | 9340189 | 9340189 | 1 | 12_9340189 | ENSG00000286911 | AC009533.3 | 6838 | Upstream | -4.7685625 | 1.86E-06 | 0.01040945 |
| 22 | 47597045 | 47597045 | 1 | 22_47597045 | ENSG00000205634 | LINC00898 | 15185 | Downstream | 4.76845415 | 1.86E-06 | 0.01041162 |
| 3 | 100540780 | 100540780 | 1 | 3_100540780 | ENSG00000181458 | TMEM45A | 0 | INTRON | 4.76806054 | 1.86E-06 | 0.01042854 |
| 8 | 105138248 | 105138248 | 1 | 8_105138248 | ENSG00000169946 | ZFPM2 | 0 | INTRON | -4.7678936 | 1.86E-06 | 0.01043374 |
| 4 | 8839066 | 8839066 | 1 | 4_8839066 | ENSG00000215612 | HMX1 | 7009 | Downstream | 4.76772615 | 1.86E-06 | 0.01043898 |
| X | 2747815 | 2747815 | 1 | X_2747815 | ENSG00000124343 | XG | 4232 | Upstream | -4.7672077 | 1.87E-06 | 0.01046242 |
| 3 | 137725997 | 137725997 | 1 | 3_137725997 | ENSG00000242070 | NPM1P17 | 1454 | Downstream | -4.7670918 | 1.87E-06 | 0.01046458 |
| 15 | 25473937 | 25473937 | 1 | 15_25473937 | ENSG00000235731 | LINC02250 | 0 | EXON | 4.7670279 | 1.87E-06 | 0.01046458 |
| 2 | 85610994 | 85610994 | 1 | 2_85610994 | ENSG00000168887 | C2orf68 | 0 | 3UTR | -4.7669279 | 1.87E-06 | 0.01046458 |
| 13 | 72552996 | 72552996 | 1 | 13_72552996 | ENSG00000278113 | AL356754.2 | 14216 | Upstream | -4.7669009 | 1.87E-06 | 0.01046458 |
| 5 | 101774456 | 101774456 | 1 | 5_101774456 | ENSG00000251261 | OR7H2P | 42018 | Downstream | 4.76633297 | 1.88E-06 | 0.01049066 |
| 2 | 33586778 | 33586778 | 1 | 2_33586778 | ENSG00000119812 | FAM98A | 0 | EXON | -4.7659737 | 1.88E-06 | 0.01050591 |
| 22 | 45097927 | 45097927 | 1 | 22_45097927 | ENSG00000226328 | NUP50-DT | 35092 | Downstream | -4.7657258 | 1.88E-06 | 0.01051539 |
| 6 | 128637075 | 128637075 | 1 | 6_128637075 | ENSG00000220110 | AL080315.1 | 2112 | Downstream | 4.76554375 | 1.88E-06 | 0.01052143 |
| 6 | 103695375 | 103695375 | 1 | 6_103695375 | ENSG00000202283 | AL591387.1 | 112107 | Downstream | 4.76530745 | 1.89E-06 | 0.01052714 |
| 12 | 12494997 | 12494997 | 1 | 12_12494997 | ENSG00000111266 | DUSP16 | 0 | INTRON | 4.76530214 | 1.89E-06 | 0.01052714 |
| 11 | 73894696 | 73894696 | 1 | 11_73894696 | ENSG00000175575 | PAAF1 | 0 | INTRON | 4.76507452 | 1.89E-06 | 0.01053557 |
| 19 | 10203031 | 10203031 | 1 | 19_10203031 | ENSG00000130816 | DNMT1 | 0 | INTRON | -4.7644336 | 1.89E-06 | 0.01056026 |
| 2 | 205948142 | 205948142 | 1 | 2_205948142 | ENSG00000213739 | PPIAP68 | 948 | Upstream | -4.764256 | 1.90E-06 | 0.01056026 |
| 2 | 80665894 | 80665894 | 1 | 2_80665894 | ENSG00000066032 | CTNNA2 | 17033 | Downstream | -4.7641763 | 1.90E-06 | 0.01056026 |
| 2 | 14301832 | 14301832 | 1 | 2_14301832 | ENSG00000230448 | LINC00276 | 0 | INTRON | -4.7640601 | 1.90E-06 | 0.01056026 |
| 12 | 4775819 | 4775819 | 1 | 12_4775819 | ENSG00000130035 | GALNT8 | 0 | INTRON | 4.76405917 | 1.90E-06 | 0.01056026 |
| 9 | 7940007 | 7940007 | 1 | 9_7940007 | ENSG00000231902 | AL135923.2 | 0 | INTRON | -4.7640243 | 1.90E-06 | 0.01056026 |
| 6 | 80485235 | 80485235 | 1 | 6_80485235 | ENSG00000181705 | AL596028.1 | 13960 | Downstream | 4.76400727 | 1.90E-06 | 0.01056026 |
| 12 | 10335799 | 10335799 | 1 | 12_10335799 | ENSG00000256288 | LINC02617 | 0 | INTRON | 4.76396156 | 1.90E-06 | 0.01056026 |
| X | 129439076 | 129439076 | 1 | X_129439076 | ENSG00000201518 | RNA5SP513 | 2429 | Upstream | 4.76394881 | 1.90E-06 | 0.01056026 |
| 2 | 8401645 | 8401645 | 1 | 2_8401645 | ENSG00000236790 | LINC00299 | 0 | INTRON | 4.76383543 | 1.90E-06 | 0.01056026 |
| 6 | 168720895 | 168720895 | 1 | 6_168720895 | ENSG00000235815 | AL136099.1 | 0 | INTRON | -4.7638237 | 1.90E-06 | 0.01056026 |
| 21 | 34697979 | 34697979 | 1 | 21_34697979 | ENSG00000159212 | CLIC6 | 0 | INTRON | 4.76381039 | 1.90E-06 | 0.01056026 |
| 5 | 138710539 | 138710539 | 1 | 5_138710539 | ENSG00000044115 | CTNNA1 | 0 | INTRON | -4.763665 | 1.90E-06 | 0.01056443 |
| 21 | 33202156 | 33202156 | 1 | 21_33202156 | ENSG00000249624 | AP000295.1 | 27744 | Upstream | -4.7635396 | 1.90E-06 | 0.01056754 |
| 2 | 79900044 | 79900044 | 1 | 2_79900044 | ENSG00000066032 | CTNNA2 | 0 | INTRON | -4.7633058 | 1.90E-06 | 0.01057635 |
| 13 | 42559853 | 42559853 | 1 | 13_42559853 | ENSG00000120659 | TNFSF11 | 2882 | Upstream | 4.76308164 | 1.91E-06 | 0.01058313 |
| 10 | 79087921 | 79087921 | 1 | 10_79087921 | ENSG00000108175 | ZMIZ1 | 0 | INTRON | -4.763045 | 1.91E-06 | 0.01058313 |
| 4 | 40267193 | 40267193 | 1 | 4_40267193 | ENSG00000250338 | AC095057.2 | 736 | Downstream | -4.762729 | 1.91E-06 | 0.01059626 |
| 9 | 125305531 | 125305531 | 1 | 9_125305531 | ENSG00000165219 | GAPVD1 | 0 | INTRON | -4.7626039 | 1.91E-06 | 0.01059776 |
| 3 | 149050308 | 149050308 | 1 | 3_149050308 | ENSG00000071794 | HLTF | 0 | EXON | 4.76256902 | 1.91E-06 | 0.01059776 |
| 17 | 57171455 | 57171455 | 1 | 17_57171455 | ENSG00000285785 | AC003950.1 | 24625 | Downstream | 4.76245323 | 1.91E-06 | 0.01059932 |
| 17 | 81181378 | 81181378 | 1 | 17_81181378 | ENSG00000225180 | PVALEF | 0 | EXON | 4.76240784 | 1.91E-06 | 0.01059932 |
| 2 | 135611498 | 135611498 | 1 | 2_135611498 | ENSG00000048991 | R3HDM1 | 0 | INTRON | -4.7622853 | 1.91E-06 | 0.01060231 |
| 11 | 93679005 | 93679005 | 1 | 11_93679005 | ENSG00000166004 | CEP295 | 0 | INTRON | 4.76219081 | 1.92E-06 | 0.01060382 |
| 19 | 48659443 | 48659443 | 1 | 19_48659443 | ENSG00000232871 | SEC1P | 0 | INTRON | -4.7618448 | 1.92E-06 | 0.01061857 |
| 5 | 176285974 | 176285974 | 1 | 5_176285974 | ENSG00000170085 | SIMC1 | 0 | INTRON | 4.76168076 | 1.92E-06 | 0.01062061 |
| 6 | 18109648 | 18109648 | 1 | 6_18109648 | ENSG00000187566 | NHLRC1 | 10791 | Downstream | -4.7616748 | 1.92E-06 | 0.01062061 |
| 4 | 105659433 | 105659433 | 1 | 4_105659433 | ENSG00000236699 | ARHGEF38 | 0 | INTRON | -4.7615328 | 1.92E-06 | 0.01062206 |
| 7 | 91555288 | 91555288 | 1 | 7_91555288 | ENSG00000235450 | AC079760.1 | 0 | INTRON | -4.7615162 | 1.92E-06 | 0.01062206 |
| 11 | 64909046 | 64909046 | 1 | 11_64909046 | ENSG00000110046 | ATG2A | 0 | EXON | 4.76131527 | 1.92E-06 | 0.01062883 |
| 12 | 115065881 | 115065881 | 1 | 12_115065881 | ENSG00000257958 | AC008125.1 | 11443 | Upstream | -4.7612564 | 1.92E-06 | 0.01062883 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 19081542 | 19081542 | 1 | 9_19081542 | ENSG00000147874 | HAUS6 | 0 | INTRON | -4.7610518 | 1.93E-06 | 0.0106339 |
| X | 6486874 | 6486874 | 1 | X_6486874 | ENSG00000169059 | VCX3A | 46743 | Downstream | 4.7610292 | 1.93E-06 | 0.0106339 |
| 9 | 14674887 | 14674887 | 1 | 9_14674887 | ENSG00000175893 | ZDHHC21 | 0 | INTRON | 4.76093971 | 1.93E-06 | 0.01063414 |
| 5 | 31788436 | 31788436 | 1 | 5_31788436 | ENSG00000133401 | PDZD2 | 0 | INTRON | 4.7608816 | 1.93E-06 | 0.01063414 |
| 16 | 78881822 | 78881822 | 1 | 16_78881822 | ENSG00000186153 | WWOX | 0 | INTRON | -4.7608283 | 1.93E-06 | 0.01063414 |
| 2 | 229440038 | 229440038 | 1 | 2_229440038 | ENSG00000187957 | DNER | 0 | INTRON | 4.76062821 | 1.93E-06 | 0.01064116 |
| 10 | 74985453 | 74985453 | 1 | 10_74985453 | ENSG00000156650 | KAT6B | 0 | EXON | -4.7605285 | 1.93E-06 | 0.01064116 |
| 1 | 197345601 | 197345601 | 1 | 1_197345601 | ENSG00000134376 | CRB1 | 0 | INTRON | -4.7603678 | 1.93E-06 | 0.01064116 |
| 6 | 134872940 | 134872940 | 1 | 6_134872940 | ENSG00000213117 | AL021939.1 | 24933 | Upstream | -4.7603665 | 1.93E-06 | 0.01064116 |
| 1 | 98802027 | 98802027 | 1 | 1_98802027 | ENSG00000162627 | SNX7 | 41527 | Downstream | -4.7603568 | 1.93E-06 | 0.01064116 |
| 1 | 4378381 | 4378381 | 1 | 1_4378381 | ENSG00000235054 | LINC01777 | 33645 | Upstream | 4.76030309 | 1.93E-06 | 0.01064116 |
| 1 | 173963210 | 173963210 | 1 | 1_173963210 | ENSG00000135870 | RC3H1 | 0 | INTRON | 4.75999557 | 1.94E-06 | 0.01065059 |
| 9 | 134292679 | 134292679 | 1 | 9_134292679 | ENSG00000223729 | LINC02247 | 1251 | Downstream | 4.75996184 | 1.94E-06 | 0.01065059 |
| 12 | 57839702 | 57839702 | 1 | 12_57839702 | ENSG00000175215 | CTDSP2 | 0 | INTRON | 4.75980067 | 1.94E-06 | 0.01065059 |
| 16 | 57322126 | 57322126 | 1 | 16_57322126 | ENSG00000260965 | RPL23AP91 | 9 | Downstream | -4.7597896 | 1.94E-06 | 0.01065059 |
| 4 | 181995214 | 181995214 | 1 | 4_181995214 | ENSG00000177822 | TENM3-AS1 | 0 | INTRON | -4.7597465 | 1.94E-06 | 0.01065059 |
| 4 | 25111127 | 25111127 | 1 | 4_25111127 | ENSG00000109618 | SEPSECS | 8886 | Downstream | -4.7597247 | 1.94E-06 | 0.01065059 |
| 9 | 14964220 | 14964220 | 1 | 9_14964220 | ENSG00000232000 | CLCN3P1 | 0 | INTRON | -4.7596137 | 1.94E-06 | 0.01065059 |
| 7 | 151860034 | 151860034 | 1 | 7_151860034 | ENSG00000106617 | PRKAG2 | 0 | INTRON | 4.75955865 | 1.94E-06 | 0.01065059 |
| 10 | 76078230 | 76078230 | 1 | 10_76078230 | ENSG00000148655 | LRMDA | 0 | INTRON | 4.75953746 | 1.94E-06 | 0.01065059 |
| 7 | 76253728 | 76253728 | 1 | 7_76253728 | ENSG00000177679 | SRRM3 | 0 | INTRON | 4.75934399 | 1.94E-06 | 0.01065677 |
| 17 | 10174608 | 10174608 | 1 | 17_10174608 | ENSG00000007237 | GAS7 | 0 | INTRON | 4.75927882 | 1.94E-06 | 0.01065677 |
| 2 | 192530581 | 192530581 | 1 | 2_192530581 | ENSG00000229395 | AC062039.1 | 99337 | Upstream | -4.759217 | 1.94E-06 | 0.01065677 |
| 22 | 49506924 | 49506924 | 1 | 22_49506924 | ENSG00000188511 | C22orf34 | 0 | INTRON | -4.7591602 | 1.94E-06 | 0.01065677 |
| 4 | 98980734 | 98980734 | 1 | 4_98980734 | ENSG00000263923 | AC019131.1 | 0 | INTRON | 4.75904125 | 1.95E-06 | 0.01065961 |
| 3 | 175002275 | 175002275 | 1 | 3_175002275 | ENSG00000177694 | NAALADL2 | 0 | INTRON | 4.75878386 | 1.95E-06 | 0.01066978 |
| 11 | 97756179 | 97756179 | 1 | 11_97756179 | ENSG00000199315 | RNA5SP347 | 98597 | Downstream | -4.7586709 | 1.95E-06 | 0.01067231 |
| 19 | 5628381 | 5628381 | 1 | 19_5628381 | ENSG00000160633 | SAFB | 0 | INTRON | 4.75860033 | 1.95E-06 | 0.01067261 |
| 1 | 27471140 | 27471140 | 1 | 1_27471140 | ENSG00000158195 | WASF2 | 0 | INTRON | 4.75842641 | 1.95E-06 | 0.01067837 |
| 2 | 147186968 | 147186968 | 1 | 2_147186968 | ENSG00000287847 | AC018678.1 | 34921 | Downstream | 4.75829264 | 1.95E-06 | 0.01068201 |
| 10 | 130649291 | 130649291 | 1 | 10_130649291 | ENSG00000285529 | AC016816.1 | 111885 | Downstream | 4.75807428 | 1.95E-06 | 0.01069013 |
| 15 | 58312729 | 58312729 | 1 | 15_58312729 | ENSG00000128918 | ALDH1A2 | 0 | INTRON | -4.7579737 | 1.96E-06 | 0.01069203 |
| 8 | 73560270 | 73560270 | 1 | 8_73560270 | ENSG00000040341 | STAU2 | 0 | INTRON | -4.7576862 | 1.96E-06 | 0.01069969 |
| 5 | 96048460 | 96048460 | 1 | 5_96048460 | ENSG00000251314 | AC104123.1 | 0 | INTRON | 4.75758983 | 1.96E-06 | 0.01069969 |
| 2 | 222579037 | 222579037 | 1 | 2_222579037 | ENSG00000116120 | FARSB | 0 | INTRON | 4.75739949 | 1.96E-06 | 0.01069969 |
| 15 | 82008569 | 82008569 | 1 | 15_82008569 | ENSG00000259692 | AC104041.1 | 0 | INTRON | -4.7573857 | 1.96E-06 | 0.01069969 |
| 1 | 184453471 | 184453471 | 1 | 1_184453471 | ENSG00000116667 | C1orf21 | 0 | INTRON | -4.7573849 | 1.96E-06 | 0.01069969 |
| 20 | 60323374 | 60323374 | 1 | 20_60323374 | ENSG00000228340 | MIR646HG | 0 | EXON | 4.75736891 | 1.96E-06 | 0.01069969 |
| 12 | 113941293 | 113941293 | 1 | 12_113941293 | ENSG00000122965 | RBM19 | 0 | INTRON | -4.7573183 | 1.96E-06 | 0.01069969 |
| 10 | 60191733 | 60191733 | 1 | 10_60191733 | ENSG00000151150 | ANK3 | 0 | INTRON | 4.75731063 | 1.96E-06 | 0.01069969 |
| 11 | 32453592 | 32453592 | 1 | 11_32453592 | ENSG00000183242 | WT1-AS | 0 | EXON | 4.75711712 | 1.96E-06 | 0.01070492 |
| 10 | 110054643 | 110054643 | 1 | 10_110054643 | ENSG00000148700 | ADD3 | 0 | INTRON | -4.7570825 | 1.96E-06 | 0.01070492 |
| 22 | 27473639 | 27473639 | 1 | 22_27473639 | ENSG00000227880 | AL050402.1 | 13579 | Upstream | 4.75686655 | 1.97E-06 | 0.01071294 |
| 2 | 67583523 | 67583523 | 1 | 2_67583523 | ENSG00000224173 | LINC02831 | 0 | INTRON | 4.75623929 | 1.97E-06 | 0.01074086 |
| 2 | 230157105 | 230157105 | 1 | 2_230157105 | ENSG00000225963 | AC009950.1 | 0 | INTRON | 4.75621152 | 1.97E-06 | 0.01074086 |
| 5 | 179609496 | 179609496 | 1 | 5_179609496 | ENSG00000176783 | RUFY1 | 0 | EXON | 4.75607903 | 1.97E-06 | 0.01074216 |
| 3 | 166306854 | 166306854 | 1 | 3_166306854 | ENSG00000244429 | AC104629.1 | 12501 | Downstream | -4.7560578 | 1.97E-06 | 0.01074216 |
| 8 | 82212732 | 82212732 | 1 | 8_82212732 | ENSG00000254394 | AC060765.2 | 0 | INTRON | -4.7559512 | 1.98E-06 | 0.0107444 |
| 22 | 43062218 | 43062218 | 1 | 22_43062218 | ENSG00000100271 | TTLL1 | 0 | INTRON | 4.75582689 | 1.98E-06 | 0.01074758 |
| 11 | 116555170 | 116555170 | 1 | 11_116555170 | ENSG00000236437 | LINC02151 | 54540 | Upstream | 4.75572645 | 1.98E-06 | 0.01074949 |
| 9 | 85501747 | 85501747 | 1 | 9_85501747 | ENSG00000227412 | STK33P1 | 7653 | Downstream | -4.7555894 | 1.98E-06 | 0.01075335 |
| 17 | 3483845 | 3483845 | 1 | 17_3483845 | ENSG00000141255 | SPATA22 | 0 | INTRON | -4.7553542 | 1.98E-06 | 0.01076094 |
| 17 | 72159953 | 72159953 | 1 | 17_72159953 | ENSG00000234899 | SOX9-AS1 | 0 | INTRON | -4.7552464 | 1.98E-06 | 0.01076094 |
| 1 | 202095998 | 202095998 | 1 | 1_202095998 | ENSG00000227109 | CRIP1P3 | 760 | Upstream | 4.75521811 | 1.98E-06 | 0.01076094 |
| 11 | 17509216 | 17509216 | 1 | 11_17509216 | ENSG00000006611 | USH1C | 0 | INTRON | 4.75515887 | 1.98E-06 | 0.01076094 |
| 2 | 147000725 | 147000725 | 1 | 2_147000725 | ENSG00000227902 | AC062032.1 | 102507 | Downstream | 4.75512441 | 1.98E-06 | 0.01076094 |
| 1 | 86757162 | 86757162 | 1 | 1_86757162 | ENSG00000097033 | SH3GLB1 | 8978 | Downstream | -4.7548241 | 1.99E-06 | 0.01077352 |
| 15 | 48184248 | 48184248 | 1 | 15_48184248 | ENSG00000074803 | SLC12A1 | 0 | INTRON | -4.7546061 | 1.99E-06 | 0.01077838 |
| 1 | 19247523 | 19247523 | 1 | 1_19247523 | ENSG00000127463 | EMC1 | 0 | INTRON | -4.7546041 | 1.99E-06 | 0.01077838 |
| 1 | 245355416 | 245355416 | 1 | 1_245355416 | ENSG00000162849 | KIF26B | 0 | INTRON | 4.75403413 | 1.99E-06 | 0.01080539 |
| 15 | 65248025 | 65248025 | 1 | 15_65248025 | ENSG00000138617 | PARP16 | 0 | INTRON | 4.7538087 | 2.00E-06 | 0.01081321 |
| 5 | 163737614 | 163737614 | 1 | 5_163737614 | ENSG00000224012 | AC116917.1 | 28100 | Upstream | -4.7537592 | 2.00E-06 | 0.01081321 |
| 4 | 177590621 | 177590621 | 1 | 4_177590621 | ENSG00000250131 | AC078881.1 | 0 | INTRON | 4.7535712 | 2.00E-06 | 0.01081575 |
| 3 | 90563686 | 90563686 | 1 | 3_90563686 | ENSG00000271024 | HSPE1P19 | 301978 | Upstream | -4.7535621 | 2.00E-06 | 0.01081575 |
| 11 | 5144699 | 5144699 | 1 | 11_5144699 | ENSG00000182070 | OR52A1 | 0 | 3UTR | 4.75345836 | 2.00E-06 | 0.01081575 |
| 12 | 49431537 | 49431537 | 1 | 12_49431537 | ENSG00000123352 | SPATS2 | 0 | INTRON | 4.75345476 | 2.00E-06 | 0.01081575 |
| 4 | 144163939 | 144163939 | 1 | 4_144163939 | ENSG00000285783 | AC098588.3 | 0 | INTRON | 4.75334354 | 2.00E-06 | 0.01081826 |
| 1 | 207808740 | 207808740 | 1 | 1_207808740 | ENSG00000203709 | MIR29B2CHG | 0 | EXON | -4.7531576 | 2.00E-06 | 0.01082478 |
| 2 | 10985701 | 10985701 | 1 | 2_10985701 | ENSG00000162975 | KCNF1 | 71476 | Downstream | 4.75260893 | 2.01E-06 | 0.01084603 |
| 15 | 45226163 | 45226163 | 1 | 15_45226163 | ENSG00000259520 | AC051619.5 | 9766 | Downstream | 4.75258889 | 2.01E-06 | 0.01084603 |
| 9 | 68557616 | 68557616 | 1 | 9_68557616 | ENSG00000226337 | TMEM252-DT | 0 | INTRON | 4.75256861 | 2.01E-06 | 0.01084603 |
| 4 | 68463522 | 68463522 | 1 | 4_68463522 | ENSG00000087128 | TMPRSS11E | 0 | INTRON | -4.7521455 | 2.01E-06 | 0.01086409 |
| 6 | 112839503 | 112839503 | 1 | 6_112839503 | ENSG00000271498 | AL360085.1 | 13033 | Downstream | 4.75210419 | 2.01E-06 | 0.01086409 |
| 3 | 61934998 | 61934998 | 1 | 3_61934998 | ENSG00000144724 | PTPRG | 0 | INTRON | 4.75202547 | 2.01E-06 | 0.01086487 |
| 9 | 87054997 | 87054997 | 1 | 9_87054997 | ENSG00000269994 | AL513318.2 | 12578 | Upstream | -4.7519041 | 2.02E-06 | 0.01086696 |
| 18 | 59303564 | 59303564 | 1 | 18_59303564 | ENSG00000166569 | CPLX4 | 0 | INTRON | 4.75185844 | 2.02E-06 | 0.01086696 |
| 4 | 24940833 | 24940833 | 1 | 4_24940833 | ENSG00000181982 | CCDC149 | 0 | INTRON | 4.75153353 | 2.02E-06 | 0.010881 |
| 17 | 7187897 | 7187897 | 1 | 17_7187897 | ENSG00000132535 | DLG4 | 0 | 3UTR | 4.75136273 | 2.02E-06 | 0.01088674 |
| 10 | 82055206 | 82055206 | 1 | 10_82055206 | ENSG00000185737 | NRG3 | 0 | INTRON | 4.75124238 | 2.02E-06 | 0.01088978 |
| 4 | 138539065 | 138539065 | 1 | 4_138539065 | ENSG00000251372 | LINC00499 | 0 | INTRON | -4.7510468 | 2.02E-06 | 0.01089347 |
| 10 | 60883401 | 60883401 | 1 | 10_60883401 | ENSG00000072422 | RHOBTB1 | 0 | INTRON | 4.75104582 | 2.02E-06 | 0.01089347 |
| 4 | 119215146 | 119215146 | 1 | 4_119215146 | ENSG00000145390 | USP53 | 0 | INTRON | 4.75062467 | 2.03E-06 | 0.0109112 |
| 21 | 32511186 | 32511186 | 1 | 21_32511186 | ENSG00000166979 | EVA1C | 0 | INTRON | 4.75058928 | 2.03E-06 | 0.0109112 |
| 11 | 34874418 | 34874418 | 1 | 11_34874418 | ENSG00000149089 | APIP | 0 | INTRON | -4.7504828 | 2.03E-06 | 0.01091349 |
| 7 | 73167650 | 73167650 | 1 | 7_73167650 | ENSG00000233369 | GTF2IP4 | 0 | INTRON | -4.7503871 | 2.03E-06 | 0.01091377 |
| 11 | 94842961 | 94842961 | 1 | 11_94842961 | ENSG00000166025 | AMOTL1 | 0 | INTRON | -4.7503499 | 2.03E-06 | 0.01091377 |
| 17 | 39644914 | 39644914 | 1 | 17_39644914 | ENSG00000131748 | STARD3 | 0 | INTRON | 4.75017307 | 2.03E-06 | 0.01091987 |
| 2 | 122865903 | 122865903 | 1 | 2_122865903 | ENSG00000286481 | AC011246.1 | 0 | INTRON | 4.75006032 | 2.03E-06 | 0.0109221 |

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| 1 | 39609889 | 39609889 | 1 | 1_39609889 | ENSG00000163909 | HEYL | 13545 | Downstream | 4.74994033 | 2.03E-06 | 0.0109221 |
| 2 | 23570109 | 23570109 | 1 | 2_23570109 | ENSG00000119771 | KLHL29 | 0 | INTRON | 4.74957793 | 2.04E-06 | 0.01093678 |
| 2 | 200269232 | 200269232 | 1 | 2_200269232 | ENSG00000196141 | SPATS2L | 36648 | Upstream | 4.74952572 | 2.04E-06 | 0.01093678 |
| 8 | 95514760 | 95514760 | 1 | 8_95514760 | ENSG00000253773 | C8orf37-AS1 | 0 | INTRON | -4.7494773 | 2.04E-06 | 0.01093678 |
| 11 | 69089197 | 69089197 | 1 | 11_69089197 | ENSG00000162341 | TPCN2 | 0 | 3UTR | -4.7492667 | 2.04E-06 | 0.01094473 |
| X | 30713227 | 30713227 | 1 | X_30713227 | ENSG00000241886 | AC112496.1 | 0 | INTRON | -4.7491614 | 2.04E-06 | 0.01094698 |
| 3 | 46151230 | 46151230 | 1 | 3_46151230 | ENSG00000229515 | FLT1P1 | 7553 | Upstream | -4.7489703 | 2.04E-06 | 0.01095255 |
| 1 | 11261403 | 11261403 | 1 | 1_11261403 | ENSG00000198793 | MTOR | 0 | INTRON | 4.74893117 | 2.04E-06 | 0.01095255 |
| X | 65492963 | 65492963 | 1 | X_65492963 | ENSG00000102053 | ZC3H12B | 0 | INTRON | -4.7486592 | 2.05E-06 | 0.01096383 |
| 4 | 32718419 | 32718419 | 1 | 4_32718419 | ENSG00000286784 | AC116611.1 | 0 | INTRON | -4.7482685 | 2.05E-06 | 0.01098157 |
| 17 | 65977157 | 65977157 | 1 | 17_65977157 | ENSG00000154240 | CEP112 | 0 | INTRON | 4.74786762 | 2.06E-06 | 0.01099442 |
| 5 | 142248638 | 142248638 | 1 | 5_142248638 | ENSG00000187678 | SPRY4 | 61788 | Downstream | 4.74785178 | 2.06E-06 | 0.01099442 |
| 16 | 36230457 | 36230457 | 1 | 16_36230457 | ENSG00000261084 | PPP1R1AP2 | 317941 | Downstream | 4.74784119 | 2.06E-06 | 0.01099442 |
| 15 | 21748462 | 21748462 | 1 | 15_21748462 | ENSG00000280655 | AC134981.1 | 3815 | Downstream | 4.74756286 | 2.06E-06 | 0.01100609 |
| 14 | 38267273 | 38267273 | 1 | 14_38267273 | ENSG00000259072 | AL355835.1 | 0 | INTRON | 4.74731065 | 2.06E-06 | 0.01101474 |
| 3 | 67432884 | 67432884 | 1 | 3_67432884 | ENSG00000172340 | SUCLG2 | 0 | INTRON | -4.747277 | 2.06E-06 | 0.01101474 |
| 8 | 95123424 | 95123424 | 1 | 8_95123424 | ENSG00000156170 | NDUFAF6 | 6969 | Downstream | 4.74716126 | 2.06E-06 | 0.01101758 |
| 2 | 109266478 | 109266478 | 1 | 2_109266478 | ENSG00000172985 | SH3RF3 | 0 | INTRON | 4.74696734 | 2.06E-06 | 0.01102468 |
| 1 | 233713175 | 233713175 | 1 | 1_233713175 | ENSG00000286109 | AL357972.1 | 11278 | Upstream | 4.74688289 | 2.07E-06 | 0.01102582 |
| 14 | 96562183 | 96562183 | 1 | 14_96562183 | ENSG00000090060 | PAPOLA | 0 | INTRON | -4.7468133 | 2.07E-06 | 0.01102616 |
| X | 130299194 | 130299194 | 1 | X_130299194 | ENSG00000202304 | RNU6-1130P | 10877 | Downstream | 4.74653797 | 2.07E-06 | 0.01103771 |
| 18 | 4245246 | 4245246 | 1 | 18_4245246 | ENSG00000170579 | DLGAP1 | 0 | INTRON | 4.74633386 | 2.07E-06 | 0.01104439 |
| 2 | 201908343 | 201908343 | 1 | 2_201908343 | ENSG00000138395 | CDK15 | 12793 | Downstream | 4.74628871 | 2.07E-06 | 0.01104439 |
| 6 | 79478038 | 79478038 | 1 | 6_79478038 | ENSG00000231533 | AL391840.1 | 0 | INTRON | -4.7462136 | 2.07E-06 | 0.01104503 |
| 8 | 28630376 | 28630376 | 1 | 8_28630376 | ENSG00000012232 | EXTL3 | 0 | INTRON | -4.7461399 | 2.07E-06 | 0.0110456 |
| 12 | 96001879 | 96001879 | 1 | 12_96001879 | ENSG00000111144 | LTA4H | 0 | INTRON | -4.7459699 | 2.08E-06 | 0.01105009 |
| 21 | 18779224 | 18779224 | 1 | 21_18779224 | ENSG00000224141 | MIR548XHG | 18904 | Upstream | 4.74591984 | 2.08E-06 | 0.01105009 |
| 7 | 154891000 | 154891000 | 1 | 7_154891000 | ENSG00000130226 | DPP6 | 0 | EXON | -4.7458675 | 2.08E-06 | 0.01105009 |
| 2 | 75914780 | 75914780 | 1 | 2_75914780 | ENSG00000287474 | AC110614.1 | 0 | INTRON | 4.74545118 | 2.08E-06 | 0.01106592 |
| 12 | 132253263 | 132253263 | 1 | 12_132253263 | ENSG00000182870 | GALNT9 | 0 | INTRON | 4.74545116 | 2.08E-06 | 0.01106592 |
| 12 | 19465116 | 19465116 | 1 | 12_19465116 | ENSG00000139154 | AEBP2 | 0 | INTRON | 4.7452828 | 2.08E-06 | 0.01107167 |
| 1 | 152351173 | 152351173 | 1 | 1_152351173 | ENSG00000143520 | FLG2 | 0 | EXON | 4.74519623 | 2.08E-06 | 0.01107295 |
| 12 | 122795297 | 122795297 | 1 | 12_122795297 | ENSG00000130783 | CCDC62 | 0 | INTRON | 4.74506932 | 2.08E-06 | 0.01107643 |
| 14 | 105113144 | 105113144 | 1 | 14_105113144 | ENSG00000258154 | AL512356.2 | 281 | Upstream | -4.7449803 | 2.09E-06 | 0.01107714 |
| 4 | 113494674 | 113494674 | 1 | 4_113494674 | ENSG00000145349 | CAMK2D | 0 | INTRON | 4.74492596 | 2.09E-06 | 0.01107714 |
| 11 | 104414057 | 104414057 | 1 | 11_104414057 | ENSG00000256422 | LINC02552 | 31810 | Downstream | 4.7448668 | 2.09E-06 | 0.01107714 |
| 7 | 101109202 | 101109202 | 1 | 7_101109202 | ENSG00000169871 | TRIM56 | 11235 | Downstream | 4.74462437 | 2.09E-06 | 0.01108347 |
| 5 | 64070015 | 64070015 | 1 | 5_64070015 | ENSG00000248285 | AC122707.1 | 88972 | Upstream | -4.7445636 | 2.09E-06 | 0.01108347 |
| 8 | 9300643 | 9300643 | 1 | 8_9300643 | ENSG00000248538 | AC022784.1 | 0 | INTRON | -4.7445447 | 2.09E-06 | 0.01108347 |
| 5 | 56519059 | 56519059 | 1 | 5_56519059 | ENSG00000225940 | C5orf67 | 0 | INTRON | -4.7444986 | 2.09E-06 | 0.01108347 |
| 11 | 112401063 | 112401063 | 1 | 11_112401063 | ENSG00000254968 | LINC02763 | 0 | INTRON | -4.7443757 | 2.09E-06 | 0.01108675 |
| 17 | 35879372 | 35879372 | 1 | 17_35879372 | ENSG00000271503 | CCL5 | 0 | INTRON | -4.7441813 | 2.09E-06 | 0.01109394 |
| 2 | 5367147 | 5367147 | 1 | 2_5367147 | ENSG00000228585 | AC073143.1 | 53013 | Upstream | -4.7440869 | 2.09E-06 | 0.01109566 |
| 9 | 123594702 | 123594702 | 1 | 9_123594702 | ENSG00000119522 | DENND1A | 0 | INTRON | -4.7439545 | 2.10E-06 | 0.01109946 |
| 1 | 194578466 | 194578466 | 1 | 1_194578466 | ENSG00000251813 | RNU6-983P | 90261 | Upstream | -4.7437632 | 2.10E-06 | 0.01110596 |
| 5 | 60101501 | 60101501 | 1 | 5_60101501 | ENSG00000113448 | PDE4D | 0 | INTRON | -4.7437101 | 2.10E-06 | 0.01110596 |
| 12 | 19907944 | 19907944 | 1 | 12_19907944 | ENSG00000255910 | AC024901.1 | 0 | INTRON | 4.74348292 | 2.10E-06 | 0.01111497 |
| 11 | 66502594 | 66502594 | 1 | 11_66502594 | ENSG00000254986 | DPP3 | 0 | INTRON | -4.7432013 | 2.10E-06 | 0.01112698 |
| 8 | 65626045 | 65626045 | 1 | 8_65626045 | ENSG00000104442 | ARMC1 | 0 | INTRON | -4.7430937 | 2.10E-06 | 0.01112943 |
| 9 | 121178038 | 121178038 | 1 | 9_121178038 | ENSG00000119396 | RAB14 | 94 | Downstream | -4.743029 | 2.11E-06 | 0.01112953 |
| 17 | 17203013 | 17203013 | 1 | 17_17203013 | ENSG00000264187 | AC055811.2 | 0 | 3UTR | 4.7423789 | 2.11E-06 | 0.01115884 |
| 3 | 113406578 | 113406578 | 1 | 3_113406578 | ENSG00000243849 | CFAP44-AS1 | 0 | INTRON | 4.74231965 | 2.11E-06 | 0.01115884 |
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| 8 | 129242193 | 129242193 | 1 | 8_129242193 | ENSG00000287785 | AC103833.2 | 0 | EXON | -4.741985 | 2.12E-06 | 0.01116474 |
| 3 | 191666678 | 191666678 | 1 | 3_191666678 | ENSG00000201860 | Y_RNA | 25441 | Downstream | -4.741955 | 2.12E-06 | 0.01116474 |
| 14 | 96310045 | 96310045 | 1 | 14_96310045 | ENSG00000066739 | ATG2B | 0 | INTRON | 4.74194935 | 2.12E-06 | 0.01116474 |
| 19 | 42087246 | 42087246 | 1 | 19_42087246 | ENSG00000028277 | POU2F2 | 0 | 3UTR | 4.7416616 | 2.12E-06 | 0.01117308 |
| 2 | 123625624 | 123625624 | 1 | 2_123625624 | ENSG00000235640 | AC092646.2 | 69677 | Upstream | 4.74155387 | 2.12E-06 | 0.01117308 |
| 11 | 75335623 | 75335623 | 1 | 11_75335623 | ENSG00000137486 | ARRB1 | 0 | INTRON | -4.7415049 | 2.12E-06 | 0.01117308 |
| 7 | 33166970 | 33166970 | 1 | 7_33166970 | ENSG00000122507 | BBS9 | 0 | INTRON | 4.74141513 | 2.12E-06 | 0.01117308 |
| 16 | 88410481 | 88410481 | 1 | 16_88410481 | ENSG00000225614 | ZNF469 | 0 | INTRON | 4.74139337 | 2.12E-06 | 0.01117308 |
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| 10 | 69278585 | 69278585 | 1 | 10_69278585 | ENSG00000156515 | HK1 | 0 | TSS | -4.7413221 | 2.12E-06 | 0.01117308 |
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| 10 | 43565303 | 43565303 | 1 | 10_43565303 | ENSG00000196793 | ZNF239 | 0 | INTRON | 4.74123382 | 2.12E-06 | 0.01117308 |
| 20 | 39074090 | 39074090 | 1 | 20_39074090 | ENSG00000101452 | DHX35 | 34367 | Downstream | 4.74110199 | 2.13E-06 | 0.01117468 |
| 13 | 51690632 | 51690632 | 1 | 13_51690632 | ENSG00000139668 | WDFY2 | 0 | INTRON | 4.74105464 | 2.13E-06 | 0.01117468 |
| 14 | 105098778 | 105098778 | 1 | 14_105098778 | ENSG00000257556 | LINC02298 | 0 | EXON | 4.74101703 | 2.13E-06 | 0.01117468 |
| 10 | 15757813 | 15757813 | 1 | 10_15757813 | ENSG00000148481 | MINDY3 | 20356 | Downstream | -4.7407844 | 2.13E-06 | 0.01118407 |
| 17 | 67349298 | 67349298 | 1 | 17_67349298 | ENSG00000197170 | PSMD12 | 0 | INTRON | -4.7405813 | 2.13E-06 | 0.01118994 |
| 3 | 138387276 | 138387276 | 1 | 3_138387276 | ENSG00000158186 | MRAS | 0 | INTRON | 4.74046076 | 2.13E-06 | 0.01118994 |
| 14 | 20322725 | 20322725 | 1 | 14_20322725 | ENSG00000100814 | CCNB1IP1 | 0 | INTRON | -4.7403666 | 2.13E-06 | 0.01118994 |
| 10 | 95914468 | 95914468 | 1 | 10_95914468 | ENSG00000226688 | ENTPD1-AS1 | 0 | INTRON | -4.7402588 | 2.13E-06 | 0.01118994 |
| 1 | 180405703 | 180405703 | 1 | 1_180405703 | ENSG00000230124 | ACBD6 | 0 | INTRON | -4.740251 | 2.13E-06 | 0.01118994 |
| 17 | 35097222 | 35097222 | 1 | 17_35097222 | ENSG00000185379 | RAD51D | 0 | 3UTR | 4.74025101 | 2.13E-06 | 0.01118994 |
| 2 | 25427578 | 25427578 | 1 | 2_25427578 | ENSG00000138101 | DTNB | 0 | 3UTR | -4.7401335 | 2.14E-06 | 0.01118994 |
| 4 | 117641893 | 117641893 | 1 | 4_117641893 | ENSG00000236922 | LINC01378 | 0 | INTRON | 4.74009766 | 2.14E-06 | 0.01118994 |
| 19 | 2777111 | 2777111 | 1 | 19_2777111 | ENSG00000104969 | SGTA | 0 | INTRON | 4.74008911 | 2.14E-06 | 0.01118994 |
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| 4 | 79956643 | 79956643 | 1 | 4_79956643 | ENSG00000163297 | ANTXR2 | 0 | INTRON | -4.7398943 | 2.14E-06 | 0.01118994 |
| 3 | 159067610 | 159067610 | 1 | 3_159067610 | ENSG00000283154 | IQCJ-SCHIP1 | 0 | INTRON | 4.7398811 | 2.14E-06 | 0.01118994 |
| 9 | 24579078 | 24579078 | 1 | 9_24579078 | ENSG00000269957 | AL353811.1 | 0 | INTRON | 4.73986645 | 2.14E-06 | 0.01118994 |
| 7 | 147129707 | 147129707 | 1 | 7_147129707 | ENSG00000174469 | CNTNAP2 | 0 | INTRON | -4.7397682 | 2.14E-06 | 0.01119081 |
| 4 | 163891694 | 163891694 | 1 | 4_163891694 | ENSG00000145416 | 1-Mar | 0 | INTRON | 4.73970047 | 2.14E-06 | 0.01119081 |
| 1 | 159825491 | 159825491 | 1 | 1_159825491 | ENSG00000158714 | SLAMF8 | 1319 | Upstream | 4.739664 | 2.14E-06 | 0.01119081 |
| 2 | 219492661 | 219492661 | 1 | 2_219492661 | ENSG00000286143 | AC053503.7 | 0 | EXON | 4.73921323 | 2.15E-06 | 0.01120738 |

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| 12 | 92962405 | 92962405 | 1 | 12_92962405 | ENSG00000202534 | RNU6-1329P | 9660 | Downstream | 4.73912947 | 2.15E-06 | 0.01120738 |
| 5 | 121766843 | 121766843 | 1 | 5_121766843 | ENSG00000181867 | FTMT | 85038 | Upstream | -4.7391153 | 2.15E-06 | 0.01120738 |
| 12 | 29175760 | 29175760 | 1 | 12_29175760 | ENSG00000064763 | FAR2 | 0 | INTRON | 4.73901635 | 2.15E-06 | 0.01120837 |
| 12 | 33191928 | 33191928 | 1 | 12_33191928 | ENSG00000110975 | SYT10 | 182309 | Downstream | 4.73897304 | 2.15E-06 | 0.01120837 |
| 20 | 10961554 | 10961554 | 1 | 20_10961554 | ENSG00000270792 | AL050403.2 | 0 | INTRON | 4.73871678 | 2.15E-06 | 0.01121911 |
| 4 | 13079059 | 13079059 | 1 | 4_13079059 | ENSG00000283271 | U6 | 27648 | Downstream | 4.73855291 | 2.15E-06 | 0.01122474 |
| 12 | 95874766 | 95874766 | 1 | 12_95874766 | ENSG00000139343 | SNRPF | 0 | INTRON | 4.73824835 | 2.16E-06 | 0.01123687 |
| 11 | 133994152 | 133994152 | 1 | 11_133994152 | ENSG00000255406 | LINC02730 | 14062 | Upstream | -4.7382098 | 2.16E-06 | 0.01123687 |
| 17 | 59349046 | 59349046 | 1 | 17_59349046 | ENSG00000175155 | YPEL2 | 0 | INTRON | 4.73809063 | 2.16E-06 | 0.01124004 |
| 2 | 21213609 | 21213609 | 1 | 2_21213609 | ENSG00000233005 | AC018742.1 | 7559 | Upstream | 4.73765423 | 2.16E-06 | 0.01125873 |
| 19 | 35548531 | 35548531 | 1 | 19_35548531 | ENSG00000105677 | TMEM147 | 1005 | Downstream | -4.7376297 | 2.16E-06 | 0.01125873 |
| 7 | 135590434 | 135590434 | 1 | 7_135590434 | ENSG00000155561 | NUP205 | 0 | INTRON | 4.73715702 | 2.17E-06 | 0.01127834 |
| 1 | 10657790 | 10657790 | 1 | 1_10657790 | ENSG00000130940 | CASZ1 | 0 | INTRON | 4.73715288 | 2.17E-06 | 0.01127834 |
| 16 | 53956916 | 53956916 | 1 | 16_53956916 | ENSG00000140718 | FTO | 0 | INTRON | 4.73704891 | 2.17E-06 | 0.01128068 |
| 21 | 46003619 | 46003619 | 1 | 21_46003619 | ENSG00000142156 | COL6A1 | 0 | EXON | -4.7369677 | 2.17E-06 | 0.01128175 |
| 14 | 67257986 | 67257986 | 1 | 14_67257986 | ENSG00000072415 | MPP5 | 0 | INTRON | 4.73613524 | 2.18E-06 | 0.0113247 |
| 8 | 57461122 | 57461122 | 1 | 8_57461122 | ENSG00000253821 | AC090796.1 | 31761 | Upstream | 4.73603384 | 2.18E-06 | 0.01132564 |
| 3 | 186049306 | 186049306 | 1 | 3_186049306 | ENSG00000244405 | ETV5 | 0 | INTRON | -4.7359946 | 2.18E-06 | 0.01132564 |
| X | 136662830 | 136662830 | 1 | X_136662830 | ENSG00000102245 | CD40LG | 2440 | Downstream | -4.7358195 | 2.18E-06 | 0.01133005 |
| 15 | 98931062 | 98931062 | 1 | 15_98931062 | ENSG00000140443 | IGF1R | 0 | INTRON | -4.7357669 | 2.18E-06 | 0.01133005 |
| 15 | 85768254 | 85768254 | 1 | 15_85768254 | ENSG00000183655 | KLHL25 | 0 | EXON | 4.73573004 | 2.18E-06 | 0.01133005 |
| 13 | 110374179 | 110374179 | 1 | 13_110374179 | ENSG00000134871 | COL4A2 | 0 | INTRON | -4.7355967 | 2.18E-06 | 0.01133404 |
| 8 | 49924947 | 49924947 | 1 | 8_49924947 | ENSG00000147481 | SNTG1 | 0 | INTRON | 4.73548558 | 2.19E-06 | 0.0113368 |
| 18 | 26909146 | 26909146 | 1 | 18_26909146 | ENSG00000154080 | CHST9 | 0 | 3UTR | -4.73537 | 2.19E-06 | 0.01133867 |
| 18 | 29768194 | 29768194 | 1 | 18_29768194 | ENSG00000287803 | AC117569.2 | 117754 | Downstream | 4.73525583 | 2.19E-06 | 0.01133867 |
| 19 | 49686678 | 49686678 | 1 | 19_49686678 | ENSG00000126457 | PRMT1 | 0 | EXON | -4.7352551 | 2.19E-06 | 0.01133867 |
| 9 | 108104322 | 108104322 | 1 | 9_108104322 | ENSG00000237360 | CHCHD4P2 | 6471 | Upstream | 4.73519841 | 2.19E-06 | 0.01133867 |
| 1 | 98694136 | 98694136 | 1 | 1_98694136 | ENSG00000162627 | SNX7 | 0 | INTRON | 4.73511002 | 2.19E-06 | 0.01133867 |
| 20 | 44383126 | 44383126 | 1 | 20_44383126 | ENSG00000229005 | HNF4A-AS1 | 0 | INTRON | 4.7350814 | 2.19E-06 | 0.01133867 |
| 11 | 116547938 | 116547938 | 1 | 11_116547938 | ENSG00000236437 | LINC02151 | 47308 | Upstream | 4.73495365 | 2.19E-06 | 0.01133888 |
| 6 | 49254810 | 49254810 | 1 | 6_49254810 | ENSG00000217631 | FO393413.1 | 18789 | Upstream | 4.73494392 | 2.19E-06 | 0.01133888 |
| 21 | 35324648 | 35324648 | 1 | 21_35324648 | ENSG00000159216 | RUNX1 | 0 | INTRON | 4.73476604 | 2.19E-06 | 0.01133888 |
| 15 | 89387328 | 89387328 | 1 | 15_89387328 | ENSG00000255571 | MIR9-3HG | 0 | EXON | 4.73472542 | 2.19E-06 | 0.01133888 |
| 1 | 27452933 | 27452933 | 1 | 1_27452933 | ENSG00000158195 | WASF2 | 0 | INTRON | 4.73472347 | 2.19E-06 | 0.01133888 |
| 5 | 155610269 | 155610269 | 1 | 5_155610269 | ENSG00000270442 | AC008725.1 | 116671 | Downstream | 4.73461413 | 2.19E-06 | 0.01133888 |
| 11 | 12004087 | 12004087 | 1 | 11_12004087 | ENSG00000050165 | DKK3 | 0 | INTRON | -4.7345968 | 2.19E-06 | 0.01133888 |
| 17 | 37128966 | 37128966 | 1 | 17_37128966 | ENSG00000278540 | ACACA | 0 | INTRON | -4.7345844 | 2.20E-06 | 0.01133888 |
| 11 | 62182687 | 62182687 | 1 | 11_62182687 | ENSG00000168515 | SCGB1D1 | 7528 | Upstream | 4.7344449 | 2.20E-06 | 0.01134324 |
| 8 | 5253376 | 5253376 | 1 | 8_5253376 | ENSG00000278256 | AC007718.1 | 109994 | Upstream | 4.73423053 | 2.20E-06 | 0.01135179 |
| 4 | 137002426 | 137002426 | 1 | 4_137002426 | ENSG00000248869 | LINC02511 | 0 | INTRON | -4.7340419 | 2.20E-06 | 0.01135891 |
| 4 | 116321753 | 116321753 | 1 | 4_116321753 | ENSG00000270394 | MTRNR2L13 | 21433 | Downstream | -4.733897 | 2.20E-06 | 0.01136111 |
| 19 | 21471439 | 21471439 | 1 | 19_21471439 | ENSG00000269237 | AC010615.4 | 0 | INTRON | -4.7338795 | 2.20E-06 | 0.01136111 |
| 2 | 204611241 | 204611241 | 1 | 2_204611241 | ENSG00000116117 | PARD3B | 0 | INTRON | -4.7336958 | 2.20E-06 | 0.01136688 |
| Y | 11364705 | 11364705 | 1 | Y_11364705 | ENSG00000183704 | SLC9B1P1 | 0 | INTRON | -4.7336536 | 2.21E-06 | 0.01136688 |
| 15 | 28523041 | 28523041 | 1 | 15_28523041 | ENSG00000183629 | GOLGA8G | 0 | INTRON | -4.7335102 | 2.21E-06 | 0.01137147 |
| 2 | 61634506 | 61634506 | 1 | 2_61634506 | ENSG00000206973 | RNU6-1145P | 28784 | Downstream | 4.73340799 | 2.21E-06 | 0.01137158 |
| 18 | 52891955 | 52891955 | 1 | 18_52891955 | ENSG00000187323 | DCC | 0 | INTRON | 4.73338544 | 2.21E-06 | 0.01137158 |
| 16 | 27379369 | 27379369 | 1 | 16_27379369 | ENSG00000077238 | IL4R | 14591 | Downstream | -4.7328598 | 2.21E-06 | 0.01139763 |
| 22 | 38167981 | 38167981 | 1 | 22_38167981 | ENSG00000184381 | PLA2G6 | 0 | EXON | 4.73271331 | 2.22E-06 | 0.0113988 |
| 6 | 57158526 | 57158526 | 1 | 6_57158526 | ENSG00000226803 | ZNF451-AS1 | 0 | INTRON | 4.73266192 | 2.22E-06 | 0.0113988 |
| 11 | 33272429 | 33272429 | 1 | 11_33272429 | ENSG00000110422 | HIPK3 | 0 | INTRON | 4.73262448 | 2.22E-06 | 0.0113988 |
| 21 | 44522747 | 44522747 | 1 | 21_44522747 | ENSG00000175894 | TSPEAR | 0 | INTRON | 4.73255051 | 2.22E-06 | 0.0113988 |
| 2 | 67637706 | 67637706 | 1 | 2_67637706 | ENSG00000235495 | AC007422.1 | 0 | INTRON | -4.7325322 | 2.22E-06 | 0.0113988 |
| 8 | 95365416 | 95365416 | 1 | 8_95365416 | ENSG00000253773 | C8orf37-AS1 | 0 | INTRON | 4.73241067 | 2.22E-06 | 0.01140218 |
| 2 | 206419139 | 206419139 | 1 | 2_206419139 | ENSG00000234491 | HNRNPA1P51 | 152 | Downstream | 4.73227333 | 2.22E-06 | 0.01140646 |
| 1 | 96957098 | 96957098 | 1 | 1_96957098 | ENSG00000188641 | DPYD | 120644 | Downstream | -4.7321175 | 2.22E-06 | 0.01141108 |
| 22 | 24771884 | 24771884 | 1 | 22_24771884 | ENSG00000184571 | PIWIL3 | 0 | INTRON | 4.73195152 | 2.22E-06 | 0.01141108 |
| 7 | 144961073 | 144961073 | 1 | 7_144961073 | ENSG00000236343 | EI24P4 | 43984 | Upstream | 4.7319169 | 2.22E-06 | 0.01141108 |
| 1 | 36685122 | 36685122 | 1 | 1_36685122 | ENSG00000284705 | AL596257.1 | 18830 | Upstream | -4.7319072 | 2.22E-06 | 0.01141108 |
| X | 53344220 | 53344220 | 1 | X_53344220 | ENSG00000234413 | AC245102.1 | 2715 | Downstream | -4.731885 | 2.22E-06 | 0.01141108 |
| 6 | 163872615 | 163872615 | 1 | 6_163872615 | ENSG00000266128 | RN7SL366P | 31763 | Downstream | -4.7316757 | 2.23E-06 | 0.01141941 |
| 3 | 33958927 | 33958927 | 1 | 3_33958927 | ENSG00000226320 | LINC01811 | 0 | INTRON | 4.73154628 | 2.23E-06 | 0.01142325 |
| 4 | 75193651 | 75193651 | 1 | 4_75193651 | ENSG00000250560 | AC093870.1 | 1215 | Upstream | 4.73131499 | 2.23E-06 | 0.01143205 |
| 2 | 217794951 | 217794951 | 1 | 2_217794951 | ENSG00000079308 | TNS1 | 4636 | Downstream | 4.73126775 | 2.23E-06 | 0.01143205 |
| 11 | 72685331 | 72685331 | 1 | 11_72685331 | ENSG00000186635 | ARAP1 | 0 | 3UTR | 4.73109379 | 2.23E-06 | 0.01143767 |
| 7 | 153471738 | 153471738 | 1 | 7_153471738 | ENSG00000233489 | PAXBP1P1 | 21863 | Downstream | -4.7310457 | 2.23E-06 | 0.01143767 |
| 11 | 120309512 | 120309512 | 1 | 11_120309512 | ENSG00000137709 | POU2F3 | 0 | 3UTR | 4.73091396 | 2.24E-06 | 0.01144166 |
| 11 | 132737967 | 132737967 | 1 | 11_132737967 | ENSG00000183715 | OPCML | 0 | INTRON | 4.73079126 | 2.24E-06 | 0.01144457 |
| 4 | 150891142 | 150891142 | 1 | 4_150891142 | ENSG00000198589 | LRBA | 0 | INTRON | 4.73070949 | 2.24E-06 | 0.01144457 |
| 17 | 65005327 | 65005327 | 1 | 17_65005327 | ENSG00000120063 | GNA13 | 3961 | Downstream | 4.73062291 | 2.24E-06 | 0.01144457 |
| 20 | 2531034 | 2531034 | 1 | 20_2531034 | ENSG00000149488 | TMC2 | 5572 | Upstream | 4.73059318 | 2.24E-06 | 0.01144457 |
| 12 | 83993116 | 83993116 | 1 | 12_83993116 | ENSG00000285191 | AC090679.3 | 154187 | Downstream | -4.7305573 | 2.24E-06 | 0.01144457 |
| 2 | 216664246 | 216664246 | 1 | 2_216664246 | ENSG00000115457 | IGFBP2 | 0 | 3UTR | -4.7304538 | 2.24E-06 | 0.01144473 |
| 12 | 73901311 | 73901311 | 1 | 12_73901311 | ENSG00000251138 | AC090015.1 | 0 | INTRON | -4.7303897 | 2.24E-06 | 0.01144473 |
| 10 | 8685470 | 8685470 | 1 | 10_8685470 | ENSG00000212505 | RNA5SP299 | 28639 | Upstream | -4.7303015 | 2.24E-06 | 0.01144473 |
| 15 | 96580691 | 96580691 | 1 | 15_96580691 | ENSG00000259340 | AC110588.1 | 29174 | Downstream | -4.7302143 | 2.24E-06 | 0.01144473 |
| 5 | 92218984 | 92218984 | 1 | 5_92218984 | ENSG00000250049 | AC114316.1 | 0 | INTRON | 4.73015794 | 2.24E-06 | 0.01144473 |
| 19 | 5600064 | 5600064 | 1 | 19_5600064 | ENSG00000130254 | SAFB2 | 0 | INTRON | 4.73015591 | 2.24E-06 | 0.01144473 |
| 16 | 85772813 | 85772813 | 1 | 16_85772813 | ENSG00000131148 | EMC8 | 0 | INTRON | -4.730128 | 2.24E-06 | 0.01144473 |
| 10 | 60547370 | 60547370 | 1 | 10_60547370 | ENSG00000151150 | ANK3 | 0 | INTRON | -4.7297264 | 2.25E-06 | 0.01144906 |
| 20 | 33809426 | 33809426 | 1 | 20_33809426 | ENSG00000230753 | ZNF341-AS1 | 0 | INTRON | -4.7296797 | 2.25E-06 | 0.01144906 |
| 9 | 84266364 | 84266364 | 1 | 9_84266364 | ENSG00000197506 | SLC28A3 | 9092 | Downstream | -4.7296495 | 2.25E-06 | 0.01144906 |
| 2 | 27359600 | 27359600 | 1 | 2_27359600 | ENSG00000234072 | AC074117.1 | 0 | EXON | 4.72963291 | 2.25E-06 | 0.01144906 |
| 5 | 3099547 | 3099547 | 1 | 5_3099547 | ENSG00000249808 | AC091832.1 | 78287 | Upstream | 4.72957365 | 2.25E-06 | 0.01144906 |
| 21 | 29215074 | 29215074 | 1 | 21_29215074 | ENSG00000215533 | LINC00189 | 0 | INTRON | -4.729514 | 2.25E-06 | 0.01144906 |
| 9 | 34909690 | 34909690 | 1 | 9_34909690 | ENSG00000178723 | GLULP4 | 7484 | Upstream | -4.7294733 | 2.25E-06 | 0.01144906 |
| 8 | 29267475 | 29267475 | 1 | 8_29267475 | ENSG00000197892 | KIF13B | 4351 | Upstream | 4.72947212 | 2.25E-06 | 0.01144906 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 237741115 | 237741115 | 1 | 1_237741115 | ENSG00000198626 | RYR2 | 0 | INTRON | 4.72942269 | 2.25E-06 | 0.01144906 |
| 20 | 53151088 | 53151088 | 1 | 20_53151088 | ENSG00000182463 | TSHZ2 | 0 | INTRON | 4.72935583 | 2.25E-06 | 0.01144906 |
| 7 | 138409501 | 138409501 | 1 | 7_138409501 | ENSG00000213237 | PTMAP10 | 4978 | Upstream | -4.7293157 | 2.25E-06 | 0.01144906 |
| 1 | 116513848 | 116513848 | 1 | 1_116513848 | ENSG00000116815 | CD58 | 685 | Downstream | 4.72923855 | 2.25E-06 | 0.01144906 |
| 8 | 36388890 | 36388890 | 1 | 8_36388890 | ENSG00000253363 | AC090809.1 | 0 | INTRON | 4.72923696 | 2.25E-06 | 0.01144906 |
| 8 | 66209247 | 66209247 | 1 | 8_66209247 | ENSG00000253138 | LINC00967 | 11932 | Downstream | -4.7291841 | 2.25E-06 | 0.01144906 |
| 22 | 20728983 | 20728983 | 1 | 22_20728983 | ENSG00000241973 | PI4KA | 0 | INTRON | 4.72908534 | 2.26E-06 | 0.01144906 |
| 1 | 95382225 | 95382225 | 1 | 1_95382225 | ENSG00000237954 | AL445218.1 | 1225 | Upstream | 4.72894816 | 2.26E-06 | 0.01144906 |
| 7 | 94210831 | 94210831 | 1 | 7_94210831 | ENSG00000285090 | AC002074.1 | 67848 | Downstream | -4.7289362 | 2.26E-06 | 0.01144906 |
| 11 | 31958586 | 31958586 | 1 | 11_31958586 | ENSG00000281880 | PAUPAR | 0 | INTRON | -4.7289316 | 2.26E-06 | 0.01144906 |
| 17 | 37018982 | 37018982 | 1 | 17_37018982 | ENSG00000275700 | AATF | 0 | EXON | 4.72889812 | 2.26E-06 | 0.01144906 |
| 3 | 125632265 | 125632265 | 1 | 3_125632265 | ENSG00000144909 | OSBPL11 | 36768 | Upstream | 4.72875336 | 2.26E-06 | 0.01145381 |
| 17 | 20525240 | 20525240 | 1 | 17_20525240 | ENSG00000205215 | KRT17P7 | 0 | INTRON | 4.72863042 | 2.26E-06 | 0.01145493 |
| 9 | 43387565 | 43387565 | 1 | 9_43387565 | ENSG00000286916 | ABBA01045074.1 | 142578 | Upstream | -4.7286125 | 2.26E-06 | 0.01145493 |
| 15 | 100787300 | 100787300 | 1 | 15_100787300 | ENSG00000259579 | AC087762.1 | 0 | INTRON | -4.7284488 | 2.26E-06 | 0.01146076 |
| 12 | 6196841 | 6196841 | 1 | 12_6196841 | ENSG00000010278 | CD9 | 2873 | Upstream | 4.72830308 | 2.26E-06 | 0.01146557 |
| 2 | 228791866 | 228791866 | 1 | 2_228791866 | ENSG00000232023 | LINC01807 | 0 | INTRON | -4.7281998 | 2.27E-06 | 0.01146799 |
| 2 | 116868360 | 116868360 | 1 | 2_116868360 | ENSG00000235871 | AC062016.2 | 49599 | Downstream | 4.72811998 | 2.27E-06 | 0.01146908 |
| 6 | 30278457 | 30278457 | 1 | 6_30278457 | ENSG00000270604 | HCG17 | 0 | INTRON | -4.7280398 | 2.27E-06 | 0.0114702 |
| 11 | 1207907 | 1207907 | 1 | 11_1207907 | ENSG00000215182 | MUC5AC | 6769 | Downstream | -4.7279559 | 2.27E-06 | 0.01147153 |
| 6 | 161214540 | 161214540 | 1 | 6_161214540 | ENSG00000026652 | AGPAT4 | 0 | INTRON | 4.72786121 | 2.27E-06 | 0.01147347 |
| 19 | 17615549 | 17615549 | 1 | 19_17615549 | ENSG00000130477 | UNC13A | 0 | INTRON | 4.72765051 | 2.27E-06 | 0.0114781 |
| 3 | 130915116 | 130915116 | 1 | 3_130915116 | ENSG00000250592 | AC055733.2 | 0 | INTRON | -4.727613 | 2.27E-06 | 0.0114781 |
| 5 | 6959578 | 6959578 | 1 | 5_6959578 | ENSG00000250974 | LINC02196 | 0 | INTRON | -4.7275957 | 2.27E-06 | 0.0114781 |
| 8 | 73842477 | 73842477 | 1 | 8_73842477 | ENSG00000104343 | UBE2W | 0 | INTRON | 4.72753784 | 2.27E-06 | 0.0114781 |
| 18 | 43785718 | 43785718 | 1 | 18_43785718 | ENSG00000267716 | AC083760.1 | 253752 | Upstream | 4.72747387 | 2.27E-06 | 0.01147831 |
| 2 | 200599137 | 200599137 | 1 | 2_200599137 | ENSG00000138356 | AOX1 | 0 | INTRON | -4.7272931 | 2.28E-06 | 0.01148513 |
| 14 | 95574811 | 95574811 | 1 | 14_95574811 | ENSG00000258390 | LINC02318 | 0 | INTRON | 4.72711328 | 2.28E-06 | 0.01149189 |
| 14 | 57298786 | 57298786 | 1 | 14_57298786 | ENSG00000053770 | AP5M1 | 44 | Downstream | 4.72699772 | 2.28E-06 | 0.01149502 |
| 4 | 52466126 | 52466126 | 1 | 4_52466126 | ENSG00000287999 | AC097522.2 | 0 | INTRON | 4.72693311 | 2.28E-06 | 0.01149527 |
| 10 | 24359281 | 24359281 | 1 | 10_24359281 | ENSG00000120549 | KIAA1217 | 0 | INTRON | 4.72684062 | 2.28E-06 | 0.01149709 |
| 2 | 202081947 | 202081947 | 1 | 2_202081947 | ENSG00000182329 | KIAA2012 | 0 | INTRON | -4.7266818 | 2.28E-06 | 0.01150081 |
| 9 | 117224504 | 117224504 | 1 | 9_117224504 | ENSG00000148219 | ASTN2 | 0 | INTRON | -4.7266547 | 2.28E-06 | 0.01150081 |
| 18 | 48128271 | 48128271 | 1 | 18_48128271 | ENSG00000184828 | ZBTB7C | 0 | INTRON | -4.7262517 | 2.29E-06 | 0.01151831 |
| 6 | 78100901 | 78100901 | 1 | 6_78100901 | ENSG00000269964 | MEI4 | 173873 | Downstream | 4.72622553 | 2.29E-06 | 0.01151831 |
| 8 | 102782863 | 102782863 | 1 | 8_102782863 | ENSG00000253669 | GASAL1 | 22653 | Upstream | -4.7260276 | 2.29E-06 | 0.01152612 |
| 19 | 30902096 | 30902096 | 1 | 19_30902096 | ENSG00000261316 | LINC01834 | 5102 | Upstream | 4.72589555 | 2.29E-06 | 0.01152971 |
| 10 | 130079807 | 130079807 | 1 | 10_130079807 | ENSG00000237489 | C10orf143 | 0 | 3UTR | 4.72584421 | 2.29E-06 | 0.01152971 |
| 2 | 7354166 | 7354166 | 1 | 2_7354166 | ENSG00000229727 | AC013460.1 | 29060 | Upstream | 4.72558543 | 2.29E-06 | 0.01153864 |
| 7 | 101954937 | 101954937 | 1 | 7_101954937 | ENSG00000257923 | CUX1 | 0 | INTRON | 4.72553217 | 2.30E-06 | 0.01153864 |
| 20 | 50800002 | 50800002 | 1 | 20_50800002 | ENSG00000124243 | BCAS4 | 0 | INTRON | 4.72550667 | 2.30E-06 | 0.01153864 |
| 9 | 135023273 | 135023273 | 1 | 9_135023273 | ENSG00000279935 | AL353611.2 | 27419 | Downstream | 4.72522348 | 2.30E-06 | 0.01154739 |
| 6 | 79128292 | 79128292 | 1 | 6_79128292 | ENSG00000286340 | AL356776.2 | 46921 | Downstream | 4.72514499 | 2.30E-06 | 0.01154739 |
| 1 | 157609149 | 157609149 | 1 | 1_157609149 | ENSG00000163518 | FCRL4 | 11064 | Upstream | 4.72502798 | 2.30E-06 | 0.01154739 |
| 2 | 183179599 | 183179599 | 1 | 2_183179599 | ENSG00000272800 | AC021851.1 | 0 | INTRON | 4.72499006 | 2.30E-06 | 0.01154739 |
| 10 | 98648729 | 98648729 | 1 | 10_98648729 | ENSG00000172987 | HPSE2 | 0 | INTRON | 4.72490483 | 2.30E-06 | 0.01154739 |
| 15 | 69148550 | 69148550 | 1 | 15_69148550 | ENSG00000138604 | GLCE | 12033 | Upstream | -4.7248538 | 2.30E-06 | 0.01154739 |
| 7 | 123840894 | 123840894 | 1 | 7_123840894 | ENSG00000106302 | HYAL4 | 0 | INTRON | 4.72484016 | 2.30E-06 | 0.01154739 |
| 16 | 67628465 | 67628465 | 1 | 16_67628465 | ENSG00000102974 | CTCF | 0 | EXON | -4.7248393 | 2.30E-06 | 0.01154739 |
| 2 | 86634938 | 86634938 | 1 | 2_86634938 | ENSG00000249884 | RNF103-CHMP3 | 0 | INTRON | 4.72481317 | 2.30E-06 | 0.01154739 |
| 3 | 155753785 | 155753785 | 1 | 3_155753785 | ENSG00000241307 | AC104472.2 | 6831 | Upstream | -4.724671 | 2.30E-06 | 0.01155206 |
| 16 | 73359826 | 73359826 | 1 | 16_73359826 | ENSG00000140836 | ZFHX3 | 0 | INTRON | 4.72446252 | 2.31E-06 | 0.01155556 |
| 13 | 100933457 | 100933457 | 1 | 13_100933457 | ENSG00000233009 | NALCN-AS1 | 0 | INTRON | -4.7244347 | 2.31E-06 | 0.01155556 |
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| 4 | 136511150 | 136511150 | 1 | 4_136511150 | ENSG00000279749 | AC093875.1 | 42085 | Upstream | 4.72431158 | 2.31E-06 | 0.01155556 |
| 15 | 43360070 | 43360070 | 1 | 15_43360070 | ENSG00000140265 | ZSCAN29 | 0 | 3UTR | 4.72431042 | 2.31E-06 | 0.01155556 |
| 3 | 98174884 | 98174884 | 1 | 3_98174884 | ENSG00000233412 | OR5H15 | 5110 | Downstream | 4.72382314 | 2.31E-06 | 0.01157989 |
| 5 | 68527230 | 68527230 | 1 | 5_68527230 | ENSG00000248359 | AC010280.1 | 0 | INTRON | -4.7233435 | 2.32E-06 | 0.01160384 |
| 3 | 122685111 | 122685111 | 1 | 3_122685111 | ENSG00000173193 | PARP14 | 0 | INTRON | -4.7231861 | 2.32E-06 | 0.01160941 |
| 1 | 74351754 | 74351754 | 1 | 1_74351754 | ENSG00000259030 | FPGT-TNNI3K | 0 | INTRON | 4.72296636 | 2.32E-06 | 0.01161855 |
| X | 48157377 | 48157377 | 1 | X_48157377 | ENSG00000225198 | SSXP3 | 0 | INTRON | 4.7228028 | 2.33E-06 | 0.01162449 |
| 5 | 109316787 | 109316787 | 1 | 5_109316787 | ENSG00000249476 | AC008467.1 | 0 | INTRON | 4.722498 | 2.33E-06 | 0.01163851 |
| 14 | 44312635 | 44312635 | 1 | 14_44312635 | ENSG00000258969 | LINC02307 | 0 | INTRON | 4.72242457 | 2.33E-06 | 0.0116388 |
| 12 | 100297797 | 100297797 | 1 | 12_100297797 | ENSG00000136021 | SCYL2 | 0 | INTRON | 4.72215907 | 2.33E-06 | 0.0116388 |
| 10 | 40268354 | 40268354 | 1 | 10_40268354 | ENSG00000233832 | AL590623.1 | 1485246 | Downstream | -4.7221512 | 2.33E-06 | 0.0116388 |
| 17 | 1243955 | 1243955 | 1 | 17_1243955 | ENSG00000262213 | AC144836.1 | 0 | INTRON | 4.72208164 | 2.33E-06 | 0.0116388 |
| 5 | 36245921 | 36245921 | 1 | 5_36245921 | ENSG00000164188 | RANBP3L | 2512 | Downstream | 4.72208028 | 2.33E-06 | 0.0116388 |
| 6 | 40792912 | 40792912 | 1 | 6_40792912 | ENSG00000237947 | AL583854.1 | 77549 | Upstream | -4.7220366 | 2.33E-06 | 0.0116388 |
| 18 | 47393585 | 47393585 | 1 | 18_47393585 | ENSG00000267761 | MIR4527HG | 0 | INTRON | 4.72200865 | 2.34E-06 | 0.0116388 |
| 9 | 99362073 | 99362073 | 1 | 9_99362073 | ENSG00000271086 | NAMA | 0 | INTRON | 4.72195773 | 2.34E-06 | 0.0116388 |
| 2 | 99908372 | 99908372 | 1 | 2_99908372 | ENSG00000144218 | AFF3 | 0 | INTRON | 4.72192053 | 2.34E-06 | 0.0116388 |
| 6 | 138926334 | 138926334 | 1 | 6_138926334 | ENSG00000135597 | REPS1 | 0 | INTRON | -4.7218969 | 2.34E-06 | 0.0116388 |
| 1 | 227637862 | 227637862 | 1 | 1_227637862 | ENSG00000181450 | ZNF678 | 0 | INTRON | 4.72156651 | 2.34E-06 | 0.01165431 |
| 2 | 42555067 | 42555067 | 1 | 2_42555067 | ENSG00000057935 | MTA3 | 0 | INTRON | -4.7214859 | 2.34E-06 | 0.01165552 |
| 11 | 92459303 | 92459303 | 1 | 11_92459303 | ENSG00000165323 | FAT3 | 0 | INTRON | 4.72127621 | 2.34E-06 | 0.0116629 |
| 2 | 113466980 | 113466980 | 1 | 2_113466980 | ENSG00000136682 | CBWD2 | 0 | INTRON | -4.7211724 | 2.34E-06 | 0.0116629 |
| 14 | 56290434 | 56290434 | 1 | 14_56290434 | ENSG00000139946 | PELI2 | 0 | EXON | -4.7211502 | 2.35E-06 | 0.0116629 |
| 11 | 29984006 | 29984006 | 1 | 11_29984006 | ENSG00000254530 | LINC02755 | 0 | INTRON | -4.7211193 | 2.35E-06 | 0.0116629 |
| 7 | 16616693 | 16616693 | 1 | 7_16616693 | ENSG00000106524 | ANKMY2 | 0 | INTRON | 4.72103872 | 2.35E-06 | 0.01166412 |
| 1 | 46263874 | 46263874 | 1 | 1_46263874 | ENSG00000085999 | RAD54L | 0 | INTRON | 4.72087441 | 2.35E-06 | 0.01166654 |
| 12 | 122670240 | 122670240 | 1 | 12_122670240 | ENSG00000256249 | AC026333.3 | 16884 | Upstream | -4.7208672 | 2.35E-06 | 0.01166654 |
| 2 | 40071914 | 40071914 | 1 | 2_40071914 | ENSG00000227028 | SLC8A1-AS1 | 0 | INTRON | -4.7208182 | 2.35E-06 | 0.01166654 |
| 4 | 9331839 | 9331839 | 1 | 4_9331839 | ENSG00000230430 | USP17L25 | 0 | EXON | -4.7206926 | 2.35E-06 | 0.01167035 |
| 6 | 134872948 | 134872948 | 1 | 6_134872948 | ENSG00000213117 | AL021939.1 | 24925 | Upstream | -4.7204939 | 2.35E-06 | 0.01167835 |
| 3 | 177664584 | 177664584 | 1 | 3_177664584 | ENSG00000228221 | LINC00578 | 0 | INTRON | 4.72034743 | 2.35E-06 | 0.01168107 |
| 1 | 109061004 | 109061004 | 1 | 1_109061004 | ENSG00000197780 | TAF13 | 1481 | Downstream | 4.72032785 | 2.35E-06 | 0.01168107 |
| 4 | 184990666 | 184990666 | 1 | 4_184990666 | ENSG00000248517 | LINC02437 | 0 | INTRON | -4.7201973 | 2.36E-06 | 0.01168516 |
| 11 | 26631917 | 26631917 | 1 | 11_26631917 | ENSG00000134343 | ANO3 | 0 | INTRON | 4.71998838 | 2.36E-06 | 0.01168832 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
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| 16 | 4179483 | 4179483 | 1 | 16_4179483 | ENSG00000263105 | AC009171.2 | 633 | Downstream | -4.7199819 | 2.36E-06 | 0.01168832 |
| 10 | 42076131 | 42076131 | 1 | 10_42076131 | ENSG00000229485 | KSR1P1 | 73178 | Downstream | -4.7199465 | 2.36E-06 | 0.01168832 |
| 13 | 108774763 | 108774763 | 1 | 13_108774763 | ENSG00000041515 | MYO16 | 0 | INTRON | 4.71990522 | 2.36E-06 | 0.01168832 |
| 7 | 78823443 | 78823443 | 1 | 7_78823443 | ENSG00000187391 | MAGI2 | 0 | INTRON | -4.7196296 | 2.36E-06 | 0.01169924 |
| 5 | 75934476 | 75934476 | 1 | 5_75934476 | ENSG00000228367 | AC108120.1 | 12816 | Upstream | -4.7195801 | 2.36E-06 | 0.01169924 |
| 18 | 54260801 | 54260801 | 1 | 18_54260801 | ENSG00000277324 | AC093462.1 | 7544 | Downstream | -4.7194879 | 2.36E-06 | 0.01169924 |
| 9 | 112016164 | 112016164 | 1 | 9_112016164 | ENSG00000259953 | AL138756.1 | 12405 | Downstream | 4.71942225 | 2.37E-06 | 0.01169924 |
| 21 | 24271555 | 24271555 | 1 | 21_24271555 | ENSG00000224832 | LINC01689 | 32990 | Downstream | 4.71941941 | 2.37E-06 | 0.01169924 |
| 4 | 164797710 | 164797710 | 1 | 4_164797710 | ENSG00000248771 | SMIM31 | 0 | INTRON | 4.71927796 | 2.37E-06 | 0.01170398 |
| 20 | 43652776 | 43652776 | 1 | 20_43652776 | ENSG00000215467 | RPL27AP | 0 | INTRON | 4.71912006 | 2.37E-06 | 0.01170966 |
| 10 | 18649933 | 18649933 | 1 | 10_18649933 | ENSG00000241058 | NSUN6 | 0 | INTRON | 4.71903217 | 2.37E-06 | 0.01171132 |
| 5 | 112404040 | 112404040 | 1 | 5_112404040 | ENSG00000129595 | EPB41L4A | 0 | INTRON | 4.71847037 | 2.38E-06 | 0.01173787 |
| 3 | 67008766 | 67008766 | 1 | 3_67008766 | ENSG00000163376 | KBTBD8 | 0 | 3UTR | 4.71840505 | 2.38E-06 | 0.01173787 |
| 16 | 3911512 | 3911512 | 1 | 16_3911512 | ENSG00000262185 | AC005736.1 | 19293 | Downstream | -4.7183536 | 2.38E-06 | 0.01173787 |
| 7 | 54349539 | 54349539 | 1 | 7_54349539 | ENSG00000231427 | LINC01445 | 0 | EXON | -4.7183351 | 2.38E-06 | 0.01173787 |
| 22 | 45947581 | 45947581 | 1 | 22_45947581 | ENSG00000188064 | WNT7B | 0 | INTRON | 4.71808101 | 2.38E-06 | 0.01174913 |
| 9 | 34473947 | 34473947 | 1 | 9_34473947 | ENSG00000122735 | DNAI1 | 0 | INTRON | 4.71802084 | 2.38E-06 | 0.0117492 |
| 3 | 29331653 | 29331653 | 1 | 3_29331653 | ENSG00000144642 | RBMS3 | 0 | INTRON | -4.7178109 | 2.38E-06 | 0.01175792 |
| 17 | 9966289 | 9966289 | 1 | 17_9966289 | ENSG00000007237 | GAS7 | 0 | INTRON | 4.71768076 | 2.39E-06 | 0.01176203 |
| X | 104843010 | 104843010 | 1 | X_104843010 | ENSG00000189108 | IL1RAPL2 | 0 | INTRON | 4.71756866 | 2.39E-06 | 0.0117651 |
| 9 | 101380743 | 101380743 | 1 | 9_101380743 | ENSG00000136881 | BAAT | 0 | INTRON | 4.71748017 | 2.39E-06 | 0.01176681 |
| 11 | 58744666 | 58744666 | 1 | 11_58744666 | ENSG00000254926 | AP000445.2 | 4332 | Downstream | 4.71732942 | 2.39E-06 | 0.01177212 |
| 18 | 32114545 | 32114545 | 1 | 18_32114545 | ENSG00000134758 | RNF138 | 0 | INTRON | 4.71722486 | 2.39E-06 | 0.01177248 |
| 12 | 5230713 | 5230713 | 1 | 12_5230713 | ENSG00000256115 | LINC02443 | 0 | EXON | -4.7172054 | 2.39E-06 | 0.01177248 |
| 7 | 9377343 | 9377343 | 1 | 7_9377343 | ENSG00000278254 | AC004852.2 | 187486 | Upstream | -4.7168463 | 2.40E-06 | 0.01178985 |
| 1 | 28853882 | 28853882 | 1 | 1_28853882 | ENSG00000116329 | OPRD1 | 0 | INTRON | -4.7167617 | 2.40E-06 | 0.01179135 |
| 20 | 38986098 | 38986098 | 1 | 20_38986098 | ENSG00000101452 | DHX35 | 0 | INTRON | -4.7166297 | 2.40E-06 | 0.01179558 |
| 6 | 166222121 | 166222121 | 1 | 6_166222121 | ENSG00000280991 | AL121956.5 | 7212 | Upstream | 4.71642893 | 2.40E-06 | 0.01180288 |
| 21 | 27421413 | 27421413 | 1 | 21_27421413 | ENSG00000231236 | AP001605.1 | 0 | INTRON | -4.7162788 | 2.40E-06 | 0.01180288 |
| 6 | 151084835 | 151084835 | 1 | 6_151084835 | ENSG00000120254 | MTHFD1L | 0 | INTRON | 4.71626814 | 2.40E-06 | 0.01180288 |
| 22 | 48801838 | 48801838 | 1 | 22_48801838 | ENSG00000219438 | TAFA5 | 0 | INTRON | -4.716261 | 2.40E-06 | 0.01180288 |
| 2 | 178717889 | 178717889 | 1 | 2_178717889 | ENSG00000155657 | TTN | 0 | INTRON | -4.7162077 | 2.40E-06 | 0.01180288 |
| 12 | 132409244 | 132409244 | 1 | 12_132409244 | ENSG00000274373 | AC148476.1 | 15259 | Downstream | 4.71615102 | 2.40E-06 | 0.01180288 |
| 10 | 102101958 | 102101958 | 1 | 10_102101958 | ENSG00000198728 | LDB1 | 5601 | Downstream | 4.71585653 | 2.41E-06 | 0.01181656 |
| 2 | 235991944 | 235991944 | 1 | 2_235991944 | ENSG00000157985 | AGAP1 | 0 | INTRON | 4.71572323 | 2.41E-06 | 0.01181864 |
| 15 | 55642740 | 55642740 | 1 | 15_55642740 | ENSG00000166450 | PRTG | 0 | INTRON | 4.71562145 | 2.41E-06 | 0.01181864 |
| 1 | 174731251 | 174731251 | 1 | 1_174731251 | ENSG00000152061 | RABGAP1L | 0 | INTRON | -4.7155163 | 2.41E-06 | 0.01181864 |
| 19 | 43717072 | 43717072 | 1 | 19_43717072 | ENSG00000124449 | IRGC | 0 | INTRON | 4.71544421 | 2.41E-06 | 0.01181864 |
| 5 | 166308043 | 166308043 | 1 | 5_166308043 | ENSG00000229119 | AC026403.1 | 74261 | Upstream | 4.7154297 | 2.41E-06 | 0.01181864 |
| 16 | 34592249 | 34592249 | 1 | 16_34592249 | ENSG00000286968 | FP325313.2 | 143383 | Downstream | -4.7154169 | 2.41E-06 | 0.01181864 |
| 1 | 38426097 | 38426097 | 1 | 1_38426097 | ENSG00000200796 | RNU6-753P | 29332 | Downstream | -4.7153691 | 2.41E-06 | 0.01181864 |
| 16 | 69687960 | 69687960 | 1 | 16_69687960 | ENSG00000102908 | NFAT5 | 0 | INTRON | 4.71535136 | 2.41E-06 | 0.01181864 |
| 12 | 42259641 | 42259641 | 1 | 12_42259641 | ENSG00000134283 | PPHLN1 | 0 | INTRON | -4.7152622 | 2.41E-06 | 0.01182041 |
| 13 | 18906827 | 18906827 | 1 | 13_18906827 | ENSG00000226250 | LINC00408 | 0 | INTRON | 4.71510865 | 2.42E-06 | 0.01182368 |
| 4 | 3523589 | 3523589 | 1 | 4_3523589 | ENSG00000163956 | LRPAP1 | 0 | INTRON | 4.71505252 | 2.42E-06 | 0.01182368 |
| 15 | 89118124 | 89118124 | 1 | 15_89118124 | ENSG00000140526 | ABHD2 | 0 | INTRON | 4.71500338 | 2.42E-06 | 0.01182368 |
| 2 | 28709182 | 28709182 | 1 | 2_28709182 | ENSG00000226833 | AC092164.1 | 0 | EXON | -4.7149703 | 2.42E-06 | 0.01182368 |
| 2 | 239998686 | 239998686 | 1 | 2_239998686 | ENSG00000130414 | NDUFA10 | 0 | INTRON | 4.71491033 | 2.42E-06 | 0.01182368 |
| 16 | 57689884 | 57689884 | 1 | 16_57689884 | ENSG00000260467 | AC018552.2 | 0 | INTRON | -4.7148045 | 2.42E-06 | 0.01182368 |
| 8 | 5557175 | 5557175 | 1 | 8_5557175 | ENSG00000253510 | AC004944.1 | 48049 | Upstream | -4.7147418 | 2.42E-06 | 0.01182368 |
| 2 | 114710739 | 114710739 | 1 | 2_114710739 | ENSG00000175497 | DPP10 | 0 | INTRON | 4.71464348 | 2.42E-06 | 0.01182368 |
| 1 | 224643410 | 224643410 | 1 | 1_224643410 | ENSG00000143786 | CNIH3 | 0 | INTRON | -4.7145646 | 2.42E-06 | 0.01182368 |
| 2 | 124060161 | 124060161 | 1 | 2_124060161 | ENSG00000155052 | CNTNAP5 | 0 | INTRON | -4.7145476 | 2.42E-06 | 0.01182368 |
| 11 | 97884078 | 97884078 | 1 | 11_97884078 | ENSG00000255502 | LINC02713 | 0 | INTRON | -4.7145114 | 2.42E-06 | 0.01182368 |
| 7 | 12147788 | 12147788 | 1 | 7_12147788 | ENSG00000106460 | TMEM106B | 63481 | Upstream | -4.714492 | 2.42E-06 | 0.01182368 |
| 7 | 65126121 | 65126121 | 1 | 7_65126121 | ENSG00000164669 | INTS4P1 | 14910 | Upstream | -4.7143933 | 2.42E-06 | 0.01182368 |
| 17 | 48744061 | 48744061 | 1 | 17_48744061 | ENSG00000242407 | AC091179.1 | 10173 | Downstream | 4.71433862 | 2.42E-06 | 0.01182368 |
| 6 | 10483697 | 10483697 | 1 | 6_10483697 | ENSG00000231056 | LINC02522 | 5195 | Upstream | 4.71432698 | 2.43E-06 | 0.01182368 |
| 2 | 24517287 | 24517287 | 1 | 2_24517287 | ENSG00000084676 | NCOA1 | 0 | INTRON | 4.71427044 | 2.43E-06 | 0.01182368 |
| 2 | 9225368 | 9225368 | 1 | 2_9225368 | ENSG00000151693 | ASAP2 | 0 | INTRON | 4.71402649 | 2.43E-06 | 0.01183446 |
| 14 | 65435047 | 65435047 | 1 | 14_65435047 | ENSG00000033170 | FUT8 | 0 | INTRON | 4.7139322 | 2.43E-06 | 0.01183656 |
| 5 | 173200019 | 173200019 | 1 | 5_173200019 | ENSG00000254200 | RPL7AP33 | 25816 | Downstream | 4.71386511 | 2.43E-06 | 0.01183707 |
| 17 | 15885997 | 15885997 | 1 | 17_15885997 | ENSG00000227790 | SPECC1P1 | 0 | INTRON | 4.71319806 | 2.44E-06 | 0.0118725 |
| 18 | 41656137 | 41656137 | 1 | 18_41656137 | ENSG00000267313 | AC021504.1 | 23952 | Upstream | 4.71295015 | 2.44E-06 | 0.01187935 |
| 16 | 1118697 | 1118697 | 1 | 16_1118697 | ENSG00000260532 | AL031598.1 | 5298 | Downstream | 4.712902 | 2.44E-06 | 0.01187935 |
| 3 | 184950782 | 184950782 | 1 | 3_184950782 | ENSG00000156931 | VPS8 | 0 | INTRON | 4.71286213 | 2.44E-06 | 0.01187935 |
| 5 | 55678383 | 55678383 | 1 | 5_55678383 | ENSG00000177058 | SLC38A9 | 0 | INTRON | -4.7128433 | 2.44E-06 | 0.01187935 |
| 5 | 75859597 | 75859597 | 1 | 5_75859597 | ENSG00000251419 | AC108120.3 | 26833 | Upstream | 4.71278938 | 2.44E-06 | 0.01187935 |
| 1 | 104615360 | 104615360 | 1 | 1_104615360 | ENSG00000285981 | AL591888.1 | 383045 | Downstream | 4.71241195 | 2.45E-06 | 0.01188971 |
| 22 | 29298280 | 29298280 | 1 | 22_29298280 | ENSG00000182944 | EWSR1 | 0 | INTRON | 4.71238542 | 2.45E-06 | 0.01188971 |
| 15 | 54664871 | 54664871 | 1 | 15_54664871 | ENSG00000137766 | UNC13C | 31457 | Downstream | -4.7123846 | 2.45E-06 | 0.01188971 |
| 3 | 47778139 | 47778139 | 1 | 3_47778139 | ENSG00000173473 | SMARCC1 | 0 | INTRON | -4.7123281 | 2.45E-06 | 0.01188971 |
| 17 | 7658373 | 7658373 | 1 | 17_7658373 | ENSG00000129244 | ATP1B2 | 603 | Downstream | 4.71232091 | 2.45E-06 | 0.01188971 |
| 2 | 57195423 | 57195423 | 1 | 2_57195423 | ENSG00000285755 | AC132153.1 | 94224 | Downstream | -4.7122455 | 2.45E-06 | 0.01189073 |
| 3 | 26071791 | 26071791 | 1 | 3_26071791 | ENSG00000234158 | RPEP2 | 55422 | Downstream | -4.71208 | 2.45E-06 | 0.011897 |
| 19 | 6077106 | 6077106 | 1 | 19_6077106 | ENSG00000267262 | AC011444.2 | 0 | EXON | -4.7118967 | 2.45E-06 | 0.01190431 |
| 14 | 21745904 | 21745904 | 1 | 14_21745904 | ENSG00000211779 | TRAV5 | 3273 | Upstream | -4.7117583 | 2.46E-06 | 0.011909 |
| 19 | 42248695 | 42248695 | 1 | 19_42248695 | ENSG00000105722 | ERF | 0 | EXON | 4.71150963 | 2.46E-06 | 0.01191647 |
| 18 | 75155338 | 75155338 | 1 | 18_75155338 | ENSG00000285915 | AC015819.5 | 29773 | Upstream | -4.7114957 | 2.46E-06 | 0.01191647 |
| 20 | 57562709 | 57562709 | 1 | 20_57562709 | ENSG00000124253 | PCK1 | 0 | EXON | 4.71145641 | 2.46E-06 | 0.01191647 |
| 16 | 58224789 | 58224789 | 1 | 16_58224789 | ENSG00000103021 | CCDC113 | 6367 | Upstream | 4.7113308 | 2.46E-06 | 0.01192043 |
| 2 | 229551494 | 229551494 | 1 | 2_229551494 | ENSG00000187957 | DNER | 0 | INTRON | -4.7111477 | 2.46E-06 | 0.01192445 |
| 11 | 77531595 | 77531595 | 1 | 11_77531595 | ENSG00000074201 | CLNS1A | 0 | INTRON | 4.71109507 | 2.46E-06 | 0.01192445 |
| 12 | 63107203 | 63107203 | 1 | 12_63107203 | ENSG00000166148 | AVPR1A | 35555 | Downstream | -4.711088 | 2.46E-06 | 0.01192445 |
| 5 | 66759501 | 66759501 | 1 | 5_66759501 | ENSG00000069020 | MAST4 | 0 | INTRON | -4.7110289 | 2.46E-06 | 0.01192453 |
| 1 | 32365437 | 32365437 | 1 | 1_32365437 | ENSG00000160058 | BSDC1 | 0 | 3UTR | 4.71090648 | 2.47E-06 | 0.0119283 |
| 17 | 62457870 | 62457870 | 1 | 17_62457870 | ENSG00000146872 | TLK2 | 787 | Upstream | -4.7105981 | 2.47E-06 | 0.01194297 |
| 5 | 154855620 | 154855620 | 1 | 5_154855620 | ENSG00000170271 | FAXDC2 | 0 | INTRON | -4.7103812 | 2.47E-06 | 0.01195093 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
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| 7 | 127658183 | 127658183 | 1 | 7_127658183 | ENSG00000197157 | SND1 | 0 | INTRON | -4.7103465 | 2.47E-06 | 0.01195093 |
| 2 | 835912 | 835912 | 1 | 2_835912 | ENSG00000237667 | LINC01115 | 0 | INTRON | 4.71018581 | 2.47E-06 | 0.0119552 |
| 1 | 151962138 | 151962138 | 1 | 1_151962138 | ENSG00000286581 | AL450992.3 | 8153 | Downstream | 4.7101579 | 2.48E-06 | 0.0119552 |
| X | 94983122 | 94983122 | 1 | X_94983122 | ENSG00000221187 | MIR548M | 80018 | Downstream | 4.71005801 | 2.48E-06 | 0.01195525 |
| 10 | 10810232 | 10810232 | 1 | 10_10810232 | ENSG00000048740 | CELF2 | 0 | INTRON | -4.7100103 | 2.48E-06 | 0.01195525 |
| 8 | 128877163 | 128877163 | 1 | 8_128877163 | ENSG00000229140 | CCDC26 | 0 | INTRON | -4.7099837 | 2.48E-06 | 0.01195525 |
| X | 104618454 | 104618454 | 1 | X_104618454 | ENSG00000189108 | IL1RAPL2 | 0 | INTRON | 4.70987599 | 2.48E-06 | 0.01195817 |
| 18 | 41058616 | 41058616 | 1 | 18_41058616 | ENSG00000286328 | AC079052.1 | 282702 | Upstream | 4.70971049 | 2.48E-06 | 0.0119645 |
| 3 | 5340190 | 5340190 | 1 | 3_5340190 | ENSG00000230944 | AC026202.1 | 83429 | Upstream | 4.70964829 | 2.48E-06 | 0.01196476 |
| 14 | 84754297 | 84754297 | 1 | 14_84754297 | ENSG00000251895 | RNU6-976P | 14245 | Downstream | 4.70934915 | 2.49E-06 | 0.01197499 |
| 1 | 3509884 | 3509884 | 1 | 1_3509884 | ENSG00000162591 | MEGF6 | 0 | EXON | 4.70931395 | 2.49E-06 | 0.01197499 |
| 3 | 184410309 | 184410309 | 1 | 3_184410309 | ENSG00000224153 | LINC02054 | 0 | INTRON | -4.709255 | 2.49E-06 | 0.01197499 |
| 19 | 26141535 | 26141535 | 1 | 19_26141535 | ENSG00000267696 | ERVK-28 | 1496947 | Downstream | -4.7091895 | 2.49E-06 | 0.01197499 |
| 4 | 177071285 | 177071285 | 1 | 4_177071285 | ENSG00000287544 | AC097518.2 | 0 | INTRON | 4.70901801 | 2.49E-06 | 0.01197499 |
| 10 | 10211990 | 10211990 | 1 | 10_10211990 | ENSG00000200849 | Y_RNA | 20620 | Upstream | 4.70893151 | 2.49E-06 | 0.01197499 |
| 7 | 156391247 | 156391247 | 1 | 7_156391247 | ENSG00000182648 | LINC01006 | 0 | INTRON | 4.7089011 | 2.49E-06 | 0.01197499 |
| 1 | 125176920 | 125176920 | 1 | 1_125176920 | ENSG00000224857 | LINC01691 | 3596396 | Upstream | -4.7088273 | 2.49E-06 | 0.01197499 |
| 7 | 155503048 | 155503048 | 1 | 7_155503048 | ENSG00000146910 | CNPY1 | 0 | 3UTR | -4.708793 | 2.49E-06 | 0.01197499 |
| 2 | 141834359 | 141834359 | 1 | 2_141834359 | ENSG00000168702 | LRP1B | 0 | INTRON | -4.7087612 | 2.49E-06 | 0.01197499 |
| 14 | 66777200 | 66777200 | 1 | 14_66777200 | ENSG00000171723 | GPHN | 0 | INTRON | 4.70871249 | 2.49E-06 | 0.01197499 |
| 3 | 173590617 | 173590617 | 1 | 3_173590617 | ENSG00000169760 | NLGN1 | 0 | INTRON | -4.7086646 | 2.49E-06 | 0.01197499 |
| 1 | 1709263 | 1709263 | 1 | 1_1709263 | ENSG00000008128 | CDK11A | 0 | INTRON | -4.7086013 | 2.49E-06 | 0.01197499 |
| 5 | 155472629 | 155472629 | 1 | 5_155472629 | ENSG00000270442 | AC008725.1 | 18706 | Upstream | -4.7085014 | 2.50E-06 | 0.01197499 |
| 20 | 37151251 | 37151251 | 1 | 20_37151251 | ENSG00000101353 | MROH8 | 0 | INTRON | -4.7084809 | 2.50E-06 | 0.01197499 |
| 12 | 13800806 | 13800806 | 1 | 12_13800806 | ENSG00000273079 | GRIN2B | 0 | INTRON | -4.7084646 | 2.50E-06 | 0.01197499 |
| Y | 9229700 | 9229700 | 1 | Y_9229700 | ENSG00000232924 | ELOCP4 | 1214 | Upstream | 4.70844996 | 2.50E-06 | 0.01197499 |
| 12 | 132171344 | 132171344 | 1 | 12_132171344 | ENSG00000276693 | AC138466.3 | 1301 | Downstream | 4.70843686 | 2.50E-06 | 0.01197499 |
| 4 | 30855786 | 30855786 | 1 | 4_30855786 | ENSG00000169851 | PCDH7 | 0 | INTRON | -4.7081007 | 2.50E-06 | 0.01199137 |
| 6 | 55197746 | 55197746 | 1 | 6_55197746 | ENSG00000137252 | HCRTR2 | 0 | INTRON | 4.70799125 | 2.50E-06 | 0.01199207 |
| 11 | 71340852 | 71340852 | 1 | 11_71340852 | ENSG00000172900 | AP002387.1 | 41748 | Downstream | -4.7079568 | 2.50E-06 | 0.01199207 |
| 11 | 74835619 | 74835619 | 1 | 11_74835619 | ENSG00000166439 | RNF169 | 0 | EXON | 4.70780778 | 2.50E-06 | 0.01199207 |
| 17 | 5405943 | 5405943 | 1 | 17_5405943 | ENSG00000108559 | NUP88 | 0 | INTRON | -4.7077685 | 2.50E-06 | 0.01199207 |
| 9 | 126599299 | 126599299 | 1 | 9_126599299 | ENSG00000224842 | AL161908.1 | 0 | INTRON | 4.70776335 | 2.50E-06 | 0.01199207 |
| 2 | 32543461 | 32543461 | 1 | 2_32543461 | ENSG00000115760 | BIRC6 | 0 | EXON | -4.7077442 | 2.50E-06 | 0.01199207 |
| 12 | 92498096 | 92498096 | 1 | 12_92498096 | ENSG00000205056 | LINC02397 | 6005 | Downstream | 4.7076004 | 2.51E-06 | 0.01199716 |
| 3 | 112422595 | 112422595 | 1 | 3_112422595 | ENSG00000243081 | AC092894.1 | 13461 | Upstream | 4.7073767 | 2.51E-06 | 0.01200364 |
| 6 | 17467525 | 17467525 | 1 | 6_17467525 | ENSG00000112186 | CAP2 | 0 | INTRON | -4.7072946 | 2.51E-06 | 0.01200364 |
| 5 | 58289556 | 58289556 | 1 | 5_58289556 | ENSG00000248271 | PGAM1P1 | 127804 | Downstream | 4.70728758 | 2.51E-06 | 0.01200364 |
| 2 | 229700730 | 229700730 | 1 | 2_229700730 | ENSG00000187957 | DNER | 0 | INTRON | -4.7072609 | 2.51E-06 | 0.01200364 |
| 11 | 67274253 | 67274253 | 1 | 11_67274253 | ENSG00000173020 | GRK2 | 0 | INTRON | 4.70720076 | 2.51E-06 | 0.01200381 |
| 16 | 53481019 | 53481019 | 1 | 16_53481019 | ENSG00000279344 | AC007342.6 | 0 | EXON | -4.7070644 | 2.51E-06 | 0.01200847 |
| 7 | 3963828 | 3963828 | 1 | 7_3963828 | ENSG00000146555 | SDK1 | 0 | INTRON | 4.70696072 | 2.51E-06 | 0.0120112 |
| 6 | 39350243 | 39350243 | 1 | 6_39350243 | ENSG00000164627 | KIF6 | 0 | INTRON | -4.7067656 | 2.52E-06 | 0.0120165 |
| 1 | 204758792 | 204758792 | 1 | 1_204758792 | ENSG00000251861 | AL161793.2 | 30686 | Downstream | 4.70668591 | 2.52E-06 | 0.0120165 |
| 2 | 8887501 | 8887501 | 1 | 2_8887501 | ENSG00000143797 | MBOAT2 | 0 | INTRON | 4.70667133 | 2.52E-06 | 0.0120165 |
| 8 | 143742455 | 143742455 | 1 | 8_143742455 | ENSG00000203499 | IQANK1 | 0 | INTRON | 4.70664188 | 2.52E-06 | 0.0120165 |
| 13 | 52616960 | 52616960 | 1 | 13_52616960 | ENSG00000273784 | AL137058.2 | 0 | INTRON | 4.70624915 | 2.52E-06 | 0.01203629 |
| 2 | 130785308 | 130785308 | 1 | 2_130785308 | ENSG00000232503 | CYCSP8 | 8351 | Downstream | 4.70608011 | 2.53E-06 | 0.01203889 |
| 3 | 153447983 | 153447983 | 1 | 3_153447983 | ENSG00000238755 | LINC02006 | 0 | INTRON | -4.7060034 | 2.53E-06 | 0.01203889 |
| 14 | 88498073 | 88498073 | 1 | 14_88498073 | ENSG00000070778 | PTPN21 | 0 | INTRON | 4.70600106 | 2.53E-06 | 0.01203889 |
| 1 | 1079276 | 1079276 | 1 | 1_1079276 | ENSG00000131591 | C1orf159 | 2541 | Downstream | -4.7059765 | 2.53E-06 | 0.01203889 |
| 17 | 14113601 | 14113601 | 1 | 17_14113601 | ENSG00000006695 | COX10 | 0 | INTRON | -4.7058044 | 2.53E-06 | 0.0120449 |
| 6 | 45062939 | 45062939 | 1 | 6_45062939 | ENSG00000196284 | SUPT3H | 0 | INTRON | 4.7057605 | 2.53E-06 | 0.0120449 |
| 11 | 131390256 | 131390256 | 1 | 11_131390256 | ENSG00000182667 | NTM | 0 | INTRON | 4.70547327 | 2.53E-06 | 0.0120559 |
| 1 | 187071449 | 187071449 | 1 | 1_187071449 | ENSG00000230426 | ERVMER61-1 | 0 | INTRON | 4.70527833 | 2.54E-06 | 0.0120559 |
| 9 | 98782080 | 98782080 | 1 | 9_98782080 | ENSG00000165138 | ANKS6 | 0 | INTRON | -4.7051531 | 2.54E-06 | 0.0120559 |
| 11 | 18561569 | 18561569 | 1 | 11_18561569 | ENSG00000151116 | UEVLD | 0 | INTRON | 4.70499251 | 2.54E-06 | 0.0120559 |
| 10 | 113019294 | 113019294 | 1 | 10_113019294 | ENSG00000148737 | TCF7L2 | 0 | INTRON | 4.70493719 | 2.54E-06 | 0.0120559 |
| 13 | 105698314 | 105698314 | 1 | 13_105698314 | ENSG00000280455 | AL359745.1 | 0 | INTRON | -4.7049335 | 2.54E-06 | 0.0120559 |
| 4 | 118934291 | 118934291 | 1 | 4_118934291 | ENSG00000172403 | SYNPO2 | 0 | INTRON | 4.70484242 | 2.54E-06 | 0.0120559 |
| 7 | 23434543 | 23434543 | 1 | 7_23434543 | ENSG00000136231 | IGF2BP3 | 0 | INTRON | 4.70483556 | 2.54E-06 | 0.0120559 |
| 16 | 87196143 | 87196143 | 1 | 16_87196143 | ENSG00000260456 | C16orf95 | 0 | INTRON | 4.70476813 | 2.54E-06 | 0.0120559 |
| 12 | 77028411 | 77028411 | 1 | 12_77028411 | ENSG00000165891 | E2F7 | 0 | INTRON | -4.7046609 | 2.54E-06 | 0.0120559 |
| 3 | 105891349 | 105891349 | 1 | 3_105891349 | ENSG00000114423 | CBLB | 21797 | Upstream | 4.70465333 | 2.54E-06 | 0.0120559 |
| 11 | 80325432 | 80325432 | 1 | 11_80325432 | ENSG00000254434 | AP006295.1 | 0 | INTRON | 4.70464667 | 2.54E-06 | 0.0120559 |
| 10 | 120739880 | 120739880 | 1 | 10_120739880 | ENSG00000274461 | AC023282.1 | 0 | INTRON | -4.7045835 | 2.54E-06 | 0.0120559 |
| 22 | 37492670 | 37492670 | 1 | 22_37492670 | ENSG00000100065 | CARD10 | 0 | EXON | -4.7045698 | 2.54E-06 | 0.0120559 |
| 13 | 99548166 | 99548166 | 1 | 13_99548166 | ENSG00000125304 | TM9SF2 | 0 | INTRON | -4.7045657 | 2.54E-06 | 0.0120559 |
| 3 | 38036098 | 38036098 | 1 | 3_38036098 | ENSG00000008226 | DLEC1 | 3106 | Upstream | -4.7044293 | 2.55E-06 | 0.0120559 |
| 17 | 79178251 | 79178251 | 1 | 17_79178251 | ENSG00000167281 | RBFOX3 | 0 | INTRON | 4.70435825 | 2.55E-06 | 0.0120559 |
| 15 | 29004926 | 29004926 | 1 | 15_29004926 | ENSG00000034053 | APBA2 | 0 | INTRON | 4.70433323 | 2.55E-06 | 0.0120559 |
| 1 | 242292087 | 242292087 | 1 | 1_242292087 | ENSG00000180287 | PLD5 | 0 | INTRON | 4.70430216 | 2.55E-06 | 0.0120559 |
| 1 | 95005699 | 95005699 | 1 | 1_95005699 | ENSG00000172339 | ALG14 | 0 | INTRON | -4.7042673 | 2.55E-06 | 0.0120559 |
| 3 | 160901634 | 160901634 | 1 | 3_160901634 | ENSG00000163590 | PPM1L | 0 | INTRON | -4.7042229 | 2.55E-06 | 0.0120559 |
| 12 | 85402958 | 85402958 | 1 | 12_85402958 | ENSG00000258815 | LINC02820 | 60046 | Downstream | 4.70421924 | 2.55E-06 | 0.0120559 |
| 12 | 144667 | 144667 | 1 | 12_144667 | ENSG00000249695 | AC026369.1 | 0 | INTRON | 4.70421415 | 2.55E-06 | 0.0120559 |
| 9 | 89379127 | 89379127 | 1 | 9_89379127 | ENSG00000187764 | SEMA4D | 0 | EXON | -4.7042084 | 2.55E-06 | 0.0120559 |
| 22 | 16888730 | 16888730 | 1 | 22_16888730 | ENSG00000225480 | AC006548.1 | 8714 | Upstream | -4.7040948 | 2.55E-06 | 0.01205926 |
| 5 | 174636688 | 174636688 | 1 | 5_174636688 | ENSG00000248929 | HIGD1AP3 | 3479 | Downstream | 4.7038438 | 2.55E-06 | 0.01207075 |
| 2 | 205466781 | 205466781 | 1 | 2_205466781 | ENSG00000116117 | PARD3B | 0 | INTRON | 4.70369778 | 2.55E-06 | 0.01207603 |
| 7 | 152589970 | 152589970 | 1 | 7_152589970 | ENSG00000231139 | AC104843.2 | 670 | Downstream | 4.70330024 | 2.56E-06 | 0.01209218 |
| 2 | 7079299 | 7079299 | 1 | 2_7079299 | ENSG00000223884 | AC068481.1 | 1383 | Upstream | 4.70317997 | 2.56E-06 | 0.01209218 |
| 20 | 31505136 | 31505136 | 1 | 20_31505136 | ENSG00000101294 | HM13 | 9273 | Upstream | 4.70317592 | 2.56E-06 | 0.01209218 |
| 17 | 60786235 | 60786235 | 1 | 17_60786235 | ENSG00000141376 | BCAS3 | 0 | INTRON | -4.7031553 | 2.56E-06 | 0.01209218 |
| 7 | 44271976 | 44271976 | 1 | 7_44271976 | ENSG00000058404 | CAMK2B | 0 | INTRON | 4.70309669 | 2.56E-06 | 0.01209218 |
| 5 | 157360500 | 157360500 | 1 | 5_157360500 | ENSG00000055163 | CYFIP2 | 0 | INTRON | 4.70308522 | 2.56E-06 | 0.01209218 |
| 1 | 144892949 | 144892949 | 1 | 1_144892949 | ENSG00000196369 | SRGAP2B | 0 | INTRON | 4.70291775 | 2.56E-06 | 0.01209875 |
| 3 | 160723503 | 160723503 | 1 | 3_160723503 | ENSG00000207084 | SNORA72 | 26443 | Downstream | -4.7026834 | 2.57E-06 | 0.01210894 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 35393759 | 35393759 | 1 | 2_35393759 | ENSG00000265301 | MIR548AD | 77645 | Upstream | -4.7024411 | 2.57E-06 | 0.01210894 |
| 8 | 75086864 | 75086864 | 1 | 8_75086864 | ENSG00000121005 | CRISPLD1 | 52306 | Downstream | -4.7024303 | 2.57E-06 | 0.01210894 |
| 1 | 26086123 | 26086123 | 1 | 1_26086123 | ENSG00000158022 | TRIM63 | 17687 | Upstream | 4.70241066 | 2.57E-06 | 0.01210894 |
| 3 | 156041687 | 156041687 | 1 | 3_156041687 | ENSG00000169282 | KCNAB1 | 0 | INTRON | 4.70236022 | 2.57E-06 | 0.01210894 |
| 5 | 147483250 | 147483250 | 1 | 5_147483250 | ENSG00000113657 | DPYSL3 | 0 | INTRON | 4.70235292 | 2.57E-06 | 0.01210894 |
| 16 | 13927540 | 13927540 | 1 | 16_13927540 | ENSG00000175595 | ERCC4 | 0 | EXON | 4.70231565 | 2.57E-06 | 0.01210894 |
| 1 | 106893483 | 106893483 | 1 | 1_106893483 | ENSG00000237460 | LINC01661 | 28167 | Downstream | 4.70229376 | 2.57E-06 | 0.01210894 |
| 9 | 107716801 | 107716801 | 1 | 9_107716801 | ENSG00000202308 | RNU6-996P | 53555 | Upstream | -4.7020428 | 2.58E-06 | 0.01211988 |
| 17 | 21687444 | 21687444 | 1 | 17_21687444 | ENSG00000260458 | KCNJ18 | 5078 | Upstream | 4.70199657 | 2.58E-06 | 0.01211988 |
| 12 | 47946844 | 47946844 | 1 | 12_47946844 | ENSG00000111424 | VDR | 3796 | Upstream | -4.7018254 | 2.58E-06 | 0.01212669 |
| 2 | 116754554 | 116754554 | 1 | 2_116754554 | ENSG00000226341 | MTCYBP39 | 2906 | Downstream | 4.7017283 | 2.58E-06 | 0.01212911 |
| 21 | 33175581 | 33175581 | 1 | 21_33175581 | ENSG00000229086 | LINC01548 | 4932 | Upstream | -4.7016632 | 2.58E-06 | 0.01212963 |
| 5 | 81070525 | 81070525 | 1 | 5_81070525 | ENSG00000113319 | RASGRF2 | 0 | EXON | -4.7015406 | 2.58E-06 | 0.01213356 |
| 7 | 129150782 | 129150782 | 1 | 7_129150782 | ENSG00000158457 | TSPAN33 | 0 | INTRON | 4.70144226 | 2.58E-06 | 0.01213606 |
| 12 | 4332034 | 4332034 | 1 | 12_4332034 | ENSG00000078237 | TIGAR | 0 | INTRON | 4.70133987 | 2.58E-06 | 0.01213879 |
| 1 | 210557603 | 210557603 | 1 | 1_210557603 | ENSG00000054392 | HHAT | 0 | INTRON | 4.70097009 | 2.59E-06 | 0.01215744 |
| 5 | 11605085 | 11605085 | 1 | 5_11605085 | ENSG00000169862 | CTNND2 | 0 | INTRON | 4.70075917 | 2.59E-06 | 0.01216418 |
| 6 | 35605078 | 35605078 | 1 | 6_35605078 | ENSG00000096060 | FKBP5 | 0 | INTRON | 4.70074432 | 2.59E-06 | 0.01216418 |
| 7 | 78945155 | 78945155 | 1 | 7_78945155 | ENSG00000187391 | MAGI2 | 0 | INTRON | -4.7006086 | 2.59E-06 | 0.01216891 |
| 1 | 171708213 | 171708213 | 1 | 1_171708213 | ENSG00000117533 | VAMP4 | 0 | INTRON | 4.7005121 | 2.60E-06 | 0.01217131 |
| 12 | 69934053 | 69934053 | 1 | 12_69934053 | ENSG00000166268 | MYRFL | 0 | INTRON | -4.7004056 | 2.60E-06 | 0.0121743 |
| 5 | 169933873 | 169933873 | 1 | 5_169933873 | ENSG00000134516 | DOCK2 | 0 | INTRON | 4.7003212 | 2.60E-06 | 0.01217494 |
| 15 | 91994891 | 91994891 | 1 | 15_91994891 | ENSG00000176463 | SLCO3A1 | 0 | INTRON | 4.70025557 | 2.60E-06 | 0.01217494 |
| 1 | 21739245 | 21739245 | 1 | 1_21739245 | ENSG00000090686 | USP48 | 0 | INTRON | 4.70022615 | 2.60E-06 | 0.01217494 |
| 15 | 36716725 | 36716725 | 1 | 15_36716725 | ENSG00000186073 | C15orf41 | 0 | INTRON | -4.6999729 | 2.60E-06 | 0.01218669 |
| 6 | 3341726 | 3341726 | 1 | 6_3341726 | ENSG00000137266 | SLC22A23 | 0 | INTRON | 4.69977602 | 2.60E-06 | 0.01218863 |
| 3 | 18924385 | 18924385 | 1 | 3_18924385 | ENSG00000228956 | SATB1-AS1 | 3984 | Downstream | 4.69975153 | 2.60E-06 | 0.01218863 |
| 2 | 190391778 | 190391778 | 1 | 2_190391778 | ENSG00000151690 | MFSD6 | 16576 | Upstream | -4.699715 | 2.61E-06 | 0.01218863 |
| 21 | 33124837 | 33124837 | 1 | 21_33124837 | ENSG00000226527 | AP000289.1 | 1112 | Upstream | -4.6996365 | 2.61E-06 | 0.01218863 |
| 5 | 158542585 | 158542585 | 1 | 5_158542585 | ENSG00000254135 | AC091939.1 | 0 | INTRON | 4.69961453 | 2.61E-06 | 0.01218863 |
| 21 | 39973331 | 39973331 | 1 | 21_39973331 | ENSG00000171587 | DSCAM | 37667 | Downstream | 4.69954987 | 2.61E-06 | 0.01218863 |
| 8 | 19885495 | 19885495 | 1 | 8_19885495 | ENSG00000175445 | LPL | 16221 | Upstream | -4.6995474 | 2.61E-06 | 0.01218863 |
| 1 | 81679482 | 81679482 | 1 | 1_81679482 | ENSG00000117114 | ADGRL2 | 0 | INTRON | 4.69940255 | 2.61E-06 | 0.01218963 |
| 16 | 50501170 | 50501170 | 1 | 16_50501170 | ENSG00000260573 | AC007493.1 | 0 | INTRON | 4.69936928 | 2.61E-06 | 0.01218963 |
| 3 | 197059115 | 197059115 | 1 | 3_197059115 | ENSG00000075711 | DLG1 | 0 | INTRON | -4.6992309 | 2.61E-06 | 0.01218963 |
| 2 | 222845305 | 222845305 | 1 | 2_222845305 | ENSG00000123983 | ACSL3 | 15636 | Upstream | 4.69922047 | 2.61E-06 | 0.01218963 |
| 12 | 8693888 | 8693888 | 1 | 12_8693888 | ENSG00000166532 | RIMKLB | 0 | INTRON | -4.6991581 | 2.61E-06 | 0.01218963 |
| 5 | 38826747 | 38826747 | 1 | 5_38826747 | ENSG00000249740 | OSMR-AS1 | 0 | INTRON | -4.6991577 | 2.61E-06 | 0.01218963 |
| 14 | 81424400 | 81424400 | 1 | 14_81424400 | ENSG00000140022 | STON2 | 0 | INTRON | 4.69913816 | 2.61E-06 | 0.01218963 |
| X | 136913300 | 136913300 | 1 | X_136913300 | ENSG00000234062 | AL390879.1 | 0 | INTRON | -4.6988587 | 2.62E-06 | 0.01219718 |
| 21 | 40595885 | 40595885 | 1 | 21_40595885 | ENSG00000171587 | DSCAM | 0 | INTRON | -4.698824 | 2.62E-06 | 0.01219718 |
| 1 | 224697604 | 224697604 | 1 | 1_224697604 | ENSG00000143786 | CNIH3 | 0 | INTRON | 4.69880552 | 2.62E-06 | 0.01219718 |
| 13 | 111210372 | 111210372 | 1 | 13_111210372 | ENSG00000102606 | ARHGEF7 | 0 | INTRON | -4.6987606 | 2.62E-06 | 0.01219718 |
| 11 | 3918377 | 3918377 | 1 | 11_3918377 | ENSG00000167323 | STIM1 | 0 | INTRON | -4.6986468 | 2.62E-06 | 0.01219718 |
| X | 41322940 | 41322940 | 1 | X_41322940 | ENSG00000226641 | AL391647.1 | 0 | EXON | -4.6986082 | 2.62E-06 | 0.01219718 |
| 13 | 59773245 | 59773245 | 1 | 13_59773245 | ENSG00000139734 | DIAPH3 | 0 | INTRON | 4.69859884 | 2.62E-06 | 0.01219718 |
| 8 | 131901016 | 131901016 | 1 | 8_131901016 | ENSG00000132294 | EFR3A | 3076 | Upstream | 4.69856411 | 2.62E-06 | 0.01219718 |
| 15 | 64520496 | 64520496 | 1 | 15_64520496 | ENSG00000180357 | ZNF609 | 0 | INTRON | -4.6984996 | 2.62E-06 | 0.0121977 |
| 11 | 41584283 | 41584283 | 1 | 11_41584283 | ENSG00000255388 | LINC02741 | 0 | INTRON | -4.6982854 | 2.62E-06 | 0.01220389 |
| 17 | 43008057 | 43008057 | 1 | 17_43008057 | ENSG00000068079 | IFI35 | 0 | INTRON | 4.69824619 | 2.62E-06 | 0.01220389 |
| 17 | 28441804 | 28441804 | 1 | 17_28441804 | ENSG00000263870 | AC015917.1 | 2258 | Downstream | 4.69822828 | 2.62E-06 | 0.01220389 |
| 2 | 42893356 | 42893356 | 1 | 2_42893356 | ENSG00000232202 | AC098824.1 | 65739 | Upstream | -4.698055 | 2.63E-06 | 0.01221091 |
| 9 | 99238153 | 99238153 | 1 | 9_99238153 | ENSG00000106803 | SEC61B | 7538 | Downstream | -4.6977816 | 2.63E-06 | 0.01222393 |
| 20 | 31624494 | 31624494 | 1 | 20_31624494 | ENSG00000131055 | COX4I2 | 13417 | Upstream | 4.6977142 | 2.63E-06 | 0.01222462 |
| 22 | 16738614 | 16738614 | 1 | 22_16738614 | ENSG00000288024 | AC005301.2 | 0 | INTRON | -4.6975042 | 2.63E-06 | 0.01223195 |
| 8 | 139857371 | 139857371 | 1 | 8_139857371 | ENSG00000167632 | TRAPPC9 | 0 | INTRON | 4.69748015 | 2.63E-06 | 0.01223195 |
| 1 | 200898019 | 200898019 | 1 | 1_200898019 | ENSG00000163362 | INAVA | 0 | INTRON | 4.69720379 | 2.64E-06 | 0.01223934 |
| 21 | 45470286 | 45470286 | 1 | 21_45470286 | ENSG00000182871 | COL18A1 | 0 | INTRON | 4.69717157 | 2.64E-06 | 0.01223934 |
| 1 | 237762769 | 237762769 | 1 | 1_237762769 | ENSG00000198626 | RYR2 | 0 | INTRON | 4.69709253 | 2.64E-06 | 0.01223934 |
| 9 | 87531186 | 87531186 | 1 | 9_87531186 | ENSG00000196730 | DAPK1 | 0 | INTRON | 4.69708863 | 2.64E-06 | 0.01223934 |
| 6 | 75145365 | 75145365 | 1 | 6_75145365 | ENSG00000111799 | COL12A1 | 0 | EXON | -4.6970262 | 2.64E-06 | 0.01223934 |
| 2 | 44136028 | 44136028 | 1 | 2_44136028 | ENSG00000252599 | RNU6-566P | 18760 | Downstream | 4.69702247 | 2.64E-06 | 0.01223934 |
| 10 | 77179558 | 77179558 | 1 | 10_77179558 | ENSG00000156113 | KCNMA1 | 0 | INTRON | 4.69667949 | 2.64E-06 | 0.01225391 |
| 3 | 150303805 | 150303805 | 1 | 3_150303805 | ENSG00000243550 | LINC01214 | 7200 | Upstream | -4.6965824 | 2.65E-06 | 0.01225391 |
| 5 | 175843641 | 175843641 | 1 | 5_175843641 | ENSG00000145920 | CPLX2 | 0 | INTRON | 4.6965462 | 2.65E-06 | 0.01225391 |
| 18 | 46466554 | 46466554 | 1 | 18_46466554 | ENSG00000141622 | RNF165 | 3414 | Downstream | -4.69653 | 2.65E-06 | 0.01225391 |
| 3 | 13296187 | 13296187 | 1 | 3_13296187 | ENSG00000144711 | IQSEC1 | 12906 | Upstream | 4.69650114 | 2.65E-06 | 0.01225391 |
| 9 | 67159737 | 67159737 | 1 | 9_67159737 | ENSG00000276386 | CNTNAP3P2 | 0 | INTRON | -4.696393 | 2.65E-06 | 0.01225706 |
| 19 | 3177892 | 3177892 | 1 | 19_3177892 | ENSG00000125910 | S1PR4 | 0 | INTRON | -4.696183 | 2.65E-06 | 0.01226633 |
| 20 | 59113873 | 59113873 | 1 | 20_59113873 | ENSG00000232925 | MRPS16P2 | 242 | Downstream | -4.6960313 | 2.65E-06 | 0.01226908 |
| 2 | 54762390 | 54762390 | 1 | 2_54762390 | ENSG00000214595 | EML6 | 0 | INTRON | 4.69602588 | 2.65E-06 | 0.01226908 |
| 8 | 962855 | 962855 | 1 | 8_962855 | ENSG00000198010 | DLGAP2 | 0 | INTRON | 4.69585763 | 2.65E-06 | 0.01227585 |
| 6 | 143570838 | 143570838 | 1 | 6_143570838 | ENSG00000112419 | PHACTR2 | 0 | INTRON | -4.6957298 | 2.66E-06 | 0.0122782 |
| 7 | 73702766 | 73702766 | 1 | 7_73702766 | ENSG00000106089 | STX1A | 0 | EXON | 4.69564967 | 2.66E-06 | 0.0122782 |
| 2 | 108194721 | 108194721 | 1 | 2_108194721 | ENSG00000225328 | LINC01594 | 0 | INTRON | 4.69563803 | 2.66E-06 | 0.0122782 |
| 16 | 19298112 | 19298112 | 1 | 16_19298112 | ENSG00000261210 | CLEC19A | 0 | INTRON | -4.6955965 | 2.66E-06 | 0.0122782 |
| 4 | 3409305 | 3409305 | 1 | 4_3409305 | ENSG00000159788 | RGS12 | 0 | INTRON | -4.6954413 | 2.66E-06 | 0.0122813 |
| 13 | 54116401 | 54116401 | 1 | 13_54116401 | ENSG00000234787 | LINC00458 | 0 | INTRON | -4.695434 | 2.66E-06 | 0.0122813 |
| 7 | 66958864 | 66958864 | 1 | 7_66958864 | ENSG00000106609 | TMEM248 | 313 | Downstream | 4.69526582 | 2.66E-06 | 0.01228807 |
| 3 | 128862481 | 128862481 | 1 | 3_128862481 | ENSG00000231305 | AC112484.1 | 0 | INTRON | 4.69516415 | 2.66E-06 | 0.01229085 |
| 12 | 73724367 | 73724367 | 1 | 12_73724367 | ENSG00000257750 | LINC02445 | 34289 | Upstream | -4.694941 | 2.67E-06 | 0.01230094 |
| 20 | 32970405 | 32970405 | 1 | 20_32970405 | ENSG00000215529 | EFCAB8 | 8796 | Downstream | 4.69463595 | 2.67E-06 | 0.01231597 |
| 11 | 85612480 | 85612480 | 1 | 11_85612480 | ENSG00000150672 | DLG2 | 0 | INTRON | 4.69451244 | 2.67E-06 | 0.01231965 |
| 9 | 603721 | 603721 | 1 | 9_603721 | ENSG00000107104 | KANK1 | 0 | INTRON | 4.6944642 | 2.67E-06 | 0.01231965 |
| 17 | 49407000 | 49407000 | 1 | 17_49407000 | ENSG00000167085 | PHB | 0 | EXON | 4.69413811 | 2.68E-06 | 0.01233597 |
| 16 | 7287903 | 7287903 | 1 | 16_7287903 | ENSG00000078328 | RBFOX1 | 0 | INTRON | -4.6940804 | 2.68E-06 | 0.01233611 |
| 4 | 17794625 | 17794625 | 1 | 4_17794625 | ENSG00000163257 | DCAF16 | 6029 | Downstream | -4.6939351 | 2.68E-06 | 0.01234028 |
| 10 | 361932 | 361932 | 1 | 10_361932 | ENSG00000151240 | DIP2C | 0 | INTRON | -4.6939008 | 2.68E-06 | 0.01234028 |

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| 8 | 27572304 | 27572304 | 1 | 8_27572304 | ENSG00000234770 | GULOP | 0 | INTRON | 4.69371399 | 2.68E-06 | 0.01234487 |
| 7 | 74797679 | 74797679 | 1 | 7_74797679 | ENSG00000196275 | GTF2IRD2 | 0 | EXON | -4.6935767 | 2.68E-06 | 0.01234824 |
| 5 | 176062299 | 176062299 | 1 | 5_176062299 | ENSG00000182230 | FAM153B | 0 | INTRON | -4.6935287 | 2.69E-06 | 0.01234824 |
| 8 | 29058055 | 29058055 | 1 | 8_29058055 | ENSG00000147421 | HMBOX1 | 0 | INTRON | 4.69349239 | 2.69E-06 | 0.01234824 |
| 20 | 50976465 | 50976465 | 1 | 20_50976465 | ENSG00000124217 | MOCS3 | 12536 | Downstream | 4.69330221 | 2.69E-06 | 0.01235521 |
| 18 | 55198442 | 55198442 | 1 | 18_55198442 | ENSG00000196628 | TCF4 | 23742 | Downstream | -4.6932612 | 2.69E-06 | 0.01235521 |
| 21 | 16209630 | 16209630 | 1 | 21_16209630 | ENSG00000215386 | MIR99AHG | 0 | INTRON | -4.6932113 | 2.69E-06 | 0.01235521 |
| 3 | 49595035 | 49595035 | 1 | 3_49595035 | ENSG00000164061 | BSN | 0 | INTRON | -4.6931303 | 2.69E-06 | 0.01235678 |
| 22 | 35447272 | 35447272 | 1 | 22_35447272 | ENSG00000100297 | MCM5 | 21841 | Downstream | 4.6928314 | 2.69E-06 | 0.01236519 |
| 22 | 23163248 | 23163248 | 1 | 22_23163248 | ENSG00000100228 | RAB36 | 0 | 3UTR | 4.69280042 | 2.69E-06 | 0.01236519 |
| 1 | 155012252 | 155012252 | 1 | 1_155012252 | ENSG00000160685 | ZBTB7B | 0 | INTRON | 4.69278048 | 2.70E-06 | 0.01236519 |
| 21 | 36221895 | 36221895 | 1 | 21_36221895 | ENSG00000142197 | DOP1B | 0 | INTRON | 4.69275429 | 2.70E-06 | 0.01236519 |
| 1 | 92503649 | 92503649 | 1 | 1_92503649 | ENSG00000067208 | EVI5 | 5046 | Downstream | 4.69271532 | 2.70E-06 | 0.01236519 |
| 12 | 128792647 | 128792647 | 1 | 12_128792647 | ENSG00000139370 | SLC15A4 | 546 | Downstream | -4.6925059 | 2.70E-06 | 0.01237363 |
| 19 | 54681981 | 54681981 | 1 | 19_54681981 | ENSG00000225370 | AC243962.1 | 9390 | Downstream | 4.69238667 | 2.70E-06 | 0.01237363 |
| 13 | 74577737 | 74577737 | 1 | 13_74577737 | ENSG00000236678 | LINC00347 | 12292 | Downstream | -4.6923747 | 2.70E-06 | 0.01237363 |
| 14 | 103905762 | 103905762 | 1 | 14_103905762 | ENSG00000156411 | ATP5MPL | 6525 | Downstream | -4.6923084 | 2.70E-06 | 0.01237363 |
| 9 | 131323438 | 131323438 | 1 | 9_131323438 | ENSG00000160539 | PLPP7 | 0 | INTRON | 4.69230024 | 2.70E-06 | 0.01237363 |
| 3 | 178735533 | 178735533 | 1 | 3_178735533 | ENSG00000197584 | KCNMB2 | 0 | INTRON | 4.69210556 | 2.70E-06 | 0.01238208 |
| 12 | 118951994 | 118951994 | 1 | 12_118951994 | ENSG00000139767 | SRRM4 | 29546 | Upstream | 4.69189486 | 2.71E-06 | 0.01239151 |
| 7 | 80844200 | 80844200 | 1 | 7_80844200 | ENSG00000075223 | SEMA3C | 0 | INTRON | -4.6918249 | 2.71E-06 | 0.01239241 |
| 16 | 24016411 | 24016411 | 1 | 16_24016411 | ENSG00000166501 | PRKCB | 0 | INTRON | 4.69163569 | 2.71E-06 | 0.01239864 |
| 4 | 42440088 | 42440088 | 1 | 4_42440088 | ENSG00000124406 | ATP8A1 | 0 | INTRON | 4.69156431 | 2.71E-06 | 0.01239864 |
| 5 | 106544354 | 106544354 | 1 | 5_106544354 | ENSG00000250145 | AC114940.1 | 24 | Upstream | -4.6915572 | 2.71E-06 | 0.01239864 |
| 19 | 10236879 | 10236879 | 1 | 19_10236879 | ENSG00000267534 | S1PR2 | 5548 | Upstream | -4.6914677 | 2.71E-06 | 0.01240073 |
| 11 | 6360215 | 6360215 | 1 | 11_6360215 | ENSG00000282556 | AC068733.3 | 0 | EXON | 4.69122001 | 2.72E-06 | 0.01241242 |
| 5 | 82656907 | 82656907 | 1 | 5_82656907 | ENSG00000248870 | AC026782.2 | 69496 | Upstream | 4.69102733 | 2.72E-06 | 0.01241971 |
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| 5 | 3241686 | 3241686 | 1 | 5_3241686 | ENSG00000249808 | AC091832.1 | 60199 | Downstream | 4.69086288 | 2.72E-06 | 0.0124241 |
| 2 | 175807800 | 175807800 | 1 | 2_175807800 | ENSG00000223976 | EXTL2P1 | 35086 | Upstream | 4.69063115 | 2.72E-06 | 0.01243484 |
| 18 | 28132292 | 28132292 | 1 | 18_28132292 | ENSG00000170558 | CDH2 | 0 | INTRON | 4.69049824 | 2.73E-06 | 0.01243776 |
| 15 | 80420023 | 80420023 | 1 | 15_80420023 | ENSG00000172379 | ARNT2 | 0 | INTRON | 4.69047334 | 2.73E-06 | 0.01243776 |
| 2 | 105683861 | 105683861 | 1 | 2_105683861 | ENSG00000287308 | AC018802.2 | 47224 | Downstream | 4.69022508 | 2.73E-06 | 0.0124463 |
| 8 | 37562089 | 37562089 | 1 | 8_37562089 | ENSG00000254111 | AC124067.3 | 0 | INTRON | 4.69022321 | 2.73E-06 | 0.0124463 |
| 1 | 197862610 | 197862610 | 1 | 1_197862610 | ENSG00000203724 | C1orf53 | 40019 | Upstream | 4.68990862 | 2.73E-06 | 0.01246211 |
| 11 | 43381361 | 43381361 | 1 | 11_43381361 | ENSG00000052841 | TTC17 | 0 | INTRON | -4.6895666 | 2.74E-06 | 0.01247059 |
| 4 | 186603532 | 186603532 | 1 | 4_186603532 | ENSG00000083857 | FAT1 | 0 | EXON | 4.68956101 | 2.74E-06 | 0.01247059 |
| 10 | 127074889 | 127074889 | 1 | 10_127074889 | ENSG00000150760 | DOCK1 | 0 | INTRON | 4.68952395 | 2.74E-06 | 0.01247059 |
| 7 | 156764830 | 156764830 | 1 | 7_156764830 | ENSG00000105983 | LMBR1 | 0 | INTRON | -4.689492 | 2.74E-06 | 0.01247059 |
| 3 | 34640534 | 34640534 | 1 | 3_34640534 | ENSG00000226320 | LINC01811 | 0 | INTRON | 4.68941015 | 2.74E-06 | 0.01247059 |
| 8 | 144413839 | 144413839 | 1 | 8_144413839 | ENSG00000147804 | SLC39A4 | 0 | EXON | 4.68937088 | 2.74E-06 | 0.01247059 |
| 7 | 17279718 | 17279718 | 1 | 7_17279718 | ENSG00000237773 | AC073332.1 | 0 | INTRON | -4.6893257 | 2.74E-06 | 0.01247059 |
| 9 | 88104380 | 88104380 | 1 | 9_88104380 | ENSG00000177910 | SPATA31C2 | 25077 | Downstream | 4.6891124 | 2.74E-06 | 0.01247059 |
| 21 | 16428540 | 16428540 | 1 | 21_16428540 | ENSG00000215386 | MIR99AHG | 0 | INTRON | -4.6891094 | 2.74E-06 | 0.01247059 |
| 9 | 136782584 | 136782584 | 1 | 9_136782584 | ENSG00000224662 | ATP6V1G1P3 | 2366 | Downstream | -4.6891087 | 2.74E-06 | 0.01247059 |
| 10 | 82851218 | 82851218 | 1 | 10_82851218 | ENSG00000185737 | NRG3 | 0 | INTRON | -4.6890735 | 2.74E-06 | 0.01247059 |
| 3 | 53308393 | 53308393 | 1 | 3_53308393 | ENSG00000272886 | DCP1A | 0 | INTRON | 4.68902372 | 2.75E-06 | 0.01247059 |
| 2 | 179878940 | 179878940 | 1 | 2_179878940 | ENSG00000144331 | ZNF385B | 17328 | Upstream | 4.6890175 | 2.75E-06 | 0.01247059 |
| 14 | 103812413 | 103812413 | 1 | 14_103812413 | ENSG00000088808 | PPP1R13B | 0 | INTRON | 4.6890032 | 2.75E-06 | 0.01247059 |
| 2 | 220521827 | 220521827 | 1 | 2_220521827 | ENSG00000236451 | AC067956.1 | 0 | INTRON | -4.6888179 | 2.75E-06 | 0.01247856 |
| 16 | 19294951 | 19294951 | 1 | 16_19294951 | ENSG00000261210 | CLEC19A | 0 | INTRON | 4.68863109 | 2.75E-06 | 0.01248213 |
| 7 | 92538192 | 92538192 | 1 | 7_92538192 | ENSG00000127993 | RBM48 | 0 | 3UTR | -4.6886004 | 2.75E-06 | 0.01248213 |
| 1 | 162112005 | 162112005 | 1 | 1_162112005 | ENSG00000198929 | NOS1AP | 0 | INTRON | 4.68859558 | 2.75E-06 | 0.01248213 |
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| 13 | 84703657 | 84703657 | 1 | 13_84703657 | ENSG00000233349 | LINC00333 | 140421 | Downstream | -4.6884229 | 2.75E-06 | 0.012486 |
| 19 | 16853761 | 16853761 | 1 | 19_16853761 | ENSG00000127511 | SIN3B | 0 | INTRON | 4.68802168 | 2.76E-06 | 0.01250717 |
| 20 | 8261056 | 8261056 | 1 | 20_8261056 | ENSG00000182621 | PLCB1 | 0 | INTRON | 4.68794809 | 2.76E-06 | 0.01250833 |
| 3 | 63340640 | 63340640 | 1 | 3_63340640 | ENSG00000163630 | SYNPR | 0 | INTRON | -4.6878813 | 2.76E-06 | 0.01250908 |
| 12 | 59158692 | 59158692 | 1 | 12_59158692 | ENSG00000286351 | AC046129.1 | 27817 | Downstream | -4.6877154 | 2.76E-06 | 0.01251589 |
| 14 | 36372961 | 36372961 | 1 | 14_36372961 | ENSG00000283098 | AL132857.1 | 0 | INTRON | -4.6876219 | 2.76E-06 | 0.01251645 |
| 21 | 8392368 | 8392368 | 1 | 21_8392368 | ENSG00000280441 | FP236383.3 | 0 | INTRON | 4.68759717 | 2.76E-06 | 0.01251645 |
| 13 | 31695944 | 31695944 | 1 | 13_31695944 | ENSG00000133105 | RXFP2 | 43581 | Upstream | -4.687383 | 2.77E-06 | 0.01252302 |
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| 15 | 27193500 | 27193500 | 1 | 15_27193500 | ENSG00000182256 | GABRG3 | 0 | INTRON | 4.68727272 | 2.77E-06 | 0.01252522 |
| 21 | 10574278 | 10574278 | 1 | 21_10574278 | ENSG00000274391 | TPTE | 0 | INTRON | -4.6872335 | 2.77E-06 | 0.01252522 |
| 18 | 12511884 | 12511884 | 1 | 18_12511884 | ENSG00000134278 | SPIRE1 | 0 | INTRON | 4.68718164 | 2.77E-06 | 0.01252522 |
| 1 | 163094450 | 163094450 | 1 | 1_163094450 | ENSG00000143248 | RGS5 | 16670 | Downstream | 4.68691098 | 2.77E-06 | 0.01253846 |
| 8 | 133467896 | 133467896 | 1 | 8_133467896 | ENSG00000008513 | ST3GAL1 | 0 | INTRON | 4.68680469 | 2.78E-06 | 0.01254154 |
| 6 | 48511547 | 48511547 | 1 | 6_48511547 | ENSG00000278736 | FO393412.1 | 189943 | Downstream | 4.68675191 | 2.78E-06 | 0.01254154 |
| 12 | 48209577 | 48209577 | 1 | 12_48209577 | ENSG00000269514 | AC024257.3 | 0 | INTRON | 4.68664575 | 2.78E-06 | 0.01254458 |
| 20 | 25488288 | 25488288 | 1 | 20_25488288 | ENSG00000101004 | NINL | 0 | INTRON | 4.68658544 | 2.78E-06 | 0.01254458 |
| 7 | 142899826 | 142899826 | 1 | 7_142899826 | ENSG00000286569 | AC245427.2 | 0 | EXON | -4.6864918 | 2.78E-06 | 0.01254458 |
| 4 | 95294474 | 95294474 | 1 | 4_95294474 | ENSG00000182168 | UNC5C | 0 | INTRON | 4.68638348 | 2.78E-06 | 0.01254458 |
| 11 | 12851830 | 12851830 | 1 | 11_12851830 | ENSG00000187079 | TEAD1 | 0 | INTRON | 4.68624369 | 2.78E-06 | 0.01254458 |
| 1 | 207406531 | 207406531 | 1 | 1_207406531 | ENSG00000283044 | AL391597.1 | 0 | INTRON | 4.68605292 | 2.79E-06 | 0.01254458 |
| 7 | 12887502 | 12887502 | 1 | 7_12887502 | ENSG00000229618 | AC011287.1 | 0 | INTRON | 4.68603678 | 2.79E-06 | 0.01254458 |
| 2 | 67383603 | 67383603 | 1 | 2_67383603 | ENSG00000236780 | LINC01829 | 0 | INTRON | 4.68602389 | 2.79E-06 | 0.01254458 |
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| 12 | 86313799 | 86313799 | 1 | 12_86313799 | ENSG00000182050 | MGAT4C | 0 | INTRON | -4.6859957 | 2.79E-06 | 0.01254458 |
| 7 | 63408020 | 63408020 | 1 | 7_63408020 | ENSG00000227305 | AC073188.2 | 0 | INTRON | 4.68598513 | 2.79E-06 | 0.01254458 |
| 15 | 76594851 | 76594851 | 1 | 15_76594851 | ENSG00000140386 | SCAPER | 0 | INTRON | 4.68597989 | 2.79E-06 | 0.01254458 |
| 13 | 26110085 | 26110085 | 1 | 13_26110085 | ENSG00000233963 | ATP8A2P3 | 0 | INTRON | -4.6859057 | 2.79E-06 | 0.01254458 |
| 6 | 122538494 | 122538494 | 1 | 6_122538494 | ENSG00000135549 | PKIB | 0 | INTRON | 4.6858645 | 2.79E-06 | 0.01254458 |
| 8 | 7228173 | 7228173 | 1 | 8_7228173 | ENSG00000284728 | AF228730.6 | 100 | Upstream | -4.6858594 | 2.79E-06 | 0.01254458 |
| 17 | 58926156 | 58926156 | 1 | 17_58926156 | ENSG00000175175 | PPM1E | 0 | INTRON | 4.68583414 | 2.79E-06 | 0.01254458 |
| 1 | 226419884 | 226419884 | 1 | 1_226419884 | ENSG00000270287 | AL359704.2 | 7749 | Upstream | 4.68569316 | 2.79E-06 | 0.0125499 |
| 1 | 94847813 | 94847813 | 1 | 1_94847813 | ENSG00000224081 | SLC44A3-AS1 | 0 | INTRON | 4.68550994 | 2.79E-06 | 0.01255439 |

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| 4 | 39793659 | 39793659 | 1 | 4_39793659 | ENSG00000078140 | UBE2K | 10867 | Downstream | 4.68522653 | 2.80E-06 | 0.01256049 |
| 6 | 17924209 | 17924209 | 1 | 6_17924209 | ENSG00000137177 | KIF13A | 0 | INTRON | 4.68521876 | 2.80E-06 | 0.01256049 |
| 7 | 30648838 | 30648838 | 1 | 7_30648838 | ENSG00000106113 | CRHR2 | 3103 | Downstream | 4.6851958 | 2.80E-06 | 0.01256049 |
| 9 | 36505330 | 36505330 | 1 | 9_36505330 | ENSG00000137075 | RNF38 | 17782 | Upstream | 4.68511815 | 2.80E-06 | 0.01256075 |
| 6 | 107601198 | 107601198 | 1 | 6_107601198 | ENSG00000112320 | SOBP | 0 | INTRON | -4.6850835 | 2.80E-06 | 0.01256075 |
| 14 | 22489678 | 22489678 | 1 | 14_22489678 | ENSG00000211840 | TRAJ49 | 135 | Downstream | 4.6849473 | 2.80E-06 | 0.01256579 |
| 12 | 131480395 | 131480395 | 1 | 12_131480395 | ENSG00000279388 | AC073578.3 | 0 | EXON | 4.68488926 | 2.80E-06 | 0.01256592 |
| 15 | 34423559 | 34423559 | 1 | 15_34423559 | ENSG00000175265 | GOLGA8A | 0 | INTRON | 4.68483724 | 2.80E-06 | 0.01256592 |
| 11 | 100811487 | 100811487 | 1 | 11_100811487 | ENSG00000165895 | ARHGAP42 | 0 | INTRON | 4.68467197 | 2.80E-06 | 0.01256672 |
| 2 | 133514892 | 133514892 | 1 | 2_133514892 | ENSG00000176771 | NCKAP5 | 0 | INTRON | 4.68460438 | 2.81E-06 | 0.01256672 |
| 11 | 13747625 | 13747625 | 1 | 11_13747625 | ENSG00000255075 | CENPUP1 | 8401 | Upstream | -4.6845702 | 2.81E-06 | 0.01256672 |
| 5 | 32478654 | 32478654 | 1 | 5_32478654 | ENSG00000056097 | ZFR | 33914 | Upstream | 4.6845439 | 2.81E-06 | 0.01256672 |
| 11 | 10414280 | 10414280 | 1 | 11_10414280 | ENSG00000133805 | AMPD3 | 0 | INTRON | 4.68452369 | 2.81E-06 | 0.01256672 |
| X | 152583085 | 152583085 | 1 | X_152583085 | ENSG00000287394 | AC244102.4 | 0 | INTRON | 4.68448457 | 2.81E-06 | 0.01256672 |
| 16 | 14930388 | 14930388 | 1 | 16_14930388 | ENSG00000183458 | AC138932.1 | 0 | INTRON | 4.68444666 | 2.81E-06 | 0.01256672 |
| 9 | 110194735 | 110194735 | 1 | 9_110194735 | ENSG00000188959 | C9orf152 | 0 | INTRON | -4.6842277 | 2.81E-06 | 0.01257685 |
| 12 | 757983 | 757983 | 1 | 12_757983 | ENSG00000060237 | WNK1 | 0 | INTRON | 4.68401077 | 2.81E-06 | 0.01257694 |
| 6 | 73314349 | 73314349 | 1 | 6_73314349 | ENSG00000135314 | KHDC1 | 3984 | Upstream | 4.68398999 | 2.81E-06 | 0.01257694 |
| 2 | 234199654 | 234199654 | 1 | 2_234199654 | ENSG00000261298 | AC122134.1 | 23183 | Upstream | 4.6839832 | 2.81E-06 | 0.01257694 |
| 16 | 6092681 | 6092681 | 1 | 16_6092681 | ENSG00000257180 | AC009135.1 | 0 | EXON | -4.6839209 | 2.81E-06 | 0.01257694 |
| 9 | 135513596 | 135513596 | 1 | 9_135513596 | ENSG00000226706 | AL161452.1 | 7149 | Upstream | -4.6838916 | 2.81E-06 | 0.01257694 |
| 10 | 46161091 | 46161091 | 1 | 10_46161091 | ENSG00000264204 | AGAP7P | 29733 | Downstream | -4.6838529 | 2.82E-06 | 0.01257694 |
| 15 | 53392150 | 53392150 | 1 | 15_53392150 | ENSG00000287596 | AC066614.1 | 27714 | Upstream | -4.6838299 | 2.82E-06 | 0.01257694 |
| 18 | 6624396 | 6624396 | 1 | 18_6624396 | ENSG00000261627 | AP005205.1 | 17574 | Downstream | -4.6837136 | 2.82E-06 | 0.01257694 |
| 19 | 48042735 | 48042735 | 1 | 19_48042735 | ENSG00000105507 | CABP5 | 0 | INTRON | 4.68369103 | 2.82E-06 | 0.01257694 |
| 3 | 43473318 | 43473318 | 1 | 3_43473318 | ENSG00000160746 | ANO10 | 0 | INTRON | -4.6836881 | 2.82E-06 | 0.01257694 |
| 6 | 56675509 | 56675509 | 1 | 6_56675509 | ENSG00000151914 | DST | 0 | INTRON | -4.6836072 | 2.82E-06 | 0.01257861 |
| 5 | 1299274 | 1299274 | 1 | 5_1299274 | ENSG00000164362 | TERT | 4227 | Upstream | -4.6834942 | 2.82E-06 | 0.01258225 |
| 1 | 202370622 | 202370622 | 1 | 1_202370622 | ENSG00000077157 | PPP1R12B | 0 | INTRON | 4.68342845 | 2.82E-06 | 0.01258299 |
| 6 | 116122765 | 116122765 | 1 | 6_116122765 | ENSG00000178425 | NT5DC1 | 0 | INTRON | -4.6833159 | 2.82E-06 | 0.01258607 |
| 9 | 88455615 | 88455615 | 1 | 9_88455615 | ENSG00000106723 | SPIN1 | 0 | INTRON | 4.68327094 | 2.82E-06 | 0.01258607 |
| 7 | 158341323 | 158341323 | 1 | 7_158341323 | ENSG00000155093 | PTPRN2 | 0 | INTRON | 4.68302352 | 2.83E-06 | 0.01259507 |
| 16 | 86372723 | 86372723 | 1 | 16_86372723 | ENSG00000168367 | LINC00917 | 23035 | Upstream | 4.68301289 | 2.83E-06 | 0.01259507 |
| 11 | 128838984 | 128838984 | 1 | 11_128838984 | ENSG00000151704 | KCNJ1 | 0 | 3UTR | -4.6829226 | 2.83E-06 | 0.01259507 |
| 16 | 74587634 | 74587634 | 1 | 16_74587634 | ENSG00000090863 | GLG1 | 0 | INTRON | 4.68290982 | 2.83E-06 | 0.01259507 |
| 4 | 102602840 | 102602840 | 1 | 4_102602840 | ENSG00000109320 | NFKB1 | 0 | INTRON | -4.6824405 | 2.83E-06 | 0.01261838 |
| 10 | 130942511 | 130942511 | 1 | 10_130942511 | ENSG00000264803 | MIR378C | 20076 | Downstream | -4.6824236 | 2.84E-06 | 0.01261838 |
| 4 | 164679476 | 164679476 | 1 | 4_164679476 | ENSG00000248162 | AC074198.1 | 45833 | Upstream | 4.68229888 | 2.84E-06 | 0.01262265 |
| 7 | 1117335 | 1117335 | 1 | 7_1117335 | ENSG00000146540 | C7orf50 | 0 | INTRON | 4.68224717 | 2.84E-06 | 0.01262265 |
| 2 | 117948242 | 117948242 | 1 | 2_117948242 | ENSG00000125633 | CCDC93 | 0 | INTRON | 4.68206995 | 2.84E-06 | 0.01262892 |
| 6 | 33880467 | 33880467 | 1 | 6_33880467 | ENSG00000249346 | LINC01016 | 0 | INTRON | -4.68203 | 2.84E-06 | 0.01262892 |
| 12 | 125142831 | 125142831 | 1 | 12_125142831 | ENSG00000081760 | AACS | 0 | 3UTR | 4.68191358 | 2.84E-06 | 0.01262892 |
| 2 | 4024331 | 4024331 | 1 | 2_4024331 | ENSG00000237401 | LINC01304 | 50207 | Upstream | 4.68184022 | 2.84E-06 | 0.01262892 |
| 3 | 165301775 | 165301775 | 1 | 3_165301775 | ENSG00000244128 | LINC01322 | 0 | INTRON | -4.6817826 | 2.84E-06 | 0.01262892 |
| 5 | 180578521 | 180578521 | 1 | 5_180578521 | ENSG00000113300 | CNOT6 | 163 | Downstream | 4.68176632 | 2.84E-06 | 0.01262892 |
| 8 | 110671547 | 110671547 | 1 | 8_110671547 | ENSG00000253122 | AC025366.1 | 39153 | Downstream | 4.68175569 | 2.84E-06 | 0.01262892 |
| 1 | 41067170 | 41067170 | 1 | 1_41067170 | ENSG00000010803 | SCMH1 | 0 | INTRON | -4.6816528 | 2.85E-06 | 0.01262892 |
| 1 | 203818706 | 203818706 | 1 | 1_203818706 | ENSG00000058673 | ZC3H11A | 0 | INTRON | 4.68164543 | 2.85E-06 | 0.01262892 |
| 8 | 50991216 | 50991216 | 1 | 8_50991216 | ENSG00000201316 | AC090919.1 | 23804 | Upstream | -4.6816103 | 2.85E-06 | 0.01262892 |
| X | 83183045 | 83183045 | 1 | X_83183045 | ENSG00000232735 | ATG4AP1 | 183809 | Downstream | 4.68154749 | 2.85E-06 | 0.0126295 |
| 6 | 102811246 | 102811246 | 1 | 6_102811246 | ENSG00000217120 | Z98755.1 | 191267 | Upstream | -4.681425 | 2.85E-06 | 0.01263136 |
| 13 | 85443102 | 85443102 | 1 | 13_85443102 | ENSG00000226317 | LINC00351 | 0 | INTRON | 4.6813667 | 2.85E-06 | 0.01263136 |
| 1 | 77412832 | 77412832 | 1 | 1_77412832 | ENSG00000154027 | AK5 | 0 | INTRON | 4.6813571 | 2.85E-06 | 0.01263136 |
| 1 | 149421355 | 149421355 | 1 | 1_149421355 | ENSG00000286219 | NOTCH2NLC | 0 | INTRON | -4.6812278 | 2.85E-06 | 0.01263604 |
| 6 | 342875 | 342875 | 1 | 6_342875 | ENSG00000112679 | DUSP22 | 0 | INTRON | 4.68084115 | 2.86E-06 | 0.0126566 |
| 14 | 84471986 | 84471986 | 1 | 14_84471986 | ENSG00000251895 | RNU6-976P | 267955 | Upstream | -4.6807416 | 2.86E-06 | 0.01265808 |
| 17 | 9977051 | 9977051 | 1 | 17_9977051 | ENSG00000007237 | GAS7 | 0 | INTRON | 4.68071038 | 2.86E-06 | 0.01265808 |
| 5 | 14323694 | 14323694 | 1 | 5_14323694 | ENSG00000038382 | TRIO | 0 | INTRON | -4.6806047 | 2.86E-06 | 0.01266115 |
| 16 | 70464738 | 70464738 | 1 | 16_70464738 | ENSG00000157353 | FCSK | 0 | INTRON | -4.680554 | 2.86E-06 | 0.01266115 |
| 16 | 376086 | 376086 | 1 | 16_376086 | ENSG00000129925 | TMEM8A | 0 | INTRON | 4.680406 | 2.86E-06 | 0.012667 |
| 19 | 47007864 | 47007864 | 1 | 19_47007864 | ENSG00000160007 | ARHGAP35 | 2787 | Downstream | 4.68027624 | 2.86E-06 | 0.01267173 |
| 4 | 48305753 | 48305753 | 1 | 4_48305753 | ENSG00000109171 | SLAIN2 | 35775 | Upstream | -4.6801238 | 2.87E-06 | 0.01267786 |
| 16 | 19917690 | 19917690 | 1 | 16_19917690 | ENSG00000167191 | GPRC5B | 31523 | Upstream | 4.67996927 | 2.87E-06 | 0.01268412 |
| 16 | 88169608 | 88169608 | 1 | 16_88169608 | ENSG00000260162 | AC134312.2 | 7680 | Upstream | 4.67985468 | 2.87E-06 | 0.01268792 |
| 2 | 75738342 | 75738342 | 1 | 2_75738342 | ENSG00000286045 | AC005034.6 | 10219 | Downstream | 4.67978837 | 2.87E-06 | 0.01268872 |
| 8 | 23292379 | 23292379 | 1 | 8_23292379 | ENSG00000104679 | R3HCC1 | 0 | INTRON | 4.67961113 | 2.87E-06 | 0.0126964 |
| 22 | 46003369 | 46003369 | 1 | 22_46003369 | ENSG00000280424 | BX537318.2 | 3246 | Upstream | -4.6795057 | 2.88E-06 | 0.01269963 |
| 11 | 110146835 | 110146835 | 1 | 11_110146835 | ENSG00000137710 | RDX | 0 | INTRON | -4.6794476 | 2.88E-06 | 0.01269994 |
| 18 | 8396152 | 8396152 | 1 | 18_8396152 | ENSG00000173482 | PTPRM | 0 | INTRON | -4.6792363 | 2.88E-06 | 0.01270849 |
| 8 | 15155783 | 15155783 | 1 | 8_15155783 | ENSG00000185053 | SGCZ | 0 | INTRON | -4.6792032 | 2.88E-06 | 0.01270849 |
| 7 | 32983315 | 32983315 | 1 | 7_32983315 | ENSG00000122642 | FKBP9 | 0 | INTRON | 4.67904793 | 2.88E-06 | 0.01271156 |
| 11 | 121608881 | 121608881 | 1 | 11_121608881 | ENSG00000137642 | SORL1 | 0 | EXON | 4.67904732 | 2.88E-06 | 0.01271156 |
| 16 | 10152312 | 10152312 | 1 | 16_10152312 | ENSG00000183454 | GRIN2A | 0 | INTRON | -4.6789915 | 2.88E-06 | 0.01271173 |
| 2 | 102120919 | 102120919 | 1 | 2_102120919 | ENSG00000115594 | IL1R1 | 0 | INTRON | -4.6788318 | 2.89E-06 | 0.01271833 |
| 9 | 87595097 | 87595097 | 1 | 9_87595097 | ENSG00000196730 | DAPK1 | 0 | INTRON | 4.67863046 | 2.89E-06 | 0.01272746 |
| 14 | 55017009 | 55017009 | 1 | 14_55017009 | ENSG00000198554 | WDHD1 | 0 | INTRON | 4.67856917 | 2.89E-06 | 0.01272746 |
| 1 | 179102112 | 179102112 | 1 | 1_179102112 | ENSG00000143322 | ABL2 | 0 | 3UTR | 4.67852535 | 2.89E-06 | 0.01272746 |
| 7 | 121295280 | 121295280 | 1 | 7_121295280 | ENSG00000106034 | CPED1 | 0 | INTRON | 4.67839679 | 2.89E-06 | 0.01273197 |
| 8 | 124142037 | 124142037 | 1 | 8_124142037 | ENSG00000250727 | AC100871.1 | 0 | EXON | 4.67833517 | 2.89E-06 | 0.01273197 |
| 2 | 94926208 | 94926208 | 1 | 2_94926208 | ENSG00000259848 | AC097374.1 | 0 | INTRON | 4.67824044 | 2.89E-06 | 0.01273197 |
| X | 103387805 | 103387805 | 1 | X_103387805 | ENSG00000166681 | BEX3 | 9728 | Downstream | -4.678226 | 2.89E-06 | 0.01273197 |
| 16 | 55171532 | 55171532 | 1 | 16_55171532 | ENSG00000259283 | AC109462.1 | 88436 | Downstream | -4.6781874 | 2.89E-06 | 0.01273197 |
| 9 | 133579433 | 133579433 | 1 | 9_133579433 | ENSG00000196990 | FAM163B | 0 | INTRON | -4.6781312 | 2.90E-06 | 0.01273217 |
| 5 | 153514200 | 153514200 | 1 | 5_153514200 | ENSG00000155511 | GRIA1 | 0 | INTRON | -4.677958 | 2.90E-06 | 0.01273659 |
| 9 | 84256074 | 84256074 | 1 | 9_84256074 | ENSG00000197506 | SLC28A3 | 19382 | Downstream | 4.67795406 | 2.90E-06 | 0.01273659 |
| 2 | 74596308 | 74596308 | 1 | 2_74596308 | ENSG00000159374 | M1AP | 0 | INTRON | 4.6778254 | 2.90E-06 | 0.01274002 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 13 | 45294337 | 45294337 | 1 | 13_45294337 | ENSG00000188342 | GTF2F2 | 9444 | Downstream | -4.6777929 | 2.90E-06 | 0.01274002 |
| 1 | 52569307 | 52569307 | 1 | 1_52569307 | ENSG00000236290 | EEF1GP7 | 3806 | Upstream | -4.6776798 | 2.90E-06 | 0.01274375 |
| 5 | 141128844 | 141128844 | 1 | 5_141128844 | ENSG00000272154 | AC244517.2 | 0 | INTRON | 4.6775626 | 2.90E-06 | 0.01274775 |
| 16 | 9164202 | 9164202 | 1 | 16_9164202 | ENSG00000220793 | RPL21P119 | 7321 | Upstream | -4.6773586 | 2.91E-06 | 0.01275714 |
| 2 | 135851215 | 135851215 | 1 | 2_135851215 | ENSG00000076003 | MCM6 | 0 | INTRON | 4.67726972 | 2.91E-06 | 0.01275937 |
| 4 | 156602232 | 156602232 | 1 | 4_156602232 | ENSG00000251511 | AC096736.3 | 12193 | Downstream | 4.67703137 | 2.91E-06 | 0.01277062 |
| 2 | 107756203 | 107756203 | 1 | 2_107756203 | ENSG00000232991 | GACAT1 | 0 | INTRON | 4.6769774 | 2.91E-06 | 0.01277062 |
| 9 | 3847009 | 3847009 | 1 | 9_3847009 | ENSG00000107249 | GLIS3 | 0 | INTRON | 4.67686661 | 2.91E-06 | 0.01277062 |
| 21 | 30199607 | 30199607 | 1 | 21_30199607 | ENSG00000227342 | LINC00307 | 9543 | Downstream | -4.6768141 | 2.91E-06 | 0.01277062 |
| 13 | 67117766 | 67117766 | 1 | 13_67117766 | ENSG00000184226 | PCDH9 | 0 | INTRON | -4.6768029 | 2.91E-06 | 0.01277062 |
| 3 | 58550251 | 58550251 | 1 | 3_58550251 | ENSG00000168306 | ACOX2 | 12968 | Upstream | 4.6767515 | 2.91E-06 | 0.01277062 |
| 4 | 42392478 | 42392478 | 1 | 4_42392478 | ENSG00000250781 | AC024022.1 | 827 | Upstream | 4.67671895 | 2.92E-06 | 0.01277062 |
| 7 | 35724339 | 35724339 | 1 | 7_35724339 | ENSG00000227544 | AC018647.1 | 0 | INTRON | 4.67661048 | 2.92E-06 | 0.01277408 |
| 7 | 145927332 | 145927332 | 1 | 7_145927332 | ENSG00000280144 | AC073308.1 | 122729 | Upstream | -4.6764416 | 2.92E-06 | 0.01277813 |
| 16 | 82197161 | 82197161 | 1 | 16_82197161 | ENSG00000251888 | RN7SKP190 | 4371 | Upstream | -4.67644 | 2.92E-06 | 0.01277813 |
| 15 | 100195427 | 100195427 | 1 | 15_100195427 | ENSG00000140470 | ADAMTS17 | 0 | INTRON | 4.67566772 | 2.93E-06 | 0.01282301 |
| 8 | 50092033 | 50092033 | 1 | 8_50092033 | ENSG00000147481 | SNTG1 | 0 | INTRON | 4.6754996 | 2.93E-06 | 0.01283022 |
| 1 | 118349012 | 118349012 | 1 | 1_118349012 | ENSG00000222209 | RNA5SP56 | 84523 | Upstream | 4.6753674 | 2.93E-06 | 0.01283263 |
| 10 | 132201316 | 132201316 | 1 | 10_132201316 | ENSG00000151640 | DPYSL4 | 0 | INTRON | 4.67535564 | 2.93E-06 | 0.01283263 |
| 6 | 69899432 | 69899432 | 1 | 6_69899432 | ENSG00000082293 | COL19A1 | 0 | INTRON | -4.6751732 | 2.94E-06 | 0.01284074 |
| 14 | 53041815 | 53041815 | 1 | 14_53041815 | ENSG00000100523 | DDHD1 | 0 | 3UTR | 4.6746101 | 2.95E-06 | 0.01286427 |
| 2 | 101416449 | 101416449 | 1 | 2_101416449 | ENSG00000196460 | RFX8 | 0 | INTRON | 4.67457693 | 2.95E-06 | 0.01286427 |
| 7 | 95616466 | 95616466 | 1 | 7_95616466 | ENSG00000231170 | AC002451.1 | 1334 | Downstream | 4.67456002 | 2.95E-06 | 0.01286427 |
| 3 | 2651666 | 2651666 | 1 | 3_2651666 | ENSG00000144619 | CNTN4 | 0 | INTRON | 4.67453806 | 2.95E-06 | 0.01286427 |
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| 10 | 71428881 | 71428881 | 1 | 10_71428881 | ENSG00000107736 | CDH23 | 0 | INTRON | -4.6744504 | 2.95E-06 | 0.01286427 |
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| 13 | 44130635 | 44130635 | 1 | 13_44130635 | ENSG00000226519 | LINC00390 | 0 | INTRON | 4.67427701 | 2.95E-06 | 0.01286843 |
| 6 | 143096185 | 143096185 | 1 | 6_143096185 | ENSG00000225752 | AL023581.1 | 0 | INTRON | -4.6742561 | 2.95E-06 | 0.01286843 |
| 7 | 844288 | 844288 | 1 | 7_844288 | ENSG00000164828 | SUN1 | 0 | INTRON | 4.67417563 | 2.95E-06 | 0.01286843 |
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| 12 | 70551629 | 70551629 | 1 | 12_70551629 | ENSG00000127329 | PTPRB | 0 | INTRON | 4.67409932 | 2.95E-06 | 0.01286843 |
| X | 52578033 | 52578033 | 1 | X_52578033 | ENSG00000228771 | BX510359.3 | 5955 | Upstream | -4.6739462 | 2.95E-06 | 0.0128741 |
| 22 | 39201436 | 39201436 | 1 | 22_39201436 | ENSG00000100311 | PDGFB | 21922 | Downstream | 4.67390366 | 2.96E-06 | 0.0128741 |
| 18 | 36650609 | 36650609 | 1 | 18_36650609 | ENSG00000134775 | FHOD3 | 0 | INTRON | -4.6736454 | 2.96E-06 | 0.01288702 |
| 17 | 48639062 | 48639062 | 1 | 17_48639062 | ENSG00000272763 | AC103702.2 | 0 | INTRON | 4.67357855 | 2.96E-06 | 0.01288791 |
| 1 | 175008830 | 175008830 | 1 | 1_175008830 | ENSG00000116161 | CACYBP | 0 | EXON | -4.6734813 | 2.96E-06 | 0.01289072 |
| 1 | 14727259 | 14727259 | 1 | 1_14727259 | ENSG00000189337 | KAZN | 0 | INTRON | 4.67312947 | 2.97E-06 | 0.012904 |
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| 15 | 67183365 | 67183365 | 1 | 15_67183365 | ENSG00000166949 | SMAD3 | 0 | INTRON | 4.67294911 | 2.97E-06 | 0.012904 |
| 2 | 31928419 | 31928419 | 1 | 2_31928419 | ENSG00000162959 | MEMO1 | 0 | INTRON | -4.6729118 | 2.97E-06 | 0.012904 |
| 12 | 26747281 | 26747281 | 1 | 12_26747281 | ENSG00000123104 | ITPR2 | 0 | INTRON | -4.6729073 | 2.97E-06 | 0.012904 |
| 2 | 106773189 | 106773189 | 1 | 2_106773189 | ENSG00000144057 | ST6GAL2 | 28410 | Downstream | -4.6728912 | 2.97E-06 | 0.012904 |
| 6 | 31511476 | 31511476 | 1 | 6_31511476 | ENSG00000204516 | MICB | 352 | Downstream | 4.67270487 | 2.97E-06 | 0.012904 |
| X | 4787330 | 4787330 | 1 | X_4787330 | ENSG00000236513 | AC074035.1 | 153758 | Upstream | 4.67257392 | 2.97E-06 | 0.012904 |
| 20 | 3019228 | 3019228 | 1 | 20_3019228 | ENSG00000132670 | PTPRA | 0 | INTRON | 4.67256111 | 2.97E-06 | 0.012904 |
| 4 | 18066260 | 18066260 | 1 | 4_18066260 | ENSG00000178177 | LCORL | 44384 | Upstream | -4.6725547 | 2.97E-06 | 0.012904 |
| 7 | 112403132 | 112403132 | 1 | 7_112403132 | ENSG00000226851 | AC004112.1 | 0 | INTRON | 4.67249503 | 2.98E-06 | 0.012904 |
| 19 | 51495450 | 51495450 | 1 | 19_51495450 | ENSG00000254521 | SIGLEC12 | 0 | INTRON | -4.6724764 | 2.98E-06 | 0.012904 |
| 18 | 46832503 | 46832503 | 1 | 18_46832503 | ENSG00000078043 | PIAS2 | 0 | INTRON | -4.6724131 | 2.98E-06 | 0.012904 |
| 12 | 31512319 | 31512319 | 1 | 12_31512319 | ENSG00000170456 | DENND5B | 0 | INTRON | -4.6723582 | 2.98E-06 | 0.012904 |
| 10 | 8308677 | 8308677 | 1 | 10_8308677 | ENSG00000226861 | AL390835.1 | 7010 | Downstream | -4.6723042 | 2.98E-06 | 0.012904 |
| 14 | 23540431 | 23540431 | 1 | 14_23540431 | ENSG00000136367 | ZFHX2 | 0 | INTRON | -4.6722458 | 2.98E-06 | 0.012904 |
| 1 | 90875993 | 90875993 | 1 | 1_90875993 | ENSG00000272094 | AC091614.1 | 13073 | Upstream | 4.67222002 | 2.98E-06 | 0.012904 |
| 2 | 95935041 | 95935041 | 1 | 2_95935041 | ENSG00000174501 | ANKRD36C | 0 | INTRON | -4.672217 | 2.98E-06 | 0.012904 |
| 14 | 93131476 | 93131476 | 1 | 14_93131476 | ENSG00000258595 | AL110118.1 | 6589 | Upstream | 4.67203575 | 2.98E-06 | 0.012904 |
| 2 | 144558727 | 144558727 | 1 | 2_144558727 | ENSG00000232606 | LINC01412 | 0 | INTRON | 4.67200702 | 2.98E-06 | 0.012904 |
| 1 | 242604741 | 242604741 | 1 | 1_242604741 | ENSG00000270859 | AC099785.1 | 66398 | Upstream | 4.67196972 | 2.98E-06 | 0.012904 |
| 5 | 4028416 | 4028416 | 1 | 5_4028416 | ENSG00000249994 | AC025187.1 | 5296 | Downstream | -4.6719422 | 2.98E-06 | 0.012904 |
| 2 | 50800769 | 50800769 | 1 | 2_50800769 | ENSG00000179915 | NRXN1 | 0 | INTRON | 4.6718918 | 2.98E-06 | 0.012904 |
| 3 | 134200365 | 134200365 | 1 | 3_134200365 | ENSG00000163785 | RYK | 0 | INTRON | 4.67189066 | 2.98E-06 | 0.012904 |
| 3 | 117975685 | 117975685 | 1 | 3_117975685 | ENSG00000239268 | AC092691.1 | 0 | INTRON | -4.6718679 | 2.98E-06 | 0.012904 |
| 9 | 76787662 | 76787662 | 1 | 9_76787662 | ENSG00000106772 | PRUNE2 | 0 | INTRON | 4.67185657 | 2.98E-06 | 0.012904 |
| 14 | 56184826 | 56184826 | 1 | 14_56184826 | ENSG00000139946 | PELI2 | 0 | INTRON | 4.6717013 | 2.99E-06 | 0.01291048 |
| X | 78289663 | 78289663 | 1 | X_78289663 | ENSG00000173198 | CYSLTR1 | 0 | INTRON | 4.67152291 | 2.99E-06 | 0.01291842 |
| Y | 13523089 | 13523089 | 1 | Y_13523089 | ENSG00000183878 | UTY | 42416 | Upstream | 4.67136725 | 2.99E-06 | 0.01292493 |
| 5 | 80558381 | 80558381 | 1 | 5_80558381 | ENSG00000189127 | ANKRD34B | 0 | 3UTR | 4.67114061 | 3.00E-06 | 0.01293592 |
| 2 | 53775636 | 53775636 | 1 | 2_53775636 | ENSG00000115239 | ASB3 | 0 | INTRON | 4.67090293 | 3.00E-06 | 0.01294761 |
| 11 | 129480375 | 129480375 | 1 | 11_129480375 | ENSG00000043039 | BARX2 | 28096 | Downstream | 4.67080374 | 3.00E-06 | 0.01295058 |
| 5 | 53143652 | 53143652 | 1 | 5_53143652 | ENSG00000247796 | AC008966.1 | 15979 | Downstream | 4.67044199 | 3.01E-06 | 0.01295902 |
| 3 | 191168571 | 191168571 | 1 | 3_191168571 | ENSG00000188729 | OSTN | 30669 | Upstream | 4.67037348 | 3.01E-06 | 0.01295902 |
| 3 | 27815708 | 27815708 | 1 | 3_27815708 | ENSG00000225548 | LINC01980 | 0 | INTRON | -4.6703701 | 3.01E-06 | 0.01295902 |
| 17 | 41979700 | 41979700 | 1 | 17_41979700 | ENSG00000168259 | DNAJC7 | 0 | INTRON | -4.670329 | 3.01E-06 | 0.01295902 |
| 2 | 159708787 | 159708787 | 1 | 2_159708787 | ENSG00000226266 | AC009961.1 | 0 | INTRON | 4.67028103 | 3.01E-06 | 0.01295902 |
| 15 | 28672718 | 28672718 | 1 | 15_28672718 | ENSG00000206149 | HERC2P9 | 0 | INTRON | -4.6702556 | 3.01E-06 | 0.01295902 |
| 6 | 157924814 | 157924814 | 1 | 6_157924814 | ENSG00000130340 | SNX9 | 0 | INTRON | -4.6702399 | 3.01E-06 | 0.01295902 |
| 1 | 145647601 | 145647601 | 1 | 1_145647601 | ENSG00000117262 | GPR89A | 0 | INTRON | 4.67021238 | 3.01E-06 | 0.01295902 |
| 2 | 54747304 | 54747304 | 1 | 2_54747304 | ENSG00000231334 | AC104781.1 | 0 | EXON | 4.67015009 | 3.01E-06 | 0.01295902 |
| 6 | 145175627 | 145175627 | 1 | 6_145175627 | ENSG00000285598 | AL023283.1 | 120917 | Upstream | 4.67014961 | 3.01E-06 | 0.01295902 |
| 12 | 109431107 | 109431107 | 1 | 12_109431107 | ENSG00000174527 | MYO1H | 0 | INTRON | -4.670055 | 3.01E-06 | 0.0129617 |
| 19 | 1097386 | 1097386 | 1 | 19_1097386 | ENSG00000099817 | POLR2E | 2006 | Upstream | 4.66992897 | 3.01E-06 | 0.01296408 |
| 12 | 9445041 | 9445041 | 1 | 12_9445041 | ENSG00000214826 | DDX12P | 0 | INTRON | 4.66986186 | 3.01E-06 | 0.01296408 |
| 10 | 111647727 | 111647727 | 1 | 10_111647727 | ENSG00000287231 | AL136119.1 | 139505 | Downstream | -4.6698119 | 3.01E-06 | 0.01296408 |
| 3 | 155933737 | 155933737 | 1 | 3_155933737 | ENSG00000163655 | GMPS | 0 | INTRON | 4.6698096 | 3.01E-06 | 0.01296408 |
| 21 | 20025849 | 20025849 | 1 | 21_20025849 | ENSG00000233480 | LINC01683 | 125806 | Upstream | -4.6694853 | 3.02E-06 | 0.01298128 |
| 1 | 202933020 | 202933020 | 1 | 1_202933020 | ENSG00000117153 | KLHL12 | 4384 | Upstream | 4.66905855 | 3.03E-06 | 0.01299881 |
| 14 | 98742281 | 98742281 | 1 | 14_98742281 | ENSG00000176605 | C14orf177 | 24515 | Downstream | 4.66905059 | 3.03E-06 | 0.01299881 |

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| 2 | 222734051 | 222734051 | 1 | 2_222734051 | ENSG00000235225 | AC016712.1 | 7217 | Downstream | -4.6685569 | 3.03E-06 | 0.01302362 |
| 8 | 93222939 | 93222939 | 1 | 8_93222939 | ENSG00000246662 | LINC00535 | 0 | INTRON | 4.66843552 | 3.04E-06 | 0.01302802 |
| 16 | 29583923 | 29583923 | 1 | 16_29583923 | ENSG00000205534 | SMG1P2 | 0 | INTRON | 4.66798732 | 3.04E-06 | 0.01305318 |
| 2 | 66194240 | 66194240 | 1 | 2_66194240 | ENSG00000204929 | AC007389.1 | 0 | INTRON | 4.66779903 | 3.04E-06 | 0.01305835 |
| 9 | 135794243 | 135794243 | 1 | 9_135794243 | ENSG00000107147 | KCNT1 | 0 | 3UTR | 4.66778153 | 3.04E-06 | 0.01305835 |
| 12 | 103380004 | 103380004 | 1 | 12_103380004 | ENSG00000179088 | C12orf42 | 0 | INTRON | 4.66769509 | 3.05E-06 | 0.01305835 |
| 20 | 24383613 | 24383613 | 1 | 20_24383613 | ENSG00000234069 | GAPDHP53 | 61777 | Upstream | 4.6676456 | 3.05E-06 | 0.01305835 |
| 14 | 51609735 | 51609735 | 1 | 14_51609735 | ENSG00000139926 | FRMD6 | 0 | INTRON | 4.66758834 | 3.05E-06 | 0.01305835 |
| 13 | 110101587 | 110101587 | 1 | 13_110101587 | ENSG00000275830 | AL390755.1 | 0 | INTRON | 4.66758786 | 3.05E-06 | 0.01305835 |
| 2 | 112832165 | 112832165 | 1 | 2_112832165 | ENSG00000125538 | IL1B | 0 | INTRON | -4.6675434 | 3.05E-06 | 0.01305835 |
| 7 | 108077865 | 108077865 | 1 | 7_108077865 | ENSG00000091128 | LAMB4 | 0 | INTRON | -4.6673619 | 3.05E-06 | 0.01306475 |
| 2 | 205518794 | 205518794 | 1 | 2_205518794 | ENSG00000116117 | PARD3B | 0 | INTRON | 4.66722308 | 3.05E-06 | 0.01306475 |
| 20 | 25258271 | 25258271 | 1 | 20_25258271 | ENSG00000100994 | PYGB | 0 | INTRON | -4.6672218 | 3.05E-06 | 0.01306475 |
| 14 | 59058332 | 59058332 | 1 | 14_59058332 | ENSG00000258583 | LINC01500 | 0 | INTRON | 4.66722107 | 3.05E-06 | 0.01306475 |
| 17 | 43331966 | 43331966 | 1 | 17_43331966 | ENSG00000188825 | LINC00910 | 6774 | Downstream | -4.6671841 | 3.05E-06 | 0.01306475 |
| X | 20283546 | 20283546 | 1 | X_20283546 | ENSG00000177189 | RPS6KA3 | 16027 | Upstream | -4.6670304 | 3.06E-06 | 0.0130711 |
| 12 | 126037850 | 126037850 | 1 | 12_126037850 | ENSG00000275212 | LINC02826 | 0 | INTRON | 4.66697598 | 3.06E-06 | 0.0130711 |
| 18 | 63259424 | 63259424 | 1 | 18_63259424 | ENSG00000171791 | BCL2 | 0 | INTRON | 4.666883 | 3.06E-06 | 0.0130711 |
| 5 | 96955061 | 96955061 | 1 | 5_96955061 | ENSG00000113441 | LNPEP | 0 | INTRON | 4.66686541 | 3.06E-06 | 0.0130711 |
| 16 | 89053285 | 89053285 | 1 | 16_89053285 | ENSG00000256982 | AC135782.1 | 319 | Upstream | 4.66682588 | 3.06E-06 | 0.0130711 |
| 4 | 15738686 | 15738686 | 1 | 4_15738686 | ENSG00000109743 | BST1 | 373 | Downstream | -4.6667233 | 3.06E-06 | 0.01307315 |
| 8 | 128181121 | 128181121 | 1 | 8_128181121 | ENSG00000249859 | PVT1 | 0 | INTRON | 4.66668481 | 3.06E-06 | 0.01307315 |
| 15 | 57019213 | 57019213 | 1 | 15_57019213 | ENSG00000140262 | TCF12 | 0 | INTRON | -4.6666388 | 3.06E-06 | 0.01307315 |
| 8 | 15105621 | 15105621 | 1 | 8_15105621 | ENSG00000185053 | SGCZ | 0 | INTRON | -4.6664066 | 3.07E-06 | 0.01307704 |
| 6 | 31109527 | 31109527 | 1 | 6_31109527 | ENSG00000204542 | C6orf15 | 1695 | Downstream | 4.66635017 | 3.07E-06 | 0.01307704 |
| 1 | 181229583 | 181229583 | 1 | 1_181229583 | ENSG00000179452 | LINC01699 | 6804 | Upstream | -4.6663423 | 3.07E-06 | 0.01307704 |
| X | 51759778 | 51759778 | 1 | X_51759778 | ENSG00000189369 | GSPT2 | 13546 | Downstream | -4.6663386 | 3.07E-06 | 0.01307704 |
| 11 | 62137559 | 62137559 | 1 | 11_62137559 | ENSG00000149503 | INCENP | 0 | INTRON | 4.66632001 | 3.07E-06 | 0.01307704 |
| 8 | 32139633 | 32139633 | 1 | 8_32139633 | ENSG00000157168 | NRG1 | 0 | INTRON | 4.66606846 | 3.07E-06 | 0.01308977 |
| 7 | 124689261 | 124689261 | 1 | 7_124689261 | ENSG00000207214 | RNU6-102P | 41439 | Downstream | -4.6658598 | 3.07E-06 | 0.01309978 |
| 22 | 38114678 | 38114678 | 1 | 22_38114678 | ENSG00000184381 | PLA2G6 | 0 | INTRON | 4.66562012 | 3.08E-06 | 0.01310825 |
| 3 | 183303613 | 183303613 | 1 | 3_183303613 | ENSG00000053524 | MCF2L2 | 0 | INTRON | 4.6656158 | 3.08E-06 | 0.01310825 |
| 13 | 57865807 | 57865807 | 1 | 13_57865807 | ENSG00000202422 | RNA5SP30 | 125542 | Upstream | 4.6655724 | 3.08E-06 | 0.01310825 |
| 4 | 131309177 | 131309177 | 1 | 4_131309177 | ENSG00000206782 | RNU6-224P | 35829 | Downstream | 4.66542836 | 3.08E-06 | 0.01311415 |
| 5 | 169806801 | 169806801 | 1 | 5_169806801 | ENSG00000134516 | DOCK2 | 0 | INTRON | -4.665226 | 3.08E-06 | 0.01312315 |
| 17 | 80326390 | 80326390 | 1 | 17_80326390 | ENSG00000173821 | RNF213 | 0 | INTRON | 4.66518443 | 3.08E-06 | 0.01312315 |
| 2 | 87149968 | 87149968 | 1 | 2_87149968 | ENSG00000204745 | AC083899.1 | 0 | EXON | -4.6649658 | 3.09E-06 | 0.01313383 |
| 6 | 101837133 | 101837133 | 1 | 6_101837133 | ENSG00000164418 | GRIK2 | 0 | INTRON | -4.6646742 | 3.09E-06 | 0.01314918 |
| 21 | 13170235 | 13170235 | 1 | 21_13170235 | ENSG00000237202 | AJ239321.1 | 49428 | Downstream | 4.66462115 | 3.09E-06 | 0.01314928 |
| 16 | 60684626 | 60684626 | 1 | 16_60684626 | ENSG00000259844 | GNPATP | 27977 | Upstream | 4.66449202 | 3.09E-06 | 0.01315367 |
| 16 | 85764420 | 85764420 | 1 | 16_85764420 | ENSG00000131148 | EMC8 | 7337 | Downstream | 4.66444979 | 3.09E-06 | 0.01315367 |
| 6 | 2354458 | 2354458 | 1 | 6_2354458 | ENSG00000286512 | AL031768.2 | 0 | EXON | -4.6642436 | 3.10E-06 | 0.01316357 |
| 17 | 10236462 | 10236462 | 1 | 17_10236462 | ENSG00000242692 | RPS27AP1 | 22299 | Upstream | -4.6641647 | 3.10E-06 | 0.01316534 |
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| 11 | 60662149 | 60662149 | 1 | 11_60662149 | ENSG00000181995 | LINC00301 | 0 | INTRON | -4.6635046 | 3.11E-06 | 0.01319825 |
| 9 | 29614523 | 29614523 | 1 | 9_29614523 | ENSG00000229834 | AL354676.1 | 21962 | Upstream | -4.6634972 | 3.11E-06 | 0.01319825 |
| 1 | 237172715 | 237172715 | 1 | 1_237172715 | ENSG00000198626 | RYR2 | 0 | INTRON | 4.66343178 | 3.11E-06 | 0.01319831 |
| 15 | 37360041 | 37360041 | 1 | 15_37360041 | ENSG00000259434 | AC068875.1 | 3978 | Downstream | -4.6633936 | 3.11E-06 | 0.01319831 |
| 4 | 26693932 | 26693932 | 1 | 4_26693932 | ENSG00000109680 | TBC1D19 | 0 | INTRON | 4.66333607 | 3.11E-06 | 0.01319871 |
| 19 | 34228324 | 34228324 | 1 | 19_34228324 | ENSG00000257103 | LSM14A | 0 | 3UTR | 4.66319417 | 3.11E-06 | 0.01320097 |
| 7 | 346684 | 346684 | 1 | 7_346684 | ENSG00000287342 | AC188616.1 | 13512 | Upstream | -4.6630424 | 3.12E-06 | 0.01320097 |
| 9 | 136878096 | 136878096 | 1 | 9_136878096 | ENSG00000127191 | TRAF2 | 3815 | Upstream | 4.66303384 | 3.12E-06 | 0.01320097 |
| 6 | 130470961 | 130470961 | 1 | 6_130470961 | ENSG00000164484 | TMEM200A | 27898 | Downstream | 4.66301444 | 3.12E-06 | 0.01320097 |
| X | 154357330 | 154357330 | 1 | X_154357330 | ENSG00000196924 | FLNA | 0 | INTRON | -4.6630117 | 3.12E-06 | 0.01320097 |
| 13 | 62475311 | 62475311 | 1 | 13_62475311 | ENSG00000286469 | AL445668.1 | 64039 | Downstream | -4.6629775 | 3.12E-06 | 0.01320097 |
| 2 | 42323762 | 42323762 | 1 | 2_42323762 | ENSG00000143924 | EML4 | 0 | INTRON | 4.6629422 | 3.12E-06 | 0.01320097 |
| 2 | 163935503 | 163935503 | 1 | 2_163935503 | ENSG00000237844 | AC016766.1 | 0 | INTRON | -4.6627011 | 3.12E-06 | 0.01321083 |
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| 6 | 75665573 | 75665573 | 1 | 6_75665573 | ENSG00000112701 | SENP6 | 0 | INTRON | 4.66253571 | 3.12E-06 | 0.01321721 |
| 1 | 66655805 | 66655805 | 1 | 1_66655805 | ENSG00000118473 | SGIP1 | 0 | INTRON | -4.66231 | 3.13E-06 | 0.01322505 |
| 17 | 15950559 | 15950559 | 1 | 17_15950559 | ENSG00000170425 | ADORA2B | 0 | INTRON | 4.6622795 | 3.13E-06 | 0.01322505 |
| 19 | 29202964 | 29202964 | 1 | 19_29202964 | ENSG00000169021 | UQCRFS1 | 2355 | Downstream | -4.6622301 | 3.13E-06 | 0.01322505 |
| 14 | 27250323 | 27250323 | 1 | 14_27250323 | ENSG00000258081 | AL110292.1 | 0 | INTRON | -4.6622092 | 3.13E-06 | 0.01322505 |
| 8 | 29465930 | 29465930 | 1 | 8_29465930 | ENSG00000253632 | AC084026.2 | 61381 | Upstream | 4.66211077 | 3.13E-06 | 0.01322809 |
| 2 | 26708399 | 26708399 | 1 | 2_26708399 | ENSG00000171303 | KCNK3 | 0 | INTRON | 4.66192202 | 3.13E-06 | 0.01323694 |
| 8 | 64668264 | 64668264 | 1 | 8_64668264 | ENSG00000172817 | CYP7B1 | 0 | INTRON | 4.66167098 | 3.14E-06 | 0.01324493 |
| 5 | 14835402 | 14835402 | 1 | 5_14835402 | ENSG00000154122 | ANKH | 0 | INTRON | 4.66166633 | 3.14E-06 | 0.01324493 |
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| 11 | 3644854 | 3644854 | 1 | 11_3644854 | ENSG00000129744 | ART1 | 273 | Upstream | -4.6615321 | 3.14E-06 | 0.01324493 |
| 6 | 36261004 | 36261004 | 1 | 6_36261004 | ENSG00000180316 | PNPLA1 | 0 | INTRON | 4.66146182 | 3.14E-06 | 0.01324493 |
| 17 | 6938666 | 6938666 | 1 | 17_6938666 | ENSG00000215067 | ALOX12-AS1 | 0 | INTRON | -4.6614521 | 3.14E-06 | 0.01324493 |
| 6 | 162668493 | 162668493 | 1 | 6_162668493 | ENSG00000185345 | PRKN | 0 | INTRON | -4.6614405 | 3.14E-06 | 0.01324493 |
| X | 154495340 | 154495340 | 1 | X_154495340 | ENSG00000264484 | RN7SL697P | 474 | Downstream | -4.6613342 | 3.14E-06 | 0.01324792 |
| 2 | 130004053 | 130004053 | 1 | 2_130004053 | ENSG00000286026 | AC079776.4 | 0 | INTRON | 4.66127848 | 3.14E-06 | 0.01324792 |
| 7 | 75363897 | 75363897 | 1 | 7_75363897 | ENSG00000205583 | STAG3L1 | 0 | INTRON | -4.6612411 | 3.14E-06 | 0.01324792 |
| 7 | 146910496 | 146910496 | 1 | 7_146910496 | ENSG00000174469 | CNTNAP2 | 0 | INTRON | -4.661187 | 3.14E-06 | 0.01324812 |
| 14 | 73547253 | 73547253 | 1 | 14_73547253 | ENSG00000187105 | HEATR4 | 0 | INTRON | -4.6609909 | 3.15E-06 | 0.01325743 |
| 3 | 77501909 | 77501909 | 1 | 3_77501909 | ENSG00000185008 | ROBO2 | 0 | INTRON | 4.6609406 | 3.15E-06 | 0.01325743 |
| 1 | 25016201 | 25016201 | 1 | 1_25016201 | ENSG00000264371 | MIR4425 | 7301 | Upstream | 4.66078376 | 3.15E-06 | 0.01326425 |
| 17 | 81251556 | 81251556 | 1 | 17_81251556 | ENSG00000157637 | SLC38A10 | 0 | EXON | -4.6605982 | 3.15E-06 | 0.01327293 |
| 18 | 56980369 | 56980369 | 1 | 18_56980369 | ENSG00000091157 | WDR7 | 0 | INTRON | 4.66050716 | 3.15E-06 | 0.01327307 |
| 7 | 109398183 | 109398183 | 1 | 7_109398183 | ENSG00000230941 | AC002386.1 | 71868 | Upstream | -4.6604942 | 3.15E-06 | 0.01327307 |
| 7 | 130454112 | 130454112 | 1 | 7_130454112 | ENSG00000106477 | CEP41 | 11679 | Upstream | -4.6603809 | 3.16E-06 | 0.01327558 |
| 2 | 182135389 | 182135389 | 1 | 2_182135389 | ENSG00000150722 | PPP1R1C | 3991 | Downstream | 4.66035359 | 3.16E-06 | 0.01327558 |
| 18 | 34246738 | 34246738 | 1 | 18_34246738 | ENSG00000278052 | AC104985.2 | 20309 | Downstream | 4.66024624 | 3.16E-06 | 0.01327922 |
| 3 | 51237535 | 51237535 | 1 | 3_51237535 | ENSG00000088538 | DOCK3 | 0 | EXON | 4.66011523 | 3.16E-06 | 0.01328396 |

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| 12 | 1842314 | 1842314 | 1 | 12_1842314 | ENSG00000151062 | CACNA2D4 | 0 | INTRON | 4.66002332 | 3.16E-06 | 0.01328396 |
| 19 | 5782858 | 5782858 | 1 | 19_5782858 | ENSG00000212123 | PRR22 | 101 | Downstream | 4.66002023 | 3.16E-06 | 0.01328396 |
| 7 | 147207113 | 147207113 | 1 | 7_147207113 | ENSG00000174469 | CNTNAP2 | 0 | INTRON | -4.6599689 | 3.16E-06 | 0.013284 |
| 12 | 77828210 | 77828210 | 1 | 12_77828210 | ENSG00000067798 | NAV3 | 0 | INTRON | 4.65987799 | 3.16E-06 | 0.01328659 |
| 20 | 45736978 | 45736978 | 1 | 20_45736978 | ENSG00000226188 | HNRNPA1P3 | 8758 | Downstream | 4.65917829 | 3.17E-06 | 0.01332704 |
| 6 | 75162299 | 75162299 | 1 | 6_75162299 | ENSG00000111799 | COL12A1 | 0 | INTRON | -4.6591506 | 3.18E-06 | 0.01332704 |
| 12 | 47266461 | 47266461 | 1 | 12_47266461 | ENSG00000257925 | AC008083.2 | 0 | INTRON | -4.6590366 | 3.18E-06 | 0.01332818 |
| 1 | 12739801 | 12739801 | 1 | 1_12739801 | ENSG00000157330 | C1orf158 | 6398 | Upstream | 4.65903141 | 3.18E-06 | 0.01332818 |
| 1 | 123984179 | 123984179 | 1 | 1_123984179 | ENSG00000224857 | LINC01691 | 2403655 | Upstream | -4.6589348 | 3.18E-06 | 0.01333115 |
| 15 | 64498238 | 64498238 | 1 | 15_64498238 | ENSG00000180357 | ZNF609 | 0 | INTRON | 4.65882278 | 3.18E-06 | 0.01333512 |
| 21 | 27505994 | 27505994 | 1 | 21_27505994 | ENSG00000219592 | NCSTNP1 | 13733 | Downstream | -4.6585469 | 3.18E-06 | 0.01334266 |
| 7 | 100799637 | 100799637 | 1 | 7_100799637 | ENSG00000146839 | ZAN | 1840 | Downstream | -4.6585452 | 3.18E-06 | 0.01334266 |
| 15 | 30953081 | 30953081 | 1 | 15_30953081 | ENSG00000166912 | MTMR10 | 0 | INTRON | 4.65852527 | 3.18E-06 | 0.01334266 |
| 1 | 25273848 | 25273848 | 1 | 1_25273848 | ENSG00000187010 | RHD | 0 | INTRON | -4.6584495 | 3.19E-06 | 0.01334266 |
| 13 | 100317383 | 100317383 | 1 | 13_100317383 | ENSG00000175198 | PCCA | 0 | INTRON | 4.65837994 | 3.19E-06 | 0.01334266 |
| 14 | 23466190 | 23466190 | 1 | 14_23466190 | ENSG00000129460 | NGDN | 3498 | Upstream | -4.658346 | 3.19E-06 | 0.01334266 |
| 18 | 8335673 | 8335673 | 1 | 18_8335673 | ENSG00000173482 | PTPRM | 0 | INTRON | 4.65833186 | 3.19E-06 | 0.01334266 |
| 10 | 16327974 | 16327974 | 1 | 10_16327974 | ENSG00000226140 | LINC02654 | 32116 | Downstream | 4.65826517 | 3.19E-06 | 0.01334266 |
| 5 | 132456111 | 132456111 | 1 | 5_132456111 | ENSG00000283782 | AC116366.3 | 0 | INTRON | -4.6582438 | 3.19E-06 | 0.01334266 |
| 9 | 122914356 | 122914356 | 1 | 9_122914356 | ENSG00000186130 | ZBTB6 | 1033 | Upstream | -4.6581997 | 3.19E-06 | 0.01334266 |
| 22 | 48340079 | 48340079 | 1 | 22_48340079 | ENSG00000285855 | Z72006.1 | 63382 | Upstream | 4.65798155 | 3.19E-06 | 0.01335352 |
| 17 | 75741800 | 75741800 | 1 | 17_75741800 | ENSG00000132470 | ITGB4 | 0 | INTRON | 4.65776538 | 3.20E-06 | 0.01336426 |
| 8 | 52961489 | 52961489 | 1 | 8_52961489 | ENSG00000248911 | AC009800.1 | 13621 | Downstream | 4.65713895 | 3.21E-06 | 0.01340168 |
| 7 | 114944733 | 114944733 | 1 | 7_114944733 | ENSG00000135272 | MDFIC | 0 | INTRON | -4.6570014 | 3.21E-06 | 0.01340559 |
| 5 | 60809216 | 60809216 | 1 | 5_60809216 | ENSG00000164181 | ELOVL7 | 0 | INTRON | 4.65695941 | 3.21E-06 | 0.01340559 |
| 17 | 75573659 | 75573659 | 1 | 17_75573659 | ENSG00000073350 | LLGL2 | 0 | INTRON | 4.65692707 | 3.21E-06 | 0.01340559 |
| X | 2765741 | 2765741 | 1 | X_2765741 | ENSG00000124343 | XG | 0 | INTRON | 4.6568199 | 3.21E-06 | 0.01340928 |
| 10 | 80304088 | 80304088 | 1 | 10_80304088 | ENSG00000232950 | ZNF519P1 | 4433 | Downstream | 4.65656831 | 3.22E-06 | 0.0134221 |
| 6 | 125117373 | 125117373 | 1 | 6_125117373 | ENSG00000111907 | TPD52L1 | 1675 | Upstream | -4.656522 | 3.22E-06 | 0.0134221 |
| 1 | 64230880 | 64230880 | 1 | 1_64230880 | ENSG00000177414 | UBE2U | 0 | INTRON | 4.65623587 | 3.22E-06 | 0.01343602 |
| 16 | 18382343 | 18382343 | 1 | 16_18382343 | ENSG00000254681 | PKD1P5 | 0 | INTRON | -4.6562075 | 3.22E-06 | 0.01343602 |
| 13 | 43162976 | 43162976 | 1 | 13_43162976 | ENSG00000229928 | LINC00400 | 3510 | Downstream | 4.65613013 | 3.22E-06 | 0.01343777 |
| 15 | 88288275 | 88288275 | 1 | 15_88288275 | ENSG00000260305 | NTRK3-AS1 | 17209 | Downstream | -4.6558354 | 3.23E-06 | 0.01345371 |
| 11 | 11443630 | 11443630 | 1 | 11_11443630 | ENSG00000110328 | GALNT18 | 0 | INTRON | -4.6556612 | 3.23E-06 | 0.01345877 |
| 2 | 71113109 | 71113109 | 1 | 2_71113109 | ENSG00000288065 | AC007881.4 | 0 | EXON | -4.6556561 | 3.23E-06 | 0.01345877 |
| 3 | 43963111 | 43963111 | 1 | 3_43963111 | ENSG00000271192 | AC006058.2 | 33784 | Upstream | -4.6555363 | 3.23E-06 | 0.01345877 |
| 6 | 54731648 | 54731648 | 1 | 6_54731648 | ENSG00000220635 | KRASP1 | 38934 | Upstream | -4.6555211 | 3.23E-06 | 0.01345877 |
| 19 | 1520923 | 1520923 | 1 | 19_1520923 | ENSG00000185988 | PLK5 | 3153 | Upstream | 4.65549474 | 3.23E-06 | 0.01345877 |
| 17 | 45422034 | 45422034 | 1 | 17_45422034 | ENSG00000159314 | ARHGAP27 | 0 | INTRON | -4.6554554 | 3.23E-06 | 0.01345877 |
| 5 | 74480154 | 74480154 | 1 | 5_74480154 | ENSG00000248673 | LINC01331 | 0 | INTRON | 4.65523606 | 3.24E-06 | 0.01346744 |
| 14 | 65372560 | 65372560 | 1 | 14_65372560 | ENSG00000266740 | MIR4708 | 37377 | Upstream | 4.65522185 | 3.24E-06 | 0.01346744 |
| 2 | 2340723 | 2340723 | 1 | 2_2340723 | ENSG00000186487 | MYT1L | 9059 | Upstream | 4.65498878 | 3.24E-06 | 0.01347754 |
| 6 | 140414462 | 140414462 | 1 | 6_140414462 | ENSG00000285875 | AL035446.2 | 161325 | Downstream | -4.6549666 | 3.24E-06 | 0.01347754 |
| 2 | 214954587 | 214954587 | 1 | 2_214954587 | ENSG00000229267 | SNHG31 | 0 | INTRON | 4.65487759 | 3.24E-06 | 0.01348007 |
| 11 | 92195956 | 92195956 | 1 | 11_92195956 | ENSG00000242248 | RPL7AP57 | 34067 | Downstream | 4.6546967 | 3.24E-06 | 0.01348861 |
| 17 | 66455228 | 66455228 | 1 | 17_66455228 | ENSG00000154229 | PRKCA | 0 | INTRON | 4.65456111 | 3.25E-06 | 0.0134942 |
| 4 | 1294700 | 1294700 | 1 | 4_1294700 | ENSG00000090316 | MAEA | 0 | INTRON | -4.6544637 | 3.25E-06 | 0.01349728 |
| 3 | 25199148 | 25199148 | 1 | 3_25199148 | ENSG00000077092 | RARB | 0 | INTRON | 4.65423335 | 3.25E-06 | 0.01350908 |
| 6 | 26605819 | 26605819 | 1 | 6_26605819 | ENSG00000275846 | AL513548.3 | 0 | EXON | 4.65401717 | 3.26E-06 | 0.01351996 |
| 7 | 5289225 | 5289225 | 1 | 7_5289225 | ENSG00000164638 | SLC29A4 | 0 | INTRON | -4.6539003 | 3.26E-06 | 0.01352433 |
| 17 | 18145862 | 18145862 | 1 | 17_18145862 | ENSG00000091536 | MYO15A | 0 | INTRON | 4.65376591 | 3.26E-06 | 0.01352783 |
| 11 | 123888600 | 123888600 | 1 | 11_123888600 | ENSG00000204300 | TMEM225 | 2930 | Upstream | -4.6537463 | 3.26E-06 | 0.01352783 |
| 9 | 8956987 | 8956987 | 1 | 9_8956987 | ENSG00000234021 | AL596451.1 | 0 | INTRON | -4.653619 | 3.26E-06 | 0.01353289 |
| 3 | 128921203 | 128921203 | 1 | 3_128921203 | ENSG00000114656 | KIAA1257 | 0 | INTRON | 4.6535443 | 3.26E-06 | 0.0135345 |
| 7 | 43655772 | 43655772 | 1 | 7_43655772 | ENSG00000106603 | COA1 | 0 | INTRON | 4.65343021 | 3.26E-06 | 0.01353678 |
| 22 | 32556470 | 32556470 | 1 | 22_32556470 | ENSG00000185666 | SYN3 | 0 | INTRON | -4.653409 | 3.26E-06 | 0.01353678 |
| 4 | 190188472 | 190188472 | 1 | 4_190188472 | ENSG00000260596 | DUX4 | 2530 | Downstream | 4.65322351 | 3.27E-06 | 0.01354567 |
| 22 | 27685917 | 27685917 | 1 | 22_27685917 | ENSG00000227838 | AL121885.2 | 0 | INTRON | 4.65311357 | 3.27E-06 | 0.0135496 |
| 18 | 73978190 | 73978190 | 1 | 18_73978190 | ENSG00000263655 | AC090125.1 | 0 | INTRON | -4.6529717 | 3.27E-06 | 0.01355435 |
| 11 | 35465696 | 35465696 | 1 | 11_35465696 | ENSG00000149090 | PAMR1 | 0 | INTRON | 4.65294087 | 3.27E-06 | 0.01355435 |
| 2 | 27865268 | 27865268 | 1 | 2_27865268 | ENSG00000171174 | RBKS | 0 | INTRON | 4.65288742 | 3.27E-06 | 0.01355457 |
| 15 | 72719970 | 72719970 | 1 | 15_72719970 | ENSG00000140463 | BBS4 | 0 | INTRON | -4.6527116 | 3.28E-06 | 0.01356283 |
| 1 | 196099444 | 196099444 | 1 | 1_196099444 | ENSG00000227421 | LINC01724 | 34209 | Upstream | 4.65253661 | 3.28E-06 | 0.01356525 |
| 12 | 117159380 | 117159380 | 1 | 12_117159380 | ENSG00000135108 | FBXO21 | 0 | INTRON | -4.6525176 | 3.28E-06 | 0.01356525 |
| 19 | 15130254 | 15130254 | 1 | 19_15130254 | ENSG00000268564 | AC003956.1 | 4080 | Downstream | 4.65251355 | 3.28E-06 | 0.01356525 |
| 5 | 160235968 | 160235968 | 1 | 5_160235968 | ENSG00000170231 | FABP6 | 0 | INTRON | 4.65242027 | 3.28E-06 | 0.01356525 |
| 22 | 31777156 | 31777156 | 1 | 22_31777156 | ENSG00000285404 | Z82190.2 | 0 | INTRON | 4.65237772 | 3.28E-06 | 0.01356525 |
| 7 | 152263728 | 152263728 | 1 | 7_152263728 | ENSG00000055609 | KMT2C | 0 | INTRON | -4.6523742 | 3.28E-06 | 0.01356525 |
| 8 | 142540016 | 142540016 | 1 | 8_142540016 | ENSG00000181790 | ADGRB1 | 0 | EXON | 4.65216921 | 3.28E-06 | 0.01357355 |
| 8 | 143460196 | 143460196 | 1 | 8_143460196 | ENSG00000014164 | ZC3H3 | 0 | INTRON | -4.6521479 | 3.28E-06 | 0.01357355 |
| 11 | 129944539 | 129944539 | 1 | 11_129944539 | ENSG00000170325 | PRDM10 | 0 | INTRON | -4.6518647 | 3.29E-06 | 0.01358554 |
| 20 | 42558705 | 42558705 | 1 | 20_42558705 | ENSG00000196090 | PTPRT | 0 | INTRON | -4.6517951 | 3.29E-06 | 0.01358554 |
| 9 | 39620637 | 39620637 | 1 | 9_39620637 | ENSG00000269692 | FKBP4P2 | 10408 | Upstream | 4.65171091 | 3.29E-06 | 0.01358554 |
| 16 | 87344790 | 87344790 | 1 | 16_87344790 | ENSG00000103264 | FBXO31 | 0 | INTRON | 4.65168123 | 3.29E-06 | 0.01358554 |
| 1 | 244440592 | 244440592 | 1 | 1_244440592 | ENSG00000035687 | ADSS | 0 | INTRON | 4.6516338 | 3.29E-06 | 0.01358554 |
| 7 | 99686192 | 99686192 | 1 | 7_99686192 | ENSG00000282301 | CYP3A7-CYP3A51P | 0 | INTRON | 4.65162811 | 3.29E-06 | 0.01358554 |
| 2 | 106467427 | 106467427 | 1 | 2_106467427 | ENSG00000153165 | RGPD3 | 0 | INTRON | 4.65156522 | 3.29E-06 | 0.01358554 |
| 1 | 193276239 | 193276239 | 1 | 1_193276239 | ENSG00000134371 | CDC73 | 21424 | Downstream | 4.65145622 | 3.30E-06 | 0.01358554 |
| 13 | 64366659 | 64366659 | 1 | 13_64366659 | ENSG00000227674 | LINC00355 | 290615 | Upstream | 4.65139197 | 3.30E-06 | 0.01358554 |
| 6 | 33163257 | 33163257 | 1 | 6_33163257 | ENSG00000204248 | COL11A2 | 0 | 3UTR | 4.65135822 | 3.30E-06 | 0.01358554 |
| 7 | 150946043 | 150946043 | 1 | 7_150946043 | ENSG00000055118 | KCNH2 | 0 | INTRON | 4.65130065 | 3.30E-06 | 0.01358554 |
| 3 | 158197702 | 158197702 | 1 | 3_158197702 | ENSG00000174891 | RSRC1 | 0 | INTRON | 4.65127392 | 3.30E-06 | 0.01358554 |
| 17 | 57522779 | 57522779 | 1 | 17_57522779 | ENSG00000153944 | MSI2 | 0 | INTRON | 4.65125059 | 3.30E-06 | 0.01358554 |
| 10 | 12683283 | 12683283 | 1 | 10_12683283 | ENSG00000183049 | CAMK1D | 0 | INTRON | 4.65123352 | 3.30E-06 | 0.01358554 |
| 2 | 167477920 | 167477920 | 1 | 2_167477920 | ENSG00000228222 | AC073050.1 | 0 | INTRON | -4.6512162 | 3.30E-06 | 0.01358554 |
| 3 | 105018022 | 105018022 | 1 | 3_105018022 | ENSG00000170017 | ALCAM | 348886 | Upstream | -4.6510547 | 3.30E-06 | 0.0135929 |
| 8 | 13326840 | 13326840 | 1 | 8_13326840 | ENSG00000164741 | DLC1 | 0 | INTRON | -4.6503967 | 3.31E-06 | 0.01363304 |
| 2 | 165413197 | 165413197 | 1 | 2_165413197 | ENSG00000288089 | AC011303.1 | 20240 | Downstream | -4.6501926 | 3.32E-06 | 0.01363675 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 | 16981528 | 16981528 | 1 | 12_16981528 | ENSG00000256211 | AC023512.1 | 7597 | Upstream | -4.6501705 | 3.32E-06 | 0.01363675 |
| 20 | 10483229 | 10483229 | 1 | 20_10483229 | ENSG00000149346 | SLX4IP | 0 | INTRON | -4.6501457 | 3.32E-06 | 0.01363675 |
| 16 | 15287984 | 15287984 | 1 | 16_15287984 | ENSG00000277770 | AC137803.1 | 70993 | Upstream | -4.6501055 | 3.32E-06 | 0.01363675 |
| 17 | 76005415 | 76005415 | 1 | 17_76005415 | ENSG00000261408 | TEN1-CDK3 | 0 | 3UTR | 4.65009139 | 3.32E-06 | 0.01363675 |
| 6 | 107149795 | 107149795 | 1 | 6_107149795 | ENSG00000164494 | PDSS2 | 2766 | Downstream | 4.64996596 | 3.32E-06 | 0.01364175 |
| 15 | 74243572 | 74243572 | 1 | 15_74243572 | ENSG00000140481 | CCDC33 | 0 | INTRON | 4.64988974 | 3.32E-06 | 0.0136435 |
| 14 | 69703549 | 69703549 | 1 | 14_69703549 | ENSG00000100647 | SUSD6 | 0 | EXON | -4.6497431 | 3.32E-06 | 0.01364991 |
| 8 | 25346551 | 25346551 | 1 | 8_25346551 | ENSG00000147459 | DOCK5 | 0 | INTRON | 4.64964803 | 3.33E-06 | 0.01365291 |
| 19 | 16340041 | 16340041 | 1 | 19_16340041 | ENSG00000127528 | KLF2 | 12167 | Downstream | 4.64953087 | 3.33E-06 | 0.01365737 |
| 2 | 224303205 | 224303205 | 1 | 2_224303205 | ENSG00000228681 | AC008072.1 | 7452 | Downstream | 4.64947149 | 3.33E-06 | 0.01365801 |
| 2 | 210824093 | 210824093 | 1 | 2_210824093 | ENSG00000021826 | CPS1 | 144986 | Downstream | 4.64933382 | 3.33E-06 | 0.01366383 |
| 16 | 30938675 | 30938675 | 1 | 16_30938675 | ENSG00000099364 | FBXL19 | 0 | INTRON | 4.64918985 | 3.33E-06 | 0.01366716 |
| 12 | 5601643 | 5601643 | 1 | 12_5601643 | ENSG00000047617 | ANO2 | 0 | INTRON | 4.64916283 | 3.33E-06 | 0.01366716 |
| 16 | 2295636 | 2295636 | 1 | 16_2295636 | ENSG00000167972 | ABCA3 | 0 | EXON | 4.64913438 | 3.33E-06 | 0.01366716 |
| 1 | 152442406 | 152442406 | 1 | 1_152442406 | ENSG00000237975 | FLG-AS1 | 0 | INTRON | -4.6489918 | 3.34E-06 | 0.01367077 |
| 22 | 41757125 | 41757125 | 1 | 22_41757125 | ENSG00000167077 | MEI1 | 0 | INTRON | -4.6489345 | 3.34E-06 | 0.01367077 |
| 19 | 44520944 | 44520944 | 1 | 19_44520944 | ENSG00000273777 | CEACAM20 | 0 | INTRON | 4.64893086 | 3.34E-06 | 0.01367077 |
| X | 138779788 | 138779788 | 1 | X_138779788 | ENSG00000129682 | FGF13 | 0 | INTRON | 4.64837725 | 3.35E-06 | 0.01369807 |
| 12 | 1349169 | 1349169 | 1 | 12_1349169 | ENSG00000082805 | ERC1 | 0 | INTRON | 4.64837602 | 3.35E-06 | 0.01369807 |
| 19 | 23213696 | 23213696 | 1 | 19_23213696 | ENSG00000196081 | ZNF724 | 7902 | Downstream | -4.6483702 | 3.35E-06 | 0.01369807 |
| 4 | 13247129 | 13247129 | 1 | 4_13247129 | ENSG00000205940 | HSP90AB2P | 86284 | Upstream | 4.64827554 | 3.35E-06 | 0.01369811 |
| 2 | 100032385 | 100032385 | 1 | 2_100032385 | ENSG00000144218 | AFF3 | 0 | INTRON | -4.6482704 | 3.35E-06 | 0.01369811 |
| 8 | 106067159 | 106067159 | 1 | 8_106067159 | ENSG00000251003 | ZFPM2-AS1 | 6635 | Upstream | 4.64821988 | 3.35E-06 | 0.01369817 |
| 13 | 30300949 | 30300949 | 1 | 13_30300949 | ENSG00000102781 | KATNAL1 | 0 | INTRON | -4.6481394 | 3.35E-06 | 0.01370022 |
| X | 65674616 | 65674616 | 1 | X_65674616 | ENSG00000147065 | MSN | 0 | INTRON | -4.6480242 | 3.35E-06 | 0.01370039 |
| 20 | 23847240 | 23847240 | 1 | 20_23847240 | ENSG00000170369 | CST2 | 20511 | Upstream | 4.64797921 | 3.35E-06 | 0.01370039 |
| 17 | 68602945 | 68602945 | 1 | 17_68602945 | ENSG00000267659 | LINC01482 | 0 | INTRON | 4.64796009 | 3.35E-06 | 0.01370039 |
| 7 | 32422181 | 32422181 | 1 | 7_32422181 | ENSG00000154678 | PDE1C | 0 | INTRON | 4.6479386 | 3.35E-06 | 0.01370039 |
| 11 | 105020005 | 105020005 | 1 | 11_105020005 | ENSG00000137757 | CASP5 | 0 | INTRON | -4.647877 | 3.35E-06 | 0.01370119 |
| 1 | 244609422 | 244609422 | 1 | 1_244609422 | ENSG00000179397 | CATSPERE | 0 | INTRON | -4.6477227 | 3.36E-06 | 0.01370753 |
| 6 | 90905664 | 90905664 | 1 | 6_90905664 | ENSG00000135341 | MAP3K7 | 318592 | Upstream | 4.6476825 | 3.36E-06 | 0.01370753 |
| 4 | 92051060 | 92051060 | 1 | 4_92051060 | ENSG00000248817 | PMPCAP1 | 131416 | Downstream | -4.6475899 | 3.36E-06 | 0.01371039 |
| 17 | 32620868 | 32620868 | 1 | 17_32620868 | ENSG00000176658 | MYO1D | 0 | INTRON | -4.647344 | 3.36E-06 | 0.01372025 |
| 1 | 109342789 | 109342789 | 1 | 1_109342789 | ENSG00000134243 | SORT1 | 0 | INTRON | -4.6472805 | 3.36E-06 | 0.01372025 |
| 1 | 15980655 | 15980655 | 1 | 1_15980655 | ENSG00000116809 | ZBTB17 | 4523 | Upstream | 4.64726161 | 3.36E-06 | 0.01372025 |
| 6 | 134824273 | 134824273 | 1 | 6_134824273 | ENSG00000213117 | AL021939.1 | 73600 | Upstream | 4.64724369 | 3.36E-06 | 0.01372025 |
| 11 | 127948440 | 127948440 | 1 | 11_127948440 | ENSG00000254612 | AP001000.1 | 6786 | Upstream | -4.6469838 | 3.37E-06 | 0.01373425 |
| 19 | 38343751 | 38343751 | 1 | 19_38343751 | ENSG00000099338 | CATSPERG | 0 | EXON | 4.6468448 | 3.37E-06 | 0.01373694 |
| 12 | 89012307 | 89012307 | 1 | 12_89012307 | ENSG00000246363 | LINC02458 | 0 | EXON | -4.6468445 | 3.37E-06 | 0.01373694 |
| 5 | 158947483 | 158947483 | 1 | 5_158947483 | ENSG00000164330 | EBF1 | 0 | INTRON | 4.6466093 | 3.37E-06 | 0.01374585 |
| 4 | 184475987 | 184475987 | 1 | 4_184475987 | ENSG00000271646 | AC099343.3 | 0 | EXON | -4.6465889 | 3.37E-06 | 0.01374585 |
| 11 | 11281441 | 11281441 | 1 | 11_11281441 | ENSG00000110328 | GALNT18 | 0 | INTRON | 4.64653677 | 3.38E-06 | 0.01374585 |
| 5 | 114147076 | 114147076 | 1 | 5_114147076 | ENSG00000080709 | KCNN2 | 0 | INTRON | -4.646513 | 3.38E-06 | 0.01374585 |
| 3 | 125833207 | 125833207 | 1 | 3_125833207 | ENSG00000241288 | LINC02614 | 0 | INTRON | -4.6463335 | 3.38E-06 | 0.01375113 |
| X | 72090212 | 72090212 | 1 | X_72090212 | ENSG00000204131 | NHSL2 | 0 | INTRON | 4.6462843 | 3.38E-06 | 0.01375113 |
| 1 | 235964294 | 235964294 | 1 | 1_235964294 | ENSG00000229291 | LINC02768 | 0 | INTRON | 4.64627671 | 3.38E-06 | 0.01375113 |
| 3 | 63614220 | 63614220 | 1 | 3_63614220 | ENSG00000163630 | SYNPR | 0 | INTRON | -4.6462362 | 3.38E-06 | 0.01375113 |
| 9 | 16119073 | 16119073 | 1 | 9_16119073 | ENSG00000164989 | CCDC171 | 57410 | Downstream | 4.64599611 | 3.38E-06 | 0.01376385 |
| 9 | 100783350 | 100783350 | 1 | 9_100783350 | ENSG00000237999 | ACTG1P19 | 50995 | Downstream | 4.64592071 | 3.39E-06 | 0.01376414 |
| 12 | 29127337 | 29127337 | 1 | 12_29127337 | ENSG00000257258 | AC012150.1 | 15631 | Downstream | 4.64589306 | 3.39E-06 | 0.01376414 |
| 7 | 120014096 | 120014096 | 1 | 7_120014096 | ENSG00000271739 | RNU1-29P | 7995 | Upstream | 4.64577498 | 3.39E-06 | 0.01376666 |
| 15 | 97453228 | 97453228 | 1 | 15_97453228 | ENSG00000259664 | LINC02254 | 0 | INTRON | -4.6457567 | 3.39E-06 | 0.01376666 |
| 2 | 38932373 | 38932373 | 1 | 2_38932373 | ENSG00000214694 | ARHGEF33 | 0 | INTRON | -4.6451988 | 3.40E-06 | 0.01379748 |
| 3 | 118426638 | 118426638 | 1 | 3_118426638 | ENSG00000243276 | AC068633.1 | 0 | INTRON | -4.6451426 | 3.40E-06 | 0.01379748 |
| 18 | 48909139 | 48909139 | 1 | 18_48909139 | ENSG00000101665 | SMAD7 | 10713 | Downstream | -4.6451265 | 3.40E-06 | 0.01379748 |
| 11 | 43433234 | 43433234 | 1 | 11_43433234 | ENSG00000052841 | TTC17 | 0 | INTRON | 4.64509799 | 3.40E-06 | 0.01379748 |
| 1 | 158007854 | 158007854 | 1 | 1_158007854 | ENSG00000183853 | KIRREL1 | 0 | INTRON | 4.64497894 | 3.40E-06 | 0.0138015 |
| 8 | 57889749 | 57889749 | 1 | 8_57889749 | ENSG00000253376 | AC012103.1 | 0 | EXON | 4.64493539 | 3.40E-06 | 0.0138015 |
| 17 | 18381438 | 18381438 | 1 | 17_18381438 | ENSG00000264177 | AL353997.2 | 0 | EXON | 4.6448902 | 3.40E-06 | 0.0138015 |
| X | 41326381 | 41326381 | 1 | X_41326381 | ENSG00000226641 | AL391647.1 | 3270 | Upstream | -4.6448361 | 3.40E-06 | 0.01380183 |
| 22 | 17949516 | 17949516 | 1 | 22_17949516 | ENSG00000243156 | MICAL3 | 0 | INTRON | 4.64466366 | 3.41E-06 | 0.01380928 |
| 3 | 40126874 | 40126874 | 1 | 3_40126874 | ENSG00000280739 | EIF1B-AS1 | 0 | INTRON | 4.6446263 | 3.41E-06 | 0.01380928 |
| 3 | 174726894 | 174726894 | 1 | 3_174726894 | ENSG00000177694 | NAALADL2 | 0 | INTRON | -4.6445215 | 3.41E-06 | 0.01381299 |
| 6 | 109327012 | 109327012 | 1 | 6_109327012 | ENSG00000203799 | CCDC162P | 0 | INTRON | 4.6442976 | 3.41E-06 | 0.01382057 |
| 10 | 60812535 | 60812535 | 1 | 10_60812535 | ENSG00000170312 | CDK1 | 17683 | Downstream | -4.6441668 | 3.41E-06 | 0.01382057 |
| 6 | 147975345 | 147975345 | 1 | 6_147975345 | ENSG00000227681 | AL033504.1 | 21408 | Downstream | -4.6441439 | 3.41E-06 | 0.01382057 |
| 22 | 43124096 | 43124096 | 1 | 22_43124096 | ENSG00000100290 | BIK | 0 | EXON | 4.64413738 | 3.42E-06 | 0.01382057 |
| 7 | 102133710 | 102133710 | 1 | 7_102133710 | ENSG00000257923 | CUX1 | 0 | INTRON | 4.64413139 | 3.42E-06 | 0.01382057 |
| 5 | 4927105 | 4927105 | 1 | 5_4927105 | ENSG00000251506 | AC010451.3 | 40658 | Downstream | 4.64410608 | 3.42E-06 | 0.01382057 |
| 7 | 148148630 | 148148630 | 1 | 7_148148630 | ENSG00000174469 | CNTNAP2 | 0 | INTRON | 4.64406439 | 3.42E-06 | 0.01382057 |
| 16 | 59104909 | 59104909 | 1 | 16_59104909 | ENSG00000245768 | AC106793.1 | 0 | INTRON | 4.6439875 | 3.42E-06 | 0.01382193 |
| 8 | 18237084 | 18237084 | 1 | 8_18237084 | ENSG00000171428 | NAT1 | 13395 | Downstream | 4.64390802 | 3.42E-06 | 0.01382193 |
| 10 | 34088645 | 34088645 | 1 | 10_34088645 | ENSG00000148498 | PARD3 | 20914 | Downstream | 4.64389689 | 3.42E-06 | 0.01382193 |
| 20 | 35781400 | 35781400 | 1 | 20_35781400 | ENSG00000025293 | PHF20 | 0 | INTRON | -4.6437326 | 3.42E-06 | 0.01382865 |
| 6 | 105044815 | 105044815 | 1 | 6_105044815 | ENSG00000187772 | LIN28B | 0 | INTRON | -4.6436763 | 3.42E-06 | 0.01382865 |
| 6 | 101178114 | 101178114 | 1 | 6_101178114 | ENSG00000164418 | GRIK2 | 3142 | Upstream | 4.64361799 | 3.42E-06 | 0.01382865 |
| 2 | 120371580 | 120371580 | 1 | 2_120371580 | ENSG00000163083 | INHBB | 19777 | Downstream | 4.64360033 | 3.42E-06 | 0.01382865 |
| 14 | 100860489 | 100860489 | 1 | 14_100860489 | ENSG00000214548 | MEG3 | 0 | INTRON | 4.6434584 | 3.43E-06 | 0.01383296 |
| 3 | 159425137 | 159425137 | 1 | 3_159425137 | ENSG00000283154 | IQCJ-SCHIP1 | 0 | INTRON | 4.64343788 | 3.43E-06 | 0.01383296 |
| 7 | 75849584 | 75849584 | 1 | 7_75849584 | ENSG00000005486 | RHBDD2 | 0 | INTRON | -4.643267 | 3.43E-06 | 0.01384113 |
| 17 | 51234987 | 51234987 | 1 | 17_51234987 | ENSG00000011258 | MBTD1 | 0 | INTRON | 4.64319216 | 3.43E-06 | 0.01384287 |
| 1 | 24774218 | 24774218 | 1 | 1_24774218 | ENSG00000169504 | CLIC4 | 0 | INTRON | 4.64303395 | 3.43E-06 | 0.01384749 |
| 2 | 219291322 | 219291322 | 1 | 2_219291322 | ENSG00000054356 | PTPRN | 0 | INTRON | 4.64302519 | 3.43E-06 | 0.01384749 |
| 1 | 507768 | 507768 | 1 | 1_507768 | ENSG00000237094 | AL732372.2 | 0 | INTRON | -4.6429519 | 3.43E-06 | 0.01384786 |
| 17 | 654087 | 654087 | 1 | 17_654087 | ENSG00000141252 | VPS53 | 0 | INTRON | 4.64292186 | 3.44E-06 | 0.01384786 |
| 17 | 42437916 | 42437916 | 1 | 17_42437916 | ENSG00000238704 | RNU7-97P | 2281 | Downstream | 4.64286651 | 3.44E-06 | 0.01384829 |
| 21 | 45034874 | 45034874 | 1 | 21_45034874 | ENSG00000275874 | PICSAR | 30147 | Upstream | 4.64266864 | 3.44E-06 | 0.01385378 |
| 13 | 100406000 | 100406000 | 1 | 13_100406000 | ENSG00000175198 | PCCA | 0 | INTRON | 4.6425352 | 3.44E-06 | 0.01385378 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 16 | 87215201 | 87215201 | 1 | 16_87215201 | ENSG00000260456 | C16orf95 | 0 | INTRON | -4.6424811 | 3.44E-06 | 0.01385378 |
| 6 | 16678806 | 16678806 | 1 | 6_16678806 | ENSG00000124788 | ATXN1 | 0 | INTRON | 4.64245137 | 3.44E-06 | 0.01385378 |
| 20 | 17894174 | 17894174 | 1 | 20_17894174 | ENSG00000233625 | AL035045.1 | 6014 | Upstream | -4.6424066 | 3.44E-06 | 0.01385378 |
| 8 | 116863728 | 116863728 | 1 | 8_116863728 | ENSG00000164754 | RAD21 | 0 | INTRON | -4.6423616 | 3.44E-06 | 0.01385378 |
| 4 | 8182030 | 8182030 | 1 | 4_8182030 | ENSG00000125089 | SH3TC1 | 41 | Upstream | 4.64231228 | 3.45E-06 | 0.01385378 |
| 4 | 15421514 | 15421514 | 1 | 4_15421514 | ENSG00000163145 | C1QTNF7 | 0 | INTRON | -4.642282 | 3.45E-06 | 0.01385378 |
| 7 | 151659835 | 151659835 | 1 | 7_151659835 | ENSG00000106617 | PRKAG2 | 0 | INTRON | 4.64227518 | 3.45E-06 | 0.01385378 |
| 14 | 89635622 | 89635622 | 1 | 14_89635622 | ENSG00000258792 | AL137230.1 | 0 | INTRON | 4.64211946 | 3.45E-06 | 0.01385378 |
| 20 | 14144919 | 14144919 | 1 | 20_14144919 | ENSG00000172264 | MACROD2 | 0 | INTRON | -4.6421163 | 3.45E-06 | 0.01385378 |
| 3 | 9447974 | 9447974 | 1 | 3_9447974 | ENSG00000168137 | SETD5 | 0 | 3UTR | 4.64207716 | 3.45E-06 | 0.01385378 |
| 5 | 157956135 | 157956135 | 1 | 5_157956135 | ENSG00000222626 | RNU2-48P | 20630 | Downstream | -4.6420501 | 3.45E-06 | 0.01385378 |
| 5 | 112967534 | 112967534 | 1 | 5_112967534 | ENSG00000172795 | DCP2 | 9167 | Upstream | -4.64204 | 3.45E-06 | 0.01385378 |
| 19 | 17757178 | 17757178 | 1 | 19_17757178 | ENSG00000130475 | FCHO1 | 0 | INTRON | 4.64196818 | 3.45E-06 | 0.01385378 |
| 12 | 75477181 | 75477181 | 1 | 12_75477181 | ENSG00000139278 | GLIPR1 | 3571 | Upstream | 4.64195056 | 3.45E-06 | 0.01385378 |
| 2 | 5221522 | 5221522 | 1 | 2_5221522 | ENSG00000228585 | AC073143.1 | 92217 | Downstream | 4.64191223 | 3.45E-06 | 0.01385378 |
| 19 | 32692925 | 32692925 | 1 | 19_32692925 | ENSG00000213965 | NUDT19 | 0 | INTRON | 4.64190594 | 3.45E-06 | 0.01385378 |
| 12 | 5336125 | 5336125 | 1 | 12_5336125 | ENSG00000256417 | AC006206.2 | 0 | INTRON | 4.64180503 | 3.45E-06 | 0.01385728 |
| 8 | 71216885 | 71216885 | 1 | 8_71216885 | ENSG00000285579 | AC015687.1 | 0 | EXON | -4.6417061 | 3.46E-06 | 0.01386064 |
| 20 | 18210270 | 18210270 | 1 | 20_18210270 | ENSG00000232943 | AL050321.1 | 9842 | Upstream | -4.6416433 | 3.46E-06 | 0.0138612 |
| 17 | 1996011 | 1996011 | 1 | 17_1996011 | ENSG00000262445 | AC099684.2 | 0 | INTRON | 4.64159374 | 3.46E-06 | 0.0138612 |
| 8 | 11700257 | 11700257 | 1 | 8_11700257 | ENSG00000136574 | GATA4 | 0 | INTRON | 4.64155184 | 3.46E-06 | 0.0138612 |
| 2 | 47082590 | 47082590 | 1 | 2_47082590 | ENSG00000239605 | STPG4 | 0 | INTRON | 4.64140421 | 3.46E-06 | 0.01386766 |
| 11 | 107253775 | 107253775 | 1 | 11_107253775 | ENSG00000261098 | AP000766.1 | 58356 | Downstream | 4.64135825 | 3.46E-06 | 0.01386766 |
| 13 | 79510712 | 79510712 | 1 | 13_79510712 | ENSG00000102471 | NDFIP2 | 0 | INTRON | 4.64126746 | 3.46E-06 | 0.01387049 |
| 12 | 84808405 | 84808405 | 1 | 12_84808405 | ENSG00000072041 | SLC6A15 | 51085 | Downstream | -4.6411949 | 3.46E-06 | 0.01387209 |
| 14 | 75538021 | 75538021 | 1 | 14_75538021 | ENSG00000156127 | BATF | 0 | INTRON | -4.6411357 | 3.46E-06 | 0.01387281 |
| 1 | 1079036 | 1079036 | 1 | 1_1079036 | ENSG00000131591 | C1orf159 | 2781 | Downstream | -4.6410654 | 3.47E-06 | 0.013874 |
| 9 | 5836763 | 5836763 | 1 | 9_5836763 | ENSG00000099219 | ERMP1 | 3646 | Upstream | 4.6410207 | 3.47E-06 | 0.013874 |
| 15 | 47969622 | 47969622 | 1 | 15_47969622 | ENSG00000259754 | AC092078.2 | 0 | INTRON | -4.640906 | 3.47E-06 | 0.01387844 |
| 14 | 33654503 | 33654503 | 1 | 14_33654503 | ENSG00000151322 | NPAS3 | 0 | INTRON | -4.640664 | 3.47E-06 | 0.01388832 |
| 12 | 103267012 | 103267012 | 1 | 12_103267012 | ENSG00000179088 | C12orf42 | 0 | INTRON | 4.64066183 | 3.47E-06 | 0.01388832 |
| 7 | 107975515 | 107975515 | 1 | 7_107975515 | ENSG00000091136 | LAMB1 | 0 | INTRON | 4.64052087 | 3.48E-06 | 0.01388894 |
| 11 | 108898498 | 108898498 | 1 | 11_108898498 | ENSG00000178105 | DDX10 | 0 | INTRON | 4.64050887 | 3.48E-06 | 0.01388894 |
| 1 | 195341749 | 195341749 | 1 | 1_195341749 | ENSG00000287364 | AL353709.1 | 405274 | Downstream | -4.640507 | 3.48E-06 | 0.01388894 |
| 2 | 85118026 | 85118026 | 1 | 2_85118026 | ENSG00000225787 | LSM3P3 | 15332 | Upstream | -4.6403191 | 3.48E-06 | 0.01389533 |
| 20 | 49233807 | 49233807 | 1 | 20_49233807 | ENSG00000124228 | DDX27 | 0 | EXON | 4.64031489 | 3.48E-06 | 0.01389533 |
| 14 | 96581264 | 96581264 | 1 | 14_96581264 | ENSG00000258702 | AL137786.1 | 11134 | Upstream | -4.6402612 | 3.48E-06 | 0.01389568 |
| 5 | 125264258 | 125264258 | 1 | 5_125264258 | ENSG00000260192 | LINC02240 | 0 | INTRON | -4.6401312 | 3.48E-06 | 0.01389842 |
| 11 | 28887827 | 28887827 | 1 | 11_28887827 | ENSG00000249867 | LINC02742 | 0 | INTRON | -4.640064 | 3.48E-06 | 0.01389842 |
| 5 | 2637124 | 2637124 | 1 | 5_2637124 | ENSG00000281560 | LSINCT5 | 75466 | Upstream | 4.64005355 | 3.48E-06 | 0.01389842 |
| 10 | 57032481 | 57032481 | 1 | 10_57032481 | ENSG00000264747 | MIR3924 | 271997 | Downstream | -4.6400266 | 3.48E-06 | 0.01389842 |
| 1 | 202336453 | 202336453 | 1 | 1_202336453 | ENSG00000077152 | UBE2T | 0 | INTRON | 4.63994759 | 3.48E-06 | 0.01389892 |
| 8 | 143864219 | 143864219 | 1 | 8_143864219 | ENSG00000261150 | EPPK1 | 0 | EXON | -4.6399222 | 3.49E-06 | 0.01389892 |
| 19 | 19576914 | 19576914 | 1 | 19_19576914 | ENSG00000105717 | PBX4 | 0 | INTRON | 4.63979123 | 3.49E-06 | 0.01390064 |
| 5 | 135988633 | 135988633 | 1 | 5_135988633 | ENSG00000145826 | LECT2 | 33650 | Upstream | 4.63979056 | 3.49E-06 | 0.01390064 |
| 5 | 173573820 | 173573820 | 1 | 5_173573820 | ENSG00000253768 | AC008663.1 | 621 | Downstream | -4.6397513 | 3.49E-06 | 0.01390064 |
| 1 | 174570476 | 174570476 | 1 | 1_174570476 | ENSG00000152061 | RABGAP1L | 0 | INTRON | 4.63969166 | 3.49E-06 | 0.0139014 |
| 7 | 135673660 | 135673660 | 1 | 7_135673660 | ENSG00000243317 | STMP1 | 0 | INTRON | 4.63963818 | 3.49E-06 | 0.01390175 |
| 12 | 91106909 | 91106909 | 1 | 12_91106909 | ENSG00000139329 | LUM | 0 | INTRON | 4.63958273 | 3.49E-06 | 0.01390222 |
| 11 | 67614419 | 67614419 | 1 | 11_67614419 | ENSG00000231793 | DOC2GP | 0 | EXON | 4.63941359 | 3.49E-06 | 0.01390869 |
| 1 | 10115659 | 10115659 | 1 | 1_10115659 | ENSG00000130939 | UBE4B | 0 | INTRON | -4.6393899 | 3.49E-06 | 0.01390869 |
| 9 | 15949298 | 15949298 | 1 | 9_15949298 | ENSG00000164989 | CCDC171 | 0 | INTRON | 4.6391739 | 3.50E-06 | 0.01391998 |
| 16 | 15671979 | 15671979 | 1 | 16_15671979 | ENSG00000072864 | NDE1 | 0 | INTRON | -4.6390948 | 3.50E-06 | 0.01392205 |
| 19 | 17923225 | 17923225 | 1 | 19_17923225 | ENSG00000007080 | CCDC124 | 9789 | Upstream | 4.63894181 | 3.50E-06 | 0.01392318 |
| 12 | 86964306 | 86964306 | 1 | 12_86964306 | ENSG00000280049 | AC079597.1 | 77609 | Upstream | -4.6389364 | 3.50E-06 | 0.01392318 |
| 2 | 225423804 | 225423804 | 1 | 2_225423804 | ENSG00000144460 | NYAP2 | 0 | INTRON | -4.6389331 | 3.50E-06 | 0.01392318 |
| 6 | 168937631 | 168937631 | 1 | 6_168937631 | ENSG00000225879 | AL513210.1 | 0 | INTRON | 4.63879278 | 3.50E-06 | 0.01392676 |
| 15 | 82156229 | 82156229 | 1 | 15_82156229 | ENSG00000140598 | EFL1 | 0 | INTRON | 4.63869613 | 3.51E-06 | 0.01392676 |
| 1 | 15487446 | 15487446 | 1 | 1_15487446 | ENSG00000215704 | CELA2B | 0 | INTRON | -4.6386847 | 3.51E-06 | 0.01392676 |
| 18 | 46157340 | 46157340 | 1 | 18_46157340 | ENSG00000152242 | C18orf25 | 16212 | Upstream | 4.63866306 | 3.51E-06 | 0.01392676 |
| 14 | 79541335 | 79541335 | 1 | 14_79541335 | ENSG00000021645 | NRXN3 | 0 | INTRON | 4.63858677 | 3.51E-06 | 0.01392676 |
| 3 | 110882783 | 110882783 | 1 | 3_110882783 | ENSG00000242242 | NECTIN3-AS1 | 5600 | Downstream | 4.63858292 | 3.51E-06 | 0.01392676 |
| 16 | 15353845 | 15353845 | 1 | 16_15353845 | ENSG00000277770 | AC137803.1 | 5132 | Upstream | 4.63854209 | 3.51E-06 | 0.01392676 |
| 2 | 234279173 | 234279173 | 1 | 2_234279173 | ENSG00000237784 | AC097713.2 | 50309 | Upstream | -4.6384818 | 3.51E-06 | 0.01392758 |
| 6 | 134558625 | 134558625 | 1 | 6_134558625 | ENSG00000232310 | AL078590.2 | 0 | INTRON | -4.6383324 | 3.51E-06 | 0.01393439 |
| 20 | 42626685 | 42626685 | 1 | 20_42626685 | ENSG00000196090 | PTPRT | 0 | INTRON | -4.638233 | 3.51E-06 | 0.0139372 |
| 1 | 30343727 | 30343727 | 1 | 1_30343727 | ENSG00000236335 | AL161638.2 | 65832 | Downstream | -4.6381856 | 3.51E-06 | 0.0139372 |
| 3 | 86740988 | 86740988 | 1 | 3_86740988 | ENSG00000277746 | AC108706.1 | 75751 | Upstream | -4.6381462 | 3.52E-06 | 0.0139372 |
| 2 | 96080080 | 96080080 | 1 | 2_96080080 | ENSG00000274286 | ADRA2B | 32795 | Downstream | 4.63779617 | 3.52E-06 | 0.01395757 |
| 18 | 66855117 | 66855117 | 1 | 18_66855117 | ENSG00000238680 | RNU6-1037P | 90998 | Upstream | -4.6375903 | 3.52E-06 | 0.0139658 |
| 2 | 106866959 | 106866959 | 1 | 2_106866959 | ENSG00000144057 | ST6GAL2 | 0 | INTRON | -4.6375469 | 3.53E-06 | 0.0139658 |
| 8 | 59025249 | 59025249 | 1 | 8_59025249 | ENSG00000198846 | TOX | 0 | INTRON | 4.6374854 | 3.53E-06 | 0.0139658 |
| 11 | 126813097 | 126813097 | 1 | 11_126813097 | ENSG00000149571 | KIRREL3 | 0 | INTRON | -4.6374818 | 3.53E-06 | 0.0139658 |
| 20 | 63482367 | 63482367 | 1 | 20_63482367 | ENSG00000101210 | EEF1A2 | 5646 | Downstream | 4.63735579 | 3.53E-06 | 0.0139706 |
| 2 | 137686796 | 137686796 | 1 | 2_137686796 | ENSG00000144229 | THSD7B | 9078 | Downstream | 4.63731455 | 3.53E-06 | 0.0139706 |
| 1 | 216468855 | 216468855 | 1 | 1_216468855 | ENSG00000196482 | ESRRG | 34390 | Downstream | -4.637142 | 3.53E-06 | 0.01397754 |
| 6 | 68776669 | 68776669 | 1 | 6_68776669 | ENSG00000135298 | ADGRB3 | 0 | INTRON | 4.63711557 | 3.53E-06 | 0.01397754 |
| 13 | 42880020 | 42880020 | 1 | 13_42880020 | ENSG00000133106 | EPSTI1 | 6367 | Downstream | 4.63691919 | 3.54E-06 | 0.0139834 |
| 6 | 19877174 | 19877174 | 1 | 6_19877174 | ENSG00000287138 | AL022726.1 | 15222 | Upstream | 4.63688814 | 3.54E-06 | 0.0139834 |
| 9 | 73600081 | 73600081 | 1 | 9_73600081 | ENSG00000232590 | AL451127.1 | 20583 | Downstream | -4.6368485 | 3.54E-06 | 0.0139834 |
| 13 | 108650557 | 108650557 | 1 | 13_108650557 | ENSG00000041515 | MYO16 | 0 | INTRON | -4.6368041 | 3.54E-06 | 0.0139834 |
| 4 | 151793707 | 151793707 | 1 | 4_151793707 | ENSG00000249184 | AC107074.1 | 5209 | Upstream | -4.6367569 | 3.54E-06 | 0.0139834 |
| 8 | 143864376 | 143864376 | 1 | 8_143864376 | ENSG00000261150 | EPPK1 | 0 | EXON | -4.6366996 | 3.54E-06 | 0.0139834 |
| 1 | 37391796 | 37391796 | 1 | 1_37391796 | ENSG00000233621 | LINC01137 | 0 | INTRON | 4.63669267 | 3.54E-06 | 0.0139834 |
| 4 | 3571557 | 3571557 | 1 | 4_3571557 | ENSG00000216560 | LINC00955 | 5311 | Upstream | 4.63660308 | 3.54E-06 | 0.01398621 |
| 12 | 111454017 | 111454017 | 1 | 12_111454017 | ENSG00000204842 | ATXN2 | 0 | 3UTR | 4.63647842 | 3.54E-06 | 0.0139914 |
| 15 | 49321048 | 49321048 | 1 | 15_49321048 | ENSG00000156958 | GALK2 | 0 | INTRON | -4.6363616 | 3.55E-06 | 0.01399606 |
| 20 | 39615964 | 39615964 | 1 | 20_39615964 | ENSG00000286083 | AL132981.1 | 39360 | Downstream | -4.6360903 | 3.55E-06 | 0.01401118 |

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| 7 | 23757653 | 23757653 | 1 | 7_23757653 | ENSG00000196335 | STK31 | 0 | INTRON | 4.63590274 | 3.55E-06 | 0.01401609 |
| 16 | 24215729 | 24215729 | 1 | 16_24215729 | ENSG00000166501 | PRKCB | 0 | 3UTR | -4.635791 | 3.56E-06 | 0.01401609 |
| 19 | 27792378 | 27792378 | 1 | 19_27792378 | ENSG00000261824 | LINC00662 | 0 | EXON | 4.63578939 | 3.56E-06 | 0.01401609 |
| 13 | 47052468 | 47052468 | 1 | 13_47052468 | ENSG00000102468 | HTR2A | 155392 | Upstream | -4.6357836 | 3.56E-06 | 0.01401609 |
| 12 | 101904586 | 101904586 | 1 | 12_101904586 | ENSG00000136048 | DRAM1 | 0 | INTRON | -4.6357781 | 3.56E-06 | 0.01401609 |
| 12 | 107013692 | 107013692 | 1 | 12_107013692 | ENSG00000008405 | CRY1 | 0 | INTRON | 4.63561906 | 3.56E-06 | 0.01401948 |
| 11 | 61625162 | 61625162 | 1 | 11_61625162 | ENSG00000243742 | RPLP0P2 | 0 | INTRON | 4.63558614 | 3.56E-06 | 0.01401948 |
| 3 | 38953708 | 38953708 | 1 | 3_38953708 | ENSG00000168356 | SCN11A | 0 | 5UTR | -4.6354695 | 3.56E-06 | 0.01401948 |
| 1 | 165859037 | 165859037 | 1 | 1_165859037 | ENSG00000143179 | UCK2 | 0 | INTRON | 4.6354497 | 3.56E-06 | 0.01401948 |
| 12 | 51687219 | 51687219 | 1 | 12_51687219 | ENSG00000196876 | SCN8A | 0 | EXON | -4.635443 | 3.56E-06 | 0.01401948 |
| 1 | 236451356 | 236451356 | 1 | 1_236451356 | ENSG00000186197 | EDARADD | 0 | INTRON | -4.6353946 | 3.56E-06 | 0.01401948 |
| 15 | 53406026 | 53406026 | 1 | 15_53406026 | ENSG00000287596 | AC066614.1 | 13838 | Upstream | -4.6353479 | 3.56E-06 | 0.01401948 |
| 20 | 13146832 | 13146832 | 1 | 20_13146832 | ENSG00000172296 | SPTLC3 | 0 | INTRON | -4.6353453 | 3.56E-06 | 0.01401948 |
| 14 | 45819638 | 45819638 | 1 | 14_45819638 | ENSG00000258700 | LINC00871 | 71448 | Upstream | 4.6351952 | 3.57E-06 | 0.01402421 |
| 12 | 102491850 | 102491850 | 1 | 12_102491850 | ENSG00000017427 | IGF1 | 10106 | Upstream | 4.63515065 | 3.57E-06 | 0.01402421 |
| 7 | 15670488 | 15670488 | 1 | 7_15670488 | ENSG00000106511 | MEOX2 | 0 | INTRON | 4.63513205 | 3.57E-06 | 0.01402421 |
| 11 | 34090497 | 34090497 | 1 | 11_34090497 | ENSG00000135387 | CAPRIN1 | 0 | INTRON | 4.63503593 | 3.57E-06 | 0.01402748 |
| 3 | 113823235 | 113823235 | 1 | 3_113823235 | ENSG00000178075 | GRAMD1C | 4946 | Upstream | -4.6349544 | 3.57E-06 | 0.01402977 |
| 8 | 142157642 | 142157642 | 1 | 8_142157642 | ENSG00000287332 | AC103758.1 | 0 | INTRON | 4.63477494 | 3.57E-06 | 0.01403606 |
| 12 | 49551301 | 49551301 | 1 | 12_49551301 | ENSG00000135519 | KCNH3 | 0 | INTRON | 4.63476614 | 3.57E-06 | 0.01403606 |
| 12 | 17766155 | 17766155 | 1 | 12_17766155 | ENSG00000206662 | Y_RNA | 55109 | Downstream | -4.6345849 | 3.58E-06 | 0.01404206 |
| 12 | 108981586 | 108981586 | 1 | 12_108981586 | ENSG00000166111 | SVOP | 0 | INTRON | 4.6345727 | 3.58E-06 | 0.01404206 |
| 7 | 106977332 | 106977332 | 1 | 7_106977332 | ENSG00000005249 | PRKAR2B | 67372 | Upstream | 4.63453453 | 3.58E-06 | 0.01404206 |
| 3 | 107400102 | 107400102 | 1 | 3_107400102 | ENSG00000239828 | AC063944.1 | 0 | INTRON | 4.63431821 | 3.58E-06 | 0.01405351 |
| 19 | 4249138 | 4249138 | 1 | 19_4249138 | ENSG00000105248 | YJU2 | 0 | INTRON | 4.63406505 | 3.59E-06 | 0.01406747 |
| 12 | 122218723 | 122218723 | 1 | 12_122218723 | ENSG00000284934 | AC048338.2 | 0 | EXON | 4.63390365 | 3.59E-06 | 0.01407521 |
| 5 | 66239605 | 66239605 | 1 | 5_66239605 | ENSG00000248846 | LINC02065 | 29712 | Upstream | 4.63384839 | 3.59E-06 | 0.01407572 |
| 7 | 104135480 | 104135480 | 1 | 7_104135480 | ENSG00000164815 | ORC5 | 0 | INTRON | 4.6337765 | 3.59E-06 | 0.01407737 |
| 7 | 45495346 | 45495346 | 1 | 7_45495346 | ENSG00000225537 | AC073325.1 | 0 | INTRON | 4.63372273 | 3.59E-06 | 0.01407778 |
| 7 | 33398793 | 33398793 | 1 | 7_33398793 | ENSG00000122507 | BBS9 | 0 | INTRON | 4.63361173 | 3.59E-06 | 0.01407989 |
| 8 | 127436332 | 127436332 | 1 | 8_127436332 | ENSG00000246228 | CASC8 | 0 | INTRON | 4.63357259 | 3.59E-06 | 0.01407989 |
| 1 | 16011219 | 16011219 | 1 | 1_16011219 | ENSG00000183888 | SRARP | 2412 | Downstream | 4.63341714 | 3.60E-06 | 0.01407989 |
| 1 | 238615553 | 238615553 | 1 | 1_238615553 | ENSG00000231877 | AL359551.1 | 77248 | Downstream | -4.6333771 | 3.60E-06 | 0.01407989 |
| 14 | 105241983 | 105241983 | 1 | 14_105241983 | ENSG00000185024 | BRF1 | 0 | 5UTR | 4.63337118 | 3.60E-06 | 0.01407989 |
| 2 | 215339727 | 215339727 | 1 | 2_215339727 | ENSG00000138363 | ATIC | 0 | INTRON | 4.63331864 | 3.60E-06 | 0.01407989 |
| 16 | 28940598 | 28940598 | 1 | 16_28940598 | ENSG00000177455 | CD19 | 1251 | Downstream | 4.63329488 | 3.60E-06 | 0.01407989 |
| 19 | 47576436 | 47576436 | 1 | 19_47576436 | ENSG00000276588 | RN7SL322P | 4586 | Upstream | 4.63327907 | 3.60E-06 | 0.01407989 |
| 10 | 32428952 | 32428952 | 1 | 10_32428952 | ENSG00000286409 | AL391839.3 | 0 | INTRON | -4.6331903 | 3.60E-06 | 0.01407989 |
| 14 | 55072085 | 55072085 | 1 | 14_55072085 | ENSG00000168175 | MAPK1IP1L | 1891 | Downstream | -4.6331754 | 3.60E-06 | 0.01407989 |
| 8 | 30855789 | 30855789 | 1 | 8_30855789 | ENSG00000133863 | TEX15 | 0 | INTRON | 4.63316811 | 3.60E-06 | 0.01407989 |
| 12 | 32012224 | 32012224 | 1 | 12_32012224 | ENSG00000257094 | AC016957.1 | 4789 | Downstream | 4.63279398 | 3.61E-06 | 0.01409982 |
| 13 | 101655980 | 101655980 | 1 | 13_101655980 | ENSG00000198542 | ITGBL1 | 0 | INTRON | -4.6327803 | 3.61E-06 | 0.01409982 |
| 12 | 68711127 | 68711127 | 1 | 12_68711127 | ENSG00000111581 | NUP107 | 0 | INTRON | 4.63268842 | 3.61E-06 | 0.01410284 |
| 4 | 144609816 | 144609816 | 1 | 4_144609816 | ENSG00000285713 | AC098588.2 | 0 | INTRON | 4.63259421 | 3.61E-06 | 0.01410544 |
| 11 | 134198996 | 134198996 | 1 | 11_134198996 | ENSG00000151503 | NCAPD3 | 0 | INTRON | 4.63250479 | 3.61E-06 | 0.01410544 |
| 15 | 32748118 | 32748118 | 1 | 15_32748118 | ENSG00000166923 | GREM1 | 3012 | Downstream | -4.6324726 | 3.61E-06 | 0.01410544 |
| 9 | 102078019 | 102078019 | 1 | 9_102078019 | ENSG00000230418 | ARL2BPP7 | 22278 | Upstream | 4.63242667 | 3.61E-06 | 0.01410544 |
| 1 | 37961359 | 37961359 | 1 | 1_37961359 | ENSG00000183431 | SF3A3 | 0 | INTRON | 4.6324057 | 3.61E-06 | 0.01410544 |
| 8 | 140573457 | 140573457 | 1 | 8_140573457 | ENSG00000123908 | AGO2 | 0 | INTRON | 4.63231917 | 3.62E-06 | 0.01410544 |
| 19 | 57904496 | 57904496 | 1 | 19_57904496 | ENSG00000269476 | AC010326.2 | 0 | INTRON | -4.6322933 | 3.62E-06 | 0.01410544 |
| 19 | 3112678 | 3112678 | 1 | 19_3112678 | ENSG00000088256 | GNA11 | 0 | INTRON | 4.63225804 | 3.62E-06 | 0.01410544 |
| 4 | 150004611 | 150004611 | 1 | 4_150004611 | ENSG00000286711 | AC105343.2 | 42392 | Downstream | -4.6321933 | 3.62E-06 | 0.01410544 |
| 16 | 24834563 | 24834563 | 1 | 16_24834563 | ENSG00000090905 | TNRC6A | 6931 | Downstream | 4.63217552 | 3.62E-06 | 0.01410544 |
| 9 | 3558796 | 3558796 | 1 | 9_3558796 | ENSG00000232104 | RFX3-AS1 | 0 | INTRON | 4.6320872 | 3.62E-06 | 0.01410823 |
| 6 | 125610948 | 125610948 | 1 | 6_125610948 | ENSG00000237742 | AL365259.1 | 0 | INTRON | 4.63183817 | 3.62E-06 | 0.01412009 |
| 8 | 35050122 | 35050122 | 1 | 8_35050122 | ENSG00000287152 | AC099685.1 | 30469 | Upstream | 4.63181847 | 3.62E-06 | 0.01412009 |
| 10 | 13318806 | 13318806 | 1 | 10_13318806 | ENSG00000086475 | SEPHS1 | 0 | 3UTR | -4.631613 | 3.63E-06 | 0.01412575 |
| 21 | 31550554 | 31550554 | 1 | 21_31550554 | ENSG00000156299 | TIAM1 | 0 | INTRON | 4.63161257 | 3.63E-06 | 0.01412575 |
| 13 | 72646354 | 72646354 | 1 | 13_72646354 | ENSG00000226617 | RPL21P110 | 57338 | Upstream | -4.6315648 | 3.63E-06 | 0.01412575 |
| 4 | 143458240 | 143458240 | 1 | 4_143458240 | ENSG00000109458 | GAB1 | 0 | INTRON | 4.63150578 | 3.63E-06 | 0.01412575 |
| 22 | 42030722 | 42030722 | 1 | 22_42030722 | ENSG00000183066 | WBP2NL | 0 | 3UTR | -4.6314987 | 3.63E-06 | 0.01412575 |
| 1 | 104587752 | 104587752 | 1 | 1_104587752 | ENSG00000215869 | AC092506.1 | 361074 | Downstream | -4.6314407 | 3.63E-06 | 0.01412648 |
| 12 | 56016490 | 56016490 | 1 | 12_56016490 | ENSG00000123411 | IKZF4 | 0 | INTRON | -4.6312192 | 3.64E-06 | 0.01413837 |
| 2 | 73006442 | 73006442 | 1 | 2_73006442 | ENSG00000144040 | SFXN5 | 0 | INTRON | 4.63115209 | 3.64E-06 | 0.01413897 |
| 1 | 10739200 | 10739200 | 1 | 1_10739200 | ENSG00000130940 | CASZ1 | 0 | INTRON | 4.63104589 | 3.64E-06 | 0.01413897 |
| 10 | 38957035 | 38957035 | 1 | 10_38957035 | ENSG00000233832 | AL590623.1 | 173927 | Downstream | 4.63102827 | 3.64E-06 | 0.01413897 |
| 13 | 86612433 | 86612433 | 1 | 13_86612433 | ENSG00000231879 | TXNL1P1 | 113066 | Upstream | -4.6310213 | 3.64E-06 | 0.01413897 |
| 14 | 88040776 | 88040776 | 1 | 14_88040776 | ENSG00000258867 | LINC01146 | 0 | INTRON | 4.63096395 | 3.64E-06 | 0.01413966 |
| 8 | 36108116 | 36108116 | 1 | 8_36108116 | ENSG00000253452 | AC124290.1 | 0 | INTRON | -4.6309033 | 3.64E-06 | 0.01414057 |
| 14 | 29459519 | 29459519 | 1 | 14_29459519 | ENSG00000286040 | AL158058.2 | 0 | INTRON | -4.6306681 | 3.64E-06 | 0.01415342 |
| 10 | 16756016 | 16756016 | 1 | 10_16756016 | ENSG00000148484 | RSU1 | 0 | INTRON | -4.630587 | 3.65E-06 | 0.01415573 |
| 18 | 78051370 | 78051370 | 1 | 18_78051370 | ENSG00000199728 | RNU6-655P | 14525 | Downstream | -4.6303533 | 3.65E-06 | 0.01416187 |
| 10 | 84756235 | 84756235 | 1 | 10_84756235 | ENSG00000178429 | RPS3AP5 | 194972 | Downstream | -4.6303387 | 3.65E-06 | 0.01416187 |
| 3 | 171957515 | 171957515 | 1 | 3_171957515 | ENSG00000287899 | AC055714.1 | 0 | INTRON | 4.63030573 | 3.65E-06 | 0.01416187 |
| 5 | 121820021 | 121820021 | 1 | 5_121820021 | ENSG00000181867 | FTMT | 31860 | Upstream | 4.63027634 | 3.65E-06 | 0.01416187 |
| 2 | 143591722 | 143591722 | 1 | 2_143591722 | ENSG00000075884 | ARHGAP15 | 0 | INTRON | -4.6302612 | 3.65E-06 | 0.01416187 |
| 5 | 68543886 | 68543886 | 1 | 5_68543886 | ENSG00000248359 | AC010280.1 | 0 | INTRON | 4.63019515 | 3.65E-06 | 0.01416315 |
| 1 | 34742804 | 34742804 | 1 | 1_34742804 | ENSG00000163866 | SMIM12 | 0 | INTRON | -4.6297341 | 3.66E-06 | 0.01418853 |
| 17 | 62409989 | 62409989 | 1 | 17_62409989 | ENSG00000172421 | EFCAB3 | 0 | INTRON | -4.6297301 | 3.66E-06 | 0.01418853 |
| 8 | 107779795 | 107779795 | 1 | 8_107779795 | ENSG00000287949 | AC025508.1 | 77793 | Upstream | -4.6296675 | 3.66E-06 | 0.01418959 |
| 11 | 75482230 | 75482230 | 1 | 11_75482230 | ENSG00000158555 | GDPD5 | 0 | INTRON | -4.6294194 | 3.67E-06 | 0.01420337 |
| 8 | 31525254 | 31525254 | 1 | 8_31525254 | ENSG00000287204 | AC090816.1 | 11375 | Upstream | -4.6293417 | 3.67E-06 | 0.01420546 |
| 6 | 24892010 | 24892010 | 1 | 6_24892010 | ENSG00000111913 | RIPOR2 | 0 | INTRON | 4.62928421 | 3.67E-06 | 0.01420618 |
| 2 | 43185933 | 43185933 | 1 | 2_43185933 | ENSG00000287387 | AC010883.3 | 33915 | Upstream | -4.6292037 | 3.67E-06 | 0.01420847 |
| 2 | 42089694 | 42089694 | 1 | 2_42089694 | ENSG00000162878 | PKDCC | 31177 | Downstream | -4.6291352 | 3.67E-06 | 0.01420921 |
| 17 | 17861972 | 17861972 | 1 | 17_17861972 | ENSG00000175662 | TOM1L2 | 0 | 3UTR | 4.62904474 | 3.67E-06 | 0.01420921 |
| 16 | 28784777 | 28784777 | 1 | 16_28784777 | ENSG00000278528 | AC145285.7 | 7243 | Upstream | -4.6289637 | 3.68E-06 | 0.01420921 |
| 20 | 51144235 | 51144235 | 1 | 20_51144235 | ENSG00000228820 | RPSAP1 | 12568 | Upstream | 4.62894859 | 3.68E-06 | 0.01420921 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
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| 21 | 31809944 | 31809944 | 1 | 21_31809944 | ENSG00000234107 | TPT1P1 | 30396 | Upstream | 4.62892724 | 3.68E-06 | 0.01420921 |
| 6 | 163025310 | 163025310 | 1 | 6_163025310 | ENSG00000112530 | PACRG | 0 | INTRON | -4.6288685 | 3.68E-06 | 0.01420921 |
| 12 | 110711873 | 110711873 | 1 | 12_110711873 | ENSG00000122986 | HVCN1 | 6923 | Upstream | 4.62886334 | 3.68E-06 | 0.01420921 |
| 2 | 207691970 | 207691970 | 1 | 2_207691970 | ENSG00000200764 | Y_RNA | 3911 | Downstream | -4.6287587 | 3.68E-06 | 0.01421002 |
| 17 | 70769569 | 70769569 | 1 | 17_70769569 | ENSG00000271239 | AC007423.1 | 9034 | Downstream | -4.6287474 | 3.68E-06 | 0.01421002 |
| 9 | 136707683 | 136707683 | 1 | 9_136707683 | ENSG00000165716 | DIPK1B | 4888 | Upstream | 4.62863377 | 3.68E-06 | 0.01421002 |
| 11 | 65848870 | 65848870 | 1 | 11_65848870 | ENSG00000172803 | SNX32 | 0 | INTRON | 4.62861984 | 3.68E-06 | 0.01421002 |
| 1 | 179195242 | 179195242 | 1 | 1_179195242 | ENSG00000143322 | ABL2 | 0 | INTRON | 4.628595 | 3.68E-06 | 0.01421002 |
| 14 | 89747230 | 89747230 | 1 | 14_89747230 | ENSG00000259053 | AL137230.2 | 0 | INTRON | 4.62856953 | 3.68E-06 | 0.01421002 |
| 16 | 3359729 | 3359729 | 1 | 16_3359729 | ENSG00000168158 | OR2C1 | 2423 | Downstream | 4.62850687 | 3.68E-06 | 0.01421109 |
| 2 | 32380497 | 32380497 | 1 | 2_32380497 | ENSG00000115760 | BIRC6 | 0 | INTRON | 4.62832129 | 3.69E-06 | 0.0142134 |
| 1 | 43631118 | 43631118 | 1 | 1_43631118 | ENSG00000142949 | PTPRF | 7452 | Downstream | 4.62829759 | 3.69E-06 | 0.0142134 |
| 2 | 231276418 | 231276418 | 1 | 2_231276418 | ENSG00000135931 | ARMC9 | 0 | INTRON | 4.62822607 | 3.69E-06 | 0.0142134 |
| 16 | 25232148 | 25232148 | 1 | 16_25232148 | ENSG00000103375 | AQP8 | 3216 | Downstream | -4.6282142 | 3.69E-06 | 0.0142134 |
| 12 | 124942437 | 124942437 | 1 | 12_124942437 | ENSG00000150990 | DHX37 | 4387 | Downstream | 4.62819174 | 3.69E-06 | 0.0142134 |
| 1 | 241663272 | 241663272 | 1 | 1_241663272 | ENSG00000054277 | OPN3 | 0 | INTRON | 4.62819161 | 3.69E-06 | 0.0142134 |
| 18 | 61397914 | 61397914 | 1 | 18_61397914 | ENSG00000101542 | CDH20 | 0 | INTRON | -4.6281378 | 3.69E-06 | 0.01421387 |
| 9 | 63679885 | 63679885 | 1 | 9_63679885 | ENSG00000234042 | AL591438.2 | 23179 | Upstream | -4.6280518 | 3.69E-06 | 0.01421392 |
| 11 | 92790110 | 92790110 | 1 | 11_92790110 | ENSG00000165323 | FAT3 | 0 | EXON | -4.6280433 | 3.69E-06 | 0.01421392 |
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| 6 | 154708671 | 154708671 | 1 | 6_154708671 | ENSG00000205625 | AL591499.1 | 876 | Downstream | 4.62794456 | 3.69E-06 | 0.01421427 |
| 18 | 31947263 | 31947263 | 1 | 18_31947263 | ENSG00000153339 | TRAPPC8 | 0 | INTRON | -4.6278958 | 3.69E-06 | 0.0142144 |
| 2 | 125773229 | 125773229 | 1 | 2_125773229 | ENSG00000235491 | LINC01889 | 7387 | Downstream | -4.6278079 | 3.70E-06 | 0.01421478 |
| 20 | 47452156 | 47452156 | 1 | 20_47452156 | ENSG00000234075 | RPL35AP | 26057 | Downstream | 4.62778247 | 3.70E-06 | 0.01421478 |
| 9 | 84481394 | 84481394 | 1 | 9_84481394 | ENSG00000285987 | AL157886.1 | 0 | INTRON | -4.6277064 | 3.70E-06 | 0.01421478 |
| 7 | 88129918 | 88129918 | 1 | 7_88129918 | ENSG00000008277 | ADAM22 | 0 | INTRON | -4.6277029 | 3.70E-06 | 0.01421478 |
| 6 | 160783933 | 160783933 | 1 | 6_160783933 | ENSG00000274903 | AL109933.3 | 719 | Downstream | 4.62755197 | 3.70E-06 | 0.01422193 |
| 1 | 247396537 | 247396537 | 1 | 1_247396537 | ENSG00000287116 | AC104335.2 | 2698 | Downstream | -4.6274469 | 3.70E-06 | 0.01422593 |
| 18 | 9934987 | 9934987 | 1 | 18_9934987 | ENSG00000101558 | VAPA | 0 | INTRON | 4.62721322 | 3.71E-06 | 0.01423877 |
| 2 | 219299621 | 219299621 | 1 | 2_219299621 | ENSG00000054356 | PTPRN | 0 | INTRON | 4.6270885 | 3.71E-06 | 0.01424413 |
| 14 | 102903306 | 102903306 | 1 | 14_102903306 | ENSG00000131323 | TRAF3 | 0 | EXON | 4.62695372 | 3.71E-06 | 0.01425018 |
| 10 | 55610533 | 55610533 | 1 | 10_55610533 | ENSG00000150275 | PCDH15 | 0 | INTRON | 4.62684151 | 3.71E-06 | 0.01425468 |
| 1 | 112919179 | 112919179 | 1 | 1_112919179 | ENSG00000155380 | SLC16A1 | 0 | INTRON | 4.62652546 | 3.72E-06 | 0.01427322 |
| 4 | 4664785 | 4664785 | 1 | 4_4664785 | ENSG00000247708 | STX18-AS1 | 0 | INTRON | -4.6264712 | 3.72E-06 | 0.01427374 |
| 12 | 31260861 | 31260861 | 1 | 12_31260861 | ENSG00000270395 | MREGP1 | 6416 | Upstream | 4.62632963 | 3.72E-06 | 0.01428028 |
| X | 19278840 | 19278840 | 1 | X_19278840 | ENSG00000131828 | PDHA1 | 65052 | Upstream | 4.62626725 | 3.72E-06 | 0.01428136 |
| 7 | 32871900 | 32871900 | 1 | 7_32871900 | ENSG00000170852 | KBTBD2 | 0 | INTRON | 4.62614784 | 3.73E-06 | 0.01428637 |
| 7 | 40182998 | 40182998 | 1 | 7_40182998 | ENSG00000175600 | SUGCT | 0 | INTRON | 4.62603146 | 3.73E-06 | 0.01428801 |
| 13 | 26491541 | 26491541 | 1 | 13_26491541 | ENSG00000285929 | AL353789.1 | 0 | INTRON | 4.62603059 | 3.73E-06 | 0.01428801 |
| 12 | 122905345 | 122905345 | 1 | 12_122905345 | ENSG00000139722 | VPS37B | 9218 | Upstream | -4.6259521 | 3.73E-06 | 0.0142888 |
| 12 | 55879117 | 55879117 | 1 | 12_55879117 | ENSG00000257966 | OLA1P3 | 6515 | Upstream | 4.62592577 | 3.73E-06 | 0.0142888 |
| 19 | 28680478 | 28680478 | 1 | 19_28680478 | ENSG00000283403 | AC005394.2 | 0 | INTRON | 4.62572989 | 3.73E-06 | 0.0142991 |
| 18 | 23875871 | 23875871 | 1 | 18_23875871 | ENSG00000053747 | LAMA3 | 0 | INTRON | 4.62526335 | 3.74E-06 | 0.01432433 |
| 1 | 53080822 | 53080822 | 1 | 1_53080822 | ENSG00000174348 | PODN | 0 | EXON | -4.6252402 | 3.74E-06 | 0.01432433 |
| 6 | 35075540 | 35075540 | 1 | 6_35075540 | ENSG00000064999 | ANKS1A | 0 | INTRON | 4.62514038 | 3.74E-06 | 0.01432433 |
| 7 | 71385236 | 71385236 | 1 | 7_71385236 | ENSG00000185274 | GALNT17 | 0 | INTRON | 4.62513332 | 3.74E-06 | 0.01432433 |
| X | 29740713 | 29740713 | 1 | X_29740713 | ENSG00000169306 | IL1RAPL1 | 0 | INTRON | -4.6251313 | 3.74E-06 | 0.01432433 |
| 2 | 207239794 | 207239794 | 1 | 2_207239794 | ENSG00000229647 | MYOSLID | 0 | EXON | 4.62497856 | 3.75E-06 | 0.01432796 |
| 5 | 165914468 | 165914468 | 1 | 5_165914468 | ENSG00000253946 | AC008489.1 | 8860 | Downstream | -4.6249782 | 3.75E-06 | 0.01432796 |
| 12 | 115022542 | 115022542 | 1 | 12_115022542 | ENSG00000257958 | AC008125.1 | 54782 | Upstream | -4.6249389 | 3.75E-06 | 0.01432796 |
| 13 | 107599202 | 107599202 | 1 | 13_107599202 | ENSG00000204442 | FAM155A | 0 | INTRON | 4.62488982 | 3.75E-06 | 0.01432814 |
| 9 | 88155320 | 88155320 | 1 | 9_88155320 | ENSG00000276535 | AL353726.1 | 9470 | Upstream | 4.62464987 | 3.75E-06 | 0.0143342 |
| 17 | 39093491 | 39093491 | 1 | 17_39093491 | ENSG00000161381 | PLXDC1 | 0 | INTRON | 4.62458437 | 3.75E-06 | 0.0143342 |
| 17 | 2026942 | 2026942 | 1 | 17_2026942 | ENSG00000185924 | RTN4RL1 | 1608 | Upstream | -4.62455 | 3.75E-06 | 0.0143342 |
| X | 153796109 | 153796109 | 1 | X_153796109 | ENSG00000180879 | SSR4 | 0 | EXON | 4.6245183 | 3.75E-06 | 0.0143342 |
| 10 | 55732911 | 55732911 | 1 | 10_55732911 | ENSG00000270541 | AC069545.1 | 13639 | Upstream | -4.6245069 | 3.75E-06 | 0.0143342 |
| 2 | 163953039 | 163953039 | 1 | 2_163953039 | ENSG00000237844 | AC016766.1 | 0 | INTRON | 4.62449658 | 3.76E-06 | 0.0143342 |
| 6 | 160933499 | 160933499 | 1 | 6_160933499 | ENSG00000233342 | AL139393.2 | 0 | INTRON | 4.62447644 | 3.76E-06 | 0.0143342 |
| 4 | 80995442 | 80995442 | 1 | 4_80995442 | ENSG00000197826 | CFAP299 | 31686 | Downstream | 4.62438631 | 3.76E-06 | 0.01433625 |
| 22 | 15617105 | 15617105 | 1 | 22_15617105 | ENSG00000226474 | AP000532.1 | 1527 | Upstream | 4.6243027 | 3.76E-06 | 0.01433625 |
| 20 | 55066813 | 55066813 | 1 | 20_55066813 | ENSG00000185834 | RPL12P4 | 7830 | Upstream | 4.62426605 | 3.76E-06 | 0.01433625 |
| 16 | 74899768 | 74899768 | 1 | 16_74899768 | ENSG00000103091 | WDR59 | 0 | INTRON | 4.62422023 | 3.76E-06 | 0.01433625 |
| 7 | 91833277 | 91833277 | 1 | 7_91833277 | ENSG00000127989 | MTERF1 | 0 | INTRON | -4.624157 | 3.76E-06 | 0.01433625 |
| 2 | 19631283 | 19631283 | 1 | 2_19631283 | ENSG00000235911 | AC019055.1 | 80431 | Upstream | -4.624128 | 3.76E-06 | 0.01433625 |
| 17 | 2423114 | 2423114 | 1 | 17_2423114 | ENSG00000127804 | METTL16 | 0 | INTRON | 4.62412155 | 3.76E-06 | 0.01433625 |
| 9 | 77743326 | 77743326 | 1 | 9_77743326 | ENSG00000156052 | GNAQ | 0 | INTRON | -4.6239374 | 3.77E-06 | 0.01434578 |
| 12 | 78906876 | 78906876 | 1 | 12_78906876 | ENSG00000067715 | SYT1 | 0 | INTRON | -4.6238507 | 3.77E-06 | 0.01434856 |
| 1 | 91974157 | 91974157 | 1 | 1_91974157 | ENSG00000137948 | BRDT | 0 | INTRON | 4.62364598 | 3.77E-06 | 0.01435666 |
| 22 | 33333219 | 33333219 | 1 | 22_33333219 | ENSG00000133424 | LARGE1 | 0 | INTRON | 4.62355989 | 3.77E-06 | 0.01435666 |
| 4 | 102722848 | 102722848 | 1 | 4_102722848 | ENSG00000109323 | MANBA | 0 | EXON | 4.62353995 | 3.77E-06 | 0.01435666 |
| 14 | 73064639 | 73064639 | 1 | 14_73064639 | ENSG00000119707 | RBM25 | 0 | INTRON | 4.62352239 | 3.77E-06 | 0.01435666 |
| 21 | 45358366 | 45358366 | 1 | 21_45358366 | ENSG00000237664 | LINC00316 | 16376 | Upstream | 4.62346442 | 3.77E-06 | 0.01435666 |
| 9 | 65435116 | 65435116 | 1 | 9_65435116 | ENSG00000287329 | FP326651.1 | 38744 | Downstream | 4.6234217 | 3.77E-06 | 0.01435666 |
| 2 | 66881088 | 66881088 | 1 | 2_66881088 | ENSG00000230355 | AC009474.2 | 0 | EXON | -4.6234092 | 3.77E-06 | 0.01435666 |
| 2 | 166275382 | 166275382 | 1 | 2_166275382 | ENSG00000169432 | SCN9A | 0 | INTRON | 4.62323807 | 3.78E-06 | 0.01436417 |
| 15 | 35314652 | 35314652 | 1 | 15_35314652 | ENSG00000134146 | DPH6 | 0 | INTRON | 4.62320795 | 3.78E-06 | 0.01436417 |
| 5 | 6753854 | 6753854 | 1 | 5_6753854 | ENSG00000112941 | TENT4A | 0 | INTRON | 4.62312019 | 3.78E-06 | 0.01436705 |
| 5 | 159792039 | 159792039 | 1 | 5_159792039 | ENSG00000249738 | AC008691.1 | 0 | INTRON | -4.6230009 | 3.78E-06 | 0.01437077 |
| 8 | 8866447 | 8866447 | 1 | 8_8866447 | ENSG00000147324 | MFHAS1 | 0 | INTRON | -4.6229738 | 3.78E-06 | 0.01437077 |
| 19 | 1112995 | 1112995 | 1 | 19_1112995 | ENSG00000064932 | SBNO2 | 0 | INTRON | -4.622751 | 3.79E-06 | 0.01438187 |
| 9 | 72134470 | 72134470 | 1 | 9_72134470 | ENSG00000119125 | GDA | 0 | INTRON | -4.6226764 | 3.79E-06 | 0.01438187 |
| 1 | 233705626 | 233705626 | 1 | 1_233705626 | ENSG00000286109 | AL357972.1 | 18827 | Upstream | 4.62267489 | 3.79E-06 | 0.01438187 |
| 9 | 70501221 | 70501221 | 1 | 9_70501221 | ENSG00000083067 | TRPM3 | 27841 | Downstream | 4.62261743 | 3.79E-06 | 0.01438265 |
| 10 | 10735536 | 10735536 | 1 | 10_10735536 | ENSG00000228997 | AL136452.1 | 40686 | Downstream | -4.6223945 | 3.79E-06 | 0.01439481 |
| 1 | 211299001 | 211299001 | 1 | 1_211299001 | ENSG00000117625 | RCOR3 | 0 | INTRON | 4.62234962 | 3.79E-06 | 0.01439481 |
| 16 | 63059739 | 63059739 | 1 | 16_63059739 | ENSG00000261502 | AC040174.1 | 0 | EXON | 4.62221312 | 3.80E-06 | 0.01440108 |
| 14 | 18914315 | 18914315 | 1 | 14_18914315 | ENSG00000257853 | MED15P1 | 0 | EXON | -4.6220432 | 3.80E-06 | 0.01440967 |
| 10 | 1086799 | 1086799 | 1 | 10_1086799 | ENSG00000047056 | WDR37 | 0 | INTRON | 4.62198117 | 3.80E-06 | 0.01441077 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 51347262 | 51347262 | 1 | 18_51347262 | ENSG00000227115 | LINC01630 | 0 | INTRON | -4.6218826 | 3.80E-06 | 0.01441282 |
| 19 | 22751834 | 22751834 | 1 | 19_22751834 | ENSG00000213973 | ZNF99 | 348 | Downstream | 4.62182071 | 3.80E-06 | 0.01441282 |
| 11 | 120886771 | 120886771 | 1 | 11_120886771 | ENSG00000250493 | AP004147.1 | 0 | INTRON | 4.62181308 | 3.80E-06 | 0.01441282 |
| 4 | 69512857 | 69512857 | 1 | 4_69512857 | ENSG00000156096 | UGT2B4 | 0 | INTRON | -4.6213099 | 3.81E-06 | 0.01444461 |
| 8 | 1848184 | 1848184 | 1 | 8_1848184 | ENSG00000283239 | AC019257.8 | 0 | INTRON | 4.62107465 | 3.82E-06 | 0.01445732 |
| 5 | 68594992 | 68594992 | 1 | 5_68594992 | ENSG00000248359 | AC010280.1 | 29477 | Upstream | 4.62103509 | 3.82E-06 | 0.01445732 |
| 20 | 11662700 | 11662700 | 1 | 20_11662700 | ENSG00000261411 | AL161938.1 | 22443 | Downstream | -4.6209841 | 3.82E-06 | 0.01445766 |
| 12 | 20522645 | 20522645 | 1 | 12_20522645 | ENSG00000172572 | PDE3A | 0 | INTRON | -4.6207593 | 3.82E-06 | 0.01446722 |
| 10 | 81171975 | 81171975 | 1 | 10_81171975 | ENSG00000226466 | RPA2P2 | 34640 | Upstream | -4.6207547 | 3.82E-06 | 0.01446722 |
| 3 | 110756529 | 110756529 | 1 | 3_110756529 | ENSG00000201426 | Y_RNA | 29408 | Downstream | 4.62032563 | 3.83E-06 | 0.01448985 |
| 6 | 100057453 | 100057453 | 1 | 6_100057453 | ENSG00000229315 | MCHR2-AS1 | 0 | INTRON | -4.6202846 | 3.83E-06 | 0.01448985 |
| 7 | 66535194 | 66535194 | 1 | 7_66535194 | ENSG00000229180 | AC006001.3 | 0 | INTRON | -4.6202631 | 3.83E-06 | 0.01448985 |
| 2 | 86214728 | 86214728 | 1 | 2_86214728 | ENSG00000068615 | REEP1 | 0 | 3UTR | -4.6202459 | 3.83E-06 | 0.01448985 |
| 5 | 107849439 | 107849439 | 1 | 5_107849439 | ENSG00000145743 | FBXL17 | 9595 | Downstream | 4.62007153 | 3.84E-06 | 0.01449695 |
| 10 | 9483549 | 9483549 | 1 | 10_9483549 | ENSG00000287120 | AL138773.1 | 173777 | Upstream | 4.6200522 | 3.84E-06 | 0.01449695 |
| 8 | 121173230 | 121173230 | 1 | 8_121173230 | ENSG00000253619 | AC068413.1 | 53476 | Downstream | -4.6198494 | 3.84E-06 | 0.0145079 |
| 13 | 65837503 | 65837503 | 1 | 13_65837503 | ENSG00000234767 | LINC01052 | 28566 | Upstream | -4.6197539 | 3.84E-06 | 0.01451136 |
| 10 | 12504914 | 12504914 | 1 | 10_12504914 | ENSG00000183049 | CAMK1D | 0 | INTRON | -4.6196768 | 3.84E-06 | 0.01451319 |
| 4 | 179381138 | 179381138 | 1 | 4_179381138 | ENSG00000250993 | AC020551.1 | 7995 | Downstream | -4.6196357 | 3.84E-06 | 0.01451319 |
| 9 | 133246615 | 133246615 | 1 | 9_133246615 | ENSG00000175164 | ABO | 3785 | Downstream | 4.61944091 | 3.85E-06 | 0.01452283 |
| 5 | 177921161 | 177921161 | 1 | 5_177921161 | ENSG00000170089 | AC106795.1 | 0 | EXON | 4.61940573 | 3.85E-06 | 0.01452283 |
| 17 | 76073515 | 76073515 | 1 | 17_76073515 | ENSG00000186919 | ZACN | 0 | INTRON | 4.61929532 | 3.85E-06 | 0.01452585 |
| 2 | 217724350 | 217724350 | 1 | 2_217724350 | ENSG00000231672 | DIRC3 | 0 | INTRON | 4.61927057 | 3.85E-06 | 0.01452585 |
| 1 | 9878537 | 9878537 | 1 | 1_9878537 | ENSG00000178585 | CTNNBIP1 | 0 | INTRON | 4.6191563 | 3.85E-06 | 0.01453063 |
| 19 | 56319610 | 56319610 | 1 | 19_56319610 | ENSG00000267549 | AC006116.8 | 0 | INTRON | 4.61896132 | 3.86E-06 | 0.01453471 |
| 20 | 7581569 | 7581569 | 1 | 20_7581569 | ENSG00000240584 | RN7SL547P | 51992 | Downstream | -4.6189539 | 3.86E-06 | 0.01453471 |
| 2 | 213903830 | 213903830 | 1 | 2_213903830 | ENSG00000144451 | SPAG16 | 0 | INTRON | 4.61894347 | 3.86E-06 | 0.01453471 |
| 22 | 19070051 | 19070051 | 1 | 22_19070051 | ENSG00000070413 | DGCR2 | 0 | INTRON | -4.6189142 | 3.86E-06 | 0.01453471 |
| 1 | 58225147 | 58225147 | 1 | 1_58225147 | ENSG00000173406 | DAB1 | 0 | INTRON | 4.61882106 | 3.86E-06 | 0.01453802 |
| 5 | 34449368 | 34449368 | 1 | 5_34449368 | ENSG00000249380 | AC138853.1 | 75518 | Downstream | -4.61869 | 3.86E-06 | 0.01454398 |
| 17 | 80056483 | 80056483 | 1 | 17_80056483 | ENSG00000141519 | CCDC40 | 0 | INTRON | 4.61855083 | 3.86E-06 | 0.01454704 |
| 5 | 125435619 | 125435619 | 1 | 5_125435619 | ENSG00000260192 | LINC02240 | 0 | INTRON | 4.61853875 | 3.86E-06 | 0.01454704 |
| 6 | 286101 | 286101 | 1 | 6_286101 | ENSG00000287265 | AL365272.1 | 0 | EXON | 4.61850863 | 3.87E-06 | 0.01454704 |
| 1 | 66915673 | 66915673 | 1 | 1_66915673 | ENSG00000152763 | WDR78 | 0 | INTRON | -4.6183613 | 3.87E-06 | 0.01455415 |
| 1 | 215620574 | 215620574 | 1 | 1_215620574 | ENSG00000136636 | KCTD3 | 0 | EXON | -4.6182446 | 3.87E-06 | 0.01455577 |
| 19 | 18401568 | 18401568 | 1 | 19_18401568 | ENSG00000175489 | LRRC25 | 3946 | Upstream | 4.61821165 | 3.87E-06 | 0.01455577 |
| 16 | 57758870 | 57758870 | 1 | 16_57758870 | ENSG00000140859 | KIFC3 | 0 | 3UTR | 4.61820051 | 3.87E-06 | 0.01455577 |
| 1 | 50502402 | 50502402 | 1 | 1_50502402 | ENSG00000185104 | FAF1 | 0 | INTRON | 4.61805201 | 3.87E-06 | 0.01455836 |
| 2 | 172621166 | 172621166 | 1 | 2_172621166 | ENSG00000152256 | PDK1 | 12497 | Downstream | -4.6180166 | 3.87E-06 | 0.01455836 |
| 7 | 129132449 | 129132449 | 1 | 7_129132449 | ENSG00000230626 | AC011005.1 | 1656 | Downstream | -4.6179907 | 3.87E-06 | 0.01455836 |
| 9 | 80133986 | 80133986 | 1 | 9_80133986 | ENSG00000230945 | LINC01507 | 99431 | Downstream | 4.61794768 | 3.88E-06 | 0.01455836 |
| 19 | 17534517 | 17534517 | 1 | 19_17534517 | ENSG00000167483 | NIBAN3 | 0 | INTRON | 4.6179333 | 3.88E-06 | 0.01455836 |
| 4 | 82882178 | 82882178 | 1 | 4_82882178 | ENSG00000138674 | SEC31A | 0 | INTRON | 4.61782576 | 3.88E-06 | 0.01455836 |
| 9 | 131949019 | 131949019 | 1 | 9_131949019 | ENSG00000160563 | MED27 | 0 | INTRON | -4.6178141 | 3.88E-06 | 0.01455836 |
| 13 | 83822014 | 83822014 | 1 | 13_83822014 | ENSG00000178235 | SLITRK1 | 55190 | Downstream | 4.617797 | 3.88E-06 | 0.01455836 |
| 19 | 10412779 | 10412779 | 1 | 19_10412779 | ENSG00000105401 | CDC37 | 0 | INTRON | -4.6176655 | 3.88E-06 | 0.01456437 |
| 2 | 45764528 | 45764528 | 1 | 2_45764528 | ENSG00000171132 | PRKCE | 0 | INTRON | 4.6175227 | 3.88E-06 | 0.01457037 |
| 7 | 68813850 | 68813850 | 1 | 7_68813850 | ENSG00000222428 | RNA5SP231 | 89802 | Upstream | -4.6174885 | 3.88E-06 | 0.01457037 |
| 9 | 34968200 | 34968200 | 1 | 9_34968200 | ENSG00000122733 | PHF24 | 0 | INTRON | -4.6172604 | 3.89E-06 | 0.0145804 |
| 11 | 120911438 | 120911438 | 1 | 11_120911438 | ENSG00000149403 | GRIK4 | 0 | INTRON | 4.61723488 | 3.89E-06 | 0.0145804 |
| 3 | 85639555 | 85639555 | 1 | 3_85639555 | ENSG00000175161 | CADM2 | 0 | INTRON | -4.6172036 | 3.89E-06 | 0.0145804 |
| 2 | 144000811 | 144000811 | 1 | 2_144000811 | ENSG00000121964 | GTDC1 | 0 | INTRON | 4.61698534 | 3.89E-06 | 0.0145804 |
| 1 | 19438827 | 19438827 | 1 | 1_19438827 | ENSG00000077549 | CAPZB | 0 | INTRON | -4.6169693 | 3.89E-06 | 0.0145804 |
| 7 | 90129212 | 90129212 | 1 | 7_90129212 | ENSG00000227646 | STEAP2-AS1 | 0 | INTRON | 4.61694977 | 3.89E-06 | 0.0145804 |
| 2 | 229110168 | 229110168 | 1 | 2_229110168 | ENSG00000153823 | PID1 | 0 | INTRON | 4.61694562 | 3.89E-06 | 0.0145804 |
| 18 | 59263135 | 59263135 | 1 | 18_59263135 | ENSG00000134438 | RAX | 3899 | Downstream | -4.6168844 | 3.90E-06 | 0.0145804 |
| 16 | 58540831 | 58540831 | 1 | 16_58540831 | ENSG00000125107 | CNOT1 | 0 | INTRON | 4.61686742 | 3.90E-06 | 0.0145804 |
| 2 | 3154970 | 3154970 | 1 | 2_3154970 | ENSG00000226649 | AC019118.1 | 1785 | Upstream | 4.61686188 | 3.90E-06 | 0.0145804 |
| 16 | 89306310 | 89306310 | 1 | 16_89306310 | ENSG00000167522 | ANKRD11 | 0 | INTRON | 4.61684272 | 3.90E-06 | 0.0145804 |
| 4 | 172828009 | 172828009 | 1 | 4_172828009 | ENSG00000174473 | GALNTL6 | 0 | INTRON | -4.6166893 | 3.90E-06 | 0.01458797 |
| 7 | 68665060 | 68665060 | 1 | 7_68665060 | ENSG00000228429 | AC004910.1 | 23476 | Downstream | 4.61647141 | 3.90E-06 | 0.01460008 |
| 11 | 120527823 | 120527823 | 1 | 11_120527823 | ENSG00000149403 | GRIK4 | 0 | INTRON | 4.61618564 | 3.91E-06 | 0.01461698 |
| 4 | 109775983 | 109775983 | 1 | 4_109775983 | ENSG00000205403 | CFI | 0 | INTRON | -4.6160794 | 3.91E-06 | 0.01462124 |
| 10 | 69553836 | 69553836 | 1 | 10_69553836 | ENSG00000287306 | AC016821.1 | 9579 | Downstream | 4.61601095 | 3.91E-06 | 0.01462285 |
| 9 | 105486323 | 105486323 | 1 | 9_105486323 | ENSG00000106701 | FSD1L | 0 | INTRON | 4.61575484 | 3.92E-06 | 0.01463365 |
| 22 | 25507417 | 25507417 | 1 | 22_25507417 | ENSG00000100058 | CRYBB2P1 | 0 | INTRON | -4.6156935 | 3.92E-06 | 0.01463365 |
| 12 | 18904041 | 18904041 | 1 | 12_18904041 | ENSG00000177938 | CAPZA3 | 164853 | Downstream | 4.6155494 | 3.92E-06 | 0.01463365 |
| 11 | 63203701 | 63203701 | 1 | 11_63203701 | ENSG00000196600 | SLC22A25 | 0 | INTRON | 4.61553079 | 3.92E-06 | 0.01463365 |
| 19 | 40706749 | 40706749 | 1 | 19_40706749 | ENSG00000123815 | COQ8B | 0 | INTRON | -4.6155193 | 3.92E-06 | 0.01463365 |
| 18 | 49591470 | 49591470 | 1 | 18_49591470 | ENSG00000101670 | LIPG | 0 | 3UTR | -4.6154981 | 3.92E-06 | 0.01463365 |
| 6 | 31467503 | 31467503 | 1 | 6_31467503 | ENSG00000206337 | HCP5 | 0 | INTRON | -4.6154856 | 3.92E-06 | 0.01463365 |
| 7 | 105195210 | 105195210 | 1 | 7_105195210 | ENSG00000135250 | SRPK2 | 0 | INTRON | 4.61537713 | 3.92E-06 | 0.01463365 |
| 3 | 190589488 | 190589488 | 1 | 3_190589488 | ENSG00000196083 | IL1RAP | 0 | INTRON | -4.6153724 | 3.92E-06 | 0.01463365 |
| X | 24692070 | 24692070 | 1 | X_24692070 | ENSG00000101868 | POLA1 | 1838 | Upstream | -4.6153684 | 3.92E-06 | 0.01463365 |
| 17 | 39916541 | 39916541 | 1 | 17_39916541 | ENSG00000073605 | GSDMB | 0 | INTRON | 4.6153564 | 3.92E-06 | 0.01463365 |
| 14 | 29500256 | 29500256 | 1 | 14_29500256 | ENSG00000286040 | AL158058.2 | 0 | INTRON | 4.61530169 | 3.93E-06 | 0.0146343 |
| 6 | 112545208 | 112545208 | 1 | 6_112545208 | ENSG00000232299 | AL357514.1 | 63572 | Upstream | 4.61518636 | 3.93E-06 | 0.01463912 |
| 16 | 27049330 | 27049330 | 1 | 16_27049330 | ENSG00000234186 | C16orf82 | 17376 | Upstream | -4.6151218 | 3.93E-06 | 0.01463912 |
| 20 | 19977641 | 19977641 | 1 | 20_19977641 | ENSG00000132669 | RIN2 | 0 | INTRON | 4.61505801 | 3.93E-06 | 0.01463912 |
| 10 | 89110599 | 89110599 | 1 | 10_89110599 | ENSG00000233292 | AL513533.1 | 28444 | Upstream | 4.61505131 | 3.93E-06 | 0.01463912 |
| 18 | 65749492 | 65749492 | 1 | 18_65749492 | ENSG00000081138 | CDH7 | 759 | Upstream | -4.6149895 | 3.93E-06 | 0.01464028 |
| 7 | 16187478 | 16187478 | 1 | 7_16187478 | ENSG00000214960 | CRPPA | 0 | INTRON | 4.61474969 | 3.94E-06 | 0.01465398 |
| 1 | 186643899 | 186643899 | 1 | 1_186643899 | ENSG00000229739 | AL096803.2 | 17280 | Downstream | -4.6147034 | 3.94E-06 | 0.01465404 |
| 20 | 56251486 | 56251486 | 1 | 20_56251486 | ENSG00000124089 | MC3R | 1671 | Downstream | 4.61455481 | 3.94E-06 | 0.01466132 |
| 16 | 30006816 | 30006816 | 1 | 16_30006816 | ENSG00000149927 | DOC2A | 0 | 3UTR | 4.61446327 | 3.94E-06 | 0.01466325 |
| X | 129754564 | 129754564 | 1 | X_129754564 | ENSG00000122121 | XPNPEP2 | 0 | EXON | -4.6144367 | 3.94E-06 | 0.01466325 |
| 17 | 28622842 | 28622842 | 1 | 17_28622842 | ENSG00000007202 | KIAA0100 | 0 | INTRON | 4.61423228 | 3.95E-06 | 0.01467448 |
| 1 | 203485477 | 203485477 | 1 | 1_203485477 | ENSG00000188783 | PRELP | 0 | INTRON | -4.6140293 | 3.95E-06 | 0.01468481 |

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| 7 | 45717989 | 45717989 | 1 | 7_45717989 | ENSG00000164742 | ADCY1 | 0 | 3UTR | 4.61399528 | 3.95E-06 | 0.01468481 |
| 20 | 15550981 | 15550981 | 1 | 20_15550981 | ENSG00000172264 | MACROD2 | 0 | INTRON | -4.6138791 | 3.95E-06 | 0.01468981 |
| 2 | 137300964 | 137300964 | 1 | 2_137300964 | ENSG00000144229 | THSD7B | 0 | INTRON | 4.61374472 | 3.95E-06 | 0.01469109 |
| 22 | 20009029 | 20009029 | 1 | 22_20009029 | ENSG00000099889 | ARVCF | 0 | INTRON | -4.6137404 | 3.95E-06 | 0.01469109 |
| 5 | 157592788 | 157592788 | 1 | 5_157592788 | ENSG00000254336 | AC008694.2 | 11918 | Downstream | -4.6137251 | 3.96E-06 | 0.01469109 |
| 12 | 108530255 | 108530255 | 1 | 12_108530255 | ENSG00000075856 | SART3 | 0 | 3UTR | -4.6136773 | 3.96E-06 | 0.01469126 |
| 19 | 33561258 | 33561258 | 1 | 19_33561258 | ENSG00000266985 | AC010485.1 | 3788 | Downstream | 4.61357773 | 3.96E-06 | 0.01469509 |
| 3 | 9311496 | 9311496 | 1 | 3_9311496 | ENSG00000254485 | AC026191.1 | 0 | INTRON | 4.61352233 | 3.96E-06 | 0.01469581 |
| 14 | 23124745 | 23124745 | 1 | 14_23124745 | ENSG00000092068 | SLC7A8 | 549 | Downstream | 4.61347493 | 3.96E-06 | 0.01469595 |
| 1 | 16958421 | 16958421 | 1 | 1_16958421 | ENSG00000058453 | CROCC | 0 | INTRON | -4.6133172 | 3.96E-06 | 0.01470347 |
| 7 | 17497169 | 17497169 | 1 | 7_17497169 | ENSG00000236039 | AC019117.1 | 0 | INTRON | -4.613278 | 3.96E-06 | 0.01470347 |
| 6 | 135739599 | 135739599 | 1 | 6_135739599 | ENSG00000231028 | LINC00271 | 0 | INTRON | -4.6130965 | 3.97E-06 | 0.01471155 |
| 12 | 46760448 | 46760448 | 1 | 12_46760448 | ENSG00000257261 | AC008014.1 | 0 | INTRON | 4.61302864 | 3.97E-06 | 0.01471155 |
| 15 | 70804782 | 70804782 | 1 | 15_70804782 | ENSG00000235420 | RPL29P30 | 2094 | Upstream | 4.61302817 | 3.97E-06 | 0.01471155 |
| 4 | 97566555 | 97566555 | 1 | 4_97566555 | ENSG00000254044 | AC034154.1 | 0 | INTRON | 4.61290484 | 3.97E-06 | 0.01471447 |
| 8 | 135201009 | 135201009 | 1 | 8_135201009 | ENSG00000254083 | LINC01591 | 33121 | Upstream | -4.6128964 | 3.97E-06 | 0.01471447 |
| 1 | 144905034 | 144905034 | 1 | 1_144905034 | ENSG00000196369 | SRGAP2B | 0 | INTRON | 4.61275313 | 3.97E-06 | 0.01472141 |
| 2 | 201370342 | 201370342 | 1 | 2_201370342 | ENSG00000115993 | TRAK2 | 6864 | Downstream | 4.61270008 | 3.97E-06 | 0.01472197 |
| 5 | 147844608 | 147844608 | 1 | 5_147844608 | ENSG00000249518 | AC011352.2 | 7035 | Downstream | -4.612618 | 3.98E-06 | 0.01472458 |
| 14 | 76780374 | 76780374 | 1 | 14_76780374 | ENSG00000071246 | VASH1 | 0 | 3UTR | 4.61242572 | 3.98E-06 | 0.014735 |
| 22 | 34460275 | 34460275 | 1 | 22_34460275 | ENSG00000235485 | AL021877.1 | 128809 | Downstream | -4.6121752 | 3.98E-06 | 0.01474957 |
| 16 | 26620433 | 26620433 | 1 | 16_26620433 | ENSG00000286712 | AC002331.1 | 13037 | Downstream | -4.6120622 | 3.99E-06 | 0.01475438 |
| 16 | 1602426 | 1602426 | 1 | 16_1602426 | ENSG00000187535 | IFT140 | 0 | EXON | 4.61193881 | 3.99E-06 | 0.01475707 |
| 2 | 237201029 | 237201029 | 1 | 2_237201029 | ENSG00000224132 | AC112715.1 | 56061 | Upstream | 4.61193398 | 3.99E-06 | 0.01475707 |
| 16 | 79462072 | 79462072 | 1 | 16_79462072 | ENSG00000261472 | AC084064.1 | 43530 | Upstream | 4.61184955 | 3.99E-06 | 0.01475986 |
| 7 | 92421811 | 92421811 | 1 | 7_92421811 | ENSG00000230927 | TMBIM7P | 0 | INTRON | 4.61180075 | 3.99E-06 | 0.01476011 |
| 11 | 89498670 | 89498670 | 1 | 11_89498670 | ENSG00000255295 | AP002404.1 | 77 | Downstream | -4.6116847 | 3.99E-06 | 0.01476515 |
| 1 | 225223662 | 225223662 | 1 | 1_225223662 | ENSG00000185842 | DNAH14 | 0 | INTRON | -4.6115807 | 4.00E-06 | 0.01476746 |
| 1 | 239558480 | 239558480 | 1 | 1_239558480 | ENSG00000133019 | CHRM3 | 0 | INTRON | -4.6115361 | 4.00E-06 | 0.01476746 |
| 16 | 64711249 | 64711249 | 1 | 16_64711249 | ENSG00000260187 | PPIAP48 | 24675 | Upstream | 4.61151683 | 4.00E-06 | 0.01476746 |
| 7 | 65095417 | 65095417 | 1 | 7_65095417 | ENSG00000226002 | GTF2IP14 | 0 | INTRON | 4.61136055 | 4.00E-06 | 0.01477058 |
| 17 | 57636631 | 57636631 | 1 | 17_57636631 | ENSG00000153944 | MSI2 | 0 | INTRON | 4.6113254 | 4.00E-06 | 0.01477058 |
| 1 | 27540508 | 27540508 | 1 | 1_27540508 | ENSG00000126705 | AHDC1 | 0 | INTRON | -4.6113115 | 4.00E-06 | 0.01477058 |
| 16 | 54536459 | 54536459 | 1 | 16_54536459 | ENSG00000283304 | LINC02183 | 6348 | Downstream | 4.61129251 | 4.00E-06 | 0.01477058 |
| 21 | 7626344 | 7626344 | 1 | 21_7626344 | ENSG00000279177 | FP236241.2 | 0 | EXON | -4.6112231 | 4.00E-06 | 0.01477156 |
| 7 | 141957045 | 141957045 | 1 | 7_141957045 | ENSG00000257335 | MGAM | 0 | INTRON | 4.61112914 | 4.00E-06 | 0.01477156 |
| 22 | 31890569 | 31890569 | 1 | 22_31890569 | ENSG00000100150 | DEPDC5 | 0 | INTRON | 4.61111058 | 4.01E-06 | 0.01477156 |
| 17 | 57446403 | 57446403 | 1 | 17_57446403 | ENSG00000153944 | MSI2 | 0 | INTRON | -4.6110833 | 4.01E-06 | 0.01477156 |
| 21 | 25259977 | 25259977 | 1 | 21_25259977 | ENSG00000222042 | AP001341.1 | 0 | INTRON | 4.61105338 | 4.01E-06 | 0.01477156 |
| 9 | 114122056 | 114122056 | 1 | 9_114122056 | ENSG00000136883 | KIF12 | 22765 | Upstream | -4.6109792 | 4.01E-06 | 0.01477363 |
| 1 | 82433880 | 82433880 | 1 | 1_82433880 | ENSG00000233290 | AL157944.1 | 0 | INTRON | 4.61086465 | 4.01E-06 | 0.01477857 |
| 17 | 80964595 | 80964595 | 1 | 17_80964595 | ENSG00000141564 | RPTOR | 0 | 3UTR | 4.61067927 | 4.01E-06 | 0.01478582 |
| 6 | 45405649 | 45405649 | 1 | 6_45405649 | ENSG00000124813 | RUNX2 | 0 | INTRON | 4.61067269 | 4.01E-06 | 0.01478582 |
| 17 | 918879 | 918879 | 1 | 17_918879 | ENSG00000167693 | NXN | 0 | INTRON | 4.61056302 | 4.02E-06 | 0.01478818 |
| 3 | 194279583 | 194279583 | 1 | 3_194279583 | ENSG00000228271 | LINC02048 | 0 | INTRON | -4.6105055 | 4.02E-06 | 0.01478818 |
| 8 | 89318774 | 89318774 | 1 | 8_89318774 | ENSG00000253621 | RPSAP74 | 74981 | Upstream | -4.6104178 | 4.02E-06 | 0.01478818 |
| 22 | 29778507 | 29778507 | 1 | 22_29778507 | ENSG00000184076 | UQCR10 | 8094 | Downstream | -4.6103999 | 4.02E-06 | 0.01478818 |
| 12 | 129662380 | 129662380 | 1 | 12_129662380 | ENSG00000151952 | TMEM132D | 0 | INTRON | 4.61030835 | 4.02E-06 | 0.01478818 |
| X | 47592167 | 47592167 | 1 | X_47592167 | ENSG00000008056 | SYN1 | 0 | INTRON | 4.61030814 | 4.02E-06 | 0.01478818 |
| 12 | 123551246 | 123551246 | 1 | 12_123551246 | ENSG00000266655 | MIR3908 | 14712 | Downstream | 4.61029808 | 4.02E-06 | 0.01478818 |
| 1 | 5923506 | 5923506 | 1 | 1_5923506 | ENSG00000131697 | NPHP4 | 0 | INTRON | 4.61027977 | 4.02E-06 | 0.01478818 |
| 8 | 102426744 | 102426744 | 1 | 8_102426744 | ENSG00000221387 | RNU6ATAC8P | 5422 | Downstream | -4.6101875 | 4.02E-06 | 0.01478964 |
| 14 | 68697623 | 68697623 | 1 | 14_68697623 | ENSG00000182185 | RAD51B | 0 | INTRON | 4.61016947 | 4.02E-06 | 0.01478964 |
| 5 | 45421353 | 45421353 | 1 | 5_45421353 | ENSG00000164588 | HCN1 | 0 | INTRON | -4.6100622 | 4.03E-06 | 0.01479393 |
| 8 | 47779839 | 47779839 | 1 | 8_47779839 | ENSG00000253729 | PRKDC | 0 | INTRON | -4.610003 | 4.03E-06 | 0.01479393 |
| 11 | 50178301 | 50178301 | 1 | 11_50178301 | ENSG00000255442 | AC109635.4 | 0 | INTRON | 4.60997444 | 4.03E-06 | 0.01479393 |
| 2 | 129825843 | 129825843 | 1 | 2_129825843 | ENSG00000229536 | LINC02572 | 0 | EXON | 4.60987384 | 4.03E-06 | 0.01479416 |
| 9 | 114868830 | 114868830 | 1 | 9_114868830 | ENSG00000173077 | 1-Dec | 0 | INTRON | 4.60983683 | 4.03E-06 | 0.01479416 |
| 19 | 48083604 | 48083604 | 1 | 19_48083604 | ENSG00000105499 | PLA2G4C | 0 | INTRON | -4.6097886 | 4.03E-06 | 0.01479416 |
| 9 | 76448177 | 76448177 | 1 | 9_76448177 | ENSG00000187210 | GCNT1 | 0 | INTRON | 4.60975193 | 4.03E-06 | 0.01479416 |
| 13 | 25058052 | 25058052 | 1 | 13_25058052 | ENSG00000151846 | PABPC3 | 37815 | Upstream | -4.609747 | 4.03E-06 | 0.01479416 |
| 7 | 54883610 | 54883610 | 1 | 7_54883610 | ENSG00000218586 | AC006971.1 | 50088 | Upstream | 4.60958438 | 4.03E-06 | 0.01479801 |
| 4 | 132784187 | 132784187 | 1 | 4_132784187 | ENSG00000251488 | AC115622.1 | 52584 | Downstream | -4.6095602 | 4.04E-06 | 0.01479801 |
| 4 | 111397810 | 111397810 | 1 | 4_111397810 | ENSG00000200963 | RNU6-289P | 66292 | Downstream | 4.60955615 | 4.04E-06 | 0.01479801 |
| 1 | 157369922 | 157369922 | 1 | 1_157369922 | ENSG00000286151 | AL732406.1 | 31004 | Upstream | -4.6095136 | 4.04E-06 | 0.01479801 |
| 2 | 159264858 | 159264858 | 1 | 2_159264858 | ENSG00000196151 | WDSUB1 | 0 | INTRON | 4.60933799 | 4.04E-06 | 0.01480732 |
| 6 | 139746505 | 139746505 | 1 | 6_139746505 | ENSG00000231426 | FILNC1 | 0 | INTRON | 4.60924263 | 4.04E-06 | 0.01481074 |
| 18 | 48626280 | 48626280 | 1 | 18_48626280 | ENSG00000134030 | CTIF | 0 | INTRON | 4.60920037 | 4.04E-06 | 0.01481074 |
| X | 816660 | 816660 | 1 | X_816660 | ENSG00000185960 | SHOX | 157249 | Downstream | 4.609112 | 4.04E-06 | 0.01481385 |
| 6 | 39380568 | 39380568 | 1 | 6_39380568 | ENSG00000164627 | KIF6 | 0 | INTRON | -4.6087773 | 4.05E-06 | 0.01483226 |
| 11 | 7698362 | 7698362 | 1 | 11_7698362 | ENSG00000183378 | OVCH2 | 0 | INTRON | -4.6087126 | 4.05E-06 | 0.01483226 |
| 1 | 3524549 | 3524549 | 1 | 1_3524549 | ENSG00000162591 | MEGF6 | 0 | INTRON | -4.6086974 | 4.05E-06 | 0.01483226 |
| 1 | 100463049 | 100463049 | 1 | 1_100463049 | ENSG00000079335 | CDC14A | 0 | INTRON | -4.6086667 | 4.05E-06 | 0.01483226 |
| 17 | 22513544 | 22513544 | 1 | 17_22513544 | ENSG00000283879 | AC132825.5 | 5650 | Downstream | -4.6086135 | 4.05E-06 | 0.01483226 |
| 19 | 48595440 | 48595440 | 1 | 19_48595440 | ENSG00000088002 | SULT2B1 | 0 | INTRON | -4.6085853 | 4.05E-06 | 0.01483226 |
| 15 | 20048399 | 20048399 | 1 | 15_20048399 | ENSG00000259769 | AC127381.1 | 405 | Upstream | -4.608469 | 4.06E-06 | 0.01483737 |
| 2 | 205893066 | 205893066 | 1 | 2_205893066 | ENSG00000201875 | RN7SKP178 | 7563 | Upstream | -4.6084144 | 4.06E-06 | 0.01483808 |
| 14 | 61563913 | 61563913 | 1 | 14_61563913 | ENSG00000250548 | LINC01303 | 0 | EXON | -4.6082422 | 4.06E-06 | 0.01484717 |
| 12 | 117891752 | 117891752 | 1 | 12_117891752 | ENSG00000171435 | KSR2 | 0 | INTRON | 4.6079741 | 4.07E-06 | 0.01486313 |
| 1 | 221189452 | 221189452 | 1 | 1_221189452 | ENSG00000226211 | AL445466.1 | 55231 | Upstream | -4.6079029 | 4.07E-06 | 0.01486503 |
| 6 | 101330264 | 101330264 | 1 | 6_101330264 | ENSG00000164418 | GRIK2 | 0 | INTRON | 4.60785464 | 4.07E-06 | 0.01486529 |
| 11 | 55546525 | 55546525 | 1 | 11_55546525 | ENSG00000181939 | OR4C15 | 7781 | Upstream | 4.60777978 | 4.07E-06 | 0.01486745 |
| 8 | 8542640 | 8542640 | 1 | 8_8542640 | ENSG00000253343 | AC114550.2 | 13097 | Downstream | -4.6076021 | 4.07E-06 | 0.01487696 |
| 14 | 64208987 | 64208987 | 1 | 14_64208987 | ENSG00000140009 | ESR2 | 0 | INTRON | 4.60742649 | 4.08E-06 | 0.01488598 |
| 9 | 130798925 | 130798925 | 1 | 9_130798925 | ENSG00000097007 | ABL1 | 0 | INTRON | 4.6073366 | 4.08E-06 | 0.01488598 |
| 4 | 140408631 | 140408631 | 1 | 4_140408631 | ENSG00000153132 | CLGN | 0 | INTRON | -4.6073118 | 4.08E-06 | 0.01488598 |
| 5 | 7100438 | 7100438 | 1 | 5_7100438 | ENSG00000250974 | LINC02196 | 0 | INTRON | -4.6072974 | 4.08E-06 | 0.01488598 |
| 7 | 141220055 | 141220055 | 1 | 7_141220055 | ENSG00000261115 | TMEM178B | 0 | INTRON | 4.60725212 | 4.08E-06 | 0.01488604 |

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| 12 | 97069186 | 97069186 | 1 | 12_97069186 | ENSG00000257470 | AC007656.1 | 0 | INTRON | 4.60706815 | 4.08E-06 | 0.01489601 |
| 9 | 8429887 | 8429887 | 1 | 9_8429887 | ENSG00000153707 | PTPRD | 0 | INTRON | 4.60702282 | 4.08E-06 | 0.01489607 |
| 5 | 147657211 | 147657211 | 1 | 5_147657211 | ENSG00000280780 | JAKMIP2-AS1 | 0 | INTRON | 4.60691044 | 4.09E-06 | 0.01490092 |
| 7 | 40393069 | 40393069 | 1 | 7_40393069 | ENSG00000175600 | SUGCT | 0 | INTRON | 4.60683871 | 4.09E-06 | 0.01490287 |
| 15 | 68349385 | 68349385 | 1 | 15_68349385 | ENSG00000137809 | ITGA11 | 0 | INTRON | -4.6064107 | 4.10E-06 | 0.01492962 |
| 2 | 47149897 | 47149897 | 1 | 2_47149897 | ENSG00000273269 | AC073283.3 | 0 | INTRON | 4.60637645 | 4.10E-06 | 0.01492962 |
| 3 | 159381815 | 159381815 | 1 | 3_159381815 | ENSG00000283154 | IQCJ-SCHIP1 | 0 | INTRON | 4.60629157 | 4.10E-06 | 0.01493252 |
| X | 51120015 | 51120015 | 1 | X_51120015 | ENSG00000230317 | LINC01284 | 0 | INTRON | 4.60610257 | 4.10E-06 | 0.01494115 |
| 4 | 66601226 | 66601226 | 1 | 4_66601226 | ENSG00000244099 | RPS23P3 | 169705 | Downstream | -4.6060823 | 4.10E-06 | 0.01494115 |
| 5 | 25461532 | 25461532 | 1 | 5_25461532 | ENSG00000248605 | AC022140.1 | 15607 | Upstream | 4.60588653 | 4.11E-06 | 0.01495201 |
| 6 | 29090628 | 29090628 | 1 | 6_29090628 | ENSG00000204703 | OR2B3 | 3315 | Upstream | -4.6057851 | 4.11E-06 | 0.01495211 |
| 3 | 177203906 | 177203906 | 1 | 3_177203906 | ENSG00000177565 | TBL1XR1 | 0 | INTRON | 4.60575345 | 4.11E-06 | 0.01495211 |
| 17 | 50841379 | 50841379 | 1 | 17_50841379 | ENSG00000173714 | WFIKKN2 | 0 | 3UTR | 4.6057517 | 4.11E-06 | 0.01495211 |
| 9 | 27381985 | 27381985 | 1 | 9_27381985 | ENSG00000120162 | MOB3B | 0 | INTRON | 4.60546402 | 4.12E-06 | 0.01496903 |
| 1 | 232359832 | 232359832 | 1 | 1_232359832 | ENSG00000116991 | SIPA1L2 | 38132 | Downstream | -4.6054273 | 4.12E-06 | 0.01496903 |
| 6 | 160491378 | 160491378 | 1 | 6_160491378 | ENSG00000213071 | LPAL2 | 0 | EXON | -4.6052268 | 4.12E-06 | 0.01497818 |
| 10 | 57854956 | 57854956 | 1 | 10_57854956 | ENSG00000223841 | AC006484.1 | 100338 | Upstream | 4.60521134 | 4.12E-06 | 0.01497818 |
| 3 | 45721509 | 45721509 | 1 | 3_45721509 | ENSG00000211456 | SACM1L | 0 | INTRON | -4.6049584 | 4.13E-06 | 0.01498881 |
| 14 | 19082169 | 19082169 | 1 | 14_19082169 | ENSG00000225210 | DUXAP9 | 0 | INTRON | -4.6048791 | 4.13E-06 | 0.01498881 |
| 3 | 136416931 | 136416931 | 1 | 3_136416931 | ENSG00000118007 | STAG1 | 0 | INTRON | -4.6048294 | 4.13E-06 | 0.01498881 |
| 10 | 98542104 | 98542104 | 1 | 10_98542104 | ENSG00000172987 | HPSE2 | 0 | INTRON | 4.60480985 | 4.13E-06 | 0.01498881 |
| 10 | 11619641 | 11619641 | 1 | 10_11619641 | ENSG00000271360 | AL512631.2 | 7414 | Downstream | 4.60480901 | 4.13E-06 | 0.01498881 |
| 15 | 28262386 | 28262386 | 1 | 15_28262386 | ENSG00000128731 | HERC2 | 0 | INTRON | 4.6047693 | 4.13E-06 | 0.01498881 |
| 12 | 56485972 | 56485972 | 1 | 12_56485972 | ENSG00000135423 | GLS2 | 0 | INTRON | 4.60473762 | 4.13E-06 | 0.01498881 |
| 12 | 82902767 | 82902767 | 1 | 12_82902767 | ENSG00000179104 | TMTC2 | 0 | INTRON | 4.60470828 | 4.13E-06 | 0.01498881 |
| 6 | 31383142 | 31383142 | 1 | 6_31383142 | ENSG00000225851 | HLA-S | 854 | Upstream | -4.6044718 | 4.14E-06 | 0.01500049 |
| 10 | 52792987 | 52792987 | 1 | 10_52792987 | ENSG00000165471 | MBL2 | 21287 | Upstream | 4.60445746 | 4.14E-06 | 0.01500049 |
| 9 | 73876585 | 73876585 | 1 | 9_73876585 | ENSG00000223368 | AL513124.1 | 3288 | Upstream | -4.6042524 | 4.14E-06 | 0.01501207 |
| 4 | 49229804 | 49229804 | 1 | 4_49229804 | ENSG00000280043 | AC118282.4 | 0 | EXON | -4.6037419 | 4.15E-06 | 0.01503811 |
| 9 | 33875092 | 33875092 | 1 | 9_33875092 | ENSG00000107341 | UBE2R2 | 0 | INTRON | -4.6037309 | 4.15E-06 | 0.01503811 |
| 18 | 25569082 | 25569082 | 1 | 18_25569082 | ENSG00000198795 | ZNF521 | 216892 | Upstream | 4.60366978 | 4.15E-06 | 0.01503811 |
| 13 | 84835208 | 84835208 | 1 | 13_84835208 | ENSG00000288038 | AL445588.1 | 32305 | Downstream | -4.6036593 | 4.15E-06 | 0.01503811 |
| 21 | 37282878 | 37282878 | 1 | 21_37282878 | ENSG00000272948 | AP001412.1 | 14381 | Downstream | -4.6036132 | 4.15E-06 | 0.01503811 |
| 22 | 36429076 | 36429076 | 1 | 22_36429076 | ENSG00000237668 | RPS15AP38 | 7432 | Upstream | -4.6036079 | 4.15E-06 | 0.01503811 |
| 20 | 52375254 | 52375254 | 1 | 20_52375254 | ENSG00000234948 | LINC01524 | 0 | INTRON | 4.60358136 | 4.15E-06 | 0.01503811 |
| 12 | 99145489 | 99145489 | 1 | 12_99145489 | ENSG00000185046 | ANKS1B | 0 | INTRON | -4.6033355 | 4.16E-06 | 0.01504589 |
| 9 | 4800307 | 4800307 | 1 | 9_4800307 | ENSG00000120158 | RCL1 | 0 | INTRON | -4.6033343 | 4.16E-06 | 0.01504589 |
| 12 | 64903917 | 64903917 | 1 | 12_64903917 | ENSG00000255693 | LINC02389 | 0 | INTRON | -4.6033275 | 4.16E-06 | 0.01504589 |
| X | 48560889 | 48560889 | 1 | X_48560889 | ENSG00000068354 | TBC1D25 | 0 | EXON | -4.6032967 | 4.16E-06 | 0.01504589 |
| 9 | 65822263 | 65822263 | 1 | 9_65822263 | ENSG00000235893 | BX284632.1 | 4791 | Upstream | 4.60314149 | 4.16E-06 | 0.01505391 |
| 2 | 69615540 | 69615540 | 1 | 2_69615540 | ENSG00000115977 | AAK1 | 0 | INTRON | 4.6026641 | 4.17E-06 | 0.0150828 |
| 11 | 79030942 | 79030942 | 1 | 11_79030942 | ENSG00000149256 | TENM4 | 0 | INTRON | -4.6026537 | 4.17E-06 | 0.0150828 |
| 4 | 90505194 | 90505194 | 1 | 4_90505194 | ENSG00000184305 | CCSER1 | 0 | INTRON | -4.6024843 | 4.17E-06 | 0.01508951 |
| 4 | 165659785 | 165659785 | 1 | 4_165659785 | ENSG00000287424 | AC080079.2 | 0 | INTRON | -4.6024325 | 4.18E-06 | 0.01508951 |
| 5 | 156576247 | 156576247 | 1 | 5_156576247 | ENSG00000170624 | SGCD | 0 | INTRON | 4.60230313 | 4.18E-06 | 0.01508951 |
| 10 | 61140876 | 61140876 | 1 | 10_61140876 | ENSG00000227244 | LINC00845 | 114456 | Downstream | 4.60228716 | 4.18E-06 | 0.01508951 |
| 7 | 119587000 | 119587000 | 1 | 7_119587000 | ENSG00000225546 | LINC02476 | 0 | INTRON | 4.60227685 | 4.18E-06 | 0.01508951 |
| 9 | 91760506 | 91760506 | 1 | 9_91760506 | ENSG00000169071 | ROR2 | 0 | INTRON | 4.60226308 | 4.18E-06 | 0.01508951 |
| 1 | 237424443 | 237424443 | 1 | 1_237424443 | ENSG00000198626 | RYR2 | 0 | INTRON | -4.6022266 | 4.18E-06 | 0.01508951 |
| 11 | 44083469 | 44083469 | 1 | 11_44083469 | ENSG00000110455 | ACCS | 0 | EXON | 4.60220758 | 4.18E-06 | 0.01508951 |
| 12 | 68916842 | 68916842 | 1 | 12_68916842 | ENSG00000135678 | CPM | 0 | INTRON | 4.60210524 | 4.18E-06 | 0.01509372 |
| 4 | 174295664 | 174295664 | 1 | 4_174295664 | ENSG00000164118 | CEP44 | 0 | INTRON | 4.60190618 | 4.19E-06 | 0.01510495 |
| 14 | 23367222 | 23367222 | 1 | 14_23367222 | ENSG00000100842 | EFS | 1470 | Upstream | -4.6016568 | 4.19E-06 | 0.01511985 |
| 2 | 44571771 | 44571771 | 1 | 2_44571771 | ENSG00000143919 | CAMKMT | 0 | INTRON | -4.6014706 | 4.20E-06 | 0.01513017 |
| 2 | 185513740 | 185513740 | 1 | 2_185513740 | ENSG00000286797 | AC009315.1 | 8132 | Downstream | -4.6014034 | 4.20E-06 | 0.01513185 |
| 2 | 131723886 | 131723886 | 1 | 2_131723886 | ENSG00000213222 | AC093724.1 | 0 | EXON | 4.60129222 | 4.20E-06 | 0.01513625 |
| 8 | 85334806 | 85334806 | 1 | 8_85334806 | ENSG00000133742 | CA1 | 0 | INTRON | -4.6012545 | 4.20E-06 | 0.01513625 |
| X | 153033863 | 153033863 | 1 | X_153033863 | ENSG00000234200 | AC243591.1 | 3715 | Downstream | 4.60115129 | 4.20E-06 | 0.01513774 |
| 9 | 17504740 | 17504740 | 1 | 9_17504740 | ENSG00000044459 | CNTLN | 817 | Downstream | 4.60114583 | 4.20E-06 | 0.01513774 |
| 10 | 974272 | 974272 | 1 | 10_974272 | ENSG00000205740 | AL359878.1 | 0 | INTRON | 4.60105532 | 4.20E-06 | 0.01514111 |
| 1 | 236596899 | 236596899 | 1 | 1_236596899 | ENSG00000119285 | HEATR1 | 0 | EXON | -4.6007714 | 4.21E-06 | 0.01515856 |
| 14 | 24238391 | 24238391 | 1 | 14_24238391 | ENSG00000100938 | GMPR2 | 0 | 3UTR | 4.60067909 | 4.21E-06 | 0.01516207 |
| 13 | 77412007 | 77412007 | 1 | 13_77412007 | ENSG00000285714 | AL159158.1 | 5813 | Upstream | 4.60061391 | 4.21E-06 | 0.0151636 |
| 13 | 21304369 | 21304369 | 1 | 13_21304369 | ENSG00000233325 | MIPEPP3 | 0 | INTRON | -4.6004382 | 4.22E-06 | 0.01517017 |
| 2 | 227544554 | 227544554 | 1 | 2_227544554 | ENSG00000173744 | AGFG1 | 0 | INTRON | 4.60043568 | 4.22E-06 | 0.01517017 |
| 15 | 52339723 | 52339723 | 1 | 15_52339723 | ENSG00000197535 | MYO5A | 0 | INTRON | 4.6003743 | 4.22E-06 | 0.01517143 |
| 10 | 115961373 | 115961373 | 1 | 10_115961373 | ENSG00000107518 | ATRNL1 | 12374 | Downstream | -4.6002626 | 4.22E-06 | 0.01517593 |
| 6 | 37945045 | 37945045 | 1 | 6_37945045 | ENSG00000156639 | ZFAND3 | 0 | INTRON | 4.60022444 | 4.22E-06 | 0.01517593 |
| 8 | 93247487 | 93247487 | 1 | 8_93247487 | ENSG00000246662 | LINC00535 | 0 | INTRON | -4.5999682 | 4.23E-06 | 0.01518885 |
| 2 | 109335471 | 109335471 | 1 | 2_109335471 | ENSG00000172985 | SH3RF3 | 0 | INTRON | 4.59995716 | 4.23E-06 | 0.01518885 |
| 9 | 92513429 | 92513429 | 1 | 9_92513429 | ENSG00000188312 | CENPP | 0 | INTRON | -4.5998547 | 4.23E-06 | 0.01518885 |
| 4 | 117843024 | 117843024 | 1 | 4_117843024 | ENSG00000229565 | LINC02264 | 0 | INTRON | 4.59984587 | 4.23E-06 | 0.01518885 |
| 5 | 14653281 | 14653281 | 1 | 5_14653281 | ENSG00000250182 | EEF1A1P13 | 0 | EXON | -4.5998272 | 4.23E-06 | 0.01518885 |
| 4 | 110079220 | 110079220 | 1 | 4_110079220 | ENSG00000170522 | ELOVL6 | 0 | INTRON | 4.59971637 | 4.23E-06 | 0.01519173 |
| 5 | 164712551 | 164712551 | 1 | 5_164712551 | ENSG00000241956 | AC109466.1 | 0 | INTRON | 4.59969974 | 4.23E-06 | 0.01519173 |
| 15 | 27041285 | 27041285 | 1 | 15_27041285 | ENSG00000182256 | GABRG3 | 0 | INTRON | 4.59958834 | 4.23E-06 | 0.01519665 |
| 10 | 86336969 | 86336969 | 1 | 10_86336969 | ENSG00000182771 | GRID1 | 0 | INTRON | -4.5995271 | 4.23E-06 | 0.01519791 |
| 21 | 33162061 | 33162061 | 1 | 21_33162061 | ENSG00000229086 | LINC01548 | 2747 | Downstream | -4.5994827 | 4.24E-06 | 0.01519795 |
| 6 | 79460673 | 79460673 | 1 | 6_79460673 | ENSG00000231533 | AL391840.1 | 0 | INTRON | 4.59941022 | 4.24E-06 | 0.01520003 |
| 5 | 72724349 | 72724349 | 1 | 5_72724349 | ENSG00000251613 | AC063979.2 | 0 | INTRON | -4.5992326 | 4.24E-06 | 0.01520978 |
| 1 | 204695854 | 204695854 | 1 | 1_204695854 | ENSG00000170382 | LRRN2 | 10116 | Upstream | 4.59862126 | 4.25E-06 | 0.01525126 |
| 22 | 31133128 | 31133128 | 1 | 22_31133128 | ENSG00000185133 | INPP5J | 0 | EXON | 4.59850213 | 4.26E-06 | 0.01525677 |
| 7 | 74957992 | 74957992 | 1 | 7_74957992 | ENSG00000274070 | CASTOR2 | 6712 | Upstream | -4.59842 | 4.26E-06 | 0.01525957 |
| 5 | 175185508 | 175185508 | 1 | 5_175185508 | ENSG00000248355 | ARL2BPP6 | 105222 | Upstream | 4.59827933 | 4.26E-06 | 0.01526547 |
| 2 | 68276782 | 68276782 | 1 | 2_68276782 | ENSG00000119865 | CNRIP1 | 7388 | Downstream | 4.59825162 | 4.26E-06 | 0.01526547 |
| 5 | 124041079 | 124041079 | 1 | 5_124041079 | ENSG00000253807 | LINC01170 | 18714 | Downstream | -4.5981 | 4.26E-06 | 0.01527337 |
| 17 | 29972194 | 29972194 | 1 | 17_29972194 | ENSG00000176927 | EFCAB5 | 0 | INTRON | -4.5979912 | 4.27E-06 | 0.01527813 |
| 3 | 197396222 | 197396222 | 1 | 3_197396222 | ENSG00000235126 | AC128709.2 | 48838 | Downstream | -4.5978707 | 4.27E-06 | 0.01528171 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 217917602 | 217917602 | 1 | 2_217917602 | ENSG00000079308 | TNS1 | 0 | INTRON | 4.59785469 | 4.27E-06 | 0.01528171 |
| 9 | 93159526 | 93159526 | 1 | 9_93159526 | ENSG00000203364 | AL390760.1 | 10970 | Downstream | -4.5977232 | 4.27E-06 | 0.01528619 |
| 12 | 126978911 | 126978911 | 1 | 12_126978911 | ENSG00000249345 | LINC02405 | 0 | INTRON | -4.5977059 | 4.27E-06 | 0.01528619 |
| 12 | 117131759 | 117131759 | 1 | 12_117131759 | ENSG00000258285 | TESC-AS1 | 0 | INTRON | 4.59759769 | 4.27E-06 | 0.01529091 |
| 10 | 95786476 | 95786476 | 1 | 10_95786476 | ENSG00000138185 | ENTPD1 | 0 | INTRON | -4.5974981 | 4.28E-06 | 0.015295 |
| 11 | 130676365 | 130676365 | 1 | 11_130676365 | ENSG00000175728 | C11orf44 | 0 | INTRON | 4.59744621 | 4.28E-06 | 0.0152956 |
| 8 | 108236173 | 108236173 | 1 | 8_108236173 | ENSG00000104408 | EIF3E | 0 | 3UTR | 4.5973385 | 4.28E-06 | 0.01530029 |
| 19 | 1879912 | 1879912 | 1 | 19_1879912 | ENSG00000129968 | ABHD17A | 0 | EXON | 4.59723558 | 4.28E-06 | 0.01530463 |
| 6 | 133423066 | 133423066 | 1 | 6_133423066 | ENSG00000112319 | EYA4 | 0 | INTRON | 4.59702174 | 4.29E-06 | 0.01531404 |
| 7 | 108016535 | 108016535 | 1 | 7_108016535 | ENSG00000091128 | LAMB4 | 7012 | Downstream | 4.59701985 | 4.29E-06 | 0.01531404 |
| 1 | 100166885 | 100166885 | 1 | 1_100166885 | ENSG00000122477 | LRRC39 | 0 | INTRON | 4.59636743 | 4.30E-06 | 0.01535594 |
| 10 | 119829096 | 119829096 | 1 | 10_119829096 | ENSG00000198825 | INPP5F | 0 | 3UTR | -4.5963613 | 4.30E-06 | 0.01535594 |
| 5 | 60322005 | 60322005 | 1 | 5_60322005 | ENSG00000113448 | PDE4D | 0 | INTRON | 4.59631909 | 4.30E-06 | 0.01535594 |
| 3 | 185064147 | 185064147 | 1 | 3_185064147 | ENSG00000156931 | VPS8 | 11533 | Downstream | -4.5962368 | 4.30E-06 | 0.01535833 |
| 6 | 97603874 | 97603874 | 1 | 6_97603874 | ENSG00000271860 | AL589740.1 | 0 | INTRON | -4.5961991 | 4.30E-06 | 0.01535833 |
| 19 | 18302507 | 18302507 | 1 | 19_18302507 | ENSG00000130520 | LSM4 | 3722 | Downstream | 4.59610176 | 4.30E-06 | 0.01536158 |
| 14 | 100161791 | 100161791 | 1 | 14_100161791 | ENSG00000168350 | DEGS2 | 2146 | Upstream | 4.59606709 | 4.31E-06 | 0.01536158 |
| 12 | 113397140 | 113397140 | 1 | 12_113397140 | ENSG00000135094 | SDS | 0 | EXON | 4.59602389 | 4.31E-06 | 0.01536158 |
| 10 | 122469003 | 122469003 | 1 | 10_122469003 | ENSG00000166033 | HTRA1 | 0 | INTRON | -4.5959702 | 4.31E-06 | 0.01536232 |
| 11 | 132672250 | 132672250 | 1 | 11_132672250 | ENSG00000183715 | OPCML | 0 | INTRON | 4.59580851 | 4.31E-06 | 0.01537101 |
| 19 | 22389608 | 22389608 | 1 | 19_22389608 | ENSG00000197360 | ZNF98 | 1410 | Downstream | 4.59547179 | 4.32E-06 | 0.01539263 |
| 8 | 41559082 | 41559082 | 1 | 8_41559082 | ENSG00000253133 | AC009630.1 | 0 | INTRON | -4.5953964 | 4.32E-06 | 0.01539453 |
| X | 123797148 | 123797148 | 1 | X_123797148 | ENSG00000226902 | CHCHD2P1 | 11697 | Downstream | 4.59535878 | 4.32E-06 | 0.01539453 |
| 1 | 231430780 | 231430780 | 1 | 1_231430780 | ENSG00000287856 | AL445524.2 | 0 | INTRON | 4.59530549 | 4.32E-06 | 0.01539469 |
| 10 | 132168172 | 132168172 | 1 | 10_132168172 | ENSG00000188385 | JAKMIP3 | 0 | 3UTR | 4.59524556 | 4.32E-06 | 0.01539469 |
| 4 | 133604290 | 133604290 | 1 | 4_133604290 | ENSG00000250191 | AC105252.1 | 29082 | Upstream | 4.59521677 | 4.32E-06 | 0.01539469 |
| 20 | 62999858 | 62999858 | 1 | 20_62999858 | ENSG00000125533 | BHLHE23 | 6068 | Downstream | 4.59518198 | 4.32E-06 | 0.01539469 |
| 5 | 76735366 | 76735366 | 1 | 5_76735366 | ENSG00000181104 | F2R | 0 | 3UTR | -4.5950553 | 4.33E-06 | 0.01540082 |
| 2 | 39258817 | 39258817 | 1 | 2_39258817 | ENSG00000011566 | MAP4K3 | 0 | INTRON | 4.59500492 | 4.33E-06 | 0.01540132 |
| 8 | 56356361 | 56356361 | 1 | 8_56356361 | ENSG00000253542 | SDR16C6P | 16702 | Downstream | 4.59486387 | 4.33E-06 | 0.01540852 |
| 14 | 53617941 | 53617941 | 1 | 14_53617941 | ENSG00000237356 | AL365295.1 | 0 | INTRON | 4.59472359 | 4.33E-06 | 0.01541567 |
| 20 | 55069168 | 55069168 | 1 | 20_55069168 | ENSG00000185834 | RPL12P4 | 5475 | Upstream | -4.5945243 | 4.34E-06 | 0.01542011 |
| 2 | 224408063 | 224408063 | 1 | 2_224408063 | ENSG00000124019 | FAM124B | 5956 | Upstream | 4.59451131 | 4.34E-06 | 0.01542011 |
| 16 | 78271297 | 78271297 | 1 | 16_78271297 | ENSG00000186153 | WWOX | 0 | INTRON | 4.59451035 | 4.34E-06 | 0.01542011 |
| 7 | 139848236 | 139848236 | 1 | 7_139848236 | ENSG00000059377 | TBXAS1 | 0 | INTRON | -4.5944891 | 4.34E-06 | 0.01542011 |
| 14 | 70411704 | 70411704 | 1 | 14_70411704 | ENSG00000258644 | SYNJ2BP-COX16 | 0 | INTRON | 4.59442508 | 4.34E-06 | 0.01542163 |
| 2 | 68647203 | 68647203 | 1 | 2_68647203 | ENSG00000169621 | APLF | 0 | INTRON | 4.5942254 | 4.34E-06 | 0.01543318 |
| 16 | 84963172 | 84963172 | 1 | 16_84963172 | ENSG00000153786 | ZDHHC7 | 11008 | Downstream | 4.59417823 | 4.34E-06 | 0.01543344 |
| 3 | 81097260 | 81097260 | 1 | 3_81097260 | ENSG00000243694 | LINC02027 | 0 | EXON | 4.59409997 | 4.35E-06 | 0.01543373 |
| 8 | 21703376 | 21703376 | 1 | 8_21703376 | ENSG00000168546 | GFRA2 | 0 | INTRON | 4.59406786 | 4.35E-06 | 0.01543373 |
| 4 | 188169604 | 188169604 | 1 | 4_188169604 | ENSG00000248370 | LINC02434 | 8447 | Downstream | 4.59404385 | 4.35E-06 | 0.01543373 |
| 4 | 144067154 | 144067154 | 1 | 4_144067154 | ENSG00000251600 | AC107223.1 | 0 | INTRON | -4.5937993 | 4.35E-06 | 0.01544861 |
| 15 | 95244617 | 95244617 | 1 | 15_95244617 | ENSG00000248441 | LINC01197 | 0 | INTRON | 4.59369515 | 4.35E-06 | 0.0154531 |
| 21 | 29100861 | 29100861 | 1 | 21_29100861 | ENSG00000156265 | MAP3K7CL | 0 | INTRON | 4.59351838 | 4.36E-06 | 0.01546298 |
| 1 | 125154316 | 125154316 | 1 | 1_125154316 | ENSG00000224857 | LINC01691 | 3573792 | Upstream | -4.5933394 | 4.36E-06 | 0.01547303 |
| 9 | 29776206 | 29776206 | 1 | 9_29776206 | ENSG00000230097 | ME2P1 | 48535 | Downstream | 4.59328887 | 4.36E-06 | 0.01547355 |
| 10 | 1345197 | 1345197 | 1 | 10_1345197 | ENSG00000185736 | ADARB2 | 0 | INTRON | 4.59320295 | 4.36E-06 | 0.0154767 |
| 5 | 146763196 | 146763196 | 1 | 5_146763196 | ENSG00000156475 | PPP2R2B | 0 | INTRON | 4.59307526 | 4.37E-06 | 0.01548295 |
| 3 | 44797610 | 44797610 | 1 | 3_44797610 | ENSG00000163808 | KIF15 | 0 | 3UTR | -4.5928241 | 4.37E-06 | 0.01549837 |
| 17 | 37369292 | 37369292 | 1 | 17_37369292 | ENSG00000278540 | ACACA | 0 | INTRON | 4.59276383 | 4.37E-06 | 0.01549962 |
| 4 | 33049700 | 33049700 | 1 | 4_33049700 | ENSG00000250076 | AC017013.1 | 37954 | Upstream | 4.59269019 | 4.38E-06 | 0.01550187 |
| 1 | 240807061 | 240807061 | 1 | 1_240807061 | ENSG00000182901 | RGS7 | 0 | INTRON | 4.59257011 | 4.38E-06 | 0.01550421 |
| 11 | 65580930 | 65580930 | 1 | 11_65580930 | ENSG00000173442 | EHBP1L1 | 0 | EXON | -4.5925557 | 4.38E-06 | 0.01550421 |
| 5 | 145756603 | 145756603 | 1 | 5_145756603 | ENSG00000186314 | PRELID2 | 0 | INTRON | -4.5924865 | 4.38E-06 | 0.01550421 |
| 3 | 45880480 | 45880480 | 1 | 3_45880480 | ENSG00000163818 | LZTFL1 | 0 | INTRON | 4.59248497 | 4.38E-06 | 0.01550421 |
| 18 | 34844981 | 34844981 | 1 | 18_34844981 | ENSG00000134769 | DTNA | 0 | INTRON | -4.5923974 | 4.38E-06 | 0.01550749 |
| 3 | 113593268 | 113593268 | 1 | 3_113593268 | ENSG00000072858 | SIDT1 | 0 | INTRON | -4.5922287 | 4.39E-06 | 0.01551681 |
| 1 | 14132694 | 14132694 | 1 | 1_14132694 | ENSG00000189337 | KAZN | 0 | INTRON | -4.5921694 | 4.39E-06 | 0.015518 |
| 1 | 39134197 | 39134197 | 1 | 1_39134197 | ENSG00000127603 | MACF1 | 0 | INTRON | 4.59205355 | 4.39E-06 | 0.01552093 |
| 2 | 54786145 | 54786145 | 1 | 2_54786145 | ENSG00000285519 | AC104781.2 | 0 | INTRON | 4.59200226 | 4.39E-06 | 0.01552093 |
| 19 | 6639341 | 6639341 | 1 | 19_6639341 | ENSG00000125735 | TNFSF14 | 21911 | Downstream | 4.59191631 | 4.39E-06 | 0.01552093 |
| 8 | 25499555 | 25499555 | 1 | 8_25499555 | ENSG00000184661 | CDCA2 | 0 | INTRON | -4.591906 | 4.39E-06 | 0.01552093 |
| 14 | 72526326 | 72526326 | 1 | 14_72526326 | ENSG00000182732 | RGS6 | 0 | INTRON | -4.5918408 | 4.39E-06 | 0.01552093 |
| 17 | 68499862 | 68499862 | 1 | 17_68499862 | ENSG00000267009 | AC007780.1 | 0 | INTRON | 4.59182803 | 4.39E-06 | 0.01552093 |
| 3 | 176134878 | 176134878 | 1 | 3_176134878 | ENSG00000238026 | AC117434.1 | 20341 | Upstream | -4.5918266 | 4.39E-06 | 0.01552093 |
| 9 | 75049491 | 75049491 | 1 | 9_75049491 | ENSG00000106733 | NMRK1 | 11081 | Downstream | 4.59167744 | 4.40E-06 | 0.01552568 |
| 1 | 59047473 | 59047473 | 1 | 1_59047473 | ENSG00000237352 | LINC01358 | 0 | INTRON | 4.59167303 | 4.40E-06 | 0.01552568 |
| 3 | 148852811 | 148852811 | 1 | 3_148852811 | ENSG00000240521 | AC092979.1 | 0 | INTRON | 4.59163284 | 4.40E-06 | 0.01552568 |
| 17 | 42852573 | 42852573 | 1 | 17_42852573 | ENSG00000131471 | AOC3 | 0 | EXON | -4.5914993 | 4.40E-06 | 0.01553239 |
| 20 | 57231146 | 57231146 | 1 | 20_57231146 | ENSG00000101144 | BMP7 | 0 | INTRON | 4.59125182 | 4.41E-06 | 0.0155444 |
| 6 | 148465114 | 148465114 | 1 | 6_148465114 | ENSG00000111961 | SASH1 | 0 | INTRON | 4.59125154 | 4.41E-06 | 0.0155444 |
| 11 | 26214442 | 26214442 | 1 | 11_26214442 | ENSG00000134343 | ANO3 | 0 | INTRON | 4.59115336 | 4.41E-06 | 0.01554661 |
| 4 | 3732869 | 3732869 | 1 | 4_3732869 | ENSG00000250986 | LINC02600 | 25878 | Downstream | -4.5911096 | 4.41E-06 | 0.01554661 |
| 4 | 171896508 | 171896508 | 1 | 4_171896508 | ENSG00000174473 | GALNTL6 | 0 | INTRON | -4.5910378 | 4.41E-06 | 0.01554661 |
| 8 | 66588216 | 66588216 | 1 | 8_66588216 | ENSG00000185697 | MYBL1 | 0 | INTRON | -4.5910345 | 4.41E-06 | 0.01554661 |
| 17 | 77838876 | 77838876 | 1 | 17_77838876 | ENSG00000204283 | LINC01973 | 38453 | Downstream | 4.5909809 | 4.41E-06 | 0.01554661 |
| 15 | 31632828 | 31632828 | 1 | 15_31632828 | ENSG00000169918 | OTUD7A | 0 | INTRON | 4.59079542 | 4.42E-06 | 0.01554661 |
| 6 | 161687750 | 161687750 | 1 | 6_161687750 | ENSG00000185345 | PRKN | 0 | INTRON | -4.5907641 | 4.42E-06 | 0.01554661 |
| 18 | 26896501 | 26896501 | 1 | 18_26896501 | ENSG00000260372 | AQP4-AS1 | 0 | INTRON | -4.5907536 | 4.42E-06 | 0.01554661 |
| 9 | 125145818 | 125145818 | 1 | 9_125145818 | ENSG00000119414 | PPP6C | 754 | Downstream | -4.5907283 | 4.42E-06 | 0.01554661 |
| 10 | 74194137 | 74194137 | 1 | 10_74194137 | ENSG00000156110 | ADK | 0 | INTRON | 4.59070838 | 4.42E-06 | 0.01554661 |
| 2 | 234355566 | 234355566 | 1 | 2_234355566 | ENSG00000288040 | AC097713.3 | 0 | INTRON | -4.5906999 | 4.42E-06 | 0.01554661 |
| 11 | 79975731 | 79975731 | 1 | 11_79975731 | ENSG00000279295 | AP001541.1 | 7023 | Downstream | 4.59063111 | 4.42E-06 | 0.01554661 |
| 19 | 17206871 | 17206871 | 1 | 19_17206871 | ENSG00000099331 | MYO9B | 0 | INTRON | 4.59061894 | 4.42E-06 | 0.01554661 |
| 6 | 1668805 | 1668805 | 1 | 6_1668805 | ENSG00000112699 | GMDS | 0 | INTRON | -4.5906169 | 4.42E-06 | 0.01554661 |
| 11 | 17565979 | 17565979 | 1 | 11_17565979 | ENSG00000188162 | OTOG | 0 | INTRON | 4.59051149 | 4.42E-06 | 0.01555125 |
| 14 | 104237999 | 104237999 | 1 | 14_104237999 | ENSG00000258913 | LINC02691 | 0 | INTRON | -4.5904099 | 4.42E-06 | 0.0155556 |
| 15 | 64554260 | 64554260 | 1 | 15_64554260 | ENSG00000180357 | ZNF609 | 0 | INTRON | -4.5902467 | 4.43E-06 | 0.01556172 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
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| 1 | 13705665 | 13705665 | 1 | 1_13705665 | ENSG00000116731 | PRDM2 | 0 | INTRON | 4.59024164 | 4.43E-06 | 0.01556172 |
| 18 | 1934406 | 1934406 | 1 | 18_1934406 | ENSG00000266602 | AP005262.2 | 0 | INTRON | -4.5900876 | 4.43E-06 | 0.01556677 |
| 14 | 35391468 | 35391468 | 1 | 14_35391468 | ENSG00000240023 | AL133163.1 | 2399 | Upstream | 4.59005248 | 4.43E-06 | 0.01556677 |
| X | 136008396 | 136008396 | 1 | X_136008396 | ENSG00000198689 | SLC9A6 | 0 | INTRON | 4.59000737 | 4.43E-06 | 0.01556677 |
| 17 | 72924230 | 72924230 | 1 | 17_72924230 | ENSG00000133195 | SLC39A11 | 0 | INTRON | 4.58995446 | 4.43E-06 | 0.01556677 |
| 14 | 93528417 | 93528417 | 1 | 14_93528417 | ENSG00000133958 | UNC79 | 0 | INTRON | -4.5899473 | 4.43E-06 | 0.01556677 |
| 1 | 202188730 | 202188730 | 1 | 1_202188730 | ENSG00000243323 | PTPRVP | 0 | INTRON | 4.5899154 | 4.43E-06 | 0.01556677 |
| 17 | 5764329 | 5764329 | 1 | 17_5764329 | ENSG00000284837 | AC007846.1 | 7904 | Upstream | -4.5897015 | 4.44E-06 | 0.01557952 |
| 5 | 80169159 | 80169159 | 1 | 5_80169159 | ENSG00000164300 | SERINC5 | 0 | INTRON | 4.58931871 | 4.45E-06 | 0.01560489 |
| 1 | 245268166 | 245268166 | 1 | 1_245268166 | ENSG00000162849 | KIF26B | 0 | INTRON | 4.58924375 | 4.45E-06 | 0.01560728 |
| 2 | 231030321 | 231030321 | 1 | 2_231030321 | ENSG00000173699 | SPATA3 | 5266 | Downstream | 4.58919132 | 4.45E-06 | 0.01560798 |
| 3 | 18206536 | 18206536 | 1 | 3_18206536 | ENSG00000131374 | TBC1D5 | 0 | INTRON | 4.58898556 | 4.45E-06 | 0.01562015 |
| 9 | 84105108 | 84105108 | 1 | 9_84105108 | ENSG00000227463 | AL390838.1 | 6124 | Downstream | -4.5887002 | 4.46E-06 | 0.01563612 |
| 16 | 89809788 | 89809788 | 1 | 16_89809788 | ENSG00000187741 | FANCA | 0 | INTRON | -4.5886862 | 4.46E-06 | 0.01563612 |
| 21 | 15571280 | 15571280 | 1 | 21_15571280 | ENSG00000229425 | AJ009632.2 | 0 | EXON | -4.5886014 | 4.46E-06 | 0.01563925 |
| 11 | 41286019 | 41286019 | 1 | 11_41286019 | ENSG00000148948 | LRRC4C | 0 | INTRON | -4.588535 | 4.46E-06 | 0.01563957 |
| 2 | 113205586 | 113205586 | 1 | 2_113205586 | ENSG00000125637 | PSD4 | 0 | 3UTR | -4.5884455 | 4.47E-06 | 0.01563957 |
| 18 | 31657514 | 31657514 | 1 | 18_31657514 | ENSG00000118276 | B4GALT6 | 0 | INTRON | -4.5883905 | 4.47E-06 | 0.01563957 |
| 9 | 114496395 | 114496395 | 1 | 9_114496395 | ENSG00000095397 | WHRN | 0 | INTRON | -4.5883875 | 4.47E-06 | 0.01563957 |
| 17 | 14994287 | 14994287 | 1 | 17_14994287 | ENSG00000232058 | AC005772.1 | 20517 | Upstream | -4.5882978 | 4.47E-06 | 0.01563957 |
| 14 | 103458829 | 103458829 | 1 | 14_103458829 | ENSG00000075413 | MARK3 | 0 | INTRON | -4.5882837 | 4.47E-06 | 0.01563957 |
| 19 | 32266209 | 32266209 | 1 | 19_32266209 | ENSG00000200738 | RNA5SP472 | 22126 | Upstream | -4.588261 | 4.47E-06 | 0.01563957 |
| 21 | 41964584 | 41964584 | 1 | 21_41964584 | ENSG00000157617 | C2CD2 | 10566 | Upstream | 4.58825336 | 4.47E-06 | 0.01563957 |
| 20 | 23505230 | 23505230 | 1 | 20_23505230 | ENSG00000260202 | AL109954.1 | 0 | INTRON | -4.5880563 | 4.47E-06 | 0.01565111 |
| 2 | 185860812 | 185860812 | 1 | 2_185860812 | ENSG00000188738 | FSIP2 | 27522 | Downstream | 4.58801251 | 4.47E-06 | 0.01565118 |
| 6 | 43908704 | 43908704 | 1 | 6_43908704 | ENSG00000223469 | AL157371.1 | 56371 | Upstream | -4.5876767 | 4.48E-06 | 0.01567314 |
| 7 | 2606985 | 2606985 | 1 | 7_2606985 | ENSG00000106012 | IQCE | 0 | INTRON | 4.5875672 | 4.48E-06 | 0.01567815 |
| 10 | 15258697 | 15258697 | 1 | 10_15258697 | ENSG00000148468 | FAM171A1 | 0 | INTRON | 4.58749305 | 4.49E-06 | 0.01568049 |
| 20 | 41451062 | 41451062 | 1 | 20_41451062 | ENSG00000124177 | CHD6 | 0 | EXON | 4.58738803 | 4.49E-06 | 0.01568167 |
| 4 | 127888425 | 127888425 | 1 | 4_127888425 | ENSG00000142731 | PLK4 | 0 | INTRON | 4.58732958 | 4.49E-06 | 0.01568167 |
| 21 | 44467211 | 44467211 | 1 | 21_44467211 | ENSG00000224747 | MTCYBP21 | 2717 | Downstream | 4.58729119 | 4.49E-06 | 0.01568167 |
| 4 | 91193007 | 91193007 | 1 | 4_91193007 | ENSG00000184305 | CCSER1 | 0 | INTRON | 4.58729114 | 4.49E-06 | 0.01568167 |
| 18 | 5160307 | 5160307 | 1 | 18_5160307 | ENSG00000266153 | AP005380.1 | 0 | INTRON | -4.5872629 | 4.49E-06 | 0.01568167 |
| 5 | 137748648 | 137748648 | 1 | 5_137748648 | ENSG00000177733 | HNRNPA0 | 0 | 3UTR | -4.5872067 | 4.49E-06 | 0.01568267 |
| 2 | 200745453 | 200745453 | 1 | 2_200745453 | ENSG00000284084 | AOX3P-AOX2P | 0 | INTRON | -4.5870702 | 4.50E-06 | 0.01568836 |
| 5 | 103245167 | 103245167 | 1 | 5_103245167 | ENSG00000248203 | AC011362.1 | 880 | Downstream | -4.5870454 | 4.50E-06 | 0.01568836 |
| 2 | 165483808 | 165483808 | 1 | 2_165483808 | ENSG00000178662 | CSRNP3 | 0 | INTRON | 4.58688357 | 4.50E-06 | 0.0156973 |
| 15 | 46293753 | 46293753 | 1 | 15_46293753 | ENSG00000287020 | AC091074.3 | 23639 | Upstream | 4.58681952 | 4.50E-06 | 0.01569889 |
| 6 | 112653210 | 112653210 | 1 | 6_112653210 | ENSG00000225580 | AL358942.1 | 35330 | Upstream | 4.58673118 | 4.50E-06 | 0.01570232 |
| 22 | 47079376 | 47079376 | 1 | 22_47079376 | ENSG00000054611 | TBC1D22A | 0 | INTRON | 4.58666096 | 4.50E-06 | 0.01570438 |
| 1 | 215630681 | 215630681 | 1 | 1_215630681 | ENSG00000042781 | USH2A | 0 | INTRON | -4.5865333 | 4.51E-06 | 0.01570964 |
| 8 | 142585367 | 142585367 | 1 | 8_142585367 | ENSG00000232722 | MROH4P | 7486 | Upstream | 4.5865054 | 4.51E-06 | 0.01570964 |
| 14 | 29771253 | 29771253 | 1 | 14_29771253 | ENSG00000184304 | PRKD1 | 0 | INTRON | -4.5864529 | 4.51E-06 | 0.01571037 |
| 1 | 125162459 | 125162459 | 1 | 1_125162459 | ENSG00000224857 | LINC01691 | 3581935 | Upstream | 4.58639082 | 4.51E-06 | 0.01571182 |
| 9 | 86455923 | 86455923 | 1 | 9_86455923 | ENSG00000235819 | AL158828.1 | 0 | INTRON | 4.58631975 | 4.51E-06 | 0.01571395 |
| 22 | 26848276 | 26848276 | 1 | 22_26848276 | ENSG00000223704 | LINC01422 | 10357 | Upstream | -4.586148 | 4.51E-06 | 0.01572366 |
| 10 | 112144681 | 112144681 | 1 | 10_112144681 | ENSG00000119927 | GPAM | 5183 | Downstream | 4.58609758 | 4.52E-06 | 0.01572397 |
| 13 | 92748014 | 92748014 | 1 | 13_92748014 | ENSG00000179399 | GPC5 | 0 | INTRON | -4.5860583 | 4.52E-06 | 0.01572397 |
| 15 | 96182805 | 96182805 | 1 | 15_96182805 | ENSG00000247809 | NR2F2-AS1 | 0 | INTRON | 4.58599842 | 4.52E-06 | 0.01572527 |
| 10 | 112675498 | 112675498 | 1 | 10_112675498 | ENSG00000233340 | AL139120.1 | 0 | INTRON | 4.58589046 | 4.52E-06 | 0.01572792 |
| 22 | 47613049 | 47613049 | 1 | 22_47613049 | ENSG00000205634 | LINC00898 | 0 | INTRON | 4.58586087 | 4.52E-06 | 0.01572792 |
| 9 | 9991045 | 9991045 | 1 | 9_9991045 | ENSG00000153707 | PTPRD | 0 | INTRON | -4.5858299 | 4.52E-06 | 0.01572792 |
| 11 | 27803010 | 27803010 | 1 | 11_27803010 | ENSG00000255496 | AC103796.1 | 0 | INTRON | 4.58579225 | 4.52E-06 | 0.01572792 |
| 18 | 69186915 | 69186915 | 1 | 18_69186915 | ENSG00000264705 | AC090337.1 | 25361 | Upstream | -4.5856886 | 4.52E-06 | 0.01573251 |
| 22 | 19042902 | 19042902 | 1 | 22_19042902 | ENSG00000070413 | DGCR2 | 0 | INTRON | 4.58563699 | 4.53E-06 | 0.01573319 |
| 5 | 32229526 | 32229526 | 1 | 5_32229526 | ENSG00000150712 | MTMR12 | 0 | 3UTR | 4.58555977 | 4.53E-06 | 0.01573579 |
| 10 | 63288036 | 63288036 | 1 | 10_63288036 | ENSG00000171988 | JMJD1C | 0 | INTRON | -4.5853475 | 4.53E-06 | 0.01574223 |
| 9 | 97114097 | 97114097 | 1 | 9_97114097 | ENSG00000213612 | FAM220CP | 7561 | Upstream | 4.5853067 | 4.53E-06 | 0.01574223 |
| 5 | 98530378 | 98530378 | 1 | 5_98530378 | ENSG00000251102 | CTBP2P4 | 45962 | Upstream | 4.58526757 | 4.53E-06 | 0.01574223 |
| 1 | 179345338 | 179345338 | 1 | 1_179345338 | ENSG00000057252 | SOAT1 | 0 | INTRON | 4.58522942 | 4.53E-06 | 0.01574223 |
| 3 | 164611515 | 164611515 | 1 | 3_164611515 | ENSG00000241636 | LINC01323 | 59362 | Downstream | -4.5852211 | 4.54E-06 | 0.01574223 |
| 4 | 186404958 | 186404958 | 1 | 4_186404958 | ENSG00000251165 | F11-AS1 | 0 | INTRON | -4.5852183 | 4.54E-06 | 0.01574223 |
| 13 | 21705760 | 21705760 | 1 | 13_21705760 | ENSG00000102678 | FGF9 | 1262 | Downstream | -4.5851339 | 4.54E-06 | 0.01574538 |
| 6 | 134530667 | 134530667 | 1 | 6_134530667 | ENSG00000232310 | AL078590.2 | 0 | INTRON | 4.58491871 | 4.54E-06 | 0.0157584 |
| 5 | 72062053 | 72062053 | 1 | 5_72062053 | ENSG00000285804 | AC025774.1 | 25728 | Downstream | -4.5848178 | 4.54E-06 | 0.01575961 |
| 1 | 221123998 | 221123998 | 1 | 1_221123998 | ENSG00000226211 | AL445466.1 | 9866 | Downstream | 4.58481744 | 4.54E-06 | 0.01575961 |
| 14 | 31142544 | 31142544 | 1 | 14_31142544 | ENSG00000092148 | HECTD1 | 0 | INTRON | 4.58453409 | 4.55E-06 | 0.01577778 |
| 8 | 2757088 | 2757088 | 1 | 8_2757088 | ENSG00000253853 | AC246817.1 | 0 | INTRON | -4.5844399 | 4.55E-06 | 0.01578168 |
| 11 | 18764933 | 18764933 | 1 | 11_18764933 | ENSG00000286998 | AC103974.2 | 0 | EXON | -4.5842856 | 4.56E-06 | 0.01579011 |
| 9 | 89846289 | 89846289 | 1 | 9_89846289 | ENSG00000237626 | AL161629.1 | 0 | INTRON | -4.5842325 | 4.56E-06 | 0.01579091 |
| 12 | 70401086 | 70401086 | 1 | 12_70401086 | ENSG00000135643 | KCNMB4 | 0 | INTRON | -4.5841371 | 4.56E-06 | 0.0157949 |
| 6 | 69999174 | 69999174 | 1 | 6_69999174 | ENSG00000082293 | COL19A1 | 0 | INTRON | -4.5839949 | 4.56E-06 | 0.01579923 |
| 15 | 55855362 | 55855362 | 1 | 15_55855362 | ENSG00000069869 | NEDD4 | 0 | INTRON | -4.583956 | 4.56E-06 | 0.01579923 |
| 4 | 24532437 | 24532437 | 1 | 4_24532437 | ENSG00000109606 | DHX15 | 0 | INTRON | 4.58395227 | 4.56E-06 | 0.01579923 |
| 16 | 51549877 | 51549877 | 1 | 16_51549877 | ENSG00000224578 | HNRNPA1P48 | 3558 | Upstream | 4.58390768 | 4.56E-06 | 0.01579939 |
| 6 | 166019256 | 166019256 | 1 | 6_166019256 | ENSG00000281832 | LINC00602 | 29641 | Downstream | 4.58363261 | 4.57E-06 | 0.01581389 |
| 7 | 82392443 | 82392443 | 1 | 7_82392443 | ENSG00000153956 | CACNA2D1 | 0 | INTRON | -4.5835786 | 4.57E-06 | 0.01581389 |
| 8 | 31196169 | 31196169 | 1 | 8_31196169 | ENSG00000253961 | AC009563.1 | 19002 | Upstream | -4.5834887 | 4.57E-06 | 0.01581389 |
| X | 11770379 | 11770379 | 1 | X_11770379 | ENSG00000005302 | MSL3 | 0 | INTRON | -4.5834885 | 4.57E-06 | 0.01581389 |
| 11 | 26291921 | 26291921 | 1 | 11_26291921 | ENSG00000254819 | ANO3-AS1 | 0 | INTRON | 4.58347857 | 4.57E-06 | 0.01581389 |
| 3 | 70299034 | 70299034 | 1 | 3_70299034 | ENSG00000240405 | SAMMSON | 0 | INTRON | -4.5834609 | 4.57E-06 | 0.01581389 |
| 20 | 16564870 | 16564870 | 1 | 20_16564870 | ENSG00000089177 | KIF16B | 0 | INTRON | 4.58331862 | 4.58E-06 | 0.01582078 |
| 3 | 34679722 | 34679722 | 1 | 3_34679722 | ENSG00000226320 | LINC01811 | 2475 | Downstream | 4.58328499 | 4.58E-06 | 0.01582078 |
| 3 | 100253144 | 100253144 | 1 | 3_100253144 | ENSG00000287378 | AC129803.1 | 0 | INTRON | 4.58314752 | 4.58E-06 | 0.01582434 |
| 3 | 38114536 | 38114536 | 1 | 3_38114536 | ENSG00000008226 | DLEC1 | 0 | INTRON | -4.5831087 | 4.58E-06 | 0.01582434 |
| 6 | 152847078 | 152847078 | 1 | 6_152847078 | ENSG00000224893 | LINC02840 | 0 | INTRON | -4.5830614 | 4.58E-06 | 0.01582434 |
| 19 | 8262623 | 8262623 | 1 | 19_8262623 | ENSG00000090661 | CERS4 | 202 | Downstream | 4.58305115 | 4.58E-06 | 0.01582434 |
| 3 | 122573246 | 122573246 | 1 | 3_122573246 | ENSG00000163840 | DTX3L | 0 | 3UTR | -4.5829383 | 4.58E-06 | 0.01582434 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
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| 3 | 176415086 | 176415086 | 1 | 3_176415086 | ENSG00000223715 | LINC01208 | 352 | Downstream | -4.5829278 | 4.59E-06 | 0.01582434 |
| 7 | 84948574 | 84948574 | 1 | 7_84948574 | ENSG00000280325 | AC074183.2 | 8318 | Upstream | 4.58283828 | 4.59E-06 | 0.01582434 |
| 15 | 60021207 | 60021207 | 1 | 15_60021207 | ENSG00000171956 | FOXB1 | 0 | INTRON | 4.58273173 | 4.59E-06 | 0.01582434 |
| 6 | 44480578 | 44480578 | 1 | 6_44480578 | ENSG00000096401 | CDC5L | 30153 | Downstream | 4.58270722 | 4.59E-06 | 0.01582434 |
| 7 | 115722504 | 115722504 | 1 | 7_115722504 | ENSG00000240973 | AC093714.1 | 39886 | Upstream | 4.58264511 | 4.59E-06 | 0.01582434 |
| 1 | 38426852 | 38426852 | 1 | 1_38426852 | ENSG00000200796 | RNU6-753P | 30087 | Downstream | -4.5826414 | 4.59E-06 | 0.01582434 |
| 11 | 66317160 | 66317160 | 1 | 11_66317160 | ENSG00000254458 | AP001107.3 | 0 | INTRON | -4.5825994 | 4.59E-06 | 0.01582434 |
| 16 | 73487193 | 73487193 | 1 | 16_73487193 | ENSG00000258779 | LINC01568 | 0 | INTRON | -4.5825841 | 4.59E-06 | 0.01582434 |
| X | 146581482 | 146581482 | 1 | X_146581482 | ENSG00000226388 | ELL2P4 | 25717 | Downstream | -4.5825836 | 4.59E-06 | 0.01582434 |
| 12 | 11526045 | 11526045 | 1 | 12_11526045 | ENSG00000274551 | AC007450.2 | 4359 | Upstream | -4.5825614 | 4.59E-06 | 0.01582434 |
| 8 | 126754351 | 126754351 | 1 | 8_126754351 | ENSG00000253438 | PCAT1 | 0 | INTRON | -4.5825573 | 4.59E-06 | 0.01582434 |
| 4 | 46128890 | 46128890 | 1 | 4_46128890 | ENSG00000163285 | GABRG1 | 4836 | Upstream | -4.5825173 | 4.59E-06 | 0.01582434 |
| 10 | 21062004 | 21062004 | 1 | 10_21062004 | ENSG00000078114 | NEBL | 0 | INTRON | 4.58247372 | 4.60E-06 | 0.01582444 |
| 7 | 152531241 | 152531241 | 1 | 7_152531241 | ENSG00000231139 | AC104843.2 | 59399 | Downstream | 4.58238591 | 4.60E-06 | 0.01582459 |
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| 9 | 27324700 | 27324700 | 1 | 9_27324700 | ENSG00000120162 | MOB3B | 508 | Downstream | 4.58234488 | 4.60E-06 | 0.01582459 |
| 15 | 61171813 | 61171813 | 1 | 15_61171813 | ENSG00000069667 | RORA | 0 | INTRON | -4.5821345 | 4.60E-06 | 0.01583732 |
| 20 | 50822557 | 50822557 | 1 | 20_50822557 | ENSG00000124243 | BCAS4 | 0 | INTRON | -4.581995 | 4.61E-06 | 0.01584468 |
| 1 | 206021202 | 206021202 | 1 | 1_206021202 | ENSG00000196188 | CTSE | 0 | EXON | -4.5818693 | 4.61E-06 | 0.01585101 |
| 1 | 91529474 | 91529474 | 1 | 1_91529474 | ENSG00000097046 | CDC7 | 3710 | Downstream | -4.5817052 | 4.61E-06 | 0.01586025 |
| 10 | 111026295 | 111026295 | 1 | 10_111026295 | ENSG00000108061 | SHOC2 | 12628 | Downstream | -4.581387 | 4.62E-06 | 0.0158789 |
| 6 | 1057771 | 1057771 | 1 | 6_1057771 | ENSG00000286785 | LINC01622 | 0 | INTRON | -4.5813585 | 4.62E-06 | 0.0158789 |
| 16 | 89772378 | 89772378 | 1 | 16_89772378 | ENSG00000187741 | FANCA | 0 | INTRON | 4.5813211 | 4.62E-06 | 0.0158789 |
| 13 | 43362684 | 43362684 | 1 | 13_43362684 | ENSG00000120658 | ENOX1 | 0 | INTRON | -4.5812577 | 4.62E-06 | 0.0158789 |
| 4 | 14606476 | 14606476 | 1 | 4_14606476 | ENSG00000248360 | LINC00504 | 0 | INTRON | 4.5812483 | 4.62E-06 | 0.0158789 |
| 9 | 115573153 | 115573153 | 1 | 9_115573153 | ENSG00000228714 | AL691420.1 | 0 | INTRON | -4.5809912 | 4.63E-06 | 0.0158938 |
| 6 | 125497629 | 125497629 | 1 | 6_125497629 | ENSG00000226409 | AL450332.1 | 52436 | Upstream | 4.58096778 | 4.63E-06 | 0.0158938 |
| 20 | 44852917 | 44852917 | 1 | 20_44852917 | ENSG00000277708 | PGBD4P2 | 10378 | Upstream | 4.58076457 | 4.63E-06 | 0.01590478 |
| 1 | 225729123 | 225729123 | 1 | 1_225729123 | ENSG00000226349 | AC099066.1 | 0 | INTRON | -4.5807235 | 4.63E-06 | 0.01590478 |
| 4 | 20863145 | 20863145 | 1 | 4_20863145 | ENSG00000185774 | KCNIP4 | 0 | INTRON | 4.58069683 | 4.63E-06 | 0.01590478 |
| 2 | 61746752 | 61746752 | 1 | 2_61746752 | ENSG00000213486 | AC108039.1 | 35774 | Upstream | 4.58059508 | 4.64E-06 | 0.01590931 |
| 3 | 196621444 | 196621444 | 1 | 3_196621444 | ENSG00000232065 | LINC01063 | 10053 | Downstream | -4.5804913 | 4.64E-06 | 0.015914 |
| 14 | 102332905 | 102332905 | 1 | 14_102332905 | ENSG00000022976 | ZNF839 | 0 | INTRON | 4.58035303 | 4.64E-06 | 0.01592131 |
| 21 | 46287716 | 46287716 | 1 | 21_46287716 | ENSG00000182362 | YBEY | 0 | INTRON | 4.58028061 | 4.64E-06 | 0.01592361 |
| 15 | 23341175 | 23341175 | 1 | 15_23341175 | ENSG00000260399 | AC100756.1 | 0 | INTRON | -4.5802073 | 4.65E-06 | 0.01592599 |
| 12 | 67768905 | 67768905 | 1 | 12_67768905 | ENSG00000279505 | AC022513.1 | 15088 | Downstream | -4.5801071 | 4.65E-06 | 0.01592888 |
| 7 | 123702076 | 123702076 | 1 | 7_123702076 | ENSG00000106299 | WASL | 0 | INTRON | 4.58008507 | 4.65E-06 | 0.01592888 |
| 12 | 3539021 | 3539021 | 1 | 12_3539021 | ENSG00000111218 | PRMT8 | 0 | INTRON | 4.57999024 | 4.65E-06 | 0.01593289 |
| 12 | 104878882 | 104878882 | 1 | 12_104878882 | ENSG00000136052 | SLC41A2 | 0 | INTRON | 4.57978653 | 4.65E-06 | 0.01594521 |
| 17 | 50615930 | 50615930 | 1 | 17_50615930 | ENSG00000006283 | CACNA1G | 0 | INTRON | 4.57971309 | 4.66E-06 | 0.01594657 |
| 20 | 10533034 | 10533034 | 1 | 20_10533034 | ENSG00000149346 | SLX4IP | 0 | INTRON | 4.57963396 | 4.66E-06 | 0.01594657 |
| 1 | 15326932 | 15326932 | 1 | 1_15326932 | ENSG00000233485 | AL031283.2 | 0 | EXON | 4.57960294 | 4.66E-06 | 0.01594657 |
| 7 | 105840099 | 105840099 | 1 | 7_105840099 | ENSG00000146776 | ATXN7L1 | 0 | INTRON | 4.57960029 | 4.66E-06 | 0.01594657 |
| 9 | 107522518 | 107522518 | 1 | 9_107522518 | ENSG00000236005 | AL389915.1 | 11871 | Upstream | 4.57942643 | 4.66E-06 | 0.01595662 |
| 1 | 235404060 | 235404060 | 1 | 1_235404060 | ENSG00000285053 | TBCE | 0 | INTRON | 4.57927213 | 4.67E-06 | 0.01596486 |
| 1 | 145415993 | 145415993 | 1 | 1_145415993 | ENSG00000234367 | PFN1P3 | 7820 | Downstream | -4.5792344 | 4.67E-06 | 0.01596486 |
| 7 | 95859902 | 95859902 | 1 | 7_95859902 | ENSG00000158560 | DYNC1I1 | 0 | INTRON | -4.5790008 | 4.67E-06 | 0.0159742 |
| 6 | 65141356 | 65141356 | 1 | 6_65141356 | ENSG00000188107 | EYS | 0 | INTRON | 4.57896826 | 4.67E-06 | 0.0159742 |
| X | 71151554 | 71151554 | 1 | X_71151554 | ENSG00000196338 | NLGN3 | 0 | INTRON | -4.5789552 | 4.67E-06 | 0.0159742 |
| 15 | 101642648 | 101642648 | 1 | 15_101642648 | ENSG00000184277 | TM2D3 | 0 | INTRON | 4.57894384 | 4.67E-06 | 0.0159742 |
| 16 | 13914403 | 13914403 | 1 | 16_13914403 | ENSG00000175595 | ERCC4 | 5753 | Upstream | -4.5788861 | 4.67E-06 | 0.0159754 |
| 13 | 94932194 | 94932194 | 1 | 13_94932194 | ENSG00000260962 | LINC00557 | 27846 | Upstream | 4.57853099 | 4.68E-06 | 0.01599933 |
| 5 | 73997798 | 73997798 | 1 | 5_73997798 | ENSG00000259968 | AC093283.1 | 43784 | Downstream | 4.57835791 | 4.69E-06 | 0.01600169 |
| 22 | 40599095 | 40599095 | 1 | 22_40599095 | ENSG00000196588 | MRTFA | 0 | INTRON | -4.578353 | 4.69E-06 | 0.01600169 |
| 6 | 36742063 | 36742063 | 1 | 6_36742063 | ENSG00000124772 | CPNE5 | 0 | 3UTR | 4.57833271 | 4.69E-06 | 0.01600169 |
| 5 | 113134251 | 113134251 | 1 | 5_113134251 | ENSG00000171444 | MCC | 0 | INTRON | -4.5783321 | 4.69E-06 | 0.01600169 |
| 1 | 211351317 | 211351317 | 1 | 1_211351317 | ENSG00000082512 | TRAF5 | 0 | INTRON | 4.57813564 | 4.69E-06 | 0.01601351 |
| 1 | 43086340 | 43086340 | 1 | 1_43086340 | ENSG00000277513 | AL161637.1 | 17745 | Upstream | -4.578057 | 4.69E-06 | 0.01601458 |
| 6 | 37862658 | 37862658 | 1 | 6_37862658 | ENSG00000156639 | ZFAND3 | 0 | INTRON | 4.57799642 | 4.69E-06 | 0.01601458 |
| 15 | 79976565 | 79976565 | 1 | 15_79976565 | ENSG00000140379 | BCL2A1 | 5369 | Upstream | 4.57799573 | 4.69E-06 | 0.01601458 |
| 13 | 101279380 | 101279380 | 1 | 13_101279380 | ENSG00000102452 | NALCN | 0 | INTRON | 4.57760786 | 4.70E-06 | 0.01603717 |
| 2 | 30333848 | 30333848 | 1 | 2_30333848 | ENSG00000287658 | AC109642.1 | 9373 | Downstream | 4.57759948 | 4.70E-06 | 0.01603717 |
| 8 | 127948694 | 127948694 | 1 | 8_127948694 | ENSG00000280055 | TMEM75 | 0 | EXON | 4.57757496 | 4.70E-06 | 0.01603717 |
| X | 129538925 | 129538925 | 1 | X_129538925 | ENSG00000122126 | OCRL | 923 | Upstream | -4.577438 | 4.71E-06 | 0.01604168 |
| 20 | 4925662 | 4925662 | 1 | 20_4925662 | ENSG00000089057 | SLC23A2 | 0 | INTRON | 4.57743238 | 4.71E-06 | 0.01604168 |
| 20 | 63257625 | 63257625 | 1 | 20_63257625 | ENSG00000275620 | AL121827.2 | 0 | EXON | 4.57719753 | 4.71E-06 | 0.01604383 |
| 20 | 6683320 | 6683320 | 1 | 20_6683320 | ENSG00000228482 | LINC01713 | 47759 | Downstream | -4.5771954 | 4.71E-06 | 0.01604383 |
| 1 | 224756782 | 224756782 | 1 | 1_224756782 | ENSG00000225334 | LINC02813 | 9541 | Upstream | 4.57718604 | 4.71E-06 | 0.01604383 |
| 4 | 74120504 | 74120504 | 1 | 4_74120504 | ENSG00000163738 | MTHFD2L | 0 | INTRON | -4.5771747 | 4.71E-06 | 0.01604383 |
| 11 | 34085574 | 34085574 | 1 | 11_34085574 | ENSG00000135387 | CAPRIN1 | 0 | INTRON | 4.5771123 | 4.71E-06 | 0.01604383 |
| 18 | 20535626 | 20535626 | 1 | 18_20535626 | ENSG00000067900 | ROCK1 | 411279 | Downstream | -4.5770745 | 4.72E-06 | 0.01604383 |
| 21 | 31049538 | 31049538 | 1 | 21_31049538 | ENSG00000228941 | UBE3AP2 | 11061 | Downstream | -4.5770716 | 4.72E-06 | 0.01604383 |
| 1 | 96418034 | 96418034 | 1 | 1_96418034 | ENSG00000234422 | UBE2WP1 | 559 | Upstream | 4.57706926 | 4.72E-06 | 0.01604383 |
| 4 | 130736368 | 130736368 | 1 | 4_130736368 | ENSG00000280059 | AC093831.2 | 72138 | Upstream | 4.57696674 | 4.72E-06 | 0.01604848 |
| 3 | 106026583 | 106026583 | 1 | 3_106026583 | ENSG00000287421 | AC131237.1 | 133833 | Upstream | 4.57685559 | 4.72E-06 | 0.01605076 |
| 14 | 61989477 | 61989477 | 1 | 14_61989477 | ENSG00000139973 | SYT16 | 0 | INTRON | 4.57685344 | 4.72E-06 | 0.01605076 |
| 12 | 11015522 | 11015522 | 1 | 12_11015522 | ENSG00000275778 | AC018630.2 | 0 | INTRON | -4.5767014 | 4.72E-06 | 0.01605921 |
| 10 | 102401281 | 102401281 | 1 | 10_102401281 | ENSG00000077150 | NFKB2 | 0 | EXON | 4.5766073 | 4.73E-06 | 0.01606322 |
| 20 | 6789873 | 6789873 | 1 | 20_6789873 | ENSG00000125845 | BMP2 | 9627 | Downstream | -4.5764143 | 4.73E-06 | 0.01607473 |
| 14 | 102206846 | 102206846 | 1 | 14_102206846 | ENSG00000140153 | WDR20 | 0 | INTRON | 4.57637048 | 4.73E-06 | 0.01607473 |
| 10 | 2584759 | 2584759 | 1 | 10_2584759 | ENSG00000235281 | AL713851.1 | 0 | INTRON | -4.5763321 | 4.73E-06 | 0.01607473 |
| 2 | 143201505 | 143201505 | 1 | 2_143201505 | ENSG00000075884 | ARHGAP15 | 0 | INTRON | -4.5762612 | 4.73E-06 | 0.01607696 |
| 1 | 180185503 | 180185503 | 1 | 1_180185503 | ENSG00000116260 | QSOX1 | 0 | INTRON | 4.57615064 | 4.74E-06 | 0.01607749 |
| 8 | 77234007 | 77234007 | 1 | 8_77234007 | ENSG00000254366 | AC062004.1 | 165064 | Upstream | -4.5761175 | 4.74E-06 | 0.01607749 |
| 21 | 45026735 | 45026735 | 1 | 21_45026735 | ENSG00000275874 | PICSAR | 22008 | Upstream | 4.57606932 | 4.74E-06 | 0.01607749 |
| 13 | 21708335 | 21708335 | 1 | 13_21708335 | ENSG00000102678 | FGF9 | 3837 | Downstream | -4.5758761 | 4.74E-06 | 0.01607749 |
| 18 | 77295467 | 77295467 | 1 | 18_77295467 | ENSG00000166573 | GALR1 | 17571 | Downstream | -4.5758614 | 4.74E-06 | 0.01607749 |
| 2 | 59952796 | 59952796 | 1 | 2_59952796 | ENSG00000271955 | AC007100.1 | 0 | INTRON | -4.5758133 | 4.74E-06 | 0.01607749 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 174822078 | 174822078 | 1 | 5_174822078 | ENSG00000251144 | AC113346.1 | 0 | INTRON | 4.57577259 | 4.74E-06 | 0.01607749 |
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| 19 | 52209705 | 52209705 | 1 | 19_52209705 | ENSG00000105568 | PPP2R1A | 0 | INTRON | -4.5757301 | 4.75E-06 | 0.01607749 |
| 3 | 78711740 | 78711740 | 1 | 3_78711740 | ENSG00000169855 | ROBO1 | 0 | INTRON | 4.57572259 | 4.75E-06 | 0.01607749 |
| 8 | 117507642 | 117507642 | 1 | 8_117507642 | ENSG00000164758 | MED30 | 13070 | Upstream | -4.5756813 | 4.75E-06 | 0.01607749 |
| 1 | 43837645 | 43837645 | 1 | 1_43837645 | ENSG00000126091 | ST3GAL3 | 0 | INTRON | 4.57564712 | 4.75E-06 | 0.01607749 |
| 11 | 70858298 | 70858298 | 1 | 11_70858298 | ENSG00000162105 | SHANK2 | 0 | INTRON | 4.57562132 | 4.75E-06 | 0.01607749 |
| 3 | 67353347 | 67353347 | 1 | 3_67353347 | ENSG00000172340 | SUCLG2 | 7112 | Downstream | -4.5755982 | 4.75E-06 | 0.01607749 |
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| 19 | 4208471 | 4208471 | 1 | 19_4208471 | ENSG00000089847 | ANKRD24 | 0 | INTRON | 4.57552318 | 4.75E-06 | 0.01607749 |
| 5 | 118114991 | 118114991 | 1 | 5_118114991 | ENSG00000250891 | LINC02208 | 0 | INTRON | 4.57552079 | 4.75E-06 | 0.01607749 |
| 5 | 142867234 | 142867234 | 1 | 5_142867234 | ENSG00000226272 | ARHGAP26-AS1 | 0 | INTRON | 4.57550355 | 4.75E-06 | 0.01607749 |
| 20 | 17954766 | 17954766 | 1 | 20_17954766 | ENSG00000089006 | SNX5 | 0 | INTRON | 4.5751895 | 4.76E-06 | 0.01609843 |
| 18 | 71689999 | 71689999 | 1 | 18_71689999 | ENSG00000265946 | AC090312.2 | 24474 | Downstream | -4.5750585 | 4.76E-06 | 0.01610022 |
| 4 | 159863080 | 159863080 | 1 | 4_159863080 | ENSG00000250488 | LINC02233 | 85252 | Upstream | -4.5750219 | 4.76E-06 | 0.01610022 |
| 19 | 18762636 | 18762636 | 1 | 19_18762636 | ENSG00000105662 | CRTC1 | 0 | INTRON | 4.57501238 | 4.76E-06 | 0.01610022 |
| 4 | 672626 | 672626 | 1 | 4_672626 | ENSG00000169020 | ATP5ME | 0 | INTRON | 4.57499975 | 4.76E-06 | 0.01610022 |
| 8 | 108209713 | 108209713 | 1 | 8_108209713 | ENSG00000104408 | EIF3E | 0 | INTRON | -4.5749435 | 4.76E-06 | 0.01610135 |
| 11 | 121919991 | 121919991 | 1 | 11_121919991 | ENSG00000286044 | AP001977.1 | 0 | INTRON | -4.5748289 | 4.77E-06 | 0.01610697 |
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| 8 | 33383083 | 33383083 | 1 | 8_33383083 | ENSG00000172728 | FUT10 | 0 | INTRON | 4.5746747 | 4.77E-06 | 0.01610777 |
| 3 | 84747840 | 84747840 | 1 | 3_84747840 | ENSG00000242641 | LINC00971 | 0 | INTRON | -4.5746706 | 4.77E-06 | 0.01610777 |
| 20 | 6946200 | 6946200 | 1 | 20_6946200 | ENSG00000232271 | AL096799.1 | 123413 | Upstream | 4.57465211 | 4.77E-06 | 0.01610777 |
| 1 | 4500740 | 4500740 | 1 | 1_4500740 | ENSG00000284694 | AL355602.1 | 16365 | Upstream | 4.57459443 | 4.77E-06 | 0.01610902 |
| 20 | 35718049 | 35718049 | 1 | 20_35718049 | ENSG00000131051 | RBM39 | 0 | INTRON | -4.5744955 | 4.77E-06 | 0.01611071 |
| 6 | 145910527 | 145910527 | 1 | 6_145910527 | ENSG00000146414 | SHPRH | 0 | 3UTR | 4.57448934 | 4.77E-06 | 0.01611071 |
| 6 | 157768761 | 157768761 | 1 | 6_157768761 | ENSG00000130340 | SNX9 | 0 | INTRON | 4.57431324 | 4.78E-06 | 0.01612107 |
| 11 | 42920536 | 42920536 | 1 | 11_42920536 | ENSG00000254914 | AC109810.1 | 19238 | Upstream | -4.574166 | 4.78E-06 | 0.01612921 |
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| 8 | 41921862 | 41921862 | 1 | 8_41921862 | ENSG00000083168 | KAT6A | 7616 | Downstream | -4.5739834 | 4.79E-06 | 0.01613585 |
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| 11 | 9342707 | 9342707 | 1 | 11_9342707 | ENSG00000166471 | TMEM41B | 28071 | Upstream | 4.57388983 | 4.79E-06 | 0.0161377 |
| 1 | 105867711 | 105867711 | 1 | 1_105867711 | ENSG00000237897 | AL512844.2 | 22981 | Downstream | 4.57375972 | 4.79E-06 | 0.01614453 |
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| 20 | 47110020 | 47110020 | 1 | 20_47110020 | ENSG00000064655 | EYA2 | 0 | INTRON | 4.57362187 | 4.79E-06 | 0.01614876 |
| 10 | 47208343 | 47208343 | 1 | 10_47208343 | ENSG00000266524 | GDF10 | 91853 | Upstream | 4.57351448 | 4.80E-06 | 0.0161518 |
| 14 | 21396157 | 21396157 | 1 | 14_21396157 | ENSG00000100888 | CHD8 | 0 | INTRON | 4.57349962 | 4.80E-06 | 0.0161518 |
| 3 | 142307611 | 142307611 | 1 | 3_142307611 | ENSG00000114127 | XRN1 | 0 | 3UTR | -4.5733768 | 4.80E-06 | 0.01615807 |
| 5 | 152409366 | 152409366 | 1 | 5_152409366 | ENSG00000286749 | AC008571.2 | 0 | INTRON | 4.57306949 | 4.81E-06 | 0.01617562 |
| 8 | 102322833 | 102322833 | 1 | 8_102322833 | ENSG00000104517 | UBR5 | 0 | INTRON | -4.5730313 | 4.81E-06 | 0.01617562 |
| 9 | 38163156 | 38163156 | 1 | 9_38163156 | ENSG00000200026 | U8 | 15595 | Downstream | 4.57301156 | 4.81E-06 | 0.01617562 |
| 6 | 401891 | 401891 | 1 | 6_401891 | ENSG00000137265 | IRF4 | 0 | INTRON | 4.57288433 | 4.81E-06 | 0.01617562 |
| 1 | 151874694 | 151874694 | 1 | 1_151874694 | ENSG00000159445 | THEM4 | 0 | 3UTR | 4.57287861 | 4.81E-06 | 0.01617562 |
| 19 | 10191113 | 10191113 | 1 | 19_10191113 | ENSG00000130816 | DNMT1 | 0 | INTRON | 4.57286727 | 4.81E-06 | 0.01617562 |
| 4 | 33397100 | 33397100 | 1 | 4_33397100 | ENSG00000249766 | AC097535.2 | 3437 | Upstream | -4.5728209 | 4.81E-06 | 0.01617562 |
| 7 | 6857039 | 6857039 | 1 | 7_6857039 | ENSG00000155070 | UNC93B2 | 0 | INTRON | -4.5728182 | 4.81E-06 | 0.01617562 |
| 15 | 48681356 | 48681356 | 1 | 15_48681356 | ENSG00000273925 | AC084757.4 | 18300 | Upstream | 4.57270454 | 4.81E-06 | 0.01617981 |
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| 1 | 55401369 | 55401369 | 1 | 1_55401369 | ENSG00000234810 | AL603840.1 | 0 | INTRON | -4.5726162 | 4.82E-06 | 0.01618164 |
| 20 | 39850872 | 39850872 | 1 | 20_39850872 | ENSG00000229976 | AL118523.1 | 35775 | Downstream | 4.572528 | 4.82E-06 | 0.01618526 |
| 6 | 113524016 | 113524016 | 1 | 6_113524016 | ENSG00000236347 | AL513123.1 | 7101 | Upstream | -4.5723509 | 4.82E-06 | 0.01619553 |
| 8 | 47206629 | 47206629 | 1 | 8_47206629 | ENSG00000215177 | IGLV8OR8-1 | 3732 | Upstream | 4.57231058 | 4.82E-06 | 0.01619553 |
| 3 | 181582568 | 181582568 | 1 | 3_181582568 | ENSG00000239381 | AC125613.1 | 0 | INTRON | -4.5722351 | 4.83E-06 | 0.01619553 |
| 7 | 94050669 | 94050669 | 1 | 7_94050669 | ENSG00000236453 | AC003092.1 | 0 | INTRON | 4.57222979 | 4.83E-06 | 0.01619553 |
| 3 | 14892286 | 14892286 | 1 | 3_14892286 | ENSG00000154783 | FGD5 | 0 | INTRON | 4.57204995 | 4.83E-06 | 0.01620421 |
| 12 | 70424704 | 70424704 | 1 | 12_70424704 | ENSG00000135643 | KCNMB4 | 0 | INTRON | 4.57199881 | 4.83E-06 | 0.01620421 |
| 17 | 77179481 | 77179481 | 1 | 17_77179481 | ENSG00000129657 | SEC14L1 | 0 | INTRON | -4.5719925 | 4.83E-06 | 0.01620421 |
| 9 | 137756189 | 137756189 | 1 | 9_137756189 | ENSG00000181090 | EHMT1 | 0 | INTRON | 4.57195231 | 4.83E-06 | 0.01620421 |
| 20 | 49881085 | 49881085 | 1 | 20_49881085 | ENSG00000197818 | SLC9A8 | 0 | INTRON | 4.57189316 | 4.83E-06 | 0.01620559 |
| 4 | 1623557 | 1623557 | 1 | 4_1623557 | ENSG00000174137 | FAM53A | 0 | INTRON | 4.57185176 | 4.83E-06 | 0.0162056 |
| 21 | 37930931 | 37930931 | 1 | 21_37930931 | ENSG00000157542 | KCNJ6 | 0 | INTRON | -4.5717264 | 4.84E-06 | 0.01621211 |
| 14 | 24251413 | 24251413 | 1 | 14_24251413 | ENSG00000092295 | TGM1 | 0 | INTRON | -4.5714905 | 4.84E-06 | 0.01622628 |
| 17 | 19906653 | 19906653 | 1 | 17_19906653 | ENSG00000108599 | AKAP10 | 0 | INTRON | 4.57144723 | 4.84E-06 | 0.01622628 |
| 7 | 80737324 | 80737324 | 1 | 7_80737324 | ENSG00000075223 | SEMA3C | 5213 | Downstream | 4.57141965 | 4.84E-06 | 0.01622628 |
| 14 | 100696053 | 100696053 | 1 | 14_100696053 | ENSG00000258717 | AL132711.1 | 16169 | Upstream | 4.57133573 | 4.85E-06 | 0.01622958 |
| X | 48985365 | 48985365 | 1 | X_48985365 | ENSG00000068400 | GRIPAP1 | 0 | EXON | -4.5711671 | 4.85E-06 | 0.01623945 |
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| 19 | 3342161 | 3342161 | 1 | 19_3342161 | ENSG00000141905 | NFIC | 0 | INTRON | 4.57080675 | 4.86E-06 | 0.0162451 |
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| 13 | 106502733 | 106502733 | 1 | 13_106502733 | ENSG00000125266 | EFNB2 | 0 | INTRON | -4.5707728 | 4.86E-06 | 0.0162451 |
| 8 | 7263497 | 7263497 | 1 | 8_7263497 | ENSG00000233132 | FAM90A3P | 1028 | Upstream | -4.5707403 | 4.86E-06 | 0.0162451 |
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| 6 | 12211181 | 12211181 | 1 | 6_12211181 | ENSG00000095951 | HIVEP1 | 46182 | Downstream | -4.5706468 | 4.86E-06 | 0.0162451 |
| 12 | 26836159 | 26836159 | 1 | 12_26836159 | ENSG00000123104 | ITPR2 | 2965 | Upstream | 4.57058847 | 4.86E-06 | 0.0162451 |
| 11 | 58071671 | 58071671 | 1 | 11_58071671 | ENSG00000186509 | OR9Q1 | 0 | INTRON | 4.57056192 | 4.86E-06 | 0.0162451 |
| 1 | 1199617 | 1199617 | 1 | 1_1199617 | ENSG00000162571 | TTLL10 | 1682 | Downstream | 4.57055336 | 4.86E-06 | 0.0162451 |
| 7 | 8151330 | 8151330 | 1 | 7_8151330 | ENSG00000003147 | ICA1 | 0 | INTRON | 4.57055163 | 4.86E-06 | 0.0162451 |
| 9 | 105420407 | 105420407 | 1 | 9_105420407 | ENSG00000070214 | SLC44A1 | 0 | INTRON | -4.5705178 | 4.87E-06 | 0.0162451 |
| 6 | 28212321 | 28212321 | 1 | 6_28212321 | ENSG00000176933 | TOB2P1 | 5321 | Downstream | 4.57038848 | 4.87E-06 | 0.01625194 |
| 13 | 40632053 | 40632053 | 1 | 13_40632053 | ENSG00000150907 | FOXO1 | 0 | INTRON | 4.570323 | 4.87E-06 | 0.01625383 |
| 14 | 59135675 | 59135675 | 1 | 14_59135675 | ENSG00000258685 | AL359219.1 | 0 | EXON | -4.5702426 | 4.87E-06 | 0.0162557 |
| 11 | 131899022 | 131899022 | 1 | 11_131899022 | ENSG00000182667 | NTM | 0 | INTRON | -4.5702167 | 4.87E-06 | 0.0162557 |
| 13 | 113671750 | 113671750 | 1 | 13_113671750 | ENSG00000185974 | GRK1 | 0 | INTRON | 4.56994875 | 4.88E-06 | 0.01627331 |
| 10 | 80304228 | 80304228 | 1 | 10_80304228 | ENSG00000232950 | ZNF519P1 | 4573 | Downstream | 4.56978808 | 4.88E-06 | 0.0162826 |
| 4 | 101902997 | 101902997 | 1 | 4_101902997 | ENSG00000153064 | BANK1 | 0 | INTRON | 4.56964276 | 4.89E-06 | 0.01628786 |
| 7 | 97336163 | 97336163 | 1 | 7_97336163 | ENSG00000226046 | AP1S2P1 | 101354 | Upstream | -4.5696074 | 4.89E-06 | 0.01628786 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 79998271 | 79998271 | 1 | 18_79998271 | ENSG00000141759 | TXNL4A | 0 | INTRON | 4.56959714 | 4.89E-06 | 0.01628786 |
| 9 | 38272552 | 38272552 | 1 | 9_38272552 | ENSG00000223716 | AL135785.1 | 87874 | Upstream | -4.5694562 | 4.89E-06 | 0.01629562 |
| 18 | 10796461 | 10796461 | 1 | 18_10796461 | ENSG00000154864 | PIEZO2 | 0 | INTRON | -4.5693143 | 4.89E-06 | 0.01630347 |
| 10 | 89541529 | 89541529 | 1 | 10_89541529 | ENSG00000152779 | SLC16A12 | 0 | INTRON | 4.5691803 | 4.90E-06 | 0.0163107 |
| 7 | 120253215 | 120253215 | 1 | 7_120253215 | ENSG00000184408 | KCND2 | 19959 | Upstream | -4.569134 | 4.90E-06 | 0.01631111 |
| 7 | 130908151 | 130908151 | 1 | 7_130908151 | ENSG00000233559 | LINC00513 | 0 | INTRON | 4.56903589 | 4.90E-06 | 0.01631555 |
| 20 | 44226085 | 44226085 | 1 | 20_44226085 | ENSG00000223891 | OSER1-DT | 58 | Downstream | 4.56897172 | 4.90E-06 | 0.01631735 |
| 9 | 62478902 | 62478902 | 1 | 9_62478902 | ENSG00000232827 | LINC01189 | 0 | INTRON | 4.56881792 | 4.90E-06 | 0.01632614 |
| 12 | 68458964 | 68458964 | 1 | 12_68458964 | ENSG00000251301 | LINC02384 | 7301 | Upstream | -4.5687149 | 4.91E-06 | 0.01633097 |
| 15 | 34079803 | 34079803 | 1 | 15_34079803 | ENSG00000134153 | EMC7 | 4213 | Downstream | 4.56856509 | 4.91E-06 | 0.01633798 |
| 17 | 40234003 | 40234003 | 1 | 17_40234003 | ENSG00000171475 | WIPF2 | 0 | INTRON | 4.56854296 | 4.91E-06 | 0.01633798 |
| 3 | 133110732 | 133110732 | 1 | 3_133110732 | ENSG00000144868 | TMEM108 | 0 | INTRON | -4.5684097 | 4.91E-06 | 0.01634517 |
| 1 | 213842275 | 213842275 | 1 | 1_213842275 | ENSG00000230461 | PROX1-AS1 | 0 | INTRON | -4.5683603 | 4.92E-06 | 0.01634583 |
| 3 | 133997043 | 133997043 | 1 | 3_133997043 | ENSG00000174640 | SLCO2A1 | 0 | INTRON | 4.56796528 | 4.92E-06 | 0.01637346 |
| 10 | 11438637 | 11438637 | 1 | 10_11438637 | ENSG00000148429 | USP6NL | 15308 | Downstream | 4.56791328 | 4.93E-06 | 0.01637432 |
| 1 | 211091625 | 211091625 | 1 | 1_211091625 | ENSG00000284299 | AL590132.1 | 0 | INTRON | -4.5677627 | 4.93E-06 | 0.01638288 |
| 22 | 39577674 | 39577674 | 1 | 22_39577674 | ENSG00000100346 | CACNA1I | 0 | INTRON | 4.56764222 | 4.93E-06 | 0.0163891 |
| 17 | 59991858 | 59991858 | 1 | 17_59991858 | ENSG00000267302 | RNFT1-DT | 0 | INTRON | 4.56753764 | 4.93E-06 | 0.01639135 |
| 15 | 36391751 | 36391751 | 1 | 15_36391751 | ENSG00000259737 | AC087516.2 | 47220 | Downstream | -4.5675315 | 4.94E-06 | 0.01639135 |
| 11 | 49015967 | 49015967 | 1 | 11_49015967 | ENSG00000205044 | AC027369.1 | 0 | INTRON | -4.5671469 | 4.94E-06 | 0.01641824 |
| 1 | 217913240 | 217913240 | 1 | 1_217913240 | ENSG00000231814 | LINC00210 | 0 | INTRON | -4.5669605 | 4.95E-06 | 0.01642685 |
| 15 | 96471497 | 96471497 | 1 | 15_96471497 | ENSG00000222617 | RN7SKP254 | 15084 | Upstream | -4.5669551 | 4.95E-06 | 0.01642685 |
| 5 | 66011555 | 66011555 | 1 | 5_66011555 | ENSG00000112851 | ERBIN | 0 | INTRON | 4.56679367 | 4.95E-06 | 0.01643079 |
| 13 | 33994423 | 33994423 | 1 | 13_33994423 | ENSG00000133119 | RFC3 | 27865 | Downstream | -4.5667515 | 4.95E-06 | 0.01643079 |
| 15 | 34899094 | 34899094 | 1 | 15_34899094 | ENSG00000021776 | AQR | 0 | INTRON | 4.56674449 | 4.95E-06 | 0.01643079 |
| 5 | 166635031 | 166635031 | 1 | 5_166635031 | ENSG00000229119 | AC026403.1 | 252432 | Downstream | -4.5667413 | 4.95E-06 | 0.01643079 |
| 14 | 37967344 | 37967344 | 1 | 14_37967344 | ENSG00000139865 | TTC6 | 0 | INTRON | -4.5665873 | 4.96E-06 | 0.01643652 |
| 1 | 232367238 | 232367238 | 1 | 1_232367238 | ENSG00000116991 | SIPA1L2 | 30726 | Downstream | 4.56658643 | 4.96E-06 | 0.01643652 |
| 2 | 25087826 | 25087826 | 1 | 2_25087826 | ENSG00000084710 | EFR3B | 0 | INTRON | -4.5665231 | 4.96E-06 | 0.01643828 |
| 4 | 16061984 | 16061984 | 1 | 4_16061984 | ENSG00000007062 | PROM1 | 0 | INTRON | -4.5663884 | 4.96E-06 | 0.01644285 |
| 3 | 58280550 | 58280550 | 1 | 3_58280550 | ENSG00000163686 | ABHD6 | 0 | INTRON | 4.56638303 | 4.96E-06 | 0.01644285 |
| 19 | 11665089 | 11665089 | 1 | 19_11665089 | ENSG00000197332 | AC008543.1 | 0 | INTRON | -4.56631 | 4.96E-06 | 0.01644538 |
| 3 | 59483795 | 59483795 | 1 | 3_59483795 | ENSG00000242545 | AC126121.2 | 0 | INTRON | -4.5661234 | 4.97E-06 | 0.01645681 |
| 12 | 117783140 | 117783140 | 1 | 12_117783140 | ENSG00000171435 | KSR2 | 0 | INTRON | -4.5660507 | 4.97E-06 | 0.01645932 |
| 7 | 145326248 | 145326248 | 1 | 7_145326248 | ENSG00000226592 | AC004911.1 | 55864 | Downstream | -4.5658768 | 4.97E-06 | 0.01646767 |
| 5 | 145691501 | 145691501 | 1 | 5_145691501 | ENSG00000186314 | PRELID2 | 0 | INTRON | 4.56585923 | 4.97E-06 | 0.01646767 |
| 21 | 30156422 | 30156422 | 1 | 21_30156422 | ENSG00000156282 | CLDN17 | 9142 | Downstream | -4.5658219 | 4.98E-06 | 0.01646767 |
| 9 | 27224600 | 27224600 | 1 | 9_27224600 | ENSG00000120156 | TEK | 0 | INTRON | -4.5653992 | 4.99E-06 | 0.01649074 |
| 8 | 5641303 | 5641303 | 1 | 8_5641303 | ENSG00000254007 | AC084768.1 | 18375 | Downstream | -4.5653415 | 4.99E-06 | 0.01649074 |
| X | 17241276 | 17241276 | 1 | X_17241276 | ENSG00000214321 | CBX1P4 | 41360 | Upstream | -4.5653268 | 4.99E-06 | 0.01649074 |
| 2 | 223060001 | 223060001 | 1 | 2_223060001 | ENSG00000152049 | KCNE4 | 0 | INTRON | 4.56532364 | 4.99E-06 | 0.01649074 |
| 19 | 23997890 | 23997890 | 1 | 19_23997890 | ENSG00000201966 | RNA5-8SP4 | 6467 | Downstream | 4.56528381 | 4.99E-06 | 0.01649074 |
| 20 | 21023764 | 21023764 | 1 | 20_21023764 | ENSG00000234104 | AL133465.1 | 51202 | Downstream | -4.5652835 | 4.99E-06 | 0.01649074 |
| 10 | 88024159 | 88024159 | 1 | 10_88024159 | ENSG00000227905 | MED6P1 | 23975 | Downstream | 4.56517515 | 4.99E-06 | 0.01649474 |
| 1 | 42801133 | 42801133 | 1 | 1_42801133 | ENSG00000274386 | TMEM269 | 0 | INTRON | -4.5651144 | 4.99E-06 | 0.01649474 |
| 10 | 113424030 | 113424030 | 1 | 10_113424030 | ENSG00000286289 | AL133482.1 | 58038 | Downstream | 4.56511038 | 4.99E-06 | 0.01649474 |
| 1 | 200047824 | 200047824 | 1 | 1_200047824 | ENSG00000116833 | NR5A2 | 0 | INTRON | -4.5650412 | 4.99E-06 | 0.01649698 |
| 6 | 132638715 | 132638715 | 1 | 6_132638715 | ENSG00000146399 | TAAR1 | 6268 | Downstream | 4.56497053 | 5.00E-06 | 0.01649933 |
| 3 | 70543951 | 70543951 | 1 | 3_70543951 | ENSG00000240405 | SAMMSON | 25887 | Downstream | 4.56489839 | 5.00E-06 | 0.01650016 |
| X | 153596515 | 153596515 | 1 | X_153596515 | ENSG00000262919 | CCNQ | 0 | INTRON | 4.56487862 | 5.00E-06 | 0.01650016 |
| 4 | 66050762 | 66050762 | 1 | 4_66050762 | ENSG00000249413 | AC116049.2 | 0 | INTRON | 4.564777 | 5.00E-06 | 0.01650495 |
| 21 | 40296559 | 40296559 | 1 | 21_40296559 | ENSG00000171587 | DSCAM | 0 | INTRON | -4.564616 | 5.00E-06 | 0.01651442 |
| 13 | 112776160 | 112776160 | 1 | 13_112776160 | ENSG00000068650 | ATP11A | 0 | INTRON | 4.56437783 | 5.01E-06 | 0.01652843 |
| 8 | 22944228 | 22944228 | 1 | 8_22944228 | ENSG00000134020 | PEBP4 | 0 | INTRON | -4.564279 | 5.01E-06 | 0.01652843 |
| 12 | 59324103 | 59324103 | 1 | 12_59324103 | ENSG00000286279 | AC108721.2 | 0 | INTRON | -4.5642591 | 5.01E-06 | 0.01652843 |
| 1 | 167052427 | 167052427 | 1 | 1_167052427 | ENSG00000227907 | AL158837.1 | 123 | Upstream | -4.5642415 | 5.01E-06 | 0.01652843 |
| 5 | 6646508 | 6646508 | 1 | 5_6646508 | ENSG00000145545 | SRD5A1 | 0 | INTRON | 4.5642347 | 5.01E-06 | 0.01652843 |
| 11 | 76848418 | 76848418 | 1 | 11_76848418 | ENSG00000078124 | ACER3 | 12448 | Upstream | 4.56418086 | 5.01E-06 | 0.01652947 |
| 10 | 84015170 | 84015170 | 1 | 10_84015170 | ENSG00000200789 | RNU1-65P | 11691 | Downstream | 4.56407123 | 5.02E-06 | 0.0165349 |
| 11 | 12683689 | 12683689 | 1 | 11_12683689 | ENSG00000187079 | TEAD1 | 0 | INTRON | 4.56399119 | 5.02E-06 | 0.01653801 |
| 10 | 109886228 | 109886228 | 1 | 10_109886228 | ENSG00000108039 | XPNPEP1 | 0 | INTRON | 4.56394529 | 5.02E-06 | 0.01653842 |
| 20 | 63243531 | 63243531 | 1 | 20_63243531 | ENSG00000101198 | NKAIN4 | 0 | INTRON | -4.5638724 | 5.02E-06 | 0.01653898 |
| 9 | 83869746 | 83869746 | 1 | 9_83869746 | ENSG00000165115 | KIF27 | 0 | INTRON | 4.56383908 | 5.02E-06 | 0.01653898 |
| 5 | 61611493 | 61611493 | 1 | 5_61611493 | ENSG00000178722 | C5orf64 | 0 | INTRON | 4.56381635 | 5.02E-06 | 0.01653898 |
| 7 | 4739950 | 4739950 | 1 | 7_4739950 | ENSG00000164916 | FOXK1 | 0 | INTRON | 4.56374728 | 5.02E-06 | 0.01654123 |
| 17 | 43750876 | 43750876 | 1 | 17_43750876 | ENSG00000167941 | SOST | 2861 | Downstream | 4.5636969 | 5.03E-06 | 0.016542 |
| 21 | 44720133 | 44720133 | 1 | 21_44720133 | ENSG00000175894 | TSPEAR | 8561 | Upstream | 4.56362096 | 5.03E-06 | 0.01654311 |
| 8 | 107625617 | 107625617 | 1 | 8_107625617 | ENSG00000248838 | PGAM1P13 | 21661 | Upstream | 4.56354179 | 5.03E-06 | 0.01654311 |
| 5 | 77297134 | 77297134 | 1 | 5_77297134 | ENSG00000113231 | PDE8B | 0 | INTRON | 4.56348262 | 5.03E-06 | 0.01654311 |
| 3 | 39579564 | 39579564 | 1 | 3_39579564 | ENSG00000168314 | MOBP | 50085 | Downstream | 4.56347754 | 5.03E-06 | 0.01654311 |
| 15 | 76165692 | 76165692 | 1 | 15_76165692 | ENSG00000169758 | TMEM266 | 0 | INTRON | 4.56345768 | 5.03E-06 | 0.01654311 |
| 10 | 111942651 | 111942651 | 1 | 10_111942651 | ENSG00000287231 | AL136119.1 | 0 | INTRON | 4.56343946 | 5.03E-06 | 0.01654311 |
| 8 | 90753376 | 90753376 | 1 | 8_90753376 | ENSG00000180694 | TMEM64 | 0 | INTRON | 4.56316921 | 5.04E-06 | 0.01655617 |
| 15 | 74592879 | 74592879 | 1 | 15_74592879 | ENSG00000179361 | ARID3B | 0 | INTRON | 4.56312563 | 5.04E-06 | 0.01655617 |
| 19 | 1978545 | 1978545 | 1 | 19_1978545 | ENSG00000133275 | CSNK1G2 | 0 | EXON | -4.5630421 | 5.04E-06 | 0.01655617 |
| 4 | 86304634 | 86304634 | 1 | 4_86304634 | ENSG00000109339 | MAPK10 | 0 | INTRON | -4.5630364 | 5.04E-06 | 0.01655617 |
| 12 | 76620078 | 76620078 | 1 | 12_76620078 | ENSG00000271142 | YWHAQP7 | 35 | Downstream | 4.56303324 | 5.04E-06 | 0.01655617 |
| 1 | 187231163 | 187231163 | 1 | 1_187231163 | ENSG00000230426 | ERVMER61-1 | 0 | INTRON | 4.56303068 | 5.04E-06 | 0.01655617 |
| 9 | 37963519 | 37963519 | 1 | 9_37963519 | ENSG00000255872 | AL138752.2 | 0 | INTRON | 4.56293447 | 5.04E-06 | 0.01656057 |
| 1 | 33501163 | 33501163 | 1 | 1_33501163 | ENSG00000121903 | ZSCAN20 | 4656 | Downstream | 4.56254404 | 5.05E-06 | 0.0165882 |
| 21 | 45598401 | 45598401 | 1 | 21_45598401 | ENSG00000233922 | LINC01694 | 0 | EXON | 4.56230514 | 5.06E-06 | 0.01660212 |
| 2 | 234921813 | 234921813 | 1 | 2_234921813 | ENSG00000235726 | AC010148.1 | 8429 | Upstream | -4.562287 | 5.06E-06 | 0.01660212 |
| 2 | 17676073 | 17676073 | 1 | 2_17676073 | ENSG00000163029 | SMC6 | 0 | INTRON | -4.5621712 | 5.06E-06 | 0.01660808 |
| 4 | 49270793 | 49270793 | 1 | 4_49270793 | ENSG00000248946 | MTND3P22 | 23878 | Downstream | -4.5621174 | 5.06E-06 | 0.01660914 |
| 14 | 66343100 | 66343100 | 1 | 14_66343100 | ENSG00000258561 | AL359232.1 | 0 | INTRON | -4.5620512 | 5.07E-06 | 0.01661021 |
| 10 | 18090406 | 18090406 | 1 | 10_18090406 | ENSG00000148482 | SLC39A12 | 47114 | Downstream | 4.56202289 | 5.07E-06 | 0.01661021 |
| 19 | 3668073 | 3668073 | 1 | 19_3668073 | ENSG00000186111 | PIP5K1C | 0 | INTRON | 4.56185306 | 5.07E-06 | 0.01661871 |
| 2 | 2030254 | 2030254 | 1 | 2_2030254 | ENSG00000186487 | MYT1L | 0 | INTRON | 4.56183465 | 5.07E-06 | 0.01661871 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
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| 10 | 18297914 | 18297914 | 1 | 10_18297914 | ENSG00000165995 | CACNB2 | 0 | INTRON | -4.5617474 | 5.07E-06 | 0.01662242 |
| X | 1088585 | 1088585 | 1 | X_1088585 | ENSG00000225661 | RPL14P5 | 78484 | Upstream | 4.56169836 | 5.07E-06 | 0.0166231 |
| 11 | 124652586 | 124652586 | 1 | 11_124652586 | ENSG00000110013 | SIAE | 0 | INTRON | -4.5616051 | 5.08E-06 | 0.01662729 |
| 14 | 54932381 | 54932381 | 1 | 14_54932381 | ENSG00000198554 | WDHD1 | 6567 | Downstream | 4.56148821 | 5.08E-06 | 0.0166308 |
| 14 | 24266198 | 24266198 | 1 | 14_24266198 | ENSG00000100949 | RABGGTA | 0 | INTRON | 4.5614466 | 5.08E-06 | 0.0166308 |
| 20 | 19617209 | 19617209 | 1 | 20_19617209 | ENSG00000185052 | SLC24A3 | 0 | INTRON | 4.56137901 | 5.08E-06 | 0.0166308 |
| 11 | 131768191 | 131768191 | 1 | 11_131768191 | ENSG00000182667 | NTM | 0 | INTRON | 4.5613622 | 5.08E-06 | 0.0166308 |
| 19 | 11359840 | 11359840 | 1 | 19_11359840 | ENSG00000105520 | PLPPR2 | 0 | EXON | 4.56130629 | 5.08E-06 | 0.0166308 |
| 1 | 219675043 | 219675043 | 1 | 1_219675043 | ENSG00000196660 | SLC30A10 | 10383 | Downstream | -4.5612648 | 5.08E-06 | 0.0166308 |
| 7 | 129312760 | 129312760 | 1 | 7_129312760 | ENSG00000158467 | AHCYL2 | 0 | INTRON | 4.56111291 | 5.09E-06 | 0.0166308 |
| 9 | 94637724 | 94637724 | 1 | 9_94637724 | ENSG00000165140 | FBP1 | 0 | INTRON | 4.56111104 | 5.09E-06 | 0.0166308 |
| 8 | 14237403 | 14237403 | 1 | 8_14237403 | ENSG00000185053 | SGCZ | 0 | INTRON | -4.5610652 | 5.09E-06 | 0.0166308 |
| 2 | 53046886 | 53046886 | 1 | 2_53046886 | ENSG00000228033 | AC010967.1 | 85434 | Upstream | -4.5610346 | 5.09E-06 | 0.0166308 |
| 4 | 14007431 | 14007431 | 1 | 4_14007431 | ENSG00000250634 | LINC01182 | 3675 | Downstream | -4.561026 | 5.09E-06 | 0.0166308 |
| 15 | 41753147 | 41753147 | 1 | 15_41753147 | ENSG00000174197 | MGA | 0 | INTRON | 4.56099137 | 5.09E-06 | 0.0166308 |
| 13 | 63703294 | 63703294 | 1 | 13_63703294 | ENSG00000231061 | LINC00395 | 0 | INTRON | 4.56091427 | 5.09E-06 | 0.0166308 |
| 12 | 56638693 | 56638693 | 1 | 12_56638693 | ENSG00000110955 | ATP5F1B | 0 | INTRON | 4.56087495 | 5.09E-06 | 0.0166308 |
| 9 | 96393041 | 96393041 | 1 | 9_96393041 | ENSG00000165244 | ZNF367 | 0 | INTRON | 4.56084201 | 5.09E-06 | 0.0166308 |
| 8 | 41997118 | 41997118 | 1 | 8_41997118 | ENSG00000083168 | KAT6A | 0 | INTRON | 4.56082258 | 5.10E-06 | 0.0166308 |
| 11 | 18209935 | 18209935 | 1 | 11_18209935 | ENSG00000189332 | SLC25A51P4 | 0 | EXON | -4.5608078 | 5.10E-06 | 0.0166308 |
| 5 | 12772381 | 12772381 | 1 | 5_12772381 | ENSG00000248131 | LINC01194 | 0 | INTRON | 4.56079299 | 5.10E-06 | 0.0166308 |
| 21 | 40334794 | 40334794 | 1 | 21_40334794 | ENSG00000171587 | DSCAM | 0 | INTRON | 4.56076983 | 5.10E-06 | 0.0166308 |
| 5 | 118950332 | 118950332 | 1 | 5_118950332 | ENSG00000169570 | DTWD2 | 0 | INTRON | 4.56075402 | 5.10E-06 | 0.0166308 |
| 13 | 88356240 | 88356240 | 1 | 13_88356240 | ENSG00000285811 | AL355677.1 | 115910 | Downstream | 4.5606929 | 5.10E-06 | 0.01663245 |
| 8 | 140611990 | 140611990 | 1 | 8_140611990 | ENSG00000123908 | AGO2 | 0 | INTRON | 4.56065215 | 5.10E-06 | 0.01663249 |
| 2 | 230799938 | 230799938 | 1 | 2_230799938 | ENSG00000135932 | CAB39 | 0 | INTRON | 4.56055736 | 5.10E-06 | 0.01663682 |
| 14 | 34943129 | 34943129 | 1 | 14_34943129 | ENSG00000258704 | SRP54-AS1 | 0 | INTRON | -4.5604245 | 5.11E-06 | 0.01664268 |
| 10 | 88609110 | 88609110 | 1 | 10_88609110 | ENSG00000204022 | LIPJ | 2134 | Downstream | 4.56040288 | 5.11E-06 | 0.01664268 |
| 7 | 139319992 | 139319992 | 1 | 7_139319992 | ENSG00000206843 | RNU6-206P | 4598 | Upstream | 4.5602991 | 5.11E-06 | 0.01664431 |
| 18 | 62491371 | 62491371 | 1 | 18_62491371 | ENSG00000141664 | ZCCHC2 | 31653 | Upstream | -4.5601832 | 5.11E-06 | 0.01664431 |
| 6 | 77352771 | 77352771 | 1 | 6_77352771 | ENSG00000276064 | AL365222.1 | 9117 | Downstream | -4.5601801 | 5.11E-06 | 0.01664431 |
| 9 | 71571271 | 71571271 | 1 | 9_71571271 | ENSG00000229814 | RPL35AP21 | 18329 | Upstream | -4.5601218 | 5.11E-06 | 0.01664431 |
| 1 | 248322253 | 248322253 | 1 | 1_248322253 | ENSG00000177186 | OR2M7 | 1376 | Downstream | -4.5601012 | 5.11E-06 | 0.01664431 |
| 13 | 53730838 | 53730838 | 1 | 13_53730838 | ENSG00000287722 | AL356295.1 | 0 | INTRON | 4.56006567 | 5.11E-06 | 0.01664431 |
| 2 | 175036346 | 175036346 | 1 | 2_175036346 | ENSG00000227187 | AC007435.1 | 2154 | Upstream | 4.5600526 | 5.11E-06 | 0.01664431 |
| 3 | 188669468 | 188669468 | 1 | 3_188669468 | ENSG00000145012 | LPP | 0 | INTRON | 4.56000147 | 5.12E-06 | 0.01664431 |
| 11 | 134174867 | 134174867 | 1 | 11_134174867 | ENSG00000151503 | NCAPD3 | 0 | INTRON | -4.5599644 | 5.12E-06 | 0.01664431 |
| 7 | 71715942 | 71715942 | 1 | 7_71715942 | ENSG00000185274 | GALNT17 | 2342 | Downstream | -4.55995 | 5.12E-06 | 0.01664431 |
| 18 | 4615953 | 4615953 | 1 | 18_4615953 | ENSG00000265545 | AP005403.1 | 156495 | Downstream | 4.5599367 | 5.12E-06 | 0.01664431 |
| 3 | 62939867 | 62939867 | 1 | 3_62939867 | ENSG00000244342 | LINC00698 | 10562 | Upstream | 4.55990012 | 5.12E-06 | 0.01664431 |
| 10 | 87532538 | 87532538 | 1 | 10_87532538 | ENSG00000107789 | MINPP1 | 0 | INTRON | 4.55981868 | 5.12E-06 | 0.01664551 |
| Y | 11429620 | 11429620 | 1 | Y_11429620 | ENSG00000275828 | AC134879.3 | 10904 | Downstream | -4.5597662 | 5.12E-06 | 0.01664551 |
| 6 | 84552242 | 84552242 | 1 | 6_84552242 | ENSG00000231776 | LINC01611 | 0 | INTRON | -4.5597646 | 5.12E-06 | 0.01664551 |
| 1 | 44218705 | 44218705 | 1 | 1_44218705 | ENSG00000178028 | DMAP1 | 0 | EXON | -4.5595601 | 5.13E-06 | 0.01665023 |
| 8 | 92446515 | 92446515 | 1 | 8_92446515 | ENSG00000253634 | AC091096.1 | 14023 | Downstream | -4.5595527 | 5.13E-06 | 0.01665023 |
| 17 | 29308397 | 29308397 | 1 | 17_29308397 | ENSG00000108256 | NUFIP2 | 14249 | Upstream | -4.5595462 | 5.13E-06 | 0.01665023 |
| 4 | 2779597 | 2779597 | 1 | 4_2779597 | ENSG00000087266 | SH3BP2 | 13473 | Upstream | 4.55948073 | 5.13E-06 | 0.01665023 |
| 15 | 42089200 | 42089200 | 1 | 15_42089200 | ENSG00000159337 | PLA2G4D | 0 | INTRON | 4.55946052 | 5.13E-06 | 0.01665023 |
| 5 | 32954544 | 32954544 | 1 | 5_32954544 | ENSG00000250697 | AC010343.3 | 0 | INTRON | -4.5594128 | 5.13E-06 | 0.01665023 |
| 12 | 94884977 | 94884977 | 1 | 12_94884977 | ENSG00000184752 | NDUFA12 | 12077 | Downstream | 4.55938759 | 5.13E-06 | 0.01665023 |
| 14 | 29102171 | 29102171 | 1 | 14_29102171 | ENSG00000258028 | AL135878.1 | 0 | INTRON | 4.55938438 | 5.13E-06 | 0.01665023 |
| 14 | 58751533 | 58751533 | 1 | 14_58751533 | ENSG00000258583 | LINC01500 | 0 | INTRON | 4.55934317 | 5.13E-06 | 0.01665032 |
| 4 | 181162822 | 181162822 | 1 | 4_181162822 | ENSG00000248197 | LINC00290 | 3673 | Upstream | -4.5591236 | 5.14E-06 | 0.01665949 |
| 2 | 85203661 | 85203661 | 1 | 2_85203661 | ENSG00000152284 | TCF7L1 | 0 | INTRON | -4.5591109 | 5.14E-06 | 0.01665949 |
| 6 | 15229578 | 15229578 | 1 | 6_15229578 | ENSG00000271888 | AL136162.1 | 14344 | Downstream | -4.5591075 | 5.14E-06 | 0.01665949 |
| 20 | 45726973 | 45726973 | 1 | 20_45726973 | ENSG00000149651 | SPINT4 | 1143 | Downstream | 4.55897893 | 5.14E-06 | 0.01666651 |
| 1 | 155846934 | 155846934 | 1 | 1_155846934 | ENSG00000116580 | GON4L | 0 | INTRON | 4.55881724 | 5.14E-06 | 0.01667608 |
| 15 | 36938994 | 36938994 | 1 | 15_36938994 | ENSG00000134138 | MEIS2 | 0 | INTRON | 4.55877828 | 5.15E-06 | 0.01667608 |
| 19 | 53060959 | 53060959 | 1 | 19_53060959 | ENSG00000170949 | ZNF160 | 5646 | Downstream | 4.55863047 | 5.15E-06 | 0.01668464 |
| 15 | 72480111 | 72480111 | 1 | 15_72480111 | ENSG00000166233 | ARIH1 | 0 | INTRON | 4.55852727 | 5.15E-06 | 0.01668967 |
| 8 | 141513355 | 141513355 | 1 | 8_141513355 | ENSG00000226490 | AC138647.1 | 1282 | Upstream | 4.55830783 | 5.16E-06 | 0.01670285 |
| 9 | 20662738 | 20662738 | 1 | 9_20662738 | ENSG00000188352 | FOCAD | 0 | INTRON | 4.5582611 | 5.16E-06 | 0.01670285 |
| 15 | 84200720 | 84200720 | 1 | 15_84200720 | ENSG00000225151 | GOLGA2P7 | 0 | EXON | -4.5582415 | 5.16E-06 | 0.01670285 |
| 3 | 109561835 | 109561835 | 1 | 3_109561835 | ENSG00000228980 | LINC01205 | 0 | INTRON | -4.5581742 | 5.16E-06 | 0.01670401 |
| 13 | 59344494 | 59344494 | 1 | 13_59344494 | ENSG00000271190 | RPP40P2 | 81103 | Downstream | -4.5581469 | 5.16E-06 | 0.01670401 |
| 11 | 74788987 | 74788987 | 1 | 11_74788987 | ENSG00000166439 | RNF169 | 0 | INTRON | 4.55807704 | 5.16E-06 | 0.01670639 |
| 2 | 224677350 | 224677350 | 1 | 2_224677350 | ENSG00000283428 | CCDC195 | 26413 | Downstream | 4.55788247 | 5.17E-06 | 0.01671586 |
| 2 | 112008573 | 112008573 | 1 | 2_112008573 | ENSG00000153208 | MERTK | 0 | INTRON | -4.5578623 | 5.17E-06 | 0.01671586 |
| 1 | 6069430 | 6069430 | 1 | 1_6069430 | ENSG00000069424 | KCNAB2 | 0 | INTRON | 4.55783808 | 5.17E-06 | 0.01671586 |
| 1 | 193792058 | 193792058 | 1 | 1_193792058 | ENSG00000227240 | AL136456.1 | 0 | INTRON | -4.5575505 | 5.18E-06 | 0.01673459 |
| 22 | 48434183 | 48434183 | 1 | 22_48434183 | ENSG00000233179 | Z82249.1 | 14706 | Upstream | 4.55750297 | 5.18E-06 | 0.01673459 |
| 16 | 79985358 | 79985358 | 1 | 16_79985358 | ENSG00000260237 | AC092130.1 | 55303 | Upstream | 4.55748313 | 5.18E-06 | 0.01673459 |
| 9 | 21494777 | 21494777 | 1 | 9_21494777 | ENSG00000171889 | MIR31HG | 0 | INTRON | -4.5574234 | 5.18E-06 | 0.01673617 |
| 21 | 39315506 | 39315506 | 1 | 21_39315506 | ENSG00000185658 | BRWD1 | 0 | INTRON | 4.55717607 | 5.18E-06 | 0.01675039 |
| 15 | 65197182 | 65197182 | 1 | 15_65197182 | ENSG00000138615 | CILP | 0 | EXON | 4.55716513 | 5.18E-06 | 0.01675039 |
| 18 | 39794666 | 39794666 | 1 | 18_39794666 | ENSG00000267374 | MIR924HG | 0 | INTRON | 4.55709774 | 5.19E-06 | 0.01675242 |
| 9 | 38335575 | 38335575 | 1 | 9_38335575 | ENSG00000223716 | AL135785.1 | 24851 | Upstream | 4.55699347 | 5.19E-06 | 0.01675242 |
| 6 | 3583333 | 3583333 | 1 | 6_3583333 | ENSG00000228793 | AL033523.1 | 1767 | Downstream | -4.5569887 | 5.19E-06 | 0.01675242 |
| 9 | 118354667 | 118354667 | 1 | 9_118354667 | ENSG00000234782 | TPT1P9 | 271285 | Upstream | -4.5569801 | 5.19E-06 | 0.01675242 |
| 11 | 12580100 | 12580100 | 1 | 11_12580100 | ENSG00000254847 | AC009806.1 | 39133 | Upstream | 4.5568697 | 5.19E-06 | 0.01675805 |
| 14 | 75855752 | 75855752 | 1 | 14_75855752 | ENSG00000119685 | TTLL5 | 0 | INTRON | 4.55680067 | 5.19E-06 | 0.01676037 |
| 2 | 52440030 | 52440030 | 1 | 2_52440030 | ENSG00000231918 | AC007402.1 | 32113 | Downstream | 4.55674675 | 5.20E-06 | 0.01676148 |
| 10 | 6992356 | 6992356 | 1 | 10_6992356 | ENSG00000287277 | AL392086.3 | 0 | INTRON | 4.55668271 | 5.20E-06 | 0.01676148 |
| 7 | 57175401 | 57175401 | 1 | 7_57175401 | ENSG00000224880 | MTCYBP29 | 1039 | Downstream | 4.55659728 | 5.20E-06 | 0.01676148 |
| 5 | 78158976 | 78158976 | 1 | 5_78158976 | ENSG00000132842 | AP3B1 | 0 | INTRON | 4.55658043 | 5.20E-06 | 0.01676148 |
| 15 | 76138146 | 76138146 | 1 | 15_76138146 | ENSG00000169758 | TMEM266 | 0 | INTRON | -4.5565515 | 5.20E-06 | 0.01676148 |
| 17 | 72632177 | 72632177 | 1 | 17_72632177 | ENSG00000227036 | LINC00511 | 0 | INTRON | 4.55645503 | 5.20E-06 | 0.01676148 |
| 11 | 15624719 | 15624719 | 1 | 11_15624719 | ENSG00000254695 | AC087379.2 | 0 | INTRON | -4.5564262 | 5.20E-06 | 0.01676148 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | 121718435 | 121718435 | 1 | 3_121718435 | ENSG00000173230 | GOLGB1 | 0 | 3UTR | 4.55641603 | 5.20E-06 | 0.01676148 |
| 6 | 157337348 | 157337348 | 1 | 6_157337348 | ENSG00000271040 | AL390955.2 | 12871 | Downstream | 4.55640987 | 5.20E-06 | 0.01676148 |
| 1 | 18349185 | 18349185 | 1 | 1_18349185 | ENSG00000117154 | IGSF21 | 0 | INTRON | 4.55638871 | 5.20E-06 | 0.01676148 |
| 2 | 224199246 | 224199246 | 1 | 2_224199246 | ENSG00000224826 | AC019109.1 | 27709 | Downstream | 4.55631341 | 5.21E-06 | 0.01676431 |
| 3 | 133837040 | 133837040 | 1 | 3_133837040 | ENSG00000154917 | RAB6B | 0 | INTRON | 4.55622444 | 5.21E-06 | 0.01676823 |
| 11 | 99511297 | 99511297 | 1 | 11_99511297 | ENSG00000149972 | CNTN5 | 0 | INTRON | 4.55616846 | 5.21E-06 | 0.01676953 |
| 14 | 93265079 | 93265079 | 1 | 14_93265079 | ENSG00000011114 | BTBD7 | 0 | INTRON | 4.55609461 | 5.21E-06 | 0.01677225 |
| 1 | 154775968 | 154775968 | 1 | 1_154775968 | ENSG00000143603 | KCNN3 | 0 | INTRON | -4.5559146 | 5.22E-06 | 0.01677768 |
| 5 | 79727195 | 79727195 | 1 | 5_79727195 | ENSG00000164309 | CMYA5 | 0 | INTRON | 4.55588672 | 5.22E-06 | 0.01677768 |
| 6 | 30832843 | 30832843 | 1 | 6_30832843 | ENSG00000214894 | LINC00243 | 2184 | Upstream | 4.55581506 | 5.22E-06 | 0.01677768 |
| 18 | 25564312 | 25564312 | 1 | 18_25564312 | ENSG00000198795 | ZNF521 | 212122 | Upstream | -4.5558008 | 5.22E-06 | 0.01677768 |
| 4 | 68682912 | 68682912 | 1 | 4_68682912 | ENSG00000196620 | UGT2B15 | 12260 | Upstream | 4.55579704 | 5.22E-06 | 0.01677768 |
| 2 | 80984011 | 80984011 | 1 | 2_80984011 | ENSG00000230975 | AC012355.1 | 113821 | Upstream | 4.55578825 | 5.22E-06 | 0.01677768 |
| 8 | 92632932 | 92632932 | 1 | 8_92632932 | ENSG00000253634 | AC091096.1 | 0 | INTRON | -4.5557097 | 5.22E-06 | 0.01677961 |
| 10 | 53127880 | 53127880 | 1 | 10_53127880 | ENSG00000231399 | SNRPEP8 | 89336 | Downstream | 4.55568457 | 5.22E-06 | 0.01677961 |
| 15 | 28655409 | 28655409 | 1 | 15_28655409 | ENSG00000206149 | HERC2P9 | 0 | EXON | 4.55558378 | 5.22E-06 | 0.01678375 |
| 18 | 64580536 | 64580536 | 1 | 18_64580536 | ENSG00000275448 | AC027506.1 | 97259 | Downstream | 4.55555338 | 5.22E-06 | 0.01678375 |
| 2 | 152150524 | 152150524 | 1 | 2_152150524 | ENSG00000115145 | STAM2 | 0 | INTRON | -4.5552657 | 5.23E-06 | 0.0168028 |
| 8 | 32984455 | 32984455 | 1 | 8_32984455 | ENSG00000247134 | AC090204.1 | 0 | INTRON | -4.5552357 | 5.23E-06 | 0.0168028 |
| 8 | 129193704 | 129193704 | 1 | 8_129193704 | ENSG00000229140 | CCDC26 | 0 | INTRON | -4.5550759 | 5.24E-06 | 0.01680637 |
| 4 | 10024159 | 10024159 | 1 | 4_10024159 | ENSG00000109667 | SLC2A9 | 0 | INTRON | -4.5550381 | 5.24E-06 | 0.01680637 |
| 3 | 134213183 | 134213183 | 1 | 3_134213183 | ENSG00000163785 | RYK | 0 | INTRON | -4.5550362 | 5.24E-06 | 0.01680637 |
| 14 | 105609226 | 105609226 | 1 | 14_105609226 | ENSG00000211891 | IGHE | 7498 | Upstream | -4.5550049 | 5.24E-06 | 0.01680637 |
| 12 | 53435561 | 53435561 | 1 | 12_53435561 | ENSG00000135409 | AMHR2 | 3889 | Downstream | 4.55499267 | 5.24E-06 | 0.01680637 |
| 17 | 36275565 | 36275565 | 1 | 17_36275565 | ENSG00000261499 | AC233699.1 | 0 | INTRON | -4.5549485 | 5.24E-06 | 0.01680674 |
| 18 | 58533750 | 58533750 | 1 | 18_58533750 | ENSG00000198796 | ALPK2 | 0 | INTRON | 4.55475211 | 5.24E-06 | 0.01681927 |
| 12 | 34855826 | 34855826 | 1 | 12_34855826 | ENSG00000256614 | AK6P1 | 605868 | Downstream | -4.5546759 | 5.25E-06 | 0.01682006 |
| 13 | 36215878 | 36215878 | 1 | 13_36215878 | ENSG00000250709 | CCDC169-SOHLH2 | 0 | INTRON | 4.55462747 | 5.25E-06 | 0.01682006 |
| 9 | 87312734 | 87312734 | 1 | 9_87312734 | ENSG00000212421 | AL136367.1 | 52149 | Downstream | 4.55460975 | 5.25E-06 | 0.01682006 |
| 8 | 140442455 | 140442455 | 1 | 8_140442455 | ENSG00000167632 | TRAPPC9 | 0 | INTRON | -4.5545838 | 5.25E-06 | 0.01682006 |
| 1 | 49115737 | 49115737 | 1 | 1_49115737 | ENSG00000229846 | AC099788.1 | 0 | INTRON | 4.55443456 | 5.25E-06 | 0.01682517 |
| 1 | 67977994 | 67977994 | 1 | 1_67977994 | ENSG00000232284 | GNG12-AS1 | 0 | INTRON | 4.55442789 | 5.25E-06 | 0.01682517 |
| 11 | 117954332 | 117954332 | 1 | 11_117954332 | ENSG00000137747 | TMPRSS13 | 24873 | Upstream | -4.5544012 | 5.25E-06 | 0.01682517 |
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| 5 | 154626160 | 154626160 | 1 | 5_154626160 | ENSG00000264760 | MIR3141 | 30088 | Upstream | 4.55420953 | 5.26E-06 | 0.01683419 |
| 8 | 6527964 | 6527964 | 1 | 8_6527964 | ENSG00000091879 | ANGPT2 | 0 | INTRON | -4.5541477 | 5.26E-06 | 0.01683597 |
| 5 | 27206732 | 27206732 | 1 | 5_27206732 | ENSG00000250337 | PURPL | 10981 | Upstream | 4.5540937 | 5.26E-06 | 0.01683713 |
| 7 | 51177973 | 51177973 | 1 | 7_51177973 | ENSG00000106078 | COBL | 0 | INTRON | 4.55390998 | 5.27E-06 | 0.01684842 |
| 17 | 18774268 | 18774268 | 1 | 17_18774268 | ENSG00000171931 | FBXW10 | 0 | INTRON | 4.55385747 | 5.27E-06 | 0.01684842 |
| 11 | 76622291 | 76622291 | 1 | 11_76622291 | ENSG00000255363 | LINC02757 | 0 | INTRON | 4.55383417 | 5.27E-06 | 0.01684842 |
| 12 | 24736135 | 24736135 | 1 | 12_24736135 | ENSG00000255745 | AC023796.1 | 0 | INTRON | 4.55363204 | 5.27E-06 | 0.01686145 |
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| 6 | 12023374 | 12023374 | 1 | 6_12023374 | ENSG00000095951 | HIVEP1 | 0 | INTRON | 4.5534731 | 5.28E-06 | 0.01686786 |
| 1 | 22263089 | 22263089 | 1 | 1_22263089 | ENSG00000266564 | MIR4418 | 3149 | Upstream | 4.55342123 | 5.28E-06 | 0.01686885 |
| 19 | 16284111 | 16284111 | 1 | 19_16284111 | ENSG00000267275 | AC020911.2 | 0 | INTRON | 4.55331746 | 5.28E-06 | 0.01687189 |
| 7 | 38706431 | 38706431 | 1 | 7_38706431 | ENSG00000006715 | VPS41 | 16542 | Downstream | -4.5532994 | 5.28E-06 | 0.01687189 |
| 22 | 19107312 | 19107312 | 1 | 22_19107312 | ENSG00000070413 | DGCR2 | 0 | INTRON | 4.55326488 | 5.28E-06 | 0.01687189 |
| 7 | 42188334 | 42188334 | 1 | 7_42188334 | ENSG00000106571 | GLI3 | 0 | INTRON | 4.55319228 | 5.28E-06 | 0.01687455 |
| 16 | 83543116 | 83543116 | 1 | 16_83543116 | ENSG00000140945 | CDH13 | 0 | INTRON | -4.5531159 | 5.29E-06 | 0.01687752 |
| 1 | 41358513 | 41358513 | 1 | 1_41358513 | ENSG00000204060 | FOXO6 | 3408 | Upstream | -4.5530755 | 5.29E-06 | 0.01687759 |
| 15 | 25775951 | 25775951 | 1 | 15_25775951 | ENSG00000206190 | ATP10A | 0 | INTRON | -4.5529861 | 5.29E-06 | 0.0168816 |
| 21 | 10365044 | 10365044 | 1 | 21_10365044 | ENSG00000275592 | VN1R7P | 6424 | Downstream | 4.55289778 | 5.29E-06 | 0.016883 |
| 20 | 62652841 | 62652841 | 1 | 20_62652841 | ENSG00000101187 | SLCO4A1 | 0 | INTRON | 4.55288983 | 5.29E-06 | 0.016883 |
| 12 | 95357180 | 95357180 | 1 | 12_95357180 | ENSG00000257943 | AC084879.1 | 0 | INTRON | -4.5527224 | 5.30E-06 | 0.01689327 |
| 7 | 138327773 | 138327773 | 1 | 7_138327773 | ENSG00000213238 | AC008155.1 | 29289 | Upstream | 4.55253647 | 5.30E-06 | 0.01690505 |
| 12 | 73261485 | 73261485 | 1 | 12_73261485 | ENSG00000258123 | LINC02444 | 53168 | Downstream | -4.5523838 | 5.30E-06 | 0.01691128 |
| 2 | 169326584 | 169326584 | 1 | 2_169326584 | ENSG00000081479 | LRP2 | 0 | INTRON | -4.5523801 | 5.30E-06 | 0.01691128 |
| 2 | 23935441 | 23935441 | 1 | 2_23935441 | ENSG00000173960 | UBXN2A | 0 | INTRON | 4.5523275 | 5.31E-06 | 0.01691234 |
| 5 | 167883723 | 167883723 | 1 | 5_167883723 | ENSG00000145934 | TENM2 | 0 | INTRON | -4.5522063 | 5.31E-06 | 0.01691893 |
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| 6 | 111311876 | 111311876 | 1 | 6_111311876 | ENSG00000272356 | AL080317.2 | 0 | EXON | 4.55195763 | 5.31E-06 | 0.01693259 |
| 2 | 221092355 | 221092355 | 1 | 2_221092355 | ENSG00000232089 | AC011233.1 | 70415 | Upstream | -4.5518701 | 5.32E-06 | 0.01693647 |
| 20 | 34398434 | 34398434 | 1 | 20_34398434 | ENSG00000078747 | ITCH | 0 | INTRON | 4.55180111 | 5.32E-06 | 0.01693764 |
| 1 | 26104231 | 26104231 | 1 | 1_26104231 | ENSG00000175087 | PDIK1L | 6933 | Upstream | 4.55175921 | 5.32E-06 | 0.01693764 |
| 7 | 96817039 | 96817039 | 1 | 7_96817039 | ENSG00000227284 | MARK2P10 | 41142 | Upstream | -4.5517375 | 5.32E-06 | 0.01693764 |
| 11 | 9425702 | 9425702 | 1 | 11_9425702 | ENSG00000205339 | IPO7 | 0 | INTRON | -4.5516143 | 5.32E-06 | 0.01694439 |
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| 19 | 26418161 | 26418161 | 1 | 19_26418161 | ENSG00000267696 | ERVK-28 | 1220321 | Downstream | -4.5513162 | 5.33E-06 | 0.01695947 |
| 13 | 71244253 | 71244253 | 1 | 13_71244253 | ENSG00000225801 | RABEPKP1 | 51956 | Upstream | -4.5513092 | 5.33E-06 | 0.01695947 |
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| 17 | 58495476 | 58495476 | 1 | 17_58495476 | ENSG00000108389 | MTMR4 | 0 | EXON | 4.55117661 | 5.33E-06 | 0.01696262 |
| 11 | 102052869 | 102052869 | 1 | 11_102052869 | ENSG00000137691 | CFAP300 | 0 | INTRON | -4.5510699 | 5.34E-06 | 0.01696262 |
| 9 | 129992221 | 129992221 | 1 | 9_129992221 | ENSG00000187239 | FNBP1 | 0 | INTRON | 4.55106878 | 5.34E-06 | 0.01696262 |
| 2 | 87190823 | 87190823 | 1 | 2_87190823 | ENSG00000204745 | AC083899.1 | 0 | INTRON | 4.55105444 | 5.34E-06 | 0.01696262 |
| 11 | 114865314 | 114865314 | 1 | 11_114865314 | ENSG00000204361 | NXPE2 | 158245 | Downstream | -4.5510087 | 5.34E-06 | 0.01696262 |
| 22 | 37053108 | 37053108 | 1 | 22_37053108 | ENSG00000100379 | KCTD17 | 0 | EXON | -4.5509949 | 5.34E-06 | 0.01696262 |
| 1 | 49524288 | 49524288 | 1 | 1_49524288 | ENSG00000186094 | AGBL4 | 0 | INTRON | 4.55077343 | 5.34E-06 | 0.01697732 |
| 6 | 141706516 | 141706516 | 1 | 6_141706516 | ENSG00000218351 | RPS3AP23 | 70013 | Upstream | -4.5507289 | 5.35E-06 | 0.01697775 |
| 17 | 10049721 | 10049721 | 1 | 17_10049721 | ENSG00000007237 | GAS7 | 0 | INTRON | 4.55063621 | 5.35E-06 | 0.01698206 |
| 12 | 21790020 | 21790020 | 1 | 12_21790020 | ENSG00000069431 | ABCC9 | 7380 | Downstream | 4.55055733 | 5.35E-06 | 0.01698526 |
| 2 | 78714214 | 78714214 | 1 | 2_78714214 | ENSG00000234877 | AC092660.1 | 114808 | Downstream | 4.55035151 | 5.36E-06 | 0.01699822 |
| 5 | 161852050 | 161852050 | 1 | 5_161852050 | ENSG00000022355 | GABRA1 | 0 | INTRON | -4.5502832 | 5.36E-06 | 0.01699822 |
| 12 | 5233326 | 5233326 | 1 | 12_5233326 | ENSG00000256115 | LINC02443 | 0 | INTRON | 4.5502791 | 5.36E-06 | 0.01699822 |
| 10 | 108690574 | 108690574 | 1 | 10_108690574 | ENSG00000223381 | LINC02661 | 17964 | Upstream | -4.5499906 | 5.36E-06 | 0.01701837 |
| 3 | 85355369 | 85355369 | 1 | 3_85355369 | ENSG00000175161 | CADM2 | 0 | INTRON | -4.5497874 | 5.37E-06 | 0.01703164 |
| 9 | 121950962 | 121950962 | 1 | 9_121950962 | ENSG00000237548 | TTLL11-IT1 | 0 | INTRON | 4.54957015 | 5.38E-06 | 0.01704605 |
| 6 | 32212646 | 32212646 | 1 | 6_32212646 | ENSG00000204301 | NOTCH4 | 0 | INTRON | 4.54952095 | 5.38E-06 | 0.01704686 |
| 3 | 87726427 | 87726427 | 1 | 3_87726427 | ENSG00000239572 | AC108749.1 | 0 | INTRON | 4.54933704 | 5.38E-06 | 0.01705859 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
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| 10 | 45477450 | 45477450 | 1 | 10_45477450 | ENSG00000165406 | 8-Mar | 0 | INTRON | 4.54917961 | 5.39E-06 | 0.01706682 |
| 10 | 10173218 | 10173218 | 1 | 10_10173218 | ENSG00000229919 | ELOCP3 | 1011 | Upstream | 4.54915703 | 5.39E-06 | 0.01706682 |
| 12 | 72783944 | 72783944 | 1 | 12_72783944 | ENSG00000258235 | AC133480.1 | 55100 | Upstream | 4.54909871 | 5.39E-06 | 0.01706838 |
| 8 | 67639337 | 67639337 | 1 | 8_67639337 | ENSG00000165078 | CPA6 | 0 | INTRON | 4.54895813 | 5.39E-06 | 0.01707383 |
| 1 | 28949823 | 28949823 | 1 | 1_28949823 | ENSG00000159023 | EPB41 | 0 | INTRON | 4.54895314 | 5.39E-06 | 0.01707383 |
| 16 | 33491943 | 33491943 | 1 | 16_33491943 | ENSG00000262090 | AC136944.5 | 3999 | Downstream | 4.54884897 | 5.39E-06 | 0.01707623 |
| 7 | 16471576 | 16471576 | 1 | 7_16471576 | ENSG00000171243 | SOSTDC1 | 0 | INTRON | -4.5488452 | 5.39E-06 | 0.01707623 |
| 7 | 76138786 | 76138786 | 1 | 7_76138786 | ENSG00000224273 | AC005077.2 | 6599 | Upstream | 4.54869696 | 5.40E-06 | 0.01708181 |
| 11 | 100749526 | 100749526 | 1 | 11_100749526 | ENSG00000165895 | ARHGAP42 | 0 | INTRON | 4.54861105 | 5.40E-06 | 0.01708181 |
| 15 | 27640736 | 27640736 | 1 | 15_27640736 | ENSG00000258594 | AC021979.1 | 11447 | Downstream | 4.54860759 | 5.40E-06 | 0.01708181 |
| X | 1758693 | 1758693 | 1 | X_1758693 | ENSG00000223511 | AL683807.1 | 0 | INTRON | 4.54860378 | 5.40E-06 | 0.01708181 |
| 17 | 13132348 | 13132348 | 1 | 17_13132348 | ENSG00000273098 | AC005303.1 | 31409 | Downstream | 4.54855498 | 5.40E-06 | 0.01708181 |
| 2 | 3076270 | 3076270 | 1 | 2_3076270 | ENSG00000234423 | LINC01250 | 0 | INTRON | -4.5485416 | 5.40E-06 | 0.01708181 |
| 1 | 91741374 | 91741374 | 1 | 1_91741374 | ENSG00000069702 | TGFBR3 | 0 | INTRON | 4.54846868 | 5.40E-06 | 0.01708455 |
| 5 | 56199845 | 56199845 | 1 | 5_56199845 | ENSG00000164512 | ANKRD55 | 0 | INTRON | 4.54838878 | 5.41E-06 | 0.01708787 |
| 2 | 148939002 | 148939002 | 1 | 2_148939002 | ENSG00000168280 | KIF5C | 0 | INTRON | -4.54824 | 5.41E-06 | 0.01709594 |
| 11 | 76966454 | 76966454 | 1 | 11_76966454 | ENSG00000078124 | ACER3 | 0 | INTRON | 4.54821117 | 5.41E-06 | 0.01709594 |
| 22 | 10526428 | 10526428 | 1 | 22_10526428 | ENSG00000277248 | U2 | 209742 | Downstream | 4.54816066 | 5.41E-06 | 0.01709687 |
| 12 | 32876776 | 32876776 | 1 | 12_32876776 | ENSG00000057294 | PKP2 | 0 | INTRON | 4.54808293 | 5.41E-06 | 0.01709893 |
| X | 130200332 | 130200332 | 1 | X_130200332 | ENSG00000056277 | ZNF280C | 2374 | Downstream | -4.5480571 | 5.41E-06 | 0.01709893 |
| 3 | 41824436 | 41824436 | 1 | 3_41824436 | ENSG00000168038 | ULK4 | 0 | INTRON | 4.54796725 | 5.42E-06 | 0.01710306 |
| 11 | 8223712 | 8223712 | 1 | 11_8223712 | ENSG00000166407 | LMO1 | 596 | Downstream | -4.5479025 | 5.42E-06 | 0.01710515 |
| 19 | 53219529 | 53219529 | 1 | 19_53219529 | ENSG00000267809 | NDUFV2P1 | 4443 | Downstream | -4.5478286 | 5.42E-06 | 0.01710761 |
| 4 | 77030040 | 77030040 | 1 | 4_77030040 | ENSG00000138758 | SEPTIN11 | 0 | INTRON | 4.54776247 | 5.42E-06 | 0.01710761 |
| 12 | 64354614 | 64354614 | 1 | 12_64354614 | ENSG00000243024 | AC012158.1 | 0 | INTRON | 4.54775501 | 5.42E-06 | 0.01710761 |
| 10 | 52038500 | 52038500 | 1 | 10_52038500 | ENSG00000185532 | PRKG1 | 0 | INTRON | 4.54768521 | 5.42E-06 | 0.01711011 |
| 3 | 139614315 | 139614315 | 1 | 3_139614315 | ENSG00000248932 | AC046134.2 | 0 | INTRON | -4.5476342 | 5.43E-06 | 0.01711108 |
| 7 | 80855892 | 80855892 | 1 | 7_80855892 | ENSG00000075223 | SEMA3C | 0 | INTRON | -4.547555 | 5.43E-06 | 0.01711435 |
| 2 | 173241479 | 173241479 | 1 | 2_173241479 | ENSG00000238133 | MAP3K20-AS1 | 0 | INTRON | -4.5475032 | 5.43E-06 | 0.01711499 |
| X | 9347690 | 9347690 | 1 | X_9347690 | ENSG00000177138 | FAM9B | 52008 | Upstream | 4.54743917 | 5.43E-06 | 0.01711499 |
| 6 | 117260249 | 117260249 | 1 | 6_117260249 | ENSG00000287253 | Z98880.1 | 1993 | Downstream | -4.5474301 | 5.43E-06 | 0.01711499 |
| 10 | 67704 | 67704 | 1 | 10_67704 | ENSG00000261456 | TUBB8 | 0 | INTRON | 4.54711516 | 5.44E-06 | 0.01713738 |
| 1 | 234729977 | 234729977 | 1 | 1_234729977 | ENSG00000227630 | LINC01132 | 0 | EXON | -4.5470415 | 5.44E-06 | 0.01713738 |
| 3 | 47256988 | 47256988 | 1 | 3_47256988 | ENSG00000088727 | KIF9 | 0 | INTRON | 4.54703795 | 5.44E-06 | 0.01713738 |
| 11 | 9483190 | 9483190 | 1 | 11_9483190 | ENSG00000166478 | ZNF143 | 0 | INTRON | 4.54676228 | 5.45E-06 | 0.01715522 |
| 4 | 104663638 | 104663638 | 1 | 4_104663638 | ENSG00000245384 | CXXC4-AS1 | 0 | INTRON | 4.54672423 | 5.45E-06 | 0.01715522 |
| X | 144219279 | 144219279 | 1 | X_144219279 | ENSG00000224630 | AC234064.1 | 89554 | Downstream | -4.546702 | 5.45E-06 | 0.01715522 |
| 2 | 237046789 | 237046789 | 1 | 2_237046789 | ENSG00000227252 | AC012063.1 | 0 | INTRON | 4.54665242 | 5.45E-06 | 0.01715608 |
| 2 | 190723358 | 190723358 | 1 | 2_190723358 | ENSG00000228509 | AC006460.1 | 14642 | Upstream | 4.54646323 | 5.46E-06 | 0.01716833 |
| 4 | 45568110 | 45568110 | 1 | 4_45568110 | ENSG00000200720 | RNU6-931P | 87974 | Downstream | 4.54640021 | 5.46E-06 | 0.01716881 |
| 2 | 234584496 | 234584496 | 1 | 2_234584496 | ENSG00000188042 | ARL4C | 87415 | Upstream | -4.5463544 | 5.46E-06 | 0.01716881 |
| 15 | 34242886 | 34242886 | 1 | 15_34242886 | ENSG00000140199 | SLC12A6 | 0 | INTRON | 4.54634055 | 5.46E-06 | 0.01716881 |
| 1 | 5948019 | 5948019 | 1 | 1_5948019 | ENSG00000131697 | NPHP4 | 0 | INTRON | 4.54627007 | 5.46E-06 | 0.01717138 |
| 22 | 27642340 | 27642340 | 1 | 22_27642340 | ENSG00000227838 | AL121885.2 | 34218 | Downstream | 4.54619954 | 5.46E-06 | 0.01717396 |
| 5 | 71385366 | 71385366 | 1 | 5_71385366 | ENSG00000169040 | PMCHL2 | 0 | EXON | -4.5461195 | 5.46E-06 | 0.01717426 |
| 17 | 79506348 | 79506348 | 1 | 17_79506348 | ENSG00000167281 | RBFOX3 | 0 | INTRON | 4.546115 | 5.46E-06 | 0.01717426 |
| 10 | 100505960 | 100505960 | 1 | 10_100505960 | ENSG00000075826 | SEC31B | 0 | 3UTR | 4.54607916 | 5.47E-06 | 0.01717426 |
| 21 | 15903351 | 15903351 | 1 | 21_15903351 | ENSG00000155313 | USP25 | 23282 | Downstream | 4.54594936 | 5.47E-06 | 0.01717922 |
| 5 | 116588333 | 116588333 | 1 | 5_116588333 | ENSG00000249167 | SEMA6A-AS2 | 0 | INTRON | 4.54594058 | 5.47E-06 | 0.01717922 |
| 1 | 90876023 | 90876023 | 1 | 1_90876023 | ENSG00000272094 | AC091614.1 | 13103 | Upstream | 4.54581776 | 5.47E-06 | 0.01718607 |
| 7 | 68826981 | 68826981 | 1 | 7_68826981 | ENSG00000222428 | RNA5SP231 | 102933 | Upstream | -4.545557 | 5.48E-06 | 0.01719614 |
| 4 | 156957158 | 156957158 | 1 | 4_156957158 | ENSG00000145431 | PDGFC | 0 | INTRON | -4.5455554 | 5.48E-06 | 0.01719614 |
| 2 | 153532333 | 153532333 | 1 | 2_153532333 | ENSG00000227400 | AC012501.2 | 0 | INTRON | -4.5455463 | 5.48E-06 | 0.01719614 |
| 7 | 142254256 | 142254256 | 1 | 7_142254256 | ENSG00000258223 | PRSS58 | 0 | INTRON | 4.54553896 | 5.48E-06 | 0.01719614 |
| 21 | 42472227 | 42472227 | 1 | 21_42472227 | ENSG00000160188 | RSPH1 | 258 | Downstream | 4.54549596 | 5.48E-06 | 0.01719648 |
| 20 | 23084367 | 23084367 | 1 | 20_23084367 | ENSG00000125810 | CD93 | 0 | EXON | -4.5453654 | 5.48E-06 | 0.01720325 |
| 10 | 104725828 | 104725828 | 1 | 10_104725828 | ENSG00000156395 | SORCS3 | 0 | INTRON | 4.54533536 | 5.48E-06 | 0.01720325 |
| 10 | 68300400 | 68300400 | 1 | 10_68300400 | ENSG00000108187 | PBLD | 0 | INTRON | 4.54528432 | 5.49E-06 | 0.01720425 |
| 4 | 112171807 | 112171807 | 1 | 4_112171807 | ENSG00000174749 | FAM241A | 0 | INTRON | 4.54518576 | 5.49E-06 | 0.01720903 |
| 6 | 160657204 | 160657204 | 1 | 6_160657204 | ENSG00000198670 | LPA | 0 | INTRON | 4.54514636 | 5.49E-06 | 0.01720903 |
| 17 | 77290687 | 77290687 | 1 | 17_77290687 | ENSG00000184640 | SEPTIN9 | 0 | INTRON | 4.5451094 | 5.49E-06 | 0.01720903 |
| X | 2161788 | 2161788 | 1 | X_2161788 | ENSG00000169084 | DHRSX | 57717 | Downstream | 4.54505195 | 5.49E-06 | 0.01721055 |
| 18 | 72617107 | 72617107 | 1 | 18_72617107 | ENSG00000141668 | CBLN2 | 0 | INTRON | 4.54481686 | 5.50E-06 | 0.0172266 |
| 1 | 120620356 | 120620356 | 1 | 1_120620356 | ENSG00000275131 | AC241952.1 | 0 | EXON | -4.5447679 | 5.50E-06 | 0.01722743 |
| 2 | 175623746 | 175623746 | 1 | 2_175623746 | ENSG00000229066 | AC093459.1 | 160566 | Downstream | 4.54470404 | 5.50E-06 | 0.01722948 |
| 15 | 26260732 | 26260732 | 1 | 15_26260732 | ENSG00000286884 | AC012060.1 | 936 | Upstream | -4.5446284 | 5.50E-06 | 0.0172325 |
| 1 | 220080592 | 220080592 | 1 | 1_220080592 | ENSG00000162813 | BPNT1 | 0 | INTRON | 4.54449811 | 5.51E-06 | 0.01723927 |
| 2 | 233617649 | 233617649 | 1 | 2_233617649 | ENSG00000242366 | UGT1A8 | 0 | 5UTR | 4.54446813 | 5.51E-06 | 0.01723927 |
| 2 | 230261504 | 230261504 | 1 | 2_230261504 | ENSG00000079263 | SP140 | 0 | INTRON | 4.54442143 | 5.51E-06 | 0.01723992 |
| 3 | 27914108 | 27914108 | 1 | 3_27914108 | ENSG00000225548 | LINC01980 | 0 | INTRON | -4.5443811 | 5.51E-06 | 0.01724005 |
| 11 | 55393566 | 55393566 | 1 | 11_55393566 | ENSG00000254891 | OR4A9P | 4094 | Downstream | 4.5442688 | 5.51E-06 | 0.01724488 |
| 14 | 102259204 | 102259204 | 1 | 14_102259204 | ENSG00000080823 | MOK | 0 | INTRON | -4.5442446 | 5.51E-06 | 0.01724488 |
| 22 | 36203490 | 36203490 | 1 | 22_36203490 | ENSG00000100336 | APOL4 | 0 | INTRON | 4.54416221 | 5.52E-06 | 0.01724846 |
| 15 | 69905140 | 69905140 | 1 | 15_69905140 | ENSG00000245750 | DRAIC | 62020 | Downstream | 4.54404522 | 5.52E-06 | 0.01725215 |
| 13 | 88348829 | 88348829 | 1 | 13_88348829 | ENSG00000225289 | RPL29P29 | 111860 | Upstream | -4.5440398 | 5.52E-06 | 0.01725215 |
| 2 | 146045026 | 146045026 | 1 | 2_146045026 | ENSG00000251905 | RNU7-2P | 100129 | Upstream | 4.54395693 | 5.52E-06 | 0.01725431 |
| 18 | 38417817 | 38417817 | 1 | 18_38417817 | ENSG00000268566 | AC100781.1 | 237391 | Downstream | 4.54390545 | 5.52E-06 | 0.01725431 |
| 7 | 90072213 | 90072213 | 1 | 7_90072213 | ENSG00000227646 | STEAP2-AS1 | 0 | INTRON | 4.54389723 | 5.52E-06 | 0.01725431 |
| 1 | 32166810 | 32166810 | 1 | 1_32166810 | ENSG00000025800 | KPNA6 | 0 | INTRON | -4.5437947 | 5.53E-06 | 0.01725832 |
| 11 | 100706042 | 100706042 | 1 | 11_100706042 | ENSG00000165895 | ARHGAP42 | 0 | INTRON | -4.5437709 | 5.53E-06 | 0.01725832 |
| 7 | 111911219 | 111911219 | 1 | 7_111911219 | ENSG00000128512 | DOCK4 | 0 | INTRON | -4.5437161 | 5.53E-06 | 0.0172587 |
| 9 | 135339893 | 135339893 | 1 | 9_135339893 | ENSG00000178243 | C9orf62 | 3355 | Upstream | -4.5436589 | 5.53E-06 | 0.0172587 |
| 1 | 1548915 | 1548915 | 1 | 1_1548915 | ENSG00000160075 | SSU72 | 0 | INTRON | 4.54364831 | 5.53E-06 | 0.0172587 |
| 6 | 16889915 | 16889915 | 1 | 6_16889915 | ENSG00000287347 | AL133405.2 | 11188 | Downstream | 4.54361161 | 5.53E-06 | 0.0172587 |
| 1 | 207827036 | 207827036 | 1 | 1_207827036 | ENSG00000203709 | MIR29B2CHG | 0 | INTRON | -4.5435132 | 5.53E-06 | 0.0172636 |
| 2 | 4838215 | 4838215 | 1 | 2_4838215 | ENSG00000252238 | AC092169.1 | 11131 | Upstream | 4.54346537 | 5.53E-06 | 0.01726435 |
| 8 | 4113695 | 4113695 | 1 | 8_4113695 | ENSG00000183117 | CSMD1 | 0 | INTRON | -4.5432809 | 5.54E-06 | 0.01727482 |
| 20 | 11991760 | 11991760 | 1 | 20_11991760 | ENSG00000132640 | BTBD3 | 65151 | Downstream | 4.54326046 | 5.54E-06 | 0.01727482 |

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| 4 | 108618770 | 108618770 | 1 | 4_108618770 | ENSG00000234492 | RPL34-AS1 | 0 | INTRON | -4.5430966 | 5.54E-06 | 0.01728247 |
| 16 | 5624650 | 5624650 | 1 | 16_5624650 | ENSG00000078328 | RBFOX1 | 0 | INTRON | 4.54306794 | 5.54E-06 | 0.01728247 |
| 7 | 106082533 | 106082533 | 1 | 7_106082533 | ENSG00000008282 | SYPL1 | 7969 | Downstream | 4.54304266 | 5.54E-06 | 0.01728247 |
| 2 | 176595358 | 176595358 | 1 | 2_176595358 | ENSG00000224577 | LINC01117 | 0 | INTRON | 4.54301265 | 5.55E-06 | 0.01728247 |
| 17 | 70041602 | 70041602 | 1 | 17_70041602 | ENSG00000230258 | AC005208.1 | 0 | INTRON | -4.5427774 | 5.55E-06 | 0.01729861 |
| 2 | 209864422 | 209864422 | 1 | 2_209864422 | ENSG00000144406 | UNC80 | 0 | INTRON | 4.54268969 | 5.55E-06 | 0.01730058 |
| 4 | 26124728 | 26124728 | 1 | 4_26124728 | ENSG00000248452 | AC097714.1 | 10889 | Downstream | -4.5426763 | 5.55E-06 | 0.01730058 |
| 7 | 157403113 | 157403113 | 1 | 7_157403113 | ENSG00000105993 | DNAJB6 | 0 | INTRON | 4.54261354 | 5.56E-06 | 0.01730197 |
| 8 | 30127412 | 30127412 | 1 | 8_30127412 | ENSG00000104660 | LEPROTL1 | 0 | INTRON | 4.54251727 | 5.56E-06 | 0.01730197 |
| 1 | 21619357 | 21619357 | 1 | 1_21619357 | ENSG00000076864 | RAP1GAP | 0 | INTRON | -4.5424743 | 5.56E-06 | 0.01730197 |
| 4 | 130310387 | 130310387 | 1 | 4_130310387 | ENSG00000251326 | LINC02479 | 65841 | Upstream | -4.542442 | 5.56E-06 | 0.01730197 |
| 12 | 129803184 | 129803184 | 1 | 12_129803184 | ENSG00000151952 | TMEM132D | 0 | INTRON | 4.54243123 | 5.56E-06 | 0.01730197 |
| 7 | 86812503 | 86812503 | 1 | 7_86812503 | ENSG00000198822 | GRM3 | 0 | INTRON | -4.542428 | 5.56E-06 | 0.01730197 |
| 6 | 164108536 | 164108536 | 1 | 6_164108536 | ENSG00000230627 | Z97205.1 | 83 | Downstream | 4.54229231 | 5.56E-06 | 0.01730859 |
| X | 38171932 | 38171932 | 1 | X_38171932 | ENSG00000101955 | SRPX | 0 | EXON | -4.5422703 | 5.57E-06 | 0.01730859 |
| 17 | 70489032 | 70489032 | 1 | 17_70489032 | ENSG00000267109 | AC011990.1 | 120116 | Upstream | 4.54222394 | 5.57E-06 | 0.01730924 |
| 6 | 77746219 | 77746219 | 1 | 6_77746219 | ENSG00000269964 | MEI4 | 0 | INTRON | -4.5421385 | 5.57E-06 | 0.01731309 |
| 14 | 33489785 | 33489785 | 1 | 14_33489785 | ENSG00000151322 | NPAS3 | 0 | INTRON | 4.5420909 | 5.57E-06 | 0.01731384 |
| 11 | 120842876 | 120842876 | 1 | 11_120842876 | ENSG00000149403 | GRIK4 | 0 | INTRON | 4.54181466 | 5.58E-06 | 0.01733338 |
| 12 | 118174731 | 118174731 | 1 | 12_118174731 | ENSG00000135090 | TAOK3 | 0 | INTRON | 4.54165565 | 5.58E-06 | 0.01734329 |
| 8 | 12487902 | 12487902 | 1 | 8_12487902 | ENSG00000283674 | AC068587.4 | 0 | EXON | -4.5414913 | 5.59E-06 | 0.01734812 |
| 6 | 45934026 | 45934026 | 1 | 6_45934026 | ENSG00000112782 | CLIC5 | 0 | INTRON | 4.54146529 | 5.59E-06 | 0.01734812 |
| 4 | 174295659 | 174295659 | 1 | 4_174295659 | ENSG00000164118 | CEP44 | 0 | INTRON | 4.54145453 | 5.59E-06 | 0.01734812 |
| 18 | 36266029 | 36266029 | 1 | 18_36266029 | ENSG00000075643 | MOCOS | 0 | INTRON | 4.54140078 | 5.59E-06 | 0.01734812 |
| 8 | 137089666 | 137089666 | 1 | 8_137089666 | ENSG00000254101 | LINC02055 | 0 | INTRON | 4.54139783 | 5.59E-06 | 0.01734812 |
| 1 | 8324876 | 8324876 | 1 | 1_8324876 | ENSG00000162426 | SLC45A1 | 0 | INTRON | 4.54136615 | 5.59E-06 | 0.01734812 |
| 7 | 157264174 | 157264174 | 1 | 7_157264174 | ENSG00000009335 | UBE3C | 0 | INTRON | 4.54115264 | 5.59E-06 | 0.01736253 |
| 16 | 33730506 | 33730506 | 1 | 16_33730506 | ENSG00000282924 | AC136428.4 | 0 | INTRON | 4.54106895 | 5.60E-06 | 0.01736626 |
| 4 | 17254904 | 17254904 | 1 | 4_17254904 | ENSG00000206780 | SNORA75B | 65841 | Downstream | 4.54070789 | 5.61E-06 | 0.01739286 |
| 20 | 23436022 | 23436022 | 1 | 20_23436022 | ENSG00000125823 | CSTL1 | 3662 | Upstream | 4.5404054 | 5.61E-06 | 0.01741466 |
| 19 | 3016081 | 3016081 | 1 | 19_3016081 | ENSG00000065717 | TLE2 | 0 | INTRON | 4.54035179 | 5.62E-06 | 0.01741591 |
| 8 | 50435537 | 50435537 | 1 | 8_50435537 | ENSG00000147481 | SNTG1 | 0 | INTRON | -4.5402827 | 5.62E-06 | 0.01741844 |
| 9 | 39791962 | 39791962 | 1 | 9_39791962 | ENSG00000278175 | GLIDR | 0 | INTRON | -4.5401739 | 5.62E-06 | 0.01742426 |
| 9 | 133906973 | 133906973 | 1 | 9_133906973 | ENSG00000160293 | VAV2 | 0 | INTRON | 4.54008463 | 5.62E-06 | 0.01742847 |
| 9 | 107409653 | 107409653 | 1 | 9_107409653 | ENSG00000226825 | LINC01509 | 10537 | Downstream | 4.53989708 | 5.63E-06 | 0.01744041 |
| 7 | 67743995 | 67743995 | 1 | 7_67743995 | ENSG00000223948 | AC092648.1 | 25633 | Downstream | -4.5398074 | 5.63E-06 | 0.01744041 |
| 1 | 42006287 | 42006287 | 1 | 1_42006287 | ENSG00000127124 | HIVEP3 | 0 | INTRON | 4.5398061 | 5.63E-06 | 0.01744041 |
| 11 | 126547473 | 126547473 | 1 | 11_126547473 | ENSG00000149571 | KIRREL3 | 0 | INTRON | -4.539767 | 5.63E-06 | 0.01744041 |
| 20 | 59101165 | 59101165 | 1 | 20_59101165 | ENSG00000232925 | MRPS16P2 | 12058 | Upstream | -4.5397173 | 5.63E-06 | 0.01744041 |
| 2 | 77318759 | 77318759 | 1 | 2_77318759 | ENSG00000286932 | AC013716.1 | 0 | INTRON | 4.53970984 | 5.63E-06 | 0.01744041 |
| 4 | 1381082 | 1381082 | 1 | 4_1381082 | ENSG00000163945 | UVSSA | 0 | INTRON | 4.53965545 | 5.63E-06 | 0.01744174 |
| 3 | 27895636 | 27895636 | 1 | 3_27895636 | ENSG00000225548 | LINC01980 | 0 | INTRON | -4.5395371 | 5.64E-06 | 0.01744459 |
| 13 | 40725209 | 40725209 | 1 | 13_40725209 | ENSG00000211491 | MIR320D1 | 2618 | Downstream | -4.5395175 | 5.64E-06 | 0.01744459 |
| 20 | 38095873 | 38095873 | 1 | 20_38095873 | ENSG00000101413 | RPRD1B | 0 | INTRON | -4.5394776 | 5.64E-06 | 0.01744459 |
| 15 | 33761867 | 33761867 | 1 | 15_33761867 | ENSG00000198838 | RYR3 | 0 | INTRON | -4.5394675 | 5.64E-06 | 0.01744459 |
| 9 | 118910243 | 118910243 | 1 | 9_118910243 | ENSG00000231166 | TUBB4BP6 | 145898 | Downstream | 4.53935901 | 5.64E-06 | 0.01744575 |
| 9 | 38562599 | 38562599 | 1 | 9_38562599 | ENSG00000283486 | FAM95C | 0 | INTRON | -4.5393267 | 5.64E-06 | 0.01744575 |
| 8 | 112070610 | 112070610 | 1 | 8_112070610 | ENSG00000222146 | RNU4-37P | 78131 | Downstream | -4.5393173 | 5.64E-06 | 0.01744575 |
| 17 | 64097240 | 64097240 | 1 | 17_64097240 | ENSG00000178607 | ERN1 | 0 | INTRON | 4.53930028 | 5.64E-06 | 0.01744575 |
| 10 | 78367335 | 78367335 | 1 | 10_78367335 | ENSG00000230417 | LINC00595 | 0 | INTRON | -4.5391481 | 5.65E-06 | 0.01744876 |
| 4 | 9624265 | 9624265 | 1 | 4_9624265 | ENSG00000287117 | AC105916.1 | 0 | INTRON | -4.5391294 | 5.65E-06 | 0.01744876 |
| X | 974192 | 974192 | 1 | X_974192 | ENSG00000237531 | AL672277.1 | 16028 | Upstream | -4.5391189 | 5.65E-06 | 0.01744876 |
| 18 | 47890767 | 47890767 | 1 | 18_47890767 | ENSG00000175387 | SMAD2 | 0 | INTRON | -4.539067 | 5.65E-06 | 0.01744876 |
| 18 | 14512743 | 14512743 | 1 | 18_14512743 | ENSG00000183206 | POTEC | 0 | INTRON | 4.53900326 | 5.65E-06 | 0.01744876 |
| 7 | 135166535 | 135166535 | 1 | 7_135166535 | ENSG00000122783 | CYREN | 0 | 3UTR | 4.53900201 | 5.65E-06 | 0.01744876 |
| 2 | 62581412 | 62581412 | 1 | 2_62581412 | ENSG00000226622 | AC092155.1 | 0 | INTRON | 4.53895492 | 5.65E-06 | 0.01744876 |
| 7 | 38369065 | 38369065 | 1 | 7_38369065 | ENSG00000281103 | TRG-AS1 | 0 | INTRON | -4.5389274 | 5.65E-06 | 0.01744876 |
| 11 | 127959863 | 127959863 | 1 | 11_127959863 | ENSG00000254612 | AP001000.1 | 18209 | Upstream | -4.5389028 | 5.65E-06 | 0.01744876 |
| 6 | 14205209 | 14205209 | 1 | 6_14205209 | ENSG00000285639 | AL133259.1 | 0 | INTRON | -4.5388499 | 5.66E-06 | 0.01744876 |
| 11 | 110733906 | 110733906 | 1 | 11_110733906 | ENSG00000137727 | ARHGAP20 | 20717 | Upstream | 4.53883103 | 5.66E-06 | 0.01744876 |
| 2 | 134690182 | 134690182 | 1 | 2_134690182 | ENSG00000152128 | TMEM163 | 0 | INTRON | 4.53880464 | 5.66E-06 | 0.01744876 |
| 8 | 27255007 | 27255007 | 1 | 8_27255007 | ENSG00000015592 | STMN4 | 0 | INTRON | -4.5387204 | 5.66E-06 | 0.01745055 |
| 12 | 62959910 | 62959910 | 1 | 12_62959910 | ENSG00000139239 | RPL14P1 | 5414 | Upstream | -4.5387066 | 5.66E-06 | 0.01745055 |
| 2 | 1649284 | 1649284 | 1 | 2_1649284 | ENSG00000130508 | PXDN | 0 | EXON | -4.5384187 | 5.67E-06 | 0.01746958 |
| 7 | 1869137 | 1869137 | 1 | 7_1869137 | ENSG00000286192 | AC069288.1 | 0 | INTRON | 4.53839335 | 5.67E-06 | 0.01746958 |
| 18 | 34765092 | 34765092 | 1 | 18_34765092 | ENSG00000134769 | DTNA | 0 | INTRON | -4.5383621 | 5.67E-06 | 0.01746958 |
| 19 | 3849612 | 3849612 | 1 | 19_3849612 | ENSG00000105278 | ZFR2 | 0 | INTRON | 4.53829966 | 5.67E-06 | 0.01747159 |
| 16 | 27818740 | 27818740 | 1 | 16_27818740 | ENSG00000169181 | GSG1L | 0 | INTRON | -4.5381434 | 5.68E-06 | 0.01747913 |
| 7 | 75599690 | 75599690 | 1 | 7_75599690 | ENSG00000127946 | HIP1 | 0 | INTRON | 4.53813229 | 5.68E-06 | 0.01747913 |
| 2 | 55939102 | 55939102 | 1 | 2_55939102 | ENSG00000202344 | RN7SKP208 | 12551 | Downstream | 4.5380411 | 5.68E-06 | 0.01748353 |
| 9 | 22704683 | 22704683 | 1 | 9_22704683 | ENSG00000234840 | LINC01239 | 0 | INTRON | -4.5378229 | 5.68E-06 | 0.01749598 |
| 2 | 195399342 | 195399342 | 1 | 2_195399342 | ENSG00000224099 | AC104823.1 | 49189 | Upstream | 4.53781172 | 5.68E-06 | 0.01749598 |
| 1 | 153904996 | 153904996 | 1 | 1_153904996 | ENSG00000143614 | GATAD2B | 0 | INTRON | 4.53777635 | 5.69E-06 | 0.01749598 |
| 1 | 30242170 | 30242170 | 1 | 1_30242170 | ENSG00000231251 | AL021921.1 | 15555 | Downstream | -4.5376353 | 5.69E-06 | 0.01750452 |
| 9 | 97301023 | 97301023 | 1 | 9_97301023 | ENSG00000255036 | STRA6LP | 0 | INTRON | 4.53738092 | 5.70E-06 | 0.01752247 |
| 4 | 36375376 | 36375376 | 1 | 4_36375376 | ENSG00000251438 | AC104078.2 | 0 | INTRON | 4.53728769 | 5.70E-06 | 0.01752705 |
| 22 | 22337140 | 22337140 | 1 | 22_22337140 | ENSG00000225724 | ASH2LP3 | 2432 | Upstream | -4.5372309 | 5.70E-06 | 0.0175286 |
| 17 | 1459615 | 1459615 | 1 | 17_1459615 | ENSG00000167193 | CRK | 0 | INTRON | -4.5371417 | 5.70E-06 | 0.01753066 |
| 15 | 74629000 | 74629000 | 1 | 15_74629000 | ENSG00000179335 | CLK3 | 0 | 3UTR | -4.5371298 | 5.70E-06 | 0.01753066 |
| 11 | 68935388 | 68935388 | 1 | 11_68935388 | ENSG00000132740 | IGHMBP2 | 0 | EXON | 4.53698741 | 5.71E-06 | 0.01753677 |
| 3 | 90333146 | 90333146 | 1 | 3_90333146 | ENSG00000271024 | HSPE1P19 | 71438 | Upstream | 4.53691727 | 5.71E-06 | 0.01753677 |
| 20 | 10259958 | 10259958 | 1 | 20_10259958 | ENSG00000132639 | SNAP25 | 0 | INTRON | -4.5369161 | 5.71E-06 | 0.01753677 |
| 9 | 71428769 | 71428769 | 1 | 9_71428769 | ENSG00000083067 | TRPM3 | 0 | INTRON | -4.5368709 | 5.71E-06 | 0.01753677 |
| 7 | 39822418 | 39822418 | 1 | 7_39822418 | ENSG00000237251 | AC004987.3 | 0 | INTRON | -4.5368658 | 5.71E-06 | 0.01753677 |
| 6 | 96720060 | 96720060 | 1 | 6_96720060 | ENSG00000216518 | EEF1GP6 | 30763 | Upstream | 4.53675116 | 5.71E-06 | 0.01754219 |
| 4 | 60853130 | 60853130 | 1 | 4_60853130 | ENSG00000249066 | LINC02496 | 57027 | Downstream | -4.5367245 | 5.71E-06 | 0.01754219 |
| 12 | 114045179 | 114045179 | 1 | 12_114045179 | ENSG00000257603 | AC010183.1 | 31953 | Upstream | 4.53667225 | 5.71E-06 | 0.01754337 |
| 1 | 164532665 | 164532665 | 1 | 1_164532665 | ENSG00000185630 | PBX1 | 22918 | Upstream | -4.5366011 | 5.72E-06 | 0.01754612 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 22 | 47300029 | 47300029 | 1 | 22_47300029 | ENSG00000280312 | Z83836.1 | 39022 | Downstream | 4.53648009 | 5.72E-06 | 0.01755058 |
| 4 | 58221870 | 58221870 | 1 | 4_58221870 | ENSG00000249105 | AC096725.1 | 103800 | Upstream | -4.5364713 | 5.72E-06 | 0.01755058 |
| 2 | 201371542 | 201371542 | 1 | 2_201371542 | ENSG00000115993 | TRAK2 | 5664 | Downstream | 4.53638999 | 5.72E-06 | 0.01755419 |
| 9 | 120448083 | 120448083 | 1 | 9_120448083 | ENSG00000136861 | CDK5RAP2 | 0 | 3UTR | 4.53605735 | 5.73E-06 | 0.01757871 |
| X | 96663071 | 96663071 | 1 | X_96663071 | ENSG00000147202 | DIAPH2 | 21591 | Upstream | -4.536017 | 5.73E-06 | 0.01757891 |
| 8 | 29130537 | 29130537 | 1 | 8_29130537 | ENSG00000197892 | KIF13B | 0 | EXON | -4.5358898 | 5.74E-06 | 0.01758633 |
| 9 | 135890646 | 135890646 | 1 | 9_135890646 | ENSG00000130559 | CAMSAP1 | 0 | INTRON | 4.5356713 | 5.74E-06 | 0.01759823 |
| 17 | 77699558 | 77699558 | 1 | 17_77699558 | ENSG00000285535 | AC021683.5 | 18871 | Downstream | 4.53567105 | 5.74E-06 | 0.01759823 |
| 4 | 165659794 | 165659794 | 1 | 4_165659794 | ENSG00000287424 | AC080079.2 | 0 | INTRON | -4.5355658 | 5.74E-06 | 0.01760384 |
| 1 | 9247435 | 9247435 | 1 | 1_9247435 | ENSG00000049239 | H6PD | 0 | INTRON | 4.53518107 | 5.76E-06 | 0.01763279 |
| 3 | 196803118 | 196803118 | 1 | 3_196803118 | ENSG00000180370 | PAK2 | 0 | EXON | -4.5349707 | 5.76E-06 | 0.01764719 |
| 3 | 174628199 | 174628199 | 1 | 3_174628199 | ENSG00000177694 | NAALADL2 | 0 | INTRON | -4.5348218 | 5.77E-06 | 0.01765258 |
| 8 | 70052662 | 70052662 | 1 | 8_70052662 | ENSG00000147596 | PRDM14 | 0 | INTRON | 4.53481378 | 5.77E-06 | 0.01765258 |
| 8 | 38924329 | 38924329 | 1 | 8_38924329 | ENSG00000169499 | PLEKHA2 | 0 | INTRON | 4.53479234 | 5.77E-06 | 0.01765258 |
| 7 | 75577943 | 75577943 | 1 | 7_75577943 | ENSG00000127946 | HIP1 | 0 | INTRON | 4.53463776 | 5.77E-06 | 0.01766146 |
| 2 | 73855703 | 73855703 | 1 | 2_73855703 | ENSG00000124356 | STAMBP | 0 | INTRON | 4.53459821 | 5.77E-06 | 0.01766146 |
| 10 | 73181230 | 73181230 | 1 | 10_73181230 | ENSG00000138286 | FAM149B1 | 0 | INTRON | -4.5345722 | 5.77E-06 | 0.01766146 |
| 11 | 6921888 | 6921888 | 1 | 11_6921888 | ENSG00000178358 | OR2D3 | 0 | EXON | -4.5345099 | 5.77E-06 | 0.0176635 |
| 11 | 129944533 | 129944533 | 1 | 11_129944533 | ENSG00000170325 | PRDM10 | 0 | INTRON | -4.5344703 | 5.77E-06 | 0.01766364 |
| 19 | 20282025 | 20282025 | 1 | 19_20282025 | ENSG00000267383 | AC011447.3 | 0 | INTRON | -4.5342899 | 5.78E-06 | 0.01766543 |
| 19 | 10801033 | 10801033 | 1 | 19_10801033 | ENSG00000079805 | DNM2 | 0 | INTRON | 4.53427975 | 5.78E-06 | 0.01766543 |
| 9 | 113944840 | 113944840 | 1 | 9_113944840 | ENSG00000157657 | ZNF618 | 0 | INTRON | 4.53427586 | 5.78E-06 | 0.01766543 |
| 14 | 23280922 | 23280922 | 1 | 14_23280922 | ENSG00000215271 | HOMEZ | 0 | INTRON | -4.5341977 | 5.78E-06 | 0.01766543 |
| 1 | 15800718 | 15800718 | 1 | 1_15800718 | ENSG00000233954 | UQCRHL | 6450 | Downstream | 4.53419532 | 5.78E-06 | 0.01766543 |
| 4 | 56337386 | 56337386 | 1 | 4_56337386 | ENSG00000157426 | AASDH | 900 | Downstream | 4.53419466 | 5.78E-06 | 0.01766543 |
| 11 | 59915800 | 59915800 | 1 | 11_59915800 | ENSG00000270929 | SRD5A3P1 | 16667 | Downstream | 4.5341835 | 5.78E-06 | 0.01766543 |
| 8 | 91948946 | 91948946 | 1 | 8_91948946 | ENSG00000079102 | RUNX1T1 | 6020 | Downstream | 4.53398058 | 5.79E-06 | 0.01767743 |
| 1 | 3089321 | 3089321 | 1 | 1_3089321 | ENSG00000142611 | PRDM16 | 0 | INTRON | 4.53392241 | 5.79E-06 | 0.01767743 |
| 4 | 96127901 | 96127901 | 1 | 4_96127901 | ENSG00000201744 | RNU6-34P | 24395 | Downstream | -4.5338899 | 5.79E-06 | 0.01767743 |
| 7 | 23922051 | 23922051 | 1 | 7_23922051 | ENSG00000227930 | AC003087.1 | 24716 | Upstream | 4.53388863 | 5.79E-06 | 0.01767743 |
| 20 | 19049307 | 19049307 | 1 | 20_19049307 | ENSG00000274863 | AL135936.1 | 0 | INTRON | 4.53381988 | 5.79E-06 | 0.01767786 |
| 18 | 18073477 | 18073477 | 1 | 18_18073477 | ENSG00000215512 | AP005901.1 | 2743195 | Upstream | -4.5338077 | 5.79E-06 | 0.01767786 |
| 15 | 28357464 | 28357464 | 1 | 15_28357464 | ENSG00000237850 | AC091304.1 | 0 | INTRON | -4.5337339 | 5.80E-06 | 0.01767879 |
| 5 | 142824816 | 142824816 | 1 | 5_142824816 | ENSG00000145819 | ARHGAP26 | 0 | INTRON | 4.53367078 | 5.80E-06 | 0.01767879 |
| 9 | 95470697 | 95470697 | 1 | 9_95470697 | ENSG00000185920 | PTCH1 | 0 | INTRON | 4.53365406 | 5.80E-06 | 0.01767879 |
| 5 | 32932290 | 32932290 | 1 | 5_32932290 | ENSG00000250697 | AC010343.3 | 0 | INTRON | -4.5336452 | 5.80E-06 | 0.01767879 |
| 17 | 77724042 | 77724042 | 1 | 17_77724042 | ENSG00000267790 | LINC01987 | 0 | EXON | 4.53343564 | 5.80E-06 | 0.01769011 |
| 10 | 83487190 | 83487190 | 1 | 10_83487190 | ENSG00000234931 | MARK2P15 | 172715 | Upstream | -4.5334065 | 5.80E-06 | 0.01769011 |
| 18 | 60724367 | 60724367 | 1 | 18_60724367 | ENSG00000267098 | AC113137.1 | 0 | INTRON | -4.5333966 | 5.80E-06 | 0.01769011 |
| 7 | 52874869 | 52874869 | 1 | 7_52874869 | ENSG00000234304 | SGO1P2 | 16967 | Downstream | -4.5332618 | 5.81E-06 | 0.01769124 |
| 7 | 99070842 | 99070842 | 1 | 7_99070842 | ENSG00000198742 | SMURF1 | 0 | INTRON | 4.53325614 | 5.81E-06 | 0.01769124 |
| 10 | 46549196 | 46549196 | 1 | 10_46549196 | ENSG00000204175 | GPRIN2 | 0 | 3UTR | 4.53324443 | 5.81E-06 | 0.01769124 |
| 4 | 169915467 | 169915467 | 1 | 4_169915467 | ENSG00000288003 | AC079768.4 | 0 | INTRON | -4.5332319 | 5.81E-06 | 0.01769124 |
| 16 | 13612035 | 13612035 | 1 | 16_13612035 | ENSG00000262801 | U91319.1 | 48647 | Downstream | 4.532901 | 5.82E-06 | 0.01771582 |
| 13 | 83077062 | 83077062 | 1 | 13_83077062 | ENSG00000286385 | AL445255.1 | 0 | INTRON | -4.5328296 | 5.82E-06 | 0.01771861 |
| 11 | 44063988 | 44063988 | 1 | 11_44063988 | ENSG00000110455 | ACCS | 1936 | Upstream | 4.53279216 | 5.82E-06 | 0.01771861 |
| 10 | 77305081 | 77305081 | 1 | 10_77305081 | ENSG00000156113 | KCNMA1 | 0 | INTRON | 4.53266333 | 5.82E-06 | 0.01772625 |
| 1 | 39565742 | 39565742 | 1 | 1_39565742 | ENSG00000228060 | PABPC4-AS1 | 0 | INTRON | 4.5325333 | 5.83E-06 | 0.01773152 |
| 12 | 71401308 | 71401308 | 1 | 12_71401308 | ENSG00000127324 | TSPAN8 | 0 | INTRON | 4.53252502 | 5.83E-06 | 0.01773152 |
| 2 | 55830902 | 55830902 | 1 | 2_55830902 | ENSG00000115380 | EFEMP1 | 35064 | Downstream | -4.5324263 | 5.83E-06 | 0.017736 |
| 3 | 98561202 | 98561202 | 1 | 3_98561202 | ENSG00000285635 | AC021660.3 | 0 | INTRON | 4.5323962 | 5.83E-06 | 0.017736 |
| 7 | 70788260 | 70788260 | 1 | 7_70788260 | ENSG00000158321 | AUTS2 | 0 | INTRON | 4.53219413 | 5.84E-06 | 0.01774423 |
| 5 | 4275304 | 4275304 | 1 | 5_4275304 | ENSG00000250921 | LINC02063 | 127875 | Downstream | -4.5321546 | 5.84E-06 | 0.01774423 |
| 14 | 62845947 | 62845947 | 1 | 14_62845947 | ENSG00000140015 | KCNH5 | 0 | INTRON | 4.5321306 | 5.84E-06 | 0.01774423 |
| 12 | 25333980 | 25333980 | 1 | 12_25333980 | ENSG00000278743 | AC087239.1 | 51689 | Downstream | 4.53202643 | 5.84E-06 | 0.01774423 |
| 4 | 81843720 | 81843720 | 1 | 4_81843720 | ENSG00000138670 | RASGEF1B | 0 | INTRON | -4.532024 | 5.84E-06 | 0.01774423 |
| 10 | 9210343 | 9210343 | 1 | 10_9210343 | ENSG00000230014 | LINC00709 | 65489 | Upstream | -4.5319957 | 5.84E-06 | 0.01774423 |
| 8 | 503188 | 503188 | 1 | 8_503188 | ENSG00000180190 | TDRP | 0 | INTRON | 4.53197932 | 5.84E-06 | 0.01774423 |
| 1 | 3311559 | 3311559 | 1 | 1_3311559 | ENSG00000142611 | PRDM16 | 0 | INTRON | -4.5319782 | 5.84E-06 | 0.01774423 |
| 3 | 179325615 | 179325615 | 1 | 3_179325615 | ENSG00000121864 | ZNF639 | 0 | INTRON | -4.5319393 | 5.84E-06 | 0.01774423 |
| 6 | 87823131 | 87823131 | 1 | 6_87823131 | ENSG00000207131 | Y_RNA | 3041 | Downstream | 4.53192117 | 5.84E-06 | 0.01774423 |
| 1 | 106803926 | 106803926 | 1 | 1_106803926 | ENSG00000233449 | MTATP6P14 | 499 | Upstream | 4.53181528 | 5.85E-06 | 0.01774996 |
| 3 | 21620161 | 21620161 | 1 | 3_21620161 | ENSG00000151789 | ZNF385D | 0 | INTRON | -4.5317243 | 5.85E-06 | 0.01775444 |
| 5 | 158041947 | 158041947 | 1 | 5_158041947 | ENSG00000253422 | AC008677.3 | 36151 | Downstream | -4.5315279 | 5.86E-06 | 0.01776779 |
| 3 | 23742735 | 23742735 | 1 | 3_23742735 | ENSG00000223791 | UBE2E1-AS1 | 61288 | Downstream | 4.53135238 | 5.86E-06 | 0.01777939 |
| 3 | 19874917 | 19874917 | 1 | 3_19874917 | ENSG00000163576 | EFHB | 4554 | Downstream | 4.53123046 | 5.86E-06 | 0.01778648 |
| 3 | 185676466 | 185676466 | 1 | 3_185676466 | ENSG00000073792 | IGF2BP2 | 0 | INTRON | 4.5311798 | 5.87E-06 | 0.01778758 |
| 20 | 35884172 | 35884172 | 1 | 20_35884172 | ENSG00000025293 | PHF20 | 0 | INTRON | 4.5311336 | 5.87E-06 | 0.0177883 |
| 10 | 116534530 | 116534530 | 1 | 10_116534530 | ENSG00000200935 | RNU6-1090P | 3652 | Upstream | 4.53087134 | 5.87E-06 | 0.01780638 |
| 15 | 59870780 | 59870780 | 1 | 15_59870780 | ENSG00000259601 | AC092079.1 | 730 | Downstream | -4.5308437 | 5.87E-06 | 0.01780638 |
| 1 | 150999413 | 150999413 | 1 | 1_150999413 | ENSG00000143409 | MINDY1 | 0 | EXON | 4.53076403 | 5.88E-06 | 0.01780993 |
| 6 | 54659035 | 54659035 | 1 | 6_54659035 | ENSG00000220773 | RPSAP44 | 33547 | Downstream | -4.5304571 | 5.89E-06 | 0.01782984 |
| 1 | 23056900 | 23056900 | 1 | 1_23056900 | ENSG00000240553 | AL031428.1 | 0 | INTRON | 4.53041907 | 5.89E-06 | 0.01782984 |
| 13 | 21096139 | 21096139 | 1 | 13_21096139 | ENSG00000180172 | RPS12P23 | 1425 | Upstream | 4.53041517 | 5.89E-06 | 0.01782984 |
| 19 | 5102706 | 5102706 | 1 | 19_5102706 | ENSG00000127663 | KDM4B | 0 | INTRON | 4.53032304 | 5.89E-06 | 0.01783444 |
| 3 | 153831912 | 153831912 | 1 | 3_153831912 | ENSG00000238755 | LINC02006 | 0 | INTRON | -4.5301686 | 5.89E-06 | 0.01784431 |
| 21 | 25667111 | 25667111 | 1 | 21_25667111 | ENSG00000154721 | JAM2 | 0 | INTRON | -4.5300707 | 5.90E-06 | 0.0178494 |
| 3 | 35255184 | 35255184 | 1 | 3_35255184 | ENSG00000212442 | RNU6-243P | 1655 | Downstream | -4.5299873 | 5.90E-06 | 0.01785314 |
| 3 | 51457670 | 51457670 | 1 | 3_51457670 | ENSG00000145041 | DCAF1 | 0 | INTRON | 4.52995134 | 5.90E-06 | 0.01785314 |
| 4 | 23789927 | 23789927 | 1 | 4_23789927 | ENSG00000109819 | PPARGC1A | 0 | INTRON | -4.5298724 | 5.90E-06 | 0.01785663 |
| 7 | 108689840 | 108689840 | 1 | 7_108689840 | ENSG00000270425 | AC002487.1 | 30767 | Downstream | 4.52976793 | 5.90E-06 | 0.01786015 |
| 12 | 22312599 | 22312599 | 1 | 12_22312599 | ENSG00000111728 | ST8SIA1 | 0 | INTRON | -4.5297557 | 5.91E-06 | 0.01786015 |
| 4 | 129876826 | 129876826 | 1 | 4_129876826 | ENSG00000249618 | LINC02465 | 0 | INTRON | -4.5296733 | 5.91E-06 | 0.01786125 |
| 5 | 102085149 | 102085149 | 1 | 5_102085149 | ENSG00000199786 | RNA5SP188 | 45857 | Downstream | -4.5296676 | 5.91E-06 | 0.01786125 |
| 13 | 51357449 | 51357449 | 1 | 13_51357449 | ENSG00000102786 | INTS6 | 0 | INTRON | 4.52950857 | 5.91E-06 | 0.01787152 |
| 8 | 18869130 | 18869130 | 1 | 8_18869130 | ENSG00000156011 | PSD3 | 0 | INTRON | 4.52936788 | 5.92E-06 | 0.01787483 |
| 3 | 36446824 | 36446824 | 1 | 3_36446824 | ENSG00000144681 | STAC | 0 | INTRON | 4.52932346 | 5.92E-06 | 0.01787483 |
| 15 | 98964638 | 98964638 | 1 | 15_98964638 | ENSG00000259475 | AC036108.1 | 0 | INTRON | 4.52932188 | 5.92E-06 | 0.01787483 |

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| 3 | 16957334 | 16957334 | 1 | 3_16957334 | ENSG00000154822 | PLCL2 | 0 | INTRON | 4.52930038 | 5.92E-06 | 0.01787483 |
| 4 | 96532406 | 96532406 | 1 | 4_96532406 | ENSG00000248510 | LINC02267 | 0 | INTRON | -4.5292551 | 5.92E-06 | 0.01787483 |
| 9 | 78852410 | 78852410 | 1 | 9_78852410 | ENSG00000237257 | MTND2P8 | 109666 | Upstream | 4.52921666 | 5.92E-06 | 0.01787483 |
| 3 | 17593932 | 17593932 | 1 | 3_17593932 | ENSG00000131374 | TBC1D5 | 0 | INTRON | 4.52920686 | 5.92E-06 | 0.01787483 |
| 17 | 9198096 | 9198096 | 1 | 17_9198096 | ENSG00000065320 | NTN1 | 0 | INTRON | 4.52915934 | 5.92E-06 | 0.01787567 |
| 1 | 13518165 | 13518165 | 1 | 1_13518165 | ENSG00000259961 | AL354712.1 | 1895 | Downstream | 4.52909932 | 5.92E-06 | 0.01787567 |
| 15 | 22963276 | 22963276 | 1 | 15_22963276 | ENSG00000273749 | CYFIP1 | 0 | INTRON | 4.52908445 | 5.92E-06 | 0.01787567 |
| 7 | 4292090 | 4292090 | 1 | 7_4292090 | ENSG00000146555 | SDK1 | 23090 | Downstream | -4.5289969 | 5.93E-06 | 0.01787991 |
| 20 | 25481475 | 25481475 | 1 | 20_25481475 | ENSG00000101004 | NINL | 0 | INTRON | 4.52880486 | 5.93E-06 | 0.01789299 |
| 9 | 27739147 | 27739147 | 1 | 9_27739147 | ENSG00000260390 | AL360014.1 | 90128 | Upstream | 4.52874662 | 5.93E-06 | 0.01789475 |
| 13 | 19987339 | 19987339 | 1 | 13_19987339 | ENSG00000121741 | ZMYM2 | 0 | INTRON | -4.5286386 | 5.94E-06 | 0.01790072 |
| 4 | 21990780 | 21990780 | 1 | 4_21990780 | ENSG00000250039 | AC096719.1 | 0 | INTRON | -4.5285888 | 5.94E-06 | 0.01790177 |
| 6 | 148930206 | 148930206 | 1 | 6_148930206 | ENSG00000111962 | UST | 0 | INTRON | -4.5284101 | 5.94E-06 | 0.01790538 |
| 18 | 13059273 | 13059273 | 1 | 18_13059273 | ENSG00000101639 | CEP192 | 0 | 5UTR | 4.52840613 | 5.94E-06 | 0.01790538 |
| 3 | 190550453 | 190550453 | 1 | 3_190550453 | ENSG00000196083 | IL1RAP | 0 | 5UTR | -4.5284039 | 5.94E-06 | 0.01790538 |
| 2 | 218821853 | 218821853 | 1 | 2_218821853 | ENSG00000115592 | PRKAG3 | 529 | Downstream | 4.52838797 | 5.94E-06 | 0.01790538 |
| 18 | 33429418 | 33429418 | 1 | 18_33429418 | ENSG00000166960 | CCDC178 | 0 | INTRON | 4.52835904 | 5.94E-06 | 0.01790538 |
| 1 | 143228528 | 143228528 | 1 | 1_143228528 | ENSG00000276118 | AC242852.1 | 114651 | Upstream | -4.5282577 | 5.95E-06 | 0.0179108 |
| 15 | 93048793 | 93048793 | 1 | 15_93048793 | ENSG00000182175 | RGMA | 0 | INTRON | -4.5282004 | 5.95E-06 | 0.01791248 |
| 16 | 21533993 | 21533993 | 1 | 16_21533993 | ENSG00000257639 | AC005632.2 | 0 | INTRON | 4.52810774 | 5.95E-06 | 0.01791717 |
| 9 | 119710950 | 119710950 | 1 | 9_119710950 | ENSG00000260970 | AC006288.1 | 186825 | Downstream | -4.5280296 | 5.95E-06 | 0.01792062 |
| 8 | 55315020 | 55315020 | 1 | 8_55315020 | ENSG00000206579 | XKR4 | 0 | INTRON | 4.52798734 | 5.95E-06 | 0.01792104 |
| 1 | 230309625 | 230309625 | 1 | 1_230309625 | ENSG00000177614 | PGBD5 | 4864 | Downstream | 4.52783781 | 5.96E-06 | 0.01792811 |
| 6 | 71403713 | 71403713 | 1 | 6_71403713 | ENSG00000269966 | AL136164.2 | 0 | INTRON | 4.52782916 | 5.96E-06 | 0.01792811 |
| 12 | 18102274 | 18102274 | 1 | 12_18102274 | ENSG00000111404 | RERGL | 0 | INTRON | 4.52777693 | 5.96E-06 | 0.01792937 |
| 7 | 121360775 | 121360775 | 1 | 7_121360775 | ENSG00000196937 | FAM3C | 0 | INTRON | -4.5277244 | 5.96E-06 | 0.01793066 |
| 8 | 5050395 | 5050395 | 1 | 8_5050395 | ENSG00000253262 | AC019176.1 | 22249 | Downstream | 4.5276184 | 5.97E-06 | 0.01793424 |
| 15 | 87607880 | 87607880 | 1 | 15_87607880 | ENSG00000259560 | AC020687.1 | 0 | INTRON | 4.52754274 | 5.97E-06 | 0.01793424 |
| 18 | 36642026 | 36642026 | 1 | 18_36642026 | ENSG00000134775 | FHOD3 | 0 | INTRON | -4.527541 | 5.97E-06 | 0.01793424 |
| 2 | 195889103 | 195889103 | 1 | 2_195889103 | ENSG00000118997 | DNAH7 | 0 | INTRON | 4.52753278 | 5.97E-06 | 0.01793424 |
| 10 | 99747394 | 99747394 | 1 | 10_99747394 | ENSG00000119929 | CUTC | 0 | INTRON | -4.5274663 | 5.97E-06 | 0.01793465 |
| 1 | 160520888 | 160520888 | 1 | 1_160520888 | ENSG00000162739 | SLAMF6 | 0 | INTRON | 4.52741624 | 5.97E-06 | 0.01793465 |
| 14 | 42989489 | 42989489 | 1 | 14_42989489 | ENSG00000259047 | AL163153.1 | 6 | Downstream | -4.527416 | 5.97E-06 | 0.01793465 |
| 7 | 131495425 | 131495425 | 1 | 7_131495425 | ENSG00000128585 | MKLN1 | 0 | 3UTR | 4.52728132 | 5.97E-06 | 0.01794291 |
| 11 | 36574490 | 36574490 | 1 | 11_36574490 | ENSG00000166349 | RAG1 | 0 | EXON | -4.5272324 | 5.98E-06 | 0.01794389 |
| 19 | 12756346 | 12756346 | 1 | 19_12756346 | ENSG00000039987 | BEST2 | 0 | 3UTR | -4.5269557 | 5.98E-06 | 0.01796163 |
| 2 | 223064105 | 223064105 | 1 | 2_223064105 | ENSG00000152049 | KCNE4 | 0 | INTRON | -4.526949 | 5.98E-06 | 0.01796163 |
| 11 | 347146 | 347146 | 1 | 11_347146 | ENSG00000270972 | AC136475.9 | 13458 | Downstream | -4.526822 | 5.99E-06 | 0.01796925 |
| 2 | 85634047 | 85634047 | 1 | 2_85634047 | ENSG00000168883 | USP39 | 0 | INTRON | 4.52677779 | 5.99E-06 | 0.01796984 |
| 6 | 139662505 | 139662505 | 1 | 6_139662505 | ENSG00000226571 | AL592429.2 | 0 | INTRON | -4.5265089 | 6.00E-06 | 0.01798954 |
| 21 | 44304663 | 44304663 | 1 | 21_44304663 | ENSG00000141959 | PFKL | 0 | INTRON | 4.52641643 | 6.00E-06 | 0.01799424 |
| 7 | 5374520 | 5374520 | 1 | 7_5374520 | ENSG00000182095 | TNRC18 | 0 | INTRON | 4.52636459 | 6.00E-06 | 0.01799467 |
| 3 | 68240642 | 68240642 | 1 | 3_68240642 | ENSG00000183662 | TAFA1 | 0 | INTRON | -4.5263368 | 6.00E-06 | 0.01799467 |
| 10 | 19431883 | 19431883 | 1 | 10_19431883 | ENSG00000204740 | MALRD1 | 0 | INTRON | 4.52629525 | 6.00E-06 | 0.01799504 |
| 14 | 89345081 | 89345081 | 1 | 14_89345081 | ENSG00000053254 | FOXN3 | 0 | INTRON | -4.5262089 | 6.01E-06 | 0.01799922 |
| 16 | 24375065 | 24375065 | 1 | 16_24375065 | ENSG00000006116 | CACNG3 | 12264 | Downstream | 4.52615021 | 6.01E-06 | 0.01799948 |
| 3 | 8864427 | 8864427 | 1 | 3_8864427 | ENSG00000070950 | RAD18 | 0 | INTRON | 4.52613134 | 6.01E-06 | 0.01799948 |
| 7 | 34245918 | 34245918 | 1 | 7_34245918 | ENSG00000236212 | AC009262.1 | 0 | INTRON | -4.5259862 | 6.01E-06 | 0.01800867 |
| 4 | 187714927 | 187714927 | 1 | 4_187714927 | ENSG00000249642 | AC097521.1 | 2598 | Downstream | -4.5258977 | 6.01E-06 | 0.01801026 |
| 13 | 95736039 | 95736039 | 1 | 13_95736039 | ENSG00000102580 | DNAJC3 | 0 | INTRON | 4.52589305 | 6.01E-06 | 0.01801026 |
| 16 | 47569506 | 47569506 | 1 | 16_47569506 | ENSG00000102893 | PHKB | 0 | INTRON | -4.525762 | 6.02E-06 | 0.01801556 |
| 4 | 39122729 | 39122729 | 1 | 4_39122729 | ENSG00000109790 | KLHL5 | 0 | INTRON | 4.52575639 | 6.02E-06 | 0.01801556 |
| 16 | 8300559 | 8300559 | 1 | 16_8300559 | ENSG00000261319 | LINC02152 | 787 | Downstream | 4.52566938 | 6.02E-06 | 0.01801981 |
| 15 | 87906696 | 87906696 | 1 | 15_87906696 | ENSG00000140538 | NTRK3 | 0 | INTRON | 4.52543649 | 6.03E-06 | 0.01803407 |
| 2 | 120990967 | 120990967 | 1 | 2_120990967 | ENSG00000074047 | GLI2 | 0 | 3UTR | 4.52541159 | 6.03E-06 | 0.01803407 |
| 2 | 198441164 | 198441164 | 1 | 2_198441164 | ENSG00000115896 | PLCL1 | 0 | INTRON | 4.52539045 | 6.03E-06 | 0.01803407 |
| 16 | 27690537 | 27690537 | 1 | 16_27690537 | ENSG00000261329 | AC016597.1 | 0 | INTRON | 4.52526812 | 6.03E-06 | 0.01803705 |
| 20 | 395437 | 395437 | 1 | 20_395437 | ENSG00000101255 | TRIB3 | 0 | INTRON | -4.5251953 | 6.03E-06 | 0.01803705 |
| 5 | 34568046 | 34568046 | 1 | 5_34568046 | ENSG00000271874 | AC025754.2 | 83410 | Downstream | 4.52519241 | 6.03E-06 | 0.01803705 |
| 2 | 100242709 | 100242709 | 1 | 2_100242709 | ENSG00000232084 | LINC01104 | 0 | EXON | 4.52518053 | 6.03E-06 | 0.01803705 |
| 12 | 15870784 | 15870784 | 1 | 12_15870784 | ENSG00000151491 | EPS8 | 0 | INTRON | -4.5251697 | 6.03E-06 | 0.01803705 |
| 14 | 102045932 | 102045932 | 1 | 14_102045932 | ENSG00000197102 | DYNC1H1 | 0 | INTRON | 4.52510498 | 6.04E-06 | 0.01803941 |
| 1 | 234003769 | 234003769 | 1 | 1_234003769 | ENSG00000183780 | SLC35F3 | 0 | INTRON | 4.52503705 | 6.04E-06 | 0.01804203 |
| 16 | 69935234 | 69935234 | 1 | 16_69935234 | ENSG00000198373 | WWP2 | 0 | INTRON | 4.52494183 | 6.04E-06 | 0.01804676 |
| 4 | 122265518 | 122265518 | 1 | 4_122265518 | ENSG00000138688 | KIAA1109 | 0 | INTRON | 4.52488513 | 6.04E-06 | 0.01804676 |
| 20 | 18748096 | 18748096 | 1 | 20_18748096 | ENSG00000125821 | DTD1 | 0 | INTRON | 4.52487023 | 6.04E-06 | 0.01804676 |
| 8 | 118246144 | 118246144 | 1 | 8_118246144 | ENSG00000177570 | SAMD12 | 0 | INTRON | 4.52465568 | 6.05E-06 | 0.01806191 |
| 6 | 140053333 | 140053333 | 1 | 6_140053333 | ENSG00000236013 | AL357146.1 | 0 | INTRON | 4.52450666 | 6.05E-06 | 0.01807064 |
| 17 | 42112686 | 42112686 | 1 | 17_42112686 | ENSG00000108771 | DHX58 | 0 | 5UTR | -4.5244793 | 6.05E-06 | 0.01807064 |
| 18 | 59920439 | 59920439 | 1 | 18_59920439 | ENSG00000267066 | AC107990.1 | 8786 | Upstream | -4.5242131 | 6.06E-06 | 0.01809022 |
| 7 | 102215778 | 102215778 | 1 | 7_102215778 | ENSG00000257923 | CUX1 | 0 | INTRON | 4.52413694 | 6.06E-06 | 0.01809356 |
| 17 | 13943982 | 13943982 | 1 | 17_13943982 | ENSG00000236088 | COX10-AS1 | 0 | INTRON | 4.5240703 | 6.07E-06 | 0.01809609 |
| 1 | 10113668 | 10113668 | 1 | 1_10113668 | ENSG00000130939 | UBE4B | 0 | INTRON | 4.52395531 | 6.07E-06 | 0.01810275 |
| 5 | 132683980 | 132683980 | 1 | 5_132683980 | ENSG00000113520 | IL4 | 1302 | Downstream | 4.52378853 | 6.07E-06 | 0.01811386 |
| 2 | 179874073 | 179874073 | 1 | 2_179874073 | ENSG00000144331 | ZNF385B | 12461 | Upstream | 4.5236985 | 6.08E-06 | 0.01811559 |
| 2 | 158133397 | 158133397 | 1 | 2_158133397 | ENSG00000237327 | UPP2-IT1 | 0 | INTRON | 4.5236941 | 6.08E-06 | 0.01811559 |
| 9 | 83428697 | 83428697 | 1 | 9_83428697 | ENSG00000172159 | FRMD3 | 0 | INTRON | -4.5236524 | 6.08E-06 | 0.01811599 |
| Y | 10089991 | 10089991 | 1 | Y_10089991 | ENSG00000251766 | RNA5SP518 | 418 | Downstream | 4.5236067 | 6.08E-06 | 0.01811673 |
| 10 | 27535808 | 27535808 | 1 | 10_27535808 | ENSG00000099246 | RAB18 | 0 | INTRON | 4.52344506 | 6.08E-06 | 0.0181199 |
| 3 | 144330242 | 144330242 | 1 | 3_144330242 | ENSG00000280397 | AC011592.1 | 111968 | Downstream | 4.52342029 | 6.08E-06 | 0.0181199 |
| 3 | 174541518 | 174541518 | 1 | 3_174541518 | ENSG00000177694 | NAALADL2 | 0 | INTRON | 4.52341615 | 6.08E-06 | 0.0181199 |
| 12 | 53981866 | 53981866 | 1 | 12_53981866 | ENSG00000251151 | HOXC-AS3 | 0 | EXON | -4.5233904 | 6.09E-06 | 0.0181199 |
| 11 | 45080793 | 45080793 | 1 | 11_45080793 | ENSG00000019485 | PRDM11 | 15012 | Upstream | 4.52338458 | 6.09E-06 | 0.0181199 |
| 4 | 89997025 | 89997025 | 1 | 4_89997025 | ENSG00000287239 | AC105445.1 | 0 | INTRON | -4.5231352 | 6.09E-06 | 0.01813249 |
| 1 | 112662129 | 112662129 | 1 | 1_112662129 | ENSG00000116489 | CAPZA1 | 0 | INTRON | 4.52311722 | 6.09E-06 | 0.01813249 |
| 10 | 80119156 | 80119156 | 1 | 10_80119156 | ENSG00000230171 | RPL22P18 | 6784 | Upstream | -4.5231081 | 6.09E-06 | 0.01813249 |
| 8 | 65058878 | 65058878 | 1 | 8_65058878 | ENSG00000253493 | AC087808.1 | 85030 | Upstream | 4.52308955 | 6.09E-06 | 0.01813249 |
| 14 | 104282011 | 104282011 | 1 | 14_104282011 | ENSG00000258913 | LINC02691 | 0 | INTRON | 4.52301129 | 6.10E-06 | 0.01813603 |

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| 4 | 102710486 | 102710486 | 1 | 4_102710486 | ENSG00000109323 | MANBA | 0 | INTRON | 4.52288355 | 6.10E-06 | 0.01814064 |
| 6 | 143655811 | 143655811 | 1 | 6_143655811 | ENSG00000112419 | PHACTR2 | 0 | INTRON | -4.5227904 | 6.10E-06 | 0.01814546 |
| 5 | 55752041 | 55752041 | 1 | 5_55752041 | ENSG00000152670 | DDX4 | 0 | INTRON | 4.52266917 | 6.11E-06 | 0.01815268 |
| 18 | 63000272 | 63000272 | 1 | 18_63000272 | ENSG00000081913 | PHLPP1 | 19839 | Downstream | 4.5225256 | 6.11E-06 | 0.01816183 |
| 2 | 193156252 | 193156252 | 1 | 2_193156252 | ENSG00000286358 | AC096647.1 | 14451 | Upstream | 4.52245011 | 6.11E-06 | 0.01816514 |
| X | 17121750 | 17121750 | 1 | X_17121750 | ENSG00000169891 | REPS2 | 0 | INTRON | 4.52240467 | 6.11E-06 | 0.01816587 |
| 9 | 101354119 | 101354119 | 1 | 9_101354119 | ENSG00000236763 | TRMT112P4 | 2346 | Downstream | -4.5223646 | 6.12E-06 | 0.01816613 |
| 3 | 174429189 | 174429189 | 1 | 3_174429189 | ENSG00000177694 | NAALADL2 | 9383 | Upstream | -4.5221567 | 6.12E-06 | 0.01818082 |
| 13 | 108221814 | 108221814 | 1 | 13_108221814 | ENSG00000139826 | ABHD13 | 0 | INTRON | -4.5221105 | 6.12E-06 | 0.01818161 |
| 5 | 67759797 | 67759797 | 1 | 5_67759797 | ENSG00000250421 | AC106798.1 | 0 | INTRON | -4.5219422 | 6.13E-06 | 0.0181929 |
| 1 | 32287002 | 32287002 | 1 | 1_32287002 | ENSG00000252450 | Y_RNA | 441 | Upstream | -4.5218547 | 6.13E-06 | 0.01819368 |
| 5 | 83937448 | 83937448 | 1 | 5_83937448 | ENSG00000164176 | EDIL3 | 3105 | Downstream | -4.5218458 | 6.13E-06 | 0.01819368 |
| 14 | 81181837 | 81181837 | 1 | 14_81181837 | ENSG00000165417 | GTF2A1 | 0 | INTRON | 4.52182241 | 6.13E-06 | 0.01819368 |
| 15 | 33807908 | 33807908 | 1 | 15_33807908 | ENSG00000198838 | RYR3 | 0 | INTRON | 4.52173772 | 6.13E-06 | 0.01819662 |
| 15 | 78335165 | 78335165 | 1 | 15_78335165 | ENSG00000279694 | AC011270.2 | 4042 | Downstream | 4.52167038 | 6.14E-06 | 0.01819662 |
| 5 | 67150633 | 67150633 | 1 | 5_67150633 | ENSG00000069020 | MAST4 | 0 | INTRON | -4.5216027 | 6.14E-06 | 0.01819662 |
| 6 | 73615183 | 73615183 | 1 | 6_73615183 | ENSG00000119899 | SLC17A5 | 0 | INTRON | 4.52159751 | 6.14E-06 | 0.01819662 |
| 3 | 150584711 | 150584711 | 1 | 3_150584711 | ENSG00000144895 | EIF2A | 0 | 3UTR | 4.52156255 | 6.14E-06 | 0.01819662 |
| 7 | 19479996 | 19479996 | 1 | 7_19479996 | ENSG00000223838 | AC007091.1 | 0 | INTRON | -4.5215325 | 6.14E-06 | 0.01819662 |
| 16 | 21545963 | 21545963 | 1 | 16_21545963 | ENSG00000257639 | AC005632.2 | 0 | INTRON | -4.5214509 | 6.14E-06 | 0.01819662 |
| 9 | 132499276 | 132499276 | 1 | 9_132499276 | ENSG00000188523 | CFAP77 | 0 | INTRON | 4.52144735 | 6.14E-06 | 0.01819662 |
| 9 | 24518793 | 24518793 | 1 | 9_24518793 | ENSG00000205442 | IZUMO3 | 24158 | Downstream | 4.52143758 | 6.14E-06 | 0.01819662 |
| 18 | 4104646 | 4104646 | 1 | 18_4104646 | ENSG00000170579 | DLGAP1 | 0 | INTRON | -4.5214195 | 6.14E-06 | 0.01819662 |
| 4 | 27062767 | 27062767 | 1 | 4_27062767 | ENSG00000109689 | STIM2 | 37386 | Downstream | 4.52124306 | 6.15E-06 | 0.01820863 |
| 8 | 40212614 | 40212614 | 1 | 8_40212614 | ENSG00000254143 | AC022733.2 | 40002 | Downstream | -4.5211552 | 6.15E-06 | 0.01821301 |
| 1 | 143392003 | 143392003 | 1 | 1_143392003 | ENSG00000277095 | AC242852.2 | 5881 | Downstream | -4.5211042 | 6.15E-06 | 0.01821423 |
| 18 | 45009029 | 45009029 | 1 | 18_45009029 | ENSG00000152217 | SETBP1 | 0 | INTRON | 4.52098129 | 6.16E-06 | 0.01822164 |
| 22 | 21561767 | 21561767 | 1 | 22_21561767 | ENSG00000185651 | UBE2L3 | 0 | INTRON | 4.52091374 | 6.16E-06 | 0.01822374 |
| 3 | 60066309 | 60066309 | 1 | 3_60066309 | ENSG00000189283 | FHIT | 0 | INTRON | -4.5208833 | 6.16E-06 | 0.01822374 |
| 5 | 143090193 | 143090193 | 1 | 5_143090193 | ENSG00000145819 | ARHGAP26 | 0 | INTRON | -4.5206408 | 6.17E-06 | 0.01824146 |
| 10 | 102776938 | 102776938 | 1 | 10_102776938 | ENSG00000166272 | WBP1L | 0 | INTRON | 4.5203482 | 6.17E-06 | 0.01826215 |
| 10 | 31601506 | 31601506 | 1 | 10_31601506 | ENSG00000223834 | AL161935.1 | 1355 | Upstream | 4.52030305 | 6.18E-06 | 0.01826215 |
| 8 | 17606455 | 17606455 | 1 | 8_17606455 | ENSG00000104213 | PDGFRL | 0 | INTRON | 4.52029037 | 6.18E-06 | 0.01826215 |
| 22 | 21935787 | 21935787 | 1 | 22_21935787 | ENSG00000100034 | PPM1F | 0 | EXON | -4.5201383 | 6.18E-06 | 0.01827196 |
| 14 | 91134562 | 91134562 | 1 | 14_91134562 | ENSG00000133943 | DGLUCY | 0 | INTRON | 4.5200656 | 6.18E-06 | 0.01827196 |
| 17 | 5905312 | 5905312 | 1 | 17_5905312 | ENSG00000285471 | AC007846.2 | 0 | INTRON | 4.5199918 | 6.18E-06 | 0.01827196 |
| 17 | 10342856 | 10342856 | 1 | 17_10342856 | ENSG00000006788 | MYH13 | 0 | INTRON | 4.51997966 | 6.18E-06 | 0.01827196 |
| 12 | 71395432 | 71395432 | 1 | 12_71395432 | ENSG00000127324 | TSPAN8 | 0 | INTRON | 4.51997667 | 6.18E-06 | 0.01827196 |
| 12 | 54705768 | 54705768 | 1 | 12_54705768 | ENSG00000257634 | AC079310.1 | 18334 | Downstream | 4.51995613 | 6.19E-06 | 0.01827196 |
| X | 118298202 | 118298202 | 1 | X_118298202 | ENSG00000270619 | AL391358.1 | 14835 | Downstream | 4.51969105 | 6.19E-06 | 0.01829167 |
| 4 | 185464664 | 185464664 | 1 | 4_185464664 | ENSG00000168491 | CCDC110 | 0 | INTRON | -4.5196508 | 6.19E-06 | 0.01829198 |
| 12 | 74271900 | 74271900 | 1 | 12_74271900 | ENSG00000251138 | AC090015.1 | 0 | INTRON | -4.5195948 | 6.20E-06 | 0.0182929 |
| 18 | 11871870 | 11871870 | 1 | 18_11871870 | ENSG00000141404 | GNAL | 0 | INTRON | -4.5195667 | 6.20E-06 | 0.0182929 |
| 20 | 40435811 | 40435811 | 1 | 20_40435811 | ENSG00000204103 | MAFB | 250036 | Downstream | 4.51932057 | 6.20E-06 | 0.01831099 |
| 15 | 91611178 | 91611178 | 1 | 15_91611178 | ENSG00000258551 | AC104035.1 | 5305 | Downstream | -4.5191424 | 6.21E-06 | 0.01832323 |
| 4 | 153036013 | 153036013 | 1 | 4_153036013 | ENSG00000249022 | AC093599.1 | 0 | INTRON | -4.5188819 | 6.22E-06 | 0.0183426 |
| 10 | 116509193 | 116509193 | 1 | 10_116509193 | ENSG00000200935 | RNU6-1090P | 28989 | Upstream | -4.5188429 | 6.22E-06 | 0.01834281 |
| 19 | 5030270 | 5030270 | 1 | 19_5030270 | ENSG00000127663 | KDM4B | 0 | INTRON | 4.51875378 | 6.22E-06 | 0.01834734 |
| 6 | 155103580 | 155103580 | 1 | 6_155103580 | ENSG00000146426 | TIAM2 | 0 | INTRON | 4.5185962 | 6.23E-06 | 0.01835697 |
| 3 | 166062934 | 166062934 | 1 | 3_166062934 | ENSG00000242178 | MTND4P17 | 97086 | Downstream | 4.51856934 | 6.23E-06 | 0.01835697 |
| 6 | 23024696 | 23024696 | 1 | 6_23024696 | ENSG00000233358 | AL035401.1 | 0 | INTRON | -4.5185182 | 6.23E-06 | 0.01835733 |
| 18 | 42311045 | 42311045 | 1 | 18_42311045 | ENSG00000267586 | LINC00907 | 0 | INTRON | 4.5184773 | 6.23E-06 | 0.01835733 |
| 2 | 131564660 | 131564660 | 1 | 2_131564660 | ENSG00000286208 | AC093838.1 | 0 | INTRON | 4.51842271 | 6.23E-06 | 0.01835733 |
| 9 | 89136661 | 89136661 | 1 | 9_89136661 | ENSG00000148082 | SHC3 | 0 | INTRON | -4.5184184 | 6.23E-06 | 0.01835733 |
| 8 | 106727710 | 106727710 | 1 | 8_106727710 | ENSG00000164830 | OXR1 | 0 | INTRON | 4.51837744 | 6.23E-06 | 0.0183577 |
| 4 | 146579883 | 146579883 | 1 | 4_146579883 | ENSG00000207182 | RNU1-44P | 164 | Upstream | 4.51819557 | 6.24E-06 | 0.01837029 |
| 2 | 129462901 | 129462901 | 1 | 2_129462901 | ENSG00000233428 | PPIAP65 | 33395 | Upstream | -4.517973 | 6.24E-06 | 0.01838512 |
| 18 | 5728662 | 5728662 | 1 | 18_5728662 | ENSG00000261738 | MIR3976HG | 0 | INTRON | 4.51795135 | 6.24E-06 | 0.01838512 |
| 2 | 24817705 | 24817705 | 1 | 2_24817705 | ENSG00000138092 | CENPO | 0 | EXON | 4.51782799 | 6.25E-06 | 0.01839265 |
| 17 | 20759002 | 20759002 | 1 | 17_20759002 | ENSG00000187870 | RNFT1P3 | 4501 | Upstream | 4.51777154 | 6.25E-06 | 0.01839437 |
| 14 | 94897884 | 94897884 | 1 | 14_94897884 | ENSG00000274379 | AL121612.1 | 20368 | Downstream | 4.51769058 | 6.25E-06 | 0.01839822 |
| 17 | 44430799 | 44430799 | 1 | 17_44430799 | ENSG00000186566 | GPATCH8 | 0 | INTRON | 4.51761272 | 6.25E-06 | 0.01840181 |
| 17 | 43353491 | 43353491 | 1 | 17_43353491 | ENSG00000188825 | LINC00910 | 0 | INTRON | -4.5173903 | 6.26E-06 | 0.01841796 |
| 12 | 96812414 | 96812414 | 1 | 12_96812414 | ENSG00000188596 | CFAP54 | 0 | INTRON | -4.5170424 | 6.27E-06 | 0.01844504 |
| 7 | 68357973 | 68357973 | 1 | 7_68357973 | ENSG00000226829 | AC093655.1 | 38297 | Upstream | 4.51676738 | 6.28E-06 | 0.01846581 |
| 7 | 99428633 | 99428633 | 1 | 7_99428633 | ENSG00000106246 | PTCD1 | 0 | INTRON | -4.5165991 | 6.28E-06 | 0.01847729 |
| 2 | 207793617 | 207793617 | 1 | 2_207793617 | ENSG00000163251 | FZD5 | 23711 | Upstream | -4.5164668 | 6.29E-06 | 0.01848564 |
| 3 | 3679461 | 3679461 | 1 | 3_3679461 | ENSG00000144455 | SUMF1 | 21352 | Downstream | 4.5163735 | 6.29E-06 | 0.01849059 |
| 17 | 7618598 | 7618598 | 1 | 17_7618598 | ENSG00000129214 | SHBG | 0 | INTRON | 4.51624464 | 6.29E-06 | 0.01849864 |
| 2 | 159987393 | 159987393 | 1 | 2_159987393 | ENSG00000153246 | PLA2R1 | 0 | INTRON | -4.5161484 | 6.30E-06 | 0.01850055 |
| 11 | 45980926 | 45980926 | 1 | 11_45980926 | ENSG00000135365 | PHF21A | 0 | INTRON | 4.51612948 | 6.30E-06 | 0.01850055 |
| 12 | 31399850 | 31399850 | 1 | 12_31399850 | ENSG00000170456 | DENND5B | 0 | INTRON | 4.51611302 | 6.30E-06 | 0.01850055 |
| 20 | 48778715 | 48778715 | 1 | 20_48778715 | ENSG00000124126 | PREX1 | 0 | INTRON | 4.51601554 | 6.30E-06 | 0.01850587 |
| 7 | 85991959 | 85991959 | 1 | 7_85991959 | ENSG00000236610 | SOCS5P1 | 224825 | Downstream | 4.5158948 | 6.30E-06 | 0.01851002 |
| 16 | 7853878 | 7853878 | 1 | 16_7853878 | ENSG00000260289 | AC093515.1 | 24920 | Downstream | -4.5158891 | 6.31E-06 | 0.01851002 |
| 21 | 43618718 | 43618718 | 1 | 21_43618718 | ENSG00000160207 | HSF2BP | 0 | INTRON | 4.51585831 | 6.31E-06 | 0.01851002 |
| 16 | 772360 | 772360 | 1 | 16_772360 | ENSG00000162006 | MSLNL | 0 | INTRON | 4.51580845 | 6.31E-06 | 0.01851119 |
| 3 | 20533870 | 20533870 | 1 | 3_20533870 | ENSG00000231304 | SGO1-AS1 | 0 | INTRON | 4.51569512 | 6.31E-06 | 0.01851422 |
| 1 | 216860939 | 216860939 | 1 | 1_216860939 | ENSG00000196482 | ESRRG | 0 | INTRON | -4.515684 | 6.31E-06 | 0.01851422 |
| 5 | 1620721 | 1620721 | 1 | 5_1620721 | ENSG00000188002 | AC026412.1 | 0 | INTRON | 4.51566406 | 6.31E-06 | 0.01851422 |
| 1 | 62728044 | 62728044 | 1 | 1_62728044 | ENSG00000235545 | AC103923.1 | 17350 | Downstream | -4.5155804 | 6.31E-06 | 0.01851779 |
| 1 | 10636465 | 10636465 | 1 | 1_10636465 | ENSG00000130940 | CASZ1 | 138 | Downstream | -4.5155502 | 6.32E-06 | 0.01851779 |
| 20 | 50612677 | 50612677 | 1 | 20_50612677 | ENSG00000042062 | RIPOR3 | 0 | INTRON | -4.5153741 | 6.32E-06 | 0.01853 |
| 8 | 139601199 | 139601199 | 1 | 8_139601199 | ENSG00000169427 | KCNK9 | 0 | 3UTR | -4.5152794 | 6.32E-06 | 0.01853283 |
| 13 | 87947664 | 87947664 | 1 | 13_87947664 | ENSG00000232204 | TET1P1 | 55192 | Upstream | -4.5152686 | 6.32E-06 | 0.01853283 |
| 6 | 108087092 | 108087092 | 1 | 6_108087092 | ENSG00000081087 | OSTM1 | 0 | INTRON | 4.51509966 | 6.33E-06 | 0.01854442 |
| 2 | 112676213 | 112676213 | 1 | 2_112676213 | ENSG00000144136 | SLC20A1 | 12388 | Downstream | 4.51498982 | 6.33E-06 | 0.01855084 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 74895168 | 74895168 | 1 | 2_74895168 | ENSG00000159399 | HK2 | 1809 | Downstream | -4.5147365 | 6.34E-06 | 0.01856983 |
| 5 | 125236741 | 125236741 | 1 | 5_125236741 | ENSG00000260192 | LINC02240 | 0 | INTRON | 4.51457207 | 6.34E-06 | 0.01857479 |
| 4 | 12184670 | 12184670 | 1 | 4_12184670 | ENSG00000251210 | LINC02270 | 38774 | Upstream | -4.5145558 | 6.34E-06 | 0.01857479 |
| 22 | 29522232 | 29522232 | 1 | 22_29522232 | ENSG00000100296 | THOC5 | 0 | INTRON | 4.51453459 | 6.35E-06 | 0.01857479 |
| 4 | 136539276 | 136539276 | 1 | 4_136539276 | ENSG00000279749 | AC093875.1 | 13959 | Upstream | 4.51453408 | 6.35E-06 | 0.01857479 |
| 14 | 95463699 | 95463699 | 1 | 14_95463699 | ENSG00000176438 | SYNE3 | 0 | INTRON | 4.51442227 | 6.35E-06 | 0.01857886 |
| 9 | 84266852 | 84266852 | 1 | 9_84266852 | ENSG00000197506 | SLC28A3 | 8604 | Downstream | 4.51441464 | 6.35E-06 | 0.01857886 |
| 10 | 121103046 | 121103046 | 1 | 10_121103046 | ENSG00000236762 | RPL19P16 | 30043 | Downstream | 4.51431545 | 6.35E-06 | 0.01858436 |
| 11 | 104900395 | 104900395 | 1 | 11_104900395 | ENSG00000235505 | CASP17P | 1153 | Downstream | -4.5142581 | 6.35E-06 | 0.0185862 |
| 12 | 15814435 | 15814435 | 1 | 12_15814435 | ENSG00000151491 | EPS8 | 0 | INTRON | 4.5141829 | 6.36E-06 | 0.01858704 |
| 2 | 111363630 | 111363630 | 1 | 2_111363630 | ENSG00000172965 | MIR4435-2HG | 0 | INTRON | -4.5141756 | 6.36E-06 | 0.01858704 |
| 20 | 25505154 | 25505154 | 1 | 20_25505154 | ENSG00000101004 | NINL | 0 | INTRON | -4.5141199 | 6.36E-06 | 0.01858873 |
| 10 | 102286293 | 102286293 | 1 | 10_102286293 | ENSG00000107862 | GBF1 | 0 | INTRON | -4.5138616 | 6.37E-06 | 0.01860565 |
| 7 | 25620538 | 25620538 | 1 | 7_25620538 | ENSG00000223561 | AC005165.1 | 0 | INTRON | 4.51385428 | 6.37E-06 | 0.01860565 |
| 5 | 90061356 | 90061356 | 1 | 5_90061356 | ENSG00000264342 | MIR3660 | 44636 | Upstream | 4.51374666 | 6.37E-06 | 0.0186119 |
| 4 | 57309456 | 57309456 | 1 | 4_57309456 | ENSG00000243920 | RPS26P24 | 43542 | Downstream | -4.5136013 | 6.37E-06 | 0.01862092 |
| 6 | 6195876 | 6195876 | 1 | 6_6195876 | ENSG00000124491 | F13A1 | 0 | EXON | 4.51357114 | 6.37E-06 | 0.01862092 |
| 2 | 13265938 | 13265938 | 1 | 2_13265938 | ENSG00000285876 | AC093912.1 | 0 | INTRON | -4.5134078 | 6.38E-06 | 0.01863159 |
| 1 | 186503384 | 186503384 | 1 | 1_186503384 | ENSG00000229739 | AL096803.2 | 0 | INTRON | 4.51335074 | 6.38E-06 | 0.01863159 |
| 16 | 25312918 | 25312918 | 1 | 16_25312918 | ENSG00000274925 | ZKSCAN2-DT | 51852 | Downstream | -4.5133321 | 6.38E-06 | 0.01863159 |
| 5 | 60279777 | 60279777 | 1 | 5_60279777 | ENSG00000113448 | PDE4D | 0 | INTRON | -4.5133043 | 6.38E-06 | 0.01863159 |
| 13 | 45275872 | 45275872 | 1 | 13_45275872 | ENSG00000188342 | GTF2F2 | 0 | INTRON | 4.51324168 | 6.38E-06 | 0.01863209 |
| 14 | 68487252 | 68487252 | 1 | 14_68487252 | ENSG00000182185 | RAD51B | 0 | INTRON | 4.51322579 | 6.38E-06 | 0.01863209 |
| 14 | 103479939 | 103479939 | 1 | 14_103479939 | ENSG00000075413 | MARK3 | 0 | INTRON | 4.51309569 | 6.39E-06 | 0.01864033 |
| 18 | 54053772 | 54053772 | 1 | 18_54053772 | ENSG00000264296 | AC090666.1 | 88360 | Upstream | -4.5128173 | 6.40E-06 | 0.01866162 |
| 2 | 136795201 | 136795201 | 1 | 2_136795201 | ENSG00000144229 | THSD7B | 0 | INTRON | -4.5127549 | 6.40E-06 | 0.01866392 |
| 4 | 13000489 | 13000489 | 1 | 4_13000489 | ENSG00000283271 | U6 | 50852 | Upstream | 4.51252217 | 6.41E-06 | 0.01868121 |
| 18 | 53659081 | 53659081 | 1 | 18_53659081 | ENSG00000263438 | LINC01919 | 29091 | Downstream | 4.51242273 | 6.41E-06 | 0.01868425 |
| 13 | 91936964 | 91936964 | 1 | 13_91936964 | ENSG00000179399 | GPC5 | 0 | INTRON | 4.51241503 | 6.41E-06 | 0.01868425 |
| 14 | 43859797 | 43859797 | 1 | 14_43859797 | ENSG00000258969 | LINC02307 | 130741 | Downstream | -4.5122948 | 6.41E-06 | 0.01868456 |
| 9 | 87073617 | 87073617 | 1 | 9_87073617 | ENSG00000224887 | AL513318.1 | 10543 | Downstream | 4.5122748 | 6.41E-06 | 0.01868456 |
| 2 | 42500196 | 42500196 | 1 | 2_42500196 | ENSG00000057935 | MTA3 | 0 | INTRON | 4.51226371 | 6.41E-06 | 0.01868456 |
| 18 | 4945159 | 4945159 | 1 | 18_4945159 | ENSG00000266268 | AP005203.1 | 0 | INTRON | 4.51225089 | 6.41E-06 | 0.01868456 |
| 21 | 36193341 | 36193341 | 1 | 21_36193341 | ENSG00000142197 | DOP1B | 0 | INTRON | 4.51222994 | 6.41E-06 | 0.01868456 |
| 17 | 40860539 | 40860539 | 1 | 17_40860539 | ENSG00000265359 | AC004231.3 | 0 | INTRON | -4.5120652 | 6.42E-06 | 0.01869588 |
| 4 | 18153046 | 18153046 | 1 | 4_18153046 | ENSG00000178177 | LCORL | 131170 | Upstream | -4.5120185 | 6.42E-06 | 0.01869681 |
| 10 | 35219423 | 35219423 | 1 | 10_35219423 | ENSG00000233200 | LINC02634 | 470 | Downstream | -4.5118694 | 6.43E-06 | 0.01870549 |
| 20 | 22244572 | 22244572 | 1 | 20_22244572 | ENSG00000225321 | LINC01427 | 18492 | Downstream | 4.51184744 | 6.43E-06 | 0.01870549 |
| 6 | 84265642 | 84265642 | 1 | 6_84265642 | ENSG00000135315 | CEP162 | 37999 | Upstream | 4.51169284 | 6.43E-06 | 0.01871173 |
| 2 | 179991827 | 179991827 | 1 | 2_179991827 | ENSG00000163510 | CWC22 | 0 | INTRON | 4.51164995 | 6.43E-06 | 0.01871173 |
| 2 | 106221983 | 106221983 | 1 | 2_106221983 | ENSG00000273595 | AC092106.2 | 13868 | Downstream | 4.51164401 | 6.43E-06 | 0.01871173 |
| 5 | 4025130 | 4025130 | 1 | 5_4025130 | ENSG00000249994 | AC025187.1 | 8582 | Downstream | 4.51163162 | 6.43E-06 | 0.01871173 |
| 4 | 27238787 | 27238787 | 1 | 4_27238787 | ENSG00000249699 | LINC02261 | 0 | INTRON | -4.5114249 | 6.44E-06 | 0.01872072 |
| 12 | 3676534 | 3676534 | 1 | 12_3676534 | ENSG00000130038 | CRACR2A | 0 | INTRON | -4.5114244 | 6.44E-06 | 0.01872072 |
| 13 | 94173353 | 94173353 | 1 | 13_94173353 | ENSG00000183098 | GPC6 | 0 | INTRON | -4.511421 | 6.44E-06 | 0.01872072 |
| 19 | 45827845 | 45827845 | 1 | 19_45827845 | ENSG00000125755 | SYMPK | 0 | EXON | -4.5113689 | 6.44E-06 | 0.01872115 |
| 4 | 170373279 | 170373279 | 1 | 4_170373279 | ENSG00000251061 | LINC02512 | 968 | Downstream | -4.5113437 | 6.44E-06 | 0.01872115 |
| 3 | 15036255 | 15036255 | 1 | 3_15036255 | ENSG00000177463 | NR2C2 | 0 | INTRON | 4.51128762 | 6.44E-06 | 0.01872291 |
| 13 | 103711087 | 103711087 | 1 | 13_103711087 | ENSG00000230474 | ATP6V1G1P7 | 266119 | Upstream | 4.51119991 | 6.45E-06 | 0.01872745 |
| 13 | 68185589 | 68185589 | 1 | 13_68185589 | ENSG00000234765 | ELL2P3 | 104089 | Downstream | -4.5111353 | 6.45E-06 | 0.01872951 |
| 12 | 113795100 | 113795100 | 1 | 12_113795100 | ENSG00000257231 | DYNLL1P4 | 5293 | Upstream | -4.5111042 | 6.45E-06 | 0.01872951 |
| 18 | 12042138 | 12042138 | 1 | 18_12042138 | ENSG00000266995 | AP001542.1 | 1838 | Upstream | -4.5110025 | 6.45E-06 | 0.01873529 |
| 6 | 24961274 | 24961274 | 1 | 6_24961274 | ENSG00000111913 | RIPOR2 | 0 | INTRON | -4.5108743 | 6.46E-06 | 0.018741 |
| 7 | 149783461 | 149783461 | 1 | 7_149783461 | ENSG00000197558 | SSPO | 0 | INTRON | 4.51086555 | 6.46E-06 | 0.018741 |
| 2 | 135208576 | 135208576 | 1 | 2_135208576 | ENSG00000121988 | ZRANB3 | 0 | INTRON | -4.5107132 | 6.46E-06 | 0.01875127 |
| 6 | 165334422 | 165334422 | 1 | 6_165334422 | ENSG00000112541 | PDE10A | 0 | INTRON | -4.5104811 | 6.47E-06 | 0.01876793 |
| 10 | 23136229 | 23136229 | 1 | 10_23136229 | ENSG00000229932 | YWHAZP3 | 694 | Upstream | 4.51042959 | 6.47E-06 | 0.01876793 |
| 1 | 165656564 | 165656564 | 1 | 1_165656564 | ENSG00000143198 | MGST3 | 0 | INTRON | -4.510396 | 6.47E-06 | 0.01876793 |
| 1 | 31247759 | 31247759 | 1 | 1_31247759 | ENSG00000084628 | NKAIN1 | 7872 | Upstream | 4.5103482 | 6.47E-06 | 0.01876793 |
| 15 | 45836770 | 45836770 | 1 | 15_45836770 | ENSG00000259200 | AC068722.1 | 0 | INTRON | 4.51032209 | 6.47E-06 | 0.01876793 |
| 10 | 122722907 | 122722907 | 1 | 10_122722907 | ENSG00000176584 | DMBT1P1 | 6521 | Upstream | -4.5103079 | 6.47E-06 | 0.01876793 |
| 15 | 29992155 | 29992155 | 1 | 15_29992155 | ENSG00000259749 | NCAPGP2 | 13049 | Upstream | 4.51022491 | 6.48E-06 | 0.0187707 |
| 11 | 108818974 | 108818974 | 1 | 11_108818974 | ENSG00000178105 | DDX10 | 0 | INTRON | -4.510192 | 6.48E-06 | 0.0187707 |
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| 5 | 80719168 | 80719168 | 1 | 5_80719168 | ENSG00000113318 | MSH3 | 0 | INTRON | 4.51007183 | 6.48E-06 | 0.01877366 |
| 15 | 65644370 | 65644370 | 1 | 15_65644370 | ENSG00000074621 | SLC24A1 | 0 | EXON | 4.51006248 | 6.48E-06 | 0.01877366 |
| 15 | 75629021 | 75629021 | 1 | 15_75629021 | ENSG00000169371 | SNUPN | 2552 | Upstream | 4.5098363 | 6.49E-06 | 0.01879049 |
| 12 | 99937617 | 99937617 | 1 | 12_99937617 | ENSG00000185046 | ANKS1B | 0 | INTRON | -4.5097973 | 6.49E-06 | 0.01879074 |
| 6 | 124829100 | 124829100 | 1 | 6_124829100 | ENSG00000236548 | RNF217-AS1 | 0 | INTRON | -4.5097266 | 6.49E-06 | 0.01879105 |
| 22 | 23096001 | 23096001 | 1 | 22_23096001 | ENSG00000128266 | GNAZ | 0 | EXON | -4.5097217 | 6.49E-06 | 0.01879105 |
| 19 | 2122048 | 2122048 | 1 | 19_2122048 | ENSG00000065000 | AP3D1 | 0 | INTRON | 4.50966004 | 6.49E-06 | 0.01879195 |
| 18 | 55957941 | 55957941 | 1 | 18_55957941 | ENSG00000267327 | AC009271.1 | 0 | INTRON | 4.50963934 | 6.49E-06 | 0.01879195 |
| 5 | 107698867 | 107698867 | 1 | 5_107698867 | ENSG00000249959 | AC024587.2 | 524 | Downstream | -4.5095951 | 6.50E-06 | 0.01879267 |
| 7 | 35678565 | 35678565 | 1 | 7_35678565 | ENSG00000122557 | HERPUD2 | 0 | INTRON | 4.50927955 | 6.50E-06 | 0.01881744 |
| 12 | 97146398 | 97146398 | 1 | 12_97146398 | ENSG00000258131 | AC007656.2 | 0 | INTRON | -4.5091369 | 6.51E-06 | 0.01882386 |
| 3 | 108419121 | 108419121 | 1 | 3_108419121 | ENSG00000144821 | MYH15 | 0 | INTRON | 4.50912969 | 6.51E-06 | 0.01882386 |
| 1 | 208059502 | 208059502 | 1 | 1_208059502 | ENSG00000076356 | PLXNA2 | 0 | INTRON | 4.50909898 | 6.51E-06 | 0.01882386 |
| 12 | 4659724 | 4659724 | 1 | 12_4659724 | ENSG00000139180 | NDUFA9 | 0 | INTRON | 4.50891317 | 6.52E-06 | 0.01883275 |
| 3 | 64339492 | 64339492 | 1 | 3_64339492 | ENSG00000163637 | PRICKLE2 | 0 | INTRON | -4.5089067 | 6.52E-06 | 0.01883275 |
| 18 | 72236942 | 72236942 | 1 | 18_72236942 | ENSG00000265995 | AC069114.1 | 292365 | Upstream | -4.5088906 | 6.52E-06 | 0.01883275 |
| 1 | 168235350 | 168235350 | 1 | 1_168235350 | ENSG00000213064 | SFT2D2 | 0 | INTRON | -4.5088046 | 6.52E-06 | 0.01883719 |
| 4 | 67892789 | 67892789 | 1 | 4_67892789 | ENSG00000248049 | UBA6-AS1 | 0 | INTRON | -4.5087186 | 6.52E-06 | 0.01883879 |
| 4 | 177459387 | 177459387 | 1 | 4_177459387 | ENSG00000250131 | AC078881.1 | 0 | INTRON | 4.50869412 | 6.52E-06 | 0.01883879 |
| 17 | 4241806 | 4241806 | 1 | 17_4241806 | ENSG00000185722 | ANKFY1 | 0 | INTRON | 4.50867028 | 6.52E-06 | 0.01883879 |
| 4 | 7335547 | 7335547 | 1 | 4_7335547 | ENSG00000184985 | SORCS2 | 0 | INTRON | 4.50864249 | 6.52E-06 | 0.01883879 |
| 1 | 210909558 | 210909558 | 1 | 1_210909558 | ENSG00000284299 | AL590132.1 | 0 | INTRON | 4.50859902 | 6.53E-06 | 0.01883946 |
| 5 | 131350984 | 131350984 | 1 | 5_131350984 | ENSG00000158985 | CDC42SE2 | 0 | INTRON | -4.5085097 | 6.53E-06 | 0.01884419 |
| 4 | 55093937 | 55093937 | 1 | 4_55093937 | ENSG00000128052 | KDR | 0 | INTRON | 4.50837747 | 6.53E-06 | 0.01885274 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 17 | 40424011 | 40424011 | 1 | 17_40424011 | ENSG00000131747 | TOP2A | 6115 | Upstream | 4.5083017 | 6.53E-06 | 0.01885542 |
| 20 | 54365091 | 54365091 | 1 | 20_54365091 | ENSG00000286229 | AL133335.1 | 95549 | Downstream | 4.5082753 | 6.54E-06 | 0.01885542 |
| 16 | 21873215 | 21873215 | 1 | 16_21873215 | ENSG00000185864 | NPIPB4 | 0 | INTRON | 4.50816199 | 6.54E-06 | 0.01886229 |
| 5 | 173435568 | 173435568 | 1 | 5_173435568 | ENSG00000253968 | AC016573.1 | 0 | INTRON | -4.5079637 | 6.55E-06 | 0.01887672 |
| X | 38885442 | 38885442 | 1 | X_38885442 | ENSG00000165175 | MID1IP1 | 78905 | Downstream | 4.50790425 | 6.55E-06 | 0.01887881 |
| X | 1688672 | 1688672 | 1 | X_1688672 | ENSG00000223511 | AL683807.1 | 43911 | Upstream | -4.5076478 | 6.56E-06 | 0.01889331 |
| 5 | 60788693 | 60788693 | 1 | 5_60788693 | ENSG00000164181 | ELOVL7 | 0 | INTRON | 4.50762629 | 6.56E-06 | 0.01889331 |
| 15 | 96582594 | 96582594 | 1 | 15_96582594 | ENSG00000259340 | AC110588.1 | 31077 | Downstream | 4.50760289 | 6.56E-06 | 0.01889331 |
| 15 | 45427084 | 45427084 | 1 | 15_45427084 | ENSG00000166920 | C15orf48 | 3444 | Upstream | -4.5075976 | 6.56E-06 | 0.01889331 |
| 6 | 165230878 | 165230878 | 1 | 6_165230878 | ENSG00000112539 | C6orf118 | 48785 | Downstream | 4.50750034 | 6.56E-06 | 0.01889876 |
| 19 | 20769000 | 20769000 | 1 | 19_20769000 | ENSG00000160229 | ZNF66 | 7303 | Upstream | -4.5074137 | 6.56E-06 | 0.01890258 |
| 1 | 158643902 | 158643902 | 1 | 1_158643902 | ENSG00000163554 | SPTA1 | 0 | INTRON | 4.50738406 | 6.56E-06 | 0.01890258 |
| 6 | 29346180 | 29346180 | 1 | 6_29346180 | ENSG00000243729 | OR5V1 | 7568 | Downstream | 4.50731495 | 6.57E-06 | 0.01890258 |
| 9 | 16777880 | 16777880 | 1 | 9_16777880 | ENSG00000173068 | BNC2 | 0 | INTRON | 4.50731373 | 6.57E-06 | 0.01890258 |
| 10 | 2336902 | 2336902 | 1 | 10_2336902 | ENSG00000234556 | LINC00701 | 21827 | Upstream | -4.507266 | 6.57E-06 | 0.01890364 |
| 12 | 105578970 | 105578970 | 1 | 12_105578970 | ENSG00000286520 | AC079851.1 | 120197 | Downstream | -4.5071826 | 6.57E-06 | 0.01890787 |
| 8 | 103373661 | 103373661 | 1 | 8_103373661 | ENSG00000164932 | CTHRC1 | 0 | INTRON | -4.5070391 | 6.57E-06 | 0.01891745 |
| 4 | 99930758 | 99930758 | 1 | 4_99930758 | ENSG00000164031 | DNAJB14 | 0 | INTRON | -4.5069502 | 6.58E-06 | 0.01891875 |
| 20 | 34275333 | 34275333 | 1 | 20_34275333 | ENSG00000250917 | AL035458.2 | 0 | INTRON | -4.5069449 | 6.58E-06 | 0.01891875 |
| 10 | 108977482 | 108977482 | 1 | 10_108977482 | ENSG00000222436 | RN7SKP278 | 36172 | Upstream | 4.50691692 | 6.58E-06 | 0.01891875 |
| 3 | 70800521 | 70800521 | 1 | 3_70800521 | ENSG00000206939 | RNU6-281P | 7828 | Upstream | -4.5067462 | 6.58E-06 | 0.0189217 |
| 7 | 4915010 | 4915010 | 1 | 7_4915010 | ENSG00000136297 | MMD2 | 0 | INTRON | 4.50674592 | 6.58E-06 | 0.0189217 |
| 2 | 199048005 | 199048005 | 1 | 2_199048005 | ENSG00000231557 | AC020718.1 | 0 | INTRON | -4.5067138 | 6.58E-06 | 0.0189217 |
| 17 | 73389859 | 73389859 | 1 | 17_73389859 | ENSG00000069188 | SDK2 | 0 | INTRON | 4.50670737 | 6.58E-06 | 0.0189217 |
| 7 | 36633730 | 36633730 | 1 | 7_36633730 | ENSG00000136250 | AOAH | 0 | INTRON | 4.50667674 | 6.59E-06 | 0.0189217 |
| 5 | 126952234 | 126952234 | 1 | 5_126952234 | ENSG00000173926 | 3-Mar | 0 | INTRON | -4.5066686 | 6.59E-06 | 0.0189217 |
| 1 | 67837839 | 67837839 | 1 | 1_67837839 | ENSG00000232284 | GNG12-AS1 | 0 | INTRON | 4.50644903 | 6.59E-06 | 0.01893506 |
| 5 | 134080488 | 134080488 | 1 | 5_134080488 | ENSG00000271128 | AC008608.1 | 1425 | Downstream | -4.5064471 | 6.59E-06 | 0.01893506 |
| 10 | 84411388 | 84411388 | 1 | 10_84411388 | ENSG00000107771 | CCSER2 | 0 | INTRON | 4.50639703 | 6.59E-06 | 0.01893596 |
| 12 | 82840840 | 82840840 | 1 | 12_82840840 | ENSG00000179104 | TMTC2 | 0 | INTRON | 4.50636536 | 6.59E-06 | 0.01893596 |
| 9 | 80271840 | 80271840 | 1 | 9_80271840 | ENSG00000236521 | NPAP1P4 | 85188 | Downstream | 4.50631306 | 6.60E-06 | 0.01893743 |
| 18 | 61869090 | 61869090 | 1 | 18_61869090 | ENSG00000176641 | RNF152 | 0 | INTRON | 4.50625236 | 6.60E-06 | 0.01893965 |
| 10 | 43284164 | 43284164 | 1 | 10_43284164 | ENSG00000198915 | RASGEF1A | 17245 | Upstream | 4.50598629 | 6.61E-06 | 0.0189602 |
| 7 | 137907461 | 137907461 | 1 | 7_137907461 | ENSG00000182158 | CREB3L2 | 0 | INTRON | 4.50591112 | 6.61E-06 | 0.0189618 |
| 1 | 33611022 | 33611022 | 1 | 1_33611022 | ENSG00000121904 | CSMD2 | 0 | INTRON | 4.50589678 | 6.61E-06 | 0.0189618 |
| 8 | 11126361 | 11126361 | 1 | 8_11126361 | ENSG00000171044 | XKR6 | 0 | INTRON | 4.50565713 | 6.62E-06 | 0.01898001 |
| 14 | 27098131 | 27098131 | 1 | 14_27098131 | ENSG00000258081 | AL110292.1 | 0 | INTRON | 4.50557078 | 6.62E-06 | 0.01898454 |
| 11 | 71222601 | 71222601 | 1 | 11_71222601 | ENSG00000162105 | SHANK2 | 0 | INTRON | 4.50551102 | 6.62E-06 | 0.01898667 |
| 4 | 108094872 | 108094872 | 1 | 4_108094872 | ENSG00000138795 | LEF1 | 0 | INTRON | 4.50546032 | 6.62E-06 | 0.01898667 |
| 19 | 20066198 | 20066198 | 1 | 19_20066198 | ENSG00000269154 | BNIP3P13 | 2878 | Downstream | -4.5054396 | 6.62E-06 | 0.01898667 |
| 7 | 21186984 | 21186984 | 1 | 7_21186984 | ENSG00000243633 | RN7SL542P | 28552 | Downstream | -4.505347 | 6.63E-06 | 0.01899175 |
| 8 | 50874753 | 50874753 | 1 | 8_50874753 | ENSG00000253340 | AC087272.1 | 14691 | Downstream | -4.5052782 | 6.63E-06 | 0.01899471 |
| 1 | 24779426 | 24779426 | 1 | 1_24779426 | ENSG00000169504 | CLIC4 | 0 | INTRON | -4.5051595 | 6.63E-06 | 0.01899915 |
| 15 | 83911888 | 83911888 | 1 | 15_83911888 | ENSG00000156218 | ADAMTSL3 | 0 | INTRON | -4.5051571 | 6.63E-06 | 0.01899915 |
| 7 | 153799069 | 153799069 | 1 | 7_153799069 | ENSG00000287744 | AC005998.1 | 50083 | Upstream | -4.5050512 | 6.64E-06 | 0.01900541 |
| 19 | 44692103 | 44692103 | 1 | 19_44692103 | ENSG00000266903 | AC243964.3 | 0 | INTRON | 4.50482825 | 6.64E-06 | 0.01902218 |
| 12 | 111282043 | 111282043 | 1 | 12_111282043 | ENSG00000111249 | CUX2 | 0 | INTRON | 4.50467086 | 6.65E-06 | 0.01903308 |
| 1 | 159532243 | 159532243 | 1 | 1_159532243 | ENSG00000184155 | OR10J5 | 2834 | Downstream | 4.50459818 | 6.65E-06 | 0.01903639 |
| 3 | 32120020 | 32120020 | 1 | 3_32120020 | ENSG00000152642 | GPD1L | 0 | INTRON | 4.50427918 | 6.66E-06 | 0.01905527 |
| 20 | 8260822 | 8260822 | 1 | 20_8260822 | ENSG00000182621 | PLCB1 | 0 | INTRON | 4.50423587 | 6.66E-06 | 0.01905527 |
| X | 118513808 | 118513808 | 1 | X_118513808 | ENSG00000147251 | DOCK11 | 0 | INTRON | 4.50421297 | 6.66E-06 | 0.01905527 |
| 22 | 21812912 | 21812912 | 1 | 22_21812912 | ENSG00000100030 | MAPK1 | 0 | INTRON | 4.50418362 | 6.66E-06 | 0.01905527 |
| 1 | 213280122 | 213280122 | 1 | 1_213280122 | ENSG00000136643 | RPS6KC1 | 5348 | Downstream | 4.50417282 | 6.66E-06 | 0.01905527 |
| 6 | 61634686 | 61634686 | 1 | 6_61634686 | ENSG00000250686 | KHDRBS2-OT | 0 | INTRON | -4.5041416 | 6.66E-06 | 0.01905527 |
| 5 | 178484682 | 178484682 | 1 | 5_178484682 | ENSG00000050767 | COL23A1 | 0 | INTRON | 4.50413775 | 6.66E-06 | 0.01905527 |
| 18 | 40687896 | 40687896 | 1 | 18_40687896 | ENSG00000286844 | AC068688.1 | 440529 | Downstream | -4.5039011 | 6.67E-06 | 0.01906286 |
| 14 | 95686134 | 95686134 | 1 | 14_95686134 | ENSG00000259084 | AL133467.3 | 0 | INTRON | 4.50389721 | 6.67E-06 | 0.01906286 |
| 20 | 43108517 | 43108517 | 1 | 20_43108517 | ENSG00000196090 | PTPRT | 0 | INTRON | -4.503861 | 6.67E-06 | 0.01906286 |
| 9 | 15863258 | 15863258 | 1 | 9_15863258 | ENSG00000164989 | CCDC171 | 0 | INTRON | 4.50384207 | 6.67E-06 | 0.01906286 |
| 13 | 79848942 | 79848942 | 1 | 13_79848942 | ENSG00000229175 | LINC00382 | 23643 | Upstream | -4.5038198 | 6.67E-06 | 0.01906286 |
| 2 | 7875871 | 7875871 | 1 | 2_7875871 | ENSG00000226506 | AC007463.1 | 10895 | Downstream | 4.5037915 | 6.68E-06 | 0.01906286 |
| 2 | 97760755 | 97760755 | 1 | 2_97760755 | ENSG00000075568 | TMEM131 | 0 | EXON | 4.50375398 | 6.68E-06 | 0.01906286 |
| 19 | 8729693 | 8729693 | 1 | 19_8729693 | ENSG00000181733 | OR2Z1 | 0 | INTRON | -4.5037309 | 6.68E-06 | 0.01906286 |
| 2 | 31224010 | 31224010 | 1 | 2_31224010 | ENSG00000214711 | CAPN14 | 0 | INTRON | -4.5037281 | 6.68E-06 | 0.01906286 |
| 1 | 119558730 | 119558730 | 1 | 1_119558730 | ENSG00000239873 | GAPDHP27 | 24 | Downstream | 4.50369648 | 6.68E-06 | 0.01906286 |
| 16 | 28001358 | 28001358 | 1 | 16_28001358 | ENSG00000169181 | GSG1L | 0 | INTRON | -4.5036601 | 6.68E-06 | 0.01906293 |
| 22 | 20606461 | 20606461 | 1 | 22_20606461 | ENSG00000223553 | SMPD4P1 | 0 | INTRON | 4.50359192 | 6.68E-06 | 0.01906574 |
| X | 24851282 | 24851282 | 1 | X_24851282 | ENSG00000101868 | POLA1 | 0 | INTRON | -4.5035296 | 6.68E-06 | 0.01906574 |
| 16 | 4338158 | 4338158 | 1 | 16_4338158 | ENSG00000126603 | GLIS2 | 0 | 3UTR | -4.5035219 | 6.68E-06 | 0.01906574 |
| 2 | 237435059 | 237435059 | 1 | 2_237435059 | ENSG00000222032 | AC112721.2 | 237 | Upstream | -4.5031351 | 6.70E-06 | 0.01909049 |
| 11 | 126842098 | 126842098 | 1 | 11_126842098 | ENSG00000149571 | KIRREL3 | 0 | INTRON | 4.50303886 | 6.70E-06 | 0.01909049 |
| 20 | 23111741 | 23111741 | 1 | 20_23111741 | ENSG00000233746 | LINC00656 | 13326 | Downstream | 4.50301702 | 6.70E-06 | 0.01909049 |
| 8 | 105335251 | 105335251 | 1 | 8_105335251 | ENSG00000169946 | ZFPM2 | 0 | INTRON | 4.50299292 | 6.70E-06 | 0.01909049 |
| 11 | 125679414 | 125679414 | 1 | 11_125679414 | ENSG00000134940 | ACRV1 | 0 | INTRON | 4.50297022 | 6.70E-06 | 0.01909049 |
| 6 | 47192382 | 47192382 | 1 | 6_47192382 | ENSG00000146072 | TNFRSF21 | 39149 | Downstream | 4.50295857 | 6.70E-06 | 0.01909049 |
| 12 | 69579777 | 69579777 | 1 | 12_69579777 | ENSG00000166225 | FRS2 | 0 | 3UTR | -4.5029483 | 6.70E-06 | 0.01909049 |
| 12 | 10836205 | 10836205 | 1 | 12_10836205 | ENSG00000231887 | PRH1 | 0 | INTRON | 4.50294506 | 6.70E-06 | 0.01909049 |
| 1 | 51533972 | 51533972 | 1 | 1_51533972 | ENSG00000227070 | AC104170.1 | 0 | INTRON | -4.5029261 | 6.70E-06 | 0.01909049 |
| 21 | 9838650 | 9838650 | 1 | 21_9838650 | ENSG00000280081 | LINC01667 | 639 | Upstream | 4.5028555 | 6.70E-06 | 0.01909364 |
| 8 | 141561248 | 141561248 | 1 | 8_141561248 | ENSG00000287677 | AC025839.1 | 20435 | Upstream | 4.50270996 | 6.71E-06 | 0.01910198 |
| 6 | 25123392 | 25123392 | 1 | 6_25123392 | ENSG00000168405 | CMAHP | 0 | INTRON | 4.50269159 | 6.71E-06 | 0.01910198 |
| 17 | 71476931 | 71476931 | 1 | 17_71476931 | ENSG00000225818 | AC118653.1 | 119406 | Upstream | -4.5025714 | 6.71E-06 | 0.01910702 |
| 9 | 105582021 | 105582021 | 1 | 9_105582021 | ENSG00000106692 | FKTN | 0 | INTRON | 4.5025644 | 6.71E-06 | 0.01910702 |
| 15 | 63434001 | 63434001 | 1 | 15_63434001 | ENSG00000259459 | LINC02568 | 0 | INTRON | -4.502502 | 6.72E-06 | 0.01910753 |
| 2 | 105128884 | 105128884 | 1 | 2_105128884 | ENSG00000226508 | LINC01918 | 15228 | Upstream | 4.50245469 | 6.72E-06 | 0.01910753 |
| 11 | 84399650 | 84399650 | 1 | 11_84399650 | ENSG00000150672 | DLG2 | 0 | INTRON | 4.50245226 | 6.72E-06 | 0.01910753 |
| 5 | 82365338 | 82365338 | 1 | 5_82365338 | ENSG00000205464 | ATP6AP1L | 0 | INTRON | 4.50240752 | 6.72E-06 | 0.01910835 |
| 8 | 2930059 | 2930059 | 1 | 8_2930059 | ENSG00000253853 | AC246817.1 | 3370 | Downstream | -4.5023132 | 6.72E-06 | 0.01910854 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | 119706015 | 119706015 | 1 | 6_119706015 | ENSG00000265725 | MIR3144 | 309163 | Upstream | -4.5022645 | 6.72E-06 | 0.01910854 |
| 2 | 62772056 | 62772056 | 1 | 2_62772056 | ENSG00000115504 | EHBP1 | 0 | EXON | -4.5022489 | 6.72E-06 | 0.01910854 |
| 7 | 92631763 | 92631763 | 1 | 7_92631763 | ENSG00000105810 | CDK6 | 0 | INTRON | -4.5022485 | 6.72E-06 | 0.01910854 |
| 19 | 36349025 | 36349025 | 1 | 19_36349025 | ENSG00000142065 | ZFP14 | 0 | INTRON | 4.50222798 | 6.72E-06 | 0.01910854 |
| 5 | 109142894 | 109142894 | 1 | 5_109142894 | ENSG00000151422 | FER | 0 | INTRON | -4.502144 | 6.73E-06 | 0.01911063 |
| 18 | 5471549 | 5471549 | 1 | 18_5471549 | ENSG00000082397 | EPB41L3 | 0 | INTRON | 4.50211068 | 6.73E-06 | 0.01911063 |
| 13 | 111476760 | 111476760 | 1 | 13_111476760 | ENSG00000204398 | AL359649.1 | 111440 | Upstream | -4.5020821 | 6.73E-06 | 0.01911063 |
| 1 | 226590759 | 226590759 | 1 | 1_226590759 | ENSG00000203685 | STUM | 0 | INTRON | 4.50205552 | 6.73E-06 | 0.01911063 |
| 9 | 81081360 | 81081360 | 1 | 9_81081360 | ENSG00000226798 | AL138749.1 | 210065 | Upstream | -4.5020027 | 6.73E-06 | 0.01911063 |
| 4 | 11450767 | 11450767 | 1 | 4_11450767 | ENSG00000287778 | AC006230.1 | 0 | INTRON | 4.50198703 | 6.73E-06 | 0.01911063 |
| 10 | 68988154 | 68988154 | 1 | 10_68988154 | ENSG00000198954 | KIF1BP | 566 | Upstream | 4.50195652 | 6.73E-06 | 0.01911063 |
| 2 | 132768796 | 132768796 | 1 | 2_132768796 | ENSG00000176771 | NCKAP5 | 0 | INTRON | 4.50188075 | 6.74E-06 | 0.01911296 |
| 1 | 156778868 | 156778868 | 1 | 1_156778868 | ENSG00000143294 | PRCC | 0 | INTRON | 4.50185972 | 6.74E-06 | 0.01911296 |
| 4 | 166500058 | 166500058 | 1 | 4_166500058 | ENSG00000249675 | AC097487.1 | 0 | INTRON | 4.50175098 | 6.74E-06 | 0.01911757 |
| 22 | 46095476 | 46095476 | 1 | 22_46095476 | ENSG00000197182 | MIRLET7BHG | 0 | INTRON | -4.5017245 | 6.74E-06 | 0.01911757 |
| 1 | 24581336 | 24581336 | 1 | 1_24581336 | ENSG00000184454 | NCMAP | 0 | INTRON | 4.50169479 | 6.74E-06 | 0.01911757 |
| 9 | 85652642 | 85652642 | 1 | 9_85652642 | ENSG00000135049 | AGTPBP1 | 0 | INTRON | -4.5016668 | 6.74E-06 | 0.01911757 |
| 5 | 19968423 | 19968423 | 1 | 5_19968423 | ENSG00000145526 | CDH18 | 0 | INTRON | -4.5014039 | 6.75E-06 | 0.0191325 |
| 1 | 167653288 | 167653288 | 1 | 1_167653288 | ENSG00000198771 | RCSD1 | 0 | INTRON | 4.50139136 | 6.75E-06 | 0.0191325 |
| 4 | 94661333 | 94661333 | 1 | 4_94661333 | ENSG00000163110 | PDLIM5 | 0 | INTRON | 4.50136235 | 6.75E-06 | 0.0191325 |
| 3 | 74585594 | 74585594 | 1 | 3_74585594 | ENSG00000113805 | CNTN3 | 64454 | Upstream | 4.50135928 | 6.75E-06 | 0.0191325 |
| 2 | 15316587 | 15316587 | 1 | 2_15316587 | ENSG00000151779 | NBAS | 0 | INTRON | 4.50125629 | 6.76E-06 | 0.01913793 |
| 4 | 114147824 | 114147824 | 1 | 4_114147824 | ENSG00000248716 | AC093815.1 | 43599 | Downstream | 4.50122817 | 6.76E-06 | 0.01913793 |
| 6 | 46746284 | 46746284 | 1 | 6_46746284 | ENSG00000230062 | ANKRD66 | 632 | Upstream | 4.50116873 | 6.76E-06 | 0.0191401 |
| 3 | 109816517 | 109816517 | 1 | 3_109816517 | ENSG00000242029 | AC078980.1 | 5656 | Downstream | -4.5010152 | 6.76E-06 | 0.01915075 |
| 20 | 33316178 | 33316178 | 1 | 20_33316178 | ENSG00000233146 | BPIFB5P | 690 | Upstream | -4.5008701 | 6.77E-06 | 0.01915728 |
| 10 | 46833194 | 46833194 | 1 | 10_46833194 | ENSG00000243289 | AGAP13P | 718 | Downstream | -4.5008605 | 6.77E-06 | 0.01915728 |
| 19 | 19344843 | 19344843 | 1 | 19_19344843 | ENSG00000129933 | MAU2 | 0 | EXON | 4.50077128 | 6.77E-06 | 0.01915728 |
| 8 | 9791497 | 9791497 | 1 | 8_9791497 | ENSG00000173273 | TNKS | 9151 | Downstream | 4.50076904 | 6.77E-06 | 0.01915728 |
| 9 | 10199455 | 10199455 | 1 | 9_10199455 | ENSG00000153707 | PTPRD | 0 | INTRON | -4.500766 | 6.77E-06 | 0.01915728 |
| 5 | 96179802 | 96179802 | 1 | 5_96179802 | ENSG00000250551 | MIR583HG | 0 | INTRON | 4.50025861 | 6.79E-06 | 0.01919806 |
| 2 | 162044477 | 162044477 | 1 | 2_162044477 | ENSG00000197635 | DPP4 | 0 | INTRON | 4.50024326 | 6.79E-06 | 0.01919806 |
| 13 | 84214625 | 84214625 | 1 | 13_84214625 | ENSG00000288016 | AL162493.1 | 0 | INTRON | -4.5001131 | 6.79E-06 | 0.01920463 |
| 3 | 69647448 | 69647448 | 1 | 3_69647448 | ENSG00000241667 | AC104445.1 | 54327 | Downstream | -4.5000999 | 6.79E-06 | 0.01920463 |
| 8 | 88387020 | 88387020 | 1 | 8_88387020 | ENSG00000253553 | AC090578.1 | 0 | INTRON | 4.49997856 | 6.80E-06 | 0.01921149 |
| 11 | 116699147 | 116699147 | 1 | 11_116699147 | ENSG00000237937 | LINC02702 | 40852 | Downstream | 4.4999534 | 6.80E-06 | 0.01921149 |
| Y | 7657924 | 7657924 | 1 | Y_7657924 | ENSG00000275280 | AC007274.3 | 572 | Downstream | -4.4998135 | 6.80E-06 | 0.01922094 |
| 11 | 123454387 | 123454387 | 1 | 11_123454387 | ENSG00000023171 | GRAMD1B | 0 | INTRON | 4.49971613 | 6.80E-06 | 0.01922394 |
| X | 104017882 | 104017882 | 1 | X_104017882 | ENSG00000123569 | H2BFWT | 4195 | Upstream | 4.49968037 | 6.81E-06 | 0.01922394 |
| 21 | 18504504 | 18504504 | 1 | 21_18504504 | ENSG00000228708 | AL109763.1 | 17905 | Upstream | 4.49967443 | 6.81E-06 | 0.01922394 |
| 3 | 26184842 | 26184842 | 1 | 3_26184842 | ENSG00000237603 | HMGB3P12 | 31479 | Upstream | 4.49954577 | 6.81E-06 | 0.01923239 |
| 9 | 134648881 | 134648881 | 1 | 9_134648881 | ENSG00000130635 | COL5A1 | 0 | INTRON | 4.49942503 | 6.81E-06 | 0.01923651 |
| 17 | 77132060 | 77132060 | 1 | 17_77132060 | ENSG00000129657 | SEC14L1 | 0 | INTRON | 4.49941479 | 6.81E-06 | 0.01923651 |
| 15 | 41735064 | 41735064 | 1 | 15_41735064 | ENSG00000174197 | MGA | 0 | INTRON | -4.4993917 | 6.81E-06 | 0.01923651 |
| 9 | 91932760 | 91932760 | 1 | 9_91932760 | ENSG00000169071 | ROR2 | 0 | INTRON | 4.49935905 | 6.82E-06 | 0.01923651 |
| 7 | 47310623 | 47310623 | 1 | 7_47310623 | ENSG00000136205 | TNS3 | 0 | INTRON | 4.49927199 | 6.82E-06 | 0.0192412 |
| 7 | 127633032 | 127633032 | 1 | 7_127633032 | ENSG00000240790 | AC073934.1 | 11652 | Downstream | 4.49910139 | 6.82E-06 | 0.01925345 |
| 1 | 18462856 | 18462856 | 1 | 1_18462856 | ENSG00000179023 | KLHDC7A | 18125 | Upstream | 4.4989834 | 6.83E-06 | 0.01926095 |
| 21 | 18119900 | 18119900 | 1 | 21_18119900 | ENSG00000154645 | CHODL | 0 | INTRON | 4.49879054 | 6.83E-06 | 0.01927523 |
| 14 | 33447427 | 33447427 | 1 | 14_33447427 | ENSG00000151322 | NPAS3 | 0 | INTRON | -4.4987009 | 6.84E-06 | 0.01927835 |
| 14 | 93057581 | 93057581 | 1 | 14_93057581 | ENSG00000100605 | ITPK1 | 0 | INTRON | 4.49867173 | 6.84E-06 | 0.01927835 |
| 10 | 101894485 | 101894485 | 1 | 10_101894485 | ENSG00000120029 | ARMH3 | 0 | INTRON | 4.49860739 | 6.84E-06 | 0.01927835 |
| 12 | 130759642 | 130759642 | 1 | 12_130759642 | ENSG00000279650 | AC073912.3 | 16051 | Downstream | 4.49858752 | 6.84E-06 | 0.01927835 |
| 16 | 58706366 | 58706366 | 1 | 16_58706366 | ENSG00000279889 | AC012183.1 | 69 | Upstream | 4.49855629 | 6.84E-06 | 0.01927835 |
| 10 | 2909851 | 2909851 | 1 | 10_2909851 | ENSG00000231743 | AC026396.1 | 26169 | Upstream | -4.4985354 | 6.84E-06 | 0.01927835 |
| 14 | 33693929 | 33693929 | 1 | 14_33693929 | ENSG00000151322 | NPAS3 | 0 | INTRON | -4.4985096 | 6.84E-06 | 0.01927835 |
| 11 | 10999570 | 10999570 | 1 | 11_10999570 | ENSG00000254401 | LINC02752 | 21312 | Upstream | 4.49843088 | 6.85E-06 | 0.01928229 |
| 10 | 91754967 | 91754967 | 1 | 10_91754967 | ENSG00000228759 | FAF2P1 | 10931 | Downstream | 4.49837361 | 6.85E-06 | 0.01928427 |
| 5 | 61227449 | 61227449 | 1 | 5_61227449 | ENSG00000249279 | LINC02057 | 0 | INTRON | 4.49833867 | 6.85E-06 | 0.01928427 |
| 16 | 31968344 | 31968344 | 1 | 16_31968344 | ENSG00000260218 | AC034105.4 | 4265 | Downstream | -4.4982352 | 6.85E-06 | 0.01929047 |
| 8 | 123315772 | 123315772 | 1 | 8_123315772 | ENSG00000156802 | ATAD2 | 4077 | Downstream | 4.49814856 | 6.85E-06 | 0.01929099 |
| 10 | 56437516 | 56437516 | 1 | 10_56437516 | ENSG00000287016 | AC010996.1 | 72802 | Downstream | -4.4981281 | 6.86E-06 | 0.01929099 |
| 5 | 98590365 | 98590365 | 1 | 5_98590365 | ENSG00000251102 | CTBP2P4 | 13105 | Downstream | 4.49812388 | 6.86E-06 | 0.01929099 |
| 2 | 201659828 | 201659828 | 1 | 2_201659828 | ENSG00000082126 | MPP4 | 0 | INTRON | 4.49806419 | 6.86E-06 | 0.01929322 |
| 8 | 98091006 | 98091006 | 1 | 8_98091006 | ENSG00000177459 | ERICH5 | 0 | INTRON | 4.49799775 | 6.86E-06 | 0.01929568 |
| 2 | 45074830 | 45074830 | 1 | 2_45074830 | ENSG00000231156 | AC093702.1 | 61162 | Upstream | 4.49796672 | 6.86E-06 | 0.01929568 |
| 18 | 64398352 | 64398352 | 1 | 18_64398352 | ENSG00000267134 | LINC01924 | 0 | INTRON | -4.4979175 | 6.86E-06 | 0.01929695 |
| 2 | 136474363 | 136474363 | 1 | 2_136474363 | ENSG00000229568 | SMC4P1 | 70348 | Upstream | -4.4978419 | 6.86E-06 | 0.01930063 |
| 6 | 141472206 | 141472206 | 1 | 6_141472206 | ENSG00000222764 | RN7SKP106 | 13934 | Downstream | -4.4977734 | 6.87E-06 | 0.01930366 |
| 13 | 105285268 | 105285268 | 1 | 13_105285268 | ENSG00000286929 | AL138954.1 | 125547 | Upstream | -4.497673 | 6.87E-06 | 0.01930958 |
| 9 | 76374457 | 76374457 | 1 | 9_76374457 | ENSG00000135002 | RFK | 11068 | Downstream | 4.49757995 | 6.87E-06 | 0.01931484 |
| 6 | 8638242 | 8638242 | 1 | 6_8638242 | ENSG00000285219 | HULC | 0 | INTRON | 4.49750361 | 6.88E-06 | 0.01931859 |
| 8 | 14487748 | 14487748 | 1 | 8_14487748 | ENSG00000185053 | SGCZ | 0 | INTRON | -4.4974098 | 6.88E-06 | 0.01932162 |
| 6 | 144280368 | 144280368 | 1 | 6_144280368 | ENSG00000152818 | UTRN | 5332 | Upstream | 4.49739999 | 6.88E-06 | 0.01932162 |
| 9 | 67627820 | 67627820 | 1 | 9_67627820 | ENSG00000275904 | Y_RNA | 69255 | Upstream | -4.4972978 | 6.88E-06 | 0.01932772 |
| 3 | 25505068 | 25505068 | 1 | 3_25505068 | ENSG00000077092 | RARB | 0 | INTRON | -4.4971927 | 6.89E-06 | 0.01933205 |
| 4 | 127445836 | 127445836 | 1 | 4_127445836 | ENSG00000248491 | AC093772.1 | 0 | INTRON | 4.49717994 | 6.89E-06 | 0.01933205 |
| 6 | 163990710 | 163990710 | 1 | 6_163990710 | ENSG00000235538 | AL078602.1 | 0 | INTRON | 4.49713974 | 6.89E-06 | 0.01933251 |
| 2 | 20984972 | 20984972 | 1 | 2_20984972 | ENSG00000261012 | AC115619.1 | 14340 | Downstream | 4.49705714 | 6.89E-06 | 0.01933426 |
| 17 | 78110547 | 78110547 | 1 | 17_78110547 | ENSG00000141524 | TMC6 | 0 | 3UTR | 4.49703179 | 6.89E-06 | 0.01933426 |
| 14 | 89639213 | 89639213 | 1 | 14_89639213 | ENSG00000258792 | AL137230.1 | 0 | INTRON | -4.4969911 | 6.89E-06 | 0.01933426 |
| 7 | 138039024 | 138039024 | 1 | 7_138039024 | ENSG00000122787 | AKR1D1 | 0 | INTRON | 4.49695496 | 6.89E-06 | 0.01933426 |
| X | 1088578 | 1088578 | 1 | X_1088578 | ENSG00000225661 | RPL14P5 | 78477 | Upstream | 4.49694509 | 6.89E-06 | 0.01933426 |
| 15 | 81255669 | 81255669 | 1 | 15_81255669 | ENSG00000172349 | IL16 | 0 | INTRON | 4.49689715 | 6.90E-06 | 0.01933544 |
| 8 | 660419 | 660419 | 1 | 8_660419 | ENSG00000104714 | ERICH1 | 0 | INTRON | -4.4966744 | 6.90E-06 | 0.01934755 |
| 14 | 95096281 | 95096281 | 1 | 14_95096281 | ENSG00000100697 | DICER1 | 0 | EXON | 4.49662195 | 6.90E-06 | 0.01934755 |
| 10 | 22289246 | 22289246 | 1 | 10_22289246 | ENSG00000233318 | RPL31P45 | 21900 | Downstream | 4.49650896 | 6.91E-06 | 0.01934755 |
| 13 | 28420150 | 28420150 | 1 | 13_28420150 | ENSG00000102755 | FLT1 | 0 | INTRON | 4.49646202 | 6.91E-06 | 0.01934755 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | 118926987 | 118926987 | 1 | 4_118926987 | ENSG00000172403 | SYNPO2 | 0 | INTRON | -4.4964459 | 6.91E-06 | 0.01934755 |
| 3 | 100695871 | 100695871 | 1 | 3_100695871 | ENSG00000144820 | ADGRG7 | 392 | Downstream | 4.49638396 | 6.91E-06 | 0.01934755 |
| 7 | 36332010 | 36332010 | 1 | 7_36332010 | ENSG00000164542 | KIAA0895 | 0 | INTRON | 4.49636983 | 6.91E-06 | 0.01934755 |
| 20 | 53393795 | 53393795 | 1 | 20_53393795 | ENSG00000182463 | TSHZ2 | 0 | INTRON | -4.4963419 | 6.91E-06 | 0.01934755 |
| 9 | 132534841 | 132534841 | 1 | 9_132534841 | ENSG00000188523 | CFAP77 | 0 | INTRON | 4.49633727 | 6.91E-06 | 0.01934755 |
| 13 | 25061552 | 25061552 | 1 | 13_25061552 | ENSG00000151846 | PABPC3 | 34315 | Upstream | -4.4963333 | 6.91E-06 | 0.01934755 |
| 20 | 51521517 | 51521517 | 1 | 20_51521517 | ENSG00000101096 | NFATC2 | 0 | INTRON | 4.49631555 | 6.91E-06 | 0.01934755 |
| 21 | 22253720 | 22253720 | 1 | 21_22253720 | ENSG00000226043 | AP000561.1 | 0 | INTRON | 4.49631234 | 6.91E-06 | 0.01934755 |
| 7 | 157190620 | 157190620 | 1 | 7_157190620 | ENSG00000009335 | UBE3C | 0 | INTRON | 4.4963087 | 6.91E-06 | 0.01934755 |
| 22 | 33041039 | 33041039 | 1 | 22_33041039 | ENSG00000185666 | SYN3 | 0 | INTRON | 4.49626809 | 6.92E-06 | 0.01934806 |
| 9 | 24554337 | 24554337 | 1 | 9_24554337 | ENSG00000269957 | AL353811.1 | 0 | INTRON | -4.4961504 | 6.92E-06 | 0.01934957 |
| 19 | 32744360 | 32744360 | 1 | 19_32744360 | ENSG00000173809 | TDRD12 | 0 | INTRON | 4.49613256 | 6.92E-06 | 0.01934957 |
| 15 | 20552330 | 20552330 | 1 | 15_20552330 | ENSG00000258797 | AC023310.3 | 2886 | Upstream | -4.4960865 | 6.92E-06 | 0.01934957 |
| 8 | 10071858 | 10071858 | 1 | 8_10071858 | ENSG00000175806 | MSRA | 0 | INTRON | 4.49608148 | 6.92E-06 | 0.01934957 |
| 2 | 205482386 | 205482386 | 1 | 2_205482386 | ENSG00000116117 | PARD3B | 0 | INTRON | 4.49607667 | 6.92E-06 | 0.01934957 |
| 3 | 50185130 | 50185130 | 1 | 3_50185130 | ENSG00000001617 | SEMA3F | 0 | INTRON | 4.49593375 | 6.93E-06 | 0.01935556 |
| 8 | 86118373 | 86118373 | 1 | 8_86118373 | ENSG00000147614 | ATP6V0D2 | 0 | INTRON | -4.4958849 | 6.93E-06 | 0.01935556 |
| 3 | 3137774 | 3137774 | 1 | 3_3137774 | ENSG00000072756 | TRNT1 | 0 | INTRON | 4.49588091 | 6.93E-06 | 0.01935556 |
| 2 | 201682985 | 201682985 | 1 | 2_201682985 | ENSG00000082126 | MPP4 | 0 | INTRON | -4.4958711 | 6.93E-06 | 0.01935556 |
| 6 | 154862671 | 154862671 | 1 | 6_154862671 | ENSG00000146426 | TIAM2 | 0 | INTRON | -4.4957563 | 6.93E-06 | 0.01936282 |
| 13 | 59407227 | 59407227 | 1 | 13_59407227 | ENSG00000239003 | RNU7-88P | 72842 | Upstream | -4.4956855 | 6.93E-06 | 0.01936387 |
| 17 | 20948190 | 20948190 | 1 | 17_20948190 | ENSG00000233098 | CCDC144NL-AS1 | 0 | INTRON | 4.49567499 | 6.93E-06 | 0.01936387 |
| 4 | 21550065 | 21550065 | 1 | 4_21550065 | ENSG00000185774 | KCNIP4 | 0 | INTRON | 4.49561829 | 6.94E-06 | 0.01936439 |
| 16 | 48294061 | 48294061 | 1 | 16_48294061 | ENSG00000102910 | LONP2 | 0 | INTRON | 4.4955929 | 6.94E-06 | 0.01936439 |
| 8 | 140429174 | 140429174 | 1 | 8_140429174 | ENSG00000167632 | TRAPPC9 | 0 | INTRON | 4.49556459 | 6.94E-06 | 0.01936439 |
| 22 | 25874604 | 25874604 | 1 | 22_25874604 | ENSG00000133454 | MYO18B | 0 | INTRON | 4.49552448 | 6.94E-06 | 0.01936486 |
| 3 | 136735186 | 136735186 | 1 | 3_136735186 | ENSG00000118007 | STAG1 | 0 | INTRON | 4.49542268 | 6.94E-06 | 0.01936919 |
| 7 | 152512300 | 152512300 | 1 | 7_152512300 | ENSG00000261455 | LINC01003 | 46751 | Downstream | -4.4953749 | 6.94E-06 | 0.01936919 |
| 15 | 46595373 | 46595373 | 1 | 15_46595373 | ENSG00000287704 | AC012405.1 | 0 | INTRON | -4.4953722 | 6.94E-06 | 0.01936919 |
| 9 | 90000823 | 90000823 | 1 | 9_90000823 | ENSG00000237626 | AL161629.1 | 0 | EXON | 4.49518603 | 6.95E-06 | 0.01938297 |
| 8 | 103611751 | 103611751 | 1 | 8_103611751 | ENSG00000176406 | RIMS2 | 0 | INTRON | -4.4951257 | 6.95E-06 | 0.01938529 |
| 20 | 62554692 | 62554692 | 1 | 20_62554692 | ENSG00000174407 | MIR1-1HG | 0 | INTRON | -4.4950765 | 6.95E-06 | 0.0193866 |
| 3 | 146225948 | 146225948 | 1 | 3_146225948 | ENSG00000114698 | PLSCR4 | 0 | INTRON | 4.49496123 | 6.96E-06 | 0.01939082 |
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| 9 | 91581880 | 91581880 | 1 | 9_91581880 | ENSG00000169071 | ROR2 | 0 | INTRON | -4.4949257 | 6.96E-06 | 0.01939082 |
| 10 | 109223896 | 109223896 | 1 | 10_109223896 | ENSG00000200217 | RNU6-839P | 15742 | Upstream | 4.49488223 | 6.96E-06 | 0.0193916 |
| X | 129779931 | 129779931 | 1 | X_129779931 | ENSG00000122122 | SASH3 | 17 | Upstream | -4.4947964 | 6.96E-06 | 0.01939189 |
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| 2 | 146858199 | 146858199 | 1 | 2_146858199 | ENSG00000231040 | LINC01911 | 0 | INTRON | -4.4946888 | 6.97E-06 | 0.01939189 |
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| 4 | 79184317 | 79184317 | 1 | 4_79184317 | ENSG00000249307 | LINC01088 | 0 | INTRON | 4.49465423 | 6.97E-06 | 0.01939189 |
| 4 | 21387947 | 21387947 | 1 | 4_21387947 | ENSG00000185774 | KCNIP4 | 0 | INTRON | -4.4946194 | 6.97E-06 | 0.01939189 |
| 17 | 75469113 | 75469113 | 1 | 17_75469113 | ENSG00000177728 | TMEM94 | 0 | INTRON | 4.49459495 | 6.97E-06 | 0.01939189 |
| 4 | 36719225 | 36719225 | 1 | 4_36719225 | ENSG00000248215 | LINC02505 | 77286 | Upstream | 4.4945617 | 6.97E-06 | 0.01939189 |
| 4 | 17593832 | 17593832 | 1 | 4_17593832 | ENSG00000002549 | LAP3 | 0 | INTRON | 4.49447904 | 6.97E-06 | 0.01939189 |
| 9 | 105013053 | 105013053 | 1 | 9_105013053 | ENSG00000286536 | AL591506.1 | 12878 | Downstream | -4.4944365 | 6.98E-06 | 0.01939189 |
| 2 | 76181339 | 76181339 | 1 | 2_76181339 | ENSG00000287474 | AC110614.1 | 0 | INTRON | -4.4944129 | 6.98E-06 | 0.01939189 |
| 12 | 131004483 | 131004483 | 1 | 12_131004483 | ENSG00000111452 | ADGRD1 | 0 | INTRON | 4.49441039 | 6.98E-06 | 0.01939189 |
| X | 92104601 | 92104601 | 1 | X_92104601 | ENSG00000102290 | PCDH11X | 0 | INTRON | 4.49439954 | 6.98E-06 | 0.01939189 |
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| 5 | 109636258 | 109636258 | 1 | 5_109636258 | ENSG00000214794 | KRT18P42 | 46666 | Downstream | 4.49435712 | 6.98E-06 | 0.01939189 |
| 14 | 101233623 | 101233623 | 1 | 14_101233623 | ENSG00000258681 | AL355836.1 | 15382 | Upstream | -4.4942709 | 6.98E-06 | 0.01939535 |
| 9 | 21172312 | 21172312 | 1 | 9_21172312 | ENSG00000137080 | IFNA21 | 5652 | Upstream | -4.4942496 | 6.98E-06 | 0.01939535 |
| 19 | 41562877 | 41562877 | 1 | 19_41562877 | ENSG00000007129 | CEACAM21 | 0 | INTRON | -4.4941301 | 6.99E-06 | 0.01939711 |
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| 8 | 330658 | 330658 | 1 | 8_330658 | ENSG00000249868 | AC136777.1 | 0 | INTRON | -4.4940405 | 6.99E-06 | 0.01939711 |
| 22 | 35947106 | 35947106 | 1 | 22_35947106 | ENSG00000100320 | RBFOX2 | 0 | INTRON | -4.4940134 | 6.99E-06 | 0.01939711 |
| 8 | 71267847 | 71267847 | 1 | 8_71267847 | ENSG00000104313 | EYA1 | 0 | INTRON | 4.49395211 | 6.99E-06 | 0.01939711 |
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| 8 | 21112622 | 21112622 | 1 | 8_21112622 | ENSG00000254092 | AC021613.1 | 0 | EXON | 4.49393607 | 6.99E-06 | 0.01939711 |
| 21 | 20690745 | 20690745 | 1 | 21_20690745 | ENSG00000224924 | LINC00320 | 0 | INTRON | -4.493906 | 6.99E-06 | 0.01939711 |
| 12 | 70769457 | 70769457 | 1 | 12_70769457 | ENSG00000153233 | PTPRR | 0 | INTRON | 4.49388312 | 6.99E-06 | 0.01939711 |
| 1 | 17309058 | 17309058 | 1 | 1_17309058 | ENSG00000159339 | PADI4 | 0 | INTRON | 4.49375504 | 7.00E-06 | 0.01940503 |
| 2 | 130894122 | 130894122 | 1 | 2_130894122 | ENSG00000136002 | ARHGEF4 | 0 | INTRON | -4.4937268 | 7.00E-06 | 0.01940503 |
| 1 | 4899160 | 4899160 | 1 | 1_4899160 | ENSG00000284739 | BX005132.1 | 64793 | Downstream | 4.49362916 | 7.00E-06 | 0.01940987 |
| 15 | 23328061 | 23328061 | 1 | 15_23328061 | ENSG00000273756 | AC100756.3 | 0 | EXON | -4.493602 | 7.00E-06 | 0.01940987 |
| 11 | 21773354 | 21773354 | 1 | 11_21773354 | ENSG00000287753 | AC130307.1 | 9304 | Upstream | 4.49356978 | 7.00E-06 | 0.01940987 |
| 7 | 7498421 | 7498421 | 1 | 7_7498421 | ENSG00000215018 | COL28A1 | 0 | INTRON | 4.49336951 | 7.01E-06 | 0.01942497 |
| 15 | 58206480 | 58206480 | 1 | 15_58206480 | ENSG00000128918 | ALDH1A2 | 0 | INTRON | -4.493323 | 7.01E-06 | 0.01942605 |
| 10 | 112303515 | 112303515 | 1 | 10_112303515 | ENSG00000119913 | TECTB | 0 | 3UTR | 4.49325816 | 7.01E-06 | 0.01942881 |
| 17 | 82942854 | 82942854 | 1 | 17_82942854 | ENSG00000141556 | TBCD | 0 | 3UTR | 4.49321761 | 7.02E-06 | 0.01942935 |
| 13 | 71374363 | 71374363 | 1 | 13_71374363 | ENSG00000276644 | DACH1 | 63602 | Downstream | 4.49311917 | 7.02E-06 | 0.01943091 |
| 2 | 7451585 | 7451585 | 1 | 2_7451585 | ENSG00000229727 | AC013460.1 | 1041 | Downstream | 4.49310246 | 7.02E-06 | 0.01943091 |
| 11 | 85745639 | 85745639 | 1 | 11_85745639 | ENSG00000137501 | SYTL2 | 0 | EXON | 4.49309193 | 7.02E-06 | 0.01943091 |
| 3 | 7203039 | 7203039 | 1 | 3_7203039 | ENSG00000196277 | GRM7 | 0 | INTRON | 4.49306198 | 7.02E-06 | 0.01943091 |
| 4 | 174104019 | 174104019 | 1 | 4_174104019 | ENSG00000248174 | LINC02268 | 0 | INTRON | 4.49300977 | 7.02E-06 | 0.01943233 |
| 4 | 117584007 | 117584007 | 1 | 4_117584007 | ENSG00000236922 | LINC01378 | 0 | INTRON | -4.4929771 | 7.02E-06 | 0.01943233 |
| 16 | 23929199 | 23929199 | 1 | 16_23929199 | ENSG00000166501 | PRKCB | 0 | INTRON | -4.492906 | 7.03E-06 | 0.01943567 |
| 1 | 15003705 | 15003705 | 1 | 1_15003705 | ENSG00000189337 | KAZN | 0 | INTRON | 4.4928407 | 7.03E-06 | 0.01943847 |
| 2 | 130054589 | 130054589 | 1 | 2_130054589 | ENSG00000286058 | AC018865.3 | 3458 | Upstream | -4.4927842 | 7.03E-06 | 0.01943974 |
| 19 | 7164583 | 7164583 | 1 | 19_7164583 | ENSG00000171105 | INSR | 0 | INTRON | 4.49275757 | 7.03E-06 | 0.01943974 |
| 11 | 111093266 | 111093266 | 1 | 11_111093266 | ENSG00000271584 | LINC02550 | 0 | INTRON | 4.49267414 | 7.03E-06 | 0.01944099 |
| 7 | 33137682 | 33137682 | 1 | 7_33137682 | ENSG00000122507 | BBS9 | 0 | INTRON | 4.49266475 | 7.03E-06 | 0.01944099 |
| 8 | 140750371 | 140750371 | 1 | 8_140750371 | ENSG00000169398 | PTK2 | 0 | EXON | 4.49264019 | 7.03E-06 | 0.01944099 |
| 8 | 127877796 | 127877796 | 1 | 8_127877796 | ENSG00000249859 | PVT1 | 0 | INTRON | -4.4926017 | 7.04E-06 | 0.01944134 |
| 2 | 101854099 | 101854099 | 1 | 2_101854099 | ENSG00000071054 | MAP4K4 | 0 | INTRON | -4.4922857 | 7.05E-06 | 0.01946706 |
| 3 | 12680806 | 12680806 | 1 | 3_12680806 | ENSG00000233252 | CRIP1P1 | 6923 | Downstream | 4.49211186 | 7.05E-06 | 0.0194798 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
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| 10 | 42078061 | 42078061 | 1 | 10_42078061 | ENSG00000229485 | KSR1P1 | 71248 | Downstream | -4.4919198 | 7.06E-06 | 0.01949421 |
| 4 | 41771944 | 41771944 | 1 | 4_41771944 | ENSG00000200338 | RNU1-49P | 0 | EXON | -4.4918801 | 7.06E-06 | 0.01949469 |
| 5 | 88203956 | 88203956 | 1 | 5_88203956 | ENSG00000164180 | TMEM161B | 0 | INTRON | -4.4918224 | 7.06E-06 | 0.0194968 |
| 14 | 58382770 | 58382770 | 1 | 14_58382770 | ENSG00000258658 | AL139021.2 | 0 | INTRON | 4.49177369 | 7.06E-06 | 0.0194981 |
| 8 | 14507959 | 14507959 | 1 | 8_14507959 | ENSG00000185053 | SGCZ | 0 | INTRON | -4.4916795 | 7.07E-06 | 0.01950357 |
| 1 | 145126410 | 145126410 | 1 | 1_145126410 | ENSG00000283752 | AC241585.3 | 13575 | Upstream | 4.49152767 | 7.07E-06 | 0.01951431 |
| 16 | 1371604 | 1371604 | 1 | 16_1371604 | ENSG00000059145 | UNKL | 0 | 5UTR | 4.49142569 | 7.07E-06 | 0.01951733 |
| 12 | 57789122 | 57789122 | 1 | 12_57789122 | ENSG00000123297 | TSFM | 0 | INTRON | 4.49142566 | 7.07E-06 | 0.01951733 |
| 13 | 95841166 | 95841166 | 1 | 13_95841166 | ENSG00000102595 | UGGT2 | 0 | INTRON | -4.4912768 | 7.08E-06 | 0.01952303 |
| 12 | 118116879 | 118116879 | 1 | 12_118116879 | ENSG00000176834 | VSIG10 | 0 | INTRON | -4.4912712 | 7.08E-06 | 0.01952303 |
| 16 | 24632423 | 24632423 | 1 | 16_24632423 | ENSG00000090905 | TNRC6A | 0 | INTRON | 4.49125992 | 7.08E-06 | 0.01952303 |
| 16 | 6841954 | 6841954 | 1 | 16_6841954 | ENSG00000078328 | RBFOX1 | 0 | INTRON | -4.4909758 | 7.09E-06 | 0.01954593 |
| 3 | 64659340 | 64659340 | 1 | 3_64659340 | ENSG00000163638 | ADAMTS9 | 0 | INTRON | -4.4907498 | 7.10E-06 | 0.01956044 |
| 3 | 165212337 | 165212337 | 1 | 3_165212337 | ENSG00000244128 | LINC01322 | 0 | INTRON | 4.49074872 | 7.10E-06 | 0.01956044 |
| 17 | 82983682 | 82983682 | 1 | 17_82983682 | ENSG00000175711 | B3GNTL1 | 0 | INTRON | 4.49071041 | 7.10E-06 | 0.01956074 |
| 12 | 133058748 | 133058748 | 1 | 12_133058748 | ENSG00000198040 | ZNF84 | 0 | EXON | 4.49067646 | 7.10E-06 | 0.01956074 |
| 10 | 22425539 | 22425539 | 1 | 10_22425539 | ENSG00000077327 | SPAG6 | 0 | INTRON | 4.49060082 | 7.10E-06 | 0.01956452 |
| 18 | 61747028 | 61747028 | 1 | 18_61747028 | ENSG00000267175 | AC105094.2 | 0 | INTRON | 4.49046293 | 7.11E-06 | 0.01957403 |
| 12 | 85998902 | 85998902 | 1 | 12_85998902 | ENSG00000182050 | MGAT4C | 0 | INTRON | -4.4903827 | 7.11E-06 | 0.01957823 |
| 3 | 44935260 | 44935260 | 1 | 3_44935260 | ENSG00000163812 | ZDHHC3 | 0 | INTRON | -4.4903084 | 7.11E-06 | 0.01958189 |
| 19 | 46041672 | 46041672 | 1 | 19_46041672 | ENSG00000204869 | IGFL4 | 0 | INTRON | 4.4901674 | 7.12E-06 | 0.0195903 |
| 11 | 77006082 | 77006082 | 1 | 11_77006082 | ENSG00000078124 | ACER3 | 0 | INTRON | -4.490148 | 7.12E-06 | 0.0195903 |
| 9 | 88527181 | 88527181 | 1 | 9_88527181 | ENSG00000130045 | NXNL2 | 6851 | Upstream | -4.4900123 | 7.12E-06 | 0.01959962 |
| 4 | 823668 | 823668 | 1 | 4_823668 | ENSG00000168993 | CPLX1 | 0 | INTRON | 4.48997123 | 7.12E-06 | 0.01960023 |
| 12 | 50259864 | 50259864 | 1 | 12_50259864 | ENSG00000050405 | LIMA1 | 0 | INTRON | -4.4898619 | 7.13E-06 | 0.01960712 |
| 4 | 15748425 | 15748425 | 1 | 4_15748425 | ENSG00000248188 | AC005798.1 | 4843 | Downstream | -4.4896188 | 7.14E-06 | 0.01962633 |
| 6 | 28584396 | 28584396 | 1 | 6_28584396 | ENSG00000232040 | ZBED9 | 0 | INTRON | -4.4895514 | 7.14E-06 | 0.0196287 |
| 3 | 96908841 | 96908841 | 1 | 3_96908841 | ENSG00000080224 | EPHA6 | 0 | INTRON | 4.48952427 | 7.14E-06 | 0.0196287 |
| 20 | 7504872 | 7504872 | 1 | 20_7504872 | ENSG00000240584 | RN7SL547P | 128689 | Downstream | 4.48916931 | 7.15E-06 | 0.01965826 |
| 1 | 77710903 | 77710903 | 1 | 1_77710903 | ENSG00000077254 | USP33 | 0 | INTRON | 4.48900157 | 7.16E-06 | 0.01967056 |
| 15 | 22561099 | 22561099 | 1 | 15_22561099 | ENSG00000276550 | HERC2P2 | 0 | INTRON | -4.4888391 | 7.16E-06 | 0.01967858 |
| 12 | 100169424 | 100169424 | 1 | 12_100169424 | ENSG00000238105 | GOLGA2P5 | 0 | INTRON | -4.4888128 | 7.16E-06 | 0.01967858 |
| 3 | 169252742 | 169252742 | 1 | 3_169252742 | ENSG00000085276 | MECOM | 0 | INTRON | 4.48878001 | 7.16E-06 | 0.01967858 |
| 4 | 149058419 | 149058419 | 1 | 4_149058419 | ENSG00000249752 | AC108156.1 | 0 | INTRON | -4.4887614 | 7.16E-06 | 0.01967858 |
| 3 | 57201227 | 57201227 | 1 | 3_57201227 | ENSG00000163666 | HESX1 | 0 | INTRON | -4.4887427 | 7.16E-06 | 0.01967858 |
| 8 | 100478177 | 100478177 | 1 | 8_100478177 | ENSG00000253666 | AP000424.1 | 0 | INTRON | 4.48866494 | 7.17E-06 | 0.01967985 |
| 20 | 47332829 | 47332829 | 1 | 20_47332829 | ENSG00000101040 | ZMYND8 | 0 | INTRON | 4.48866018 | 7.17E-06 | 0.01967985 |
| 15 | 58832507 | 58832507 | 1 | 15_58832507 | ENSG00000128923 | MINDY2 | 0 | INTRON | 4.4885185 | 7.17E-06 | 0.01968497 |
| 21 | 27241530 | 27241530 | 1 | 21_27241530 | ENSG00000215326 | GPX1P2 | 97581 | Upstream | 4.48847728 | 7.17E-06 | 0.01968497 |
| 15 | 58206491 | 58206491 | 1 | 15_58206491 | ENSG00000128918 | ALDH1A2 | 0 | INTRON | -4.4884712 | 7.17E-06 | 0.01968497 |
| 7 | 130943698 | 130943698 | 1 | 7_130943698 | ENSG00000285106 | AC016831.7 | 0 | INTRON | -4.4884539 | 7.17E-06 | 0.01968497 |
| 18 | 13412985 | 13412985 | 1 | 18_13412985 | ENSG00000168675 | LDLRAD4 | 0 | INTRON | -4.4884231 | 7.18E-06 | 0.01968497 |
| 9 | 124965959 | 124965959 | 1 | 9_124965959 | ENSG00000173611 | SCAI | 0 | INTRON | 4.48839857 | 7.18E-06 | 0.01968497 |
| 6 | 151242349 | 151242349 | 1 | 6_151242349 | ENSG00000131016 | AKAP12 | 0 | INTRON | -4.488327 | 7.18E-06 | 0.01968624 |
| 22 | 23308022 | 23308022 | 1 | 22_23308022 | ENSG00000186716 | BCR | 0 | INTRON | 4.48831618 | 7.18E-06 | 0.01968624 |
| 18 | 51167591 | 51167591 | 1 | 18_51167591 | ENSG00000176624 | MEX3C | 6958 | Downstream | 4.48825189 | 7.18E-06 | 0.019689 |
| 14 | 31995109 | 31995109 | 1 | 14_31995109 | ENSG00000258386 | AL352984.1 | 11792 | Upstream | -4.4882013 | 7.18E-06 | 0.01969051 |
| 8 | 9426232 | 9426232 | 1 | 8_9426232 | ENSG00000254237 | AC021242.2 | 0 | INTRON | -4.4881264 | 7.19E-06 | 0.01969155 |
| 1 | 19187400 | 19187400 | 1 | 1_19187400 | ENSG00000127481 | UBR4 | 0 | INTRON | -4.4881213 | 7.19E-06 | 0.01969155 |
| 5 | 143054660 | 143054660 | 1 | 5_143054660 | ENSG00000145819 | ARHGAP26 | 0 | INTRON | 4.48807835 | 7.19E-06 | 0.01969235 |
| 15 | 56878154 | 56878154 | 1 | 15_56878154 | ENSG00000285331 | AC090517.5 | 0 | INTRON | -4.4879142 | 7.19E-06 | 0.01970011 |
| 1 | 110400776 | 110400776 | 1 | 1_110400776 | ENSG00000224699 | LAMTOR5-AS1 | 0 | INTRON | 4.48788602 | 7.19E-06 | 0.01970011 |
| 19 | 45192472 | 45192472 | 1 | 19_45192472 | ENSG00000007047 | MARK4 | 0 | INTRON | 4.48787257 | 7.19E-06 | 0.01970011 |
| 16 | 81178462 | 81178462 | 1 | 16_81178462 | ENSG00000166473 | PKD1L2 | 0 | INTRON | -4.4878117 | 7.20E-06 | 0.01970011 |
| 8 | 30770475 | 30770475 | 1 | 8_30770475 | ENSG00000104691 | UBXN8 | 3469 | Downstream | 4.48779838 | 7.20E-06 | 0.01970011 |
| 3 | 14019682 | 14019682 | 1 | 3_14019682 | ENSG00000180438 | TPRXL | 0 | INTRON | -4.4877886 | 7.20E-06 | 0.01970011 |
| 11 | 89700679 | 89700679 | 1 | 11_89700679 | ENSG00000255385 | UBTFL10 | 84 | Upstream | 4.48772746 | 7.20E-06 | 0.0197026 |
| 4 | 92109338 | 92109338 | 1 | 4_92109338 | ENSG00000248817 | PMPCAP1 | 73138 | Downstream | 4.48749062 | 7.21E-06 | 0.01972047 |
| 18 | 57746030 | 57746030 | 1 | 18_57746030 | ENSG00000081923 | ATP8B1 | 0 | INTRON | -4.4874657 | 7.21E-06 | 0.01972047 |
| 9 | 15457323 | 15457323 | 1 | 9_15457323 | ENSG00000164975 | SNAPC3 | 0 | INTRON | 4.48733499 | 7.21E-06 | 0.01972419 |
| 13 | 67535996 | 67535996 | 1 | 13_67535996 | ENSG00000287876 | AL512452.1 | 41627 | Downstream | 4.48732959 | 7.21E-06 | 0.01972419 |
| 11 | 134174104 | 134174104 | 1 | 11_134174104 | ENSG00000151503 | NCAPD3 | 0 | INTRON | -4.4873227 | 7.21E-06 | 0.01972419 |
| 1 | 209061926 | 209061926 | 1 | 1_209061926 | ENSG00000287046 | AC092810.4 | 45576 | Upstream | 4.48710144 | 7.22E-06 | 0.0197415 |
| 21 | 33342582 | 33342582 | 1 | 21_33342582 | ENSG00000142166 | IFNAR1 | 0 | INTRON | 4.48702164 | 7.22E-06 | 0.01974572 |
| 7 | 73989872 | 73989872 | 1 | 7_73989872 | ENSG00000261467 | AC099398.1 | 1105 | Downstream | -4.4869743 | 7.22E-06 | 0.01974694 |
| 2 | 5902676 | 5902676 | 1 | 2_5902676 | ENSG00000232044 | SILC1 | 29866 | Upstream | 4.48687719 | 7.23E-06 | 0.01975276 |
| 7 | 116803074 | 116803074 | 1 | 7_116803074 | ENSG00000105976 | MET | 4688 | Downstream | -4.4868053 | 7.23E-06 | 0.01975625 |
| 6 | 16968654 | 16968654 | 1 | 6_16968654 | ENSG00000287347 | AL133405.2 | 15955 | Upstream | -4.4866001 | 7.24E-06 | 0.01976609 |
| 18 | 31622964 | 31622964 | 1 | 18_31622964 | ENSG00000118276 | B4GALT6 | 0 | EXON | -4.4865112 | 7.24E-06 | 0.01976609 |
| 4 | 100081912 | 100081912 | 1 | 4_100081912 | ENSG00000245322 | AC097460.1 | 0 | INTRON | -4.4865074 | 7.24E-06 | 0.01976609 |
| 22 | 41526405 | 41526405 | 1 | 22_41526405 | ENSG00000100413 | POLR3H | 0 | 3UTR | 4.48649544 | 7.24E-06 | 0.01976609 |
| 3 | 43794220 | 43794220 | 1 | 3_43794220 | ENSG00000235886 | AC006055.1 | 14238 | Upstream | 4.48640151 | 7.24E-06 | 0.01976609 |
| 5 | 16879023 | 16879023 | 1 | 5_16879023 | ENSG00000145555 | MYO10 | 0 | INTRON | -4.4863746 | 7.24E-06 | 0.01976609 |
| 10 | 107571752 | 107571752 | 1 | 10_107571752 | ENSG00000200079 | RNA5SP326 | 110083 | Downstream | -4.48637 | 7.24E-06 | 0.01976609 |
| 19 | 30847698 | 30847698 | 1 | 19_30847698 | ENSG00000267081 | AC011507.1 | 3276 | Upstream | -4.4863687 | 7.24E-06 | 0.01976609 |
| 13 | 35120268 | 35120268 | 1 | 13_35120268 | ENSG00000172915 | NBEA | 0 | INTRON | 4.48634558 | 7.25E-06 | 0.01976609 |
| 18 | 60294521 | 60294521 | 1 | 18_60294521 | ENSG00000267401 | AC090621.1 | 0 | EXON | 4.48633731 | 7.25E-06 | 0.01976609 |
| 13 | 104648109 | 104648109 | 1 | 13_104648109 | ENSG00000225823 | RPL7P45 | 166217 | Upstream | -4.486323 | 7.25E-06 | 0.01976609 |
| 14 | 93847445 | 93847445 | 1 | 14_93847445 | ENSG00000279593 | AL132642.2 | 48316 | Upstream | -4.4862679 | 7.25E-06 | 0.01976783 |
| 12 | 123859679 | 123859679 | 1 | 12_123859679 | ENSG00000197653 | DNAH10 | 0 | INTRON | 4.48623586 | 7.25E-06 | 0.01976783 |
| 12 | 90934918 | 90934918 | 1 | 12_90934918 | ENSG00000197651 | CCER1 | 0 | INTRON | 4.48613992 | 7.25E-06 | 0.01977356 |
| 18 | 49171038 | 49171038 | 1 | 18_49171038 | ENSG00000141627 | DYM | 0 | INTRON | 4.48596064 | 7.26E-06 | 0.01978412 |
| 2 | 218448335 | 218448335 | 1 | 2_218448335 | ENSG00000127831 | VIL1 | 0 | INTRON | 4.4859457 | 7.26E-06 | 0.01978412 |
| 1 | 77774241 | 77774241 | 1 | 1_77774241 | ENSG00000232672 | ACTG1P21 | 0 | EXON | 4.48584888 | 7.26E-06 | 0.01978412 |
| 16 | 8548488 | 8548488 | 1 | 16_8548488 | ENSG00000232258 | TMEM114 | 0 | INTRON | 4.48583558 | 7.26E-06 | 0.01978412 |
| 6 | 8960004 | 8960004 | 1 | 6_8960004 | ENSG00000285219 | HULC | 0 | INTRON | 4.48582613 | 7.26E-06 | 0.01978412 |
| 3 | 80454297 | 80454297 | 1 | 3_80454297 | ENSG00000242586 | AC108740.1 | 11992 | Downstream | -4.4857941 | 7.26E-06 | 0.01978412 |
| 4 | 80869995 | 80869995 | 1 | 4_80869995 | ENSG00000197826 | CFAP299 | 0 | EXON | -4.4857834 | 7.26E-06 | 0.01978412 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
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| 14 | 71367603 | 71367603 | 1 | 14_71367603 | ENSG00000197555 | SIPA1L1 | 0 | INTRON | -4.4857531 | 7.27E-06 | 0.01978412 |
| 15 | 23335419 | 23335419 | 1 | 15_23335419 | ENSG00000273756 | AC100756.3 | 1292 | Upstream | -4.4856613 | 7.27E-06 | 0.01978806 |
| 5 | 117678848 | 117678848 | 1 | 5_117678848 | ENSG00000251477 | AC114322.1 | 40391 | Downstream | -4.4856424 | 7.27E-06 | 0.01978806 |
| 9 | 112876216 | 112876216 | 1 | 9_112876216 | ENSG00000148158 | SNX30 | 0 | INTRON | 4.4855938 | 7.27E-06 | 0.0197894 |
| 11 | 17113172 | 17113172 | 1 | 11_17113172 | ENSG00000011405 | PIK3C2A | 0 | INTRON | 4.48554214 | 7.27E-06 | 0.01979103 |
| 22 | 37465502 | 37465502 | 1 | 22_37465502 | ENSG00000100060 | MFNG | 3560 | Downstream | 4.48546074 | 7.28E-06 | 0.01979542 |
| 16 | 57935401 | 57935401 | 1 | 16_57935401 | ENSG00000070729 | CNGB1 | 0 | INTRON | 4.48542229 | 7.28E-06 | 0.01979583 |
| 15 | 34839567 | 34839567 | 1 | 15_34839567 | ENSG00000259751 | AC018868.2 | 9569 | Downstream | 4.48527006 | 7.28E-06 | 0.01980635 |
| 4 | 155358033 | 155358033 | 1 | 4_155358033 | ENSG00000250910 | AC097467.3 | 0 | INTRON | 4.48524089 | 7.28E-06 | 0.01980635 |
| 1 | 30639221 | 30639221 | 1 | 1_30639221 | ENSG00000162510 | MATN1 | 72055 | Downstream | -4.4851446 | 7.29E-06 | 0.01981213 |
| 2 | 58168637 | 58168637 | 1 | 2_58168637 | ENSG00000115392 | FANCL | 0 | INTRON | 4.48509332 | 7.29E-06 | 0.01981373 |
| 6 | 168612747 | 168612747 | 1 | 6_168612747 | ENSG00000112562 | SMOC2 | 0 | INTRON | 4.48504448 | 7.29E-06 | 0.01981454 |
| 11 | 45972598 | 45972598 | 1 | 11_45972598 | ENSG00000135365 | PHF21A | 0 | INTRON | 4.48501638 | 7.29E-06 | 0.01981454 |
| 12 | 19350545 | 19350545 | 1 | 12_19350545 | ENSG00000052126 | PLEKHA5 | 0 | INTRON | 4.48488896 | 7.30E-06 | 0.01982322 |
| 1 | 6652493 | 6652493 | 1 | 1_6652493 | ENSG00000007923 | DNAJC11 | 0 | INTRON | 4.4848246 | 7.30E-06 | 0.01982604 |
| 1 | 23186668 | 23186668 | 1 | 1_23186668 | ENSG00000179546 | HTR1D | 5226 | Downstream | -4.4847516 | 7.30E-06 | 0.01982805 |
| 1 | 222995559 | 222995559 | 1 | 1_222995559 | ENSG00000154309 | DISP1 | 0 | INTRON | -4.4846851 | 7.30E-06 | 0.01982805 |
| 7 | 128224216 | 128224216 | 1 | 7_128224216 | ENSG00000207705 | MIR129-1 | 16273 | Downstream | 4.48467809 | 7.30E-06 | 0.01982805 |
| 1 | 62534351 | 62534351 | 1 | 1_62534351 | ENSG00000116641 | DOCK7 | 0 | INTRON | -4.4846668 | 7.30E-06 | 0.01982805 |
| 6 | 7999108 | 7999108 | 1 | 6_7999108 | ENSG00000259040 | BLOC1S5-TXNDC5 | 0 | INTRON | 4.48455034 | 7.31E-06 | 0.01983572 |
| 7 | 142581319 | 142581319 | 1 | 7_142581319 | ENSG00000275158 | TRBV12-5 | 0 | EXON | -4.484488 | 7.31E-06 | 0.01983669 |
| 17 | 46741922 | 46741922 | 1 | 17_46741922 | ENSG00000073969 | NSF | 0 | INTRON | -4.4844719 | 7.31E-06 | 0.01983669 |
| 5 | 94632188 | 94632188 | 1 | 5_94632188 | ENSG00000133302 | SLF1 | 0 | INTRON | 4.48434391 | 7.31E-06 | 0.01984543 |
| 3 | 52179467 | 52179467 | 1 | 3_52179467 | ENSG00000286419 | AC097637.3 | 4254 | Downstream | -4.4841709 | 7.32E-06 | 0.01985837 |
| 9 | 111946947 | 111946947 | 1 | 9_111946947 | ENSG00000148154 | UGCG | 11578 | Downstream | 4.48403264 | 7.32E-06 | 0.01986808 |
| 4 | 116380466 | 116380466 | 1 | 4_116380466 | ENSG00000250272 | TRMT112P1 | 1197 | Downstream | -4.4838965 | 7.33E-06 | 0.0198776 |
| 7 | 141254979 | 141254979 | 1 | 7_141254979 | ENSG00000261115 | TMEM178B | 0 | INTRON | -4.4838044 | 7.33E-06 | 0.01988085 |
| 10 | 80304198 | 80304198 | 1 | 10_80304198 | ENSG00000232950 | ZNF519P1 | 4543 | Downstream | 4.48375628 | 7.33E-06 | 0.01988085 |
| 2 | 49298525 | 49298525 | 1 | 2_49298525 | ENSG00000282890 | AC009975.1 | 0 | INTRON | 4.4837029 | 7.34E-06 | 0.01988085 |
| 16 | 48993401 | 48993401 | 1 | 16_48993401 | ENSG00000260067 | MTND4LP25 | 73165 | Downstream | 4.48369751 | 7.34E-06 | 0.01988085 |
| 22 | 24651505 | 24651505 | 1 | 22_24651505 | ENSG00000284070 | AP000356.2 | 0 | EXON | 4.48369179 | 7.34E-06 | 0.01988085 |
| 4 | 73287355 | 73287355 | 1 | 4_73287355 | ENSG00000250220 | AC053527.2 | 0 | INTRON | -4.4835975 | 7.34E-06 | 0.01988648 |
| 8 | 23778719 | 23778719 | 1 | 8_23778719 | ENSG00000253471 | AC012574.1 | 0 | INTRON | -4.4835371 | 7.34E-06 | 0.01988894 |
| 12 | 88571059 | 88571059 | 1 | 12_88571059 | ENSG00000049130 | KITLG | 0 | INTRON | -4.4834154 | 7.35E-06 | 0.01989712 |
| 1 | 237916761 | 237916761 | 1 | 1_237916761 | ENSG00000237250 | AL359924.1 | 0 | INTRON | -4.4833398 | 7.35E-06 | 0.01990101 |
| 19 | 52355692 | 52355692 | 1 | 19_52355692 | ENSG00000167554 | ZNF610 | 0 | INTRON | 4.48325395 | 7.35E-06 | 0.01990585 |
| 2 | 137940781 | 137940781 | 1 | 2_137940781 | ENSG00000150540 | HNMT | 23238 | Upstream | 4.48320481 | 7.35E-06 | 0.01990727 |
| 2 | 45899944 | 45899944 | 1 | 2_45899944 | ENSG00000171132 | PRKCE | 0 | INTRON | -4.4831119 | 7.36E-06 | 0.01991278 |
| 11 | 88782304 | 88782304 | 1 | 11_88782304 | ENSG00000168959 | GRM5 | 0 | INTRON | -4.4829544 | 7.36E-06 | 0.01992202 |
| 11 | 68021628 | 68021628 | 1 | 11_68021628 | ENSG00000006534 | ALDH3B1 | 0 | 3UTR | 4.48291893 | 7.36E-06 | 0.01992202 |
| 18 | 53444430 | 53444430 | 1 | 18_53444430 | ENSG00000187323 | DCC | 0 | INTRON | -4.4828806 | 7.36E-06 | 0.01992202 |
| 2 | 234006603 | 234006603 | 1 | 2_234006603 | ENSG00000144481 | TRPM8 | 0 | INTRON | 4.48287719 | 7.36E-06 | 0.01992202 |
| 10 | 54996836 | 54996836 | 1 | 10_54996836 | ENSG00000150275 | PCDH15 | 0 | INTRON | 4.48273923 | 7.37E-06 | 0.01993174 |
| 7 | 73239693 | 73239693 | 1 | 7_73239693 | ENSG00000214544 | GTF2IRD2P1 | 3057 | Downstream | 4.48256409 | 7.38E-06 | 0.01994107 |
| 7 | 68150408 | 68150408 | 1 | 7_68150408 | ENSG00000226829 | AC093655.1 | 0 | INTRON | -4.4825571 | 7.38E-06 | 0.01994107 |
| 17 | 39915251 | 39915251 | 1 | 17_39915251 | ENSG00000073605 | GSDMB | 0 | INTRON | -4.4825377 | 7.38E-06 | 0.01994107 |
| 9 | 105711168 | 105711168 | 1 | 9_105711168 | ENSG00000095209 | TMEM38B | 0 | INTRON | -4.482451 | 7.38E-06 | 0.0199459 |
| 1 | 44710481 | 44710481 | 1 | 1_44710481 | ENSG00000198520 | ARMH1 | 0 | INTRON | -4.4823092 | 7.38E-06 | 0.0199459 |
| 7 | 10378944 | 10378944 | 1 | 7_10378944 | ENSG00000283117 | AC004949.1 | 70875 | Downstream | -4.482303 | 7.38E-06 | 0.0199459 |
| 5 | 39400357 | 39400357 | 1 | 5_39400357 | ENSG00000153071 | DAB2 | 0 | INTRON | 4.48228547 | 7.38E-06 | 0.0199459 |
| 11 | 62566179 | 62566179 | 1 | 11_62566179 | ENSG00000254772 | EEF1G | 0 | INTRON | 4.48228149 | 7.38E-06 | 0.0199459 |
| 9 | 128221336 | 128221336 | 1 | 9_128221336 | ENSG00000106976 | DNM1 | 0 | INTRON | -4.4822527 | 7.39E-06 | 0.0199459 |
| 19 | 33323324 | 33323324 | 1 | 19_33323324 | ENSG00000267130 | AC008738.2 | 13937 | Downstream | 4.48224881 | 7.39E-06 | 0.0199459 |
| 5 | 118387209 | 118387209 | 1 | 5_118387209 | ENSG00000250891 | LINC02208 | 0 | INTRON | 4.48218493 | 7.39E-06 | 0.01994871 |
| 6 | 98836912 | 98836912 | 1 | 6_98836912 | ENSG00000184486 | POU3F2 | 0 | 3UTR | -4.4821147 | 7.39E-06 | 0.01995211 |
| 8 | 141788150 | 141788150 | 1 | 8_141788150 | ENSG00000221768 | MIR1302-7 | 1837 | Upstream | 4.48201385 | 7.39E-06 | 0.01995838 |
| 11 | 98711129 | 98711129 | 1 | 11_98711129 | ENSG00000254599 | AP003715.1 | 27394 | Downstream | 4.48194066 | 7.40E-06 | 0.01995907 |
| 3 | 87282414 | 87282414 | 1 | 3_87282414 | ENSG00000064835 | POU1F1 | 5830 | Upstream | -4.4819388 | 7.40E-06 | 0.01995907 |
| 19 | 38668634 | 38668634 | 1 | 19_38668634 | ENSG00000130402 | ACTN4 | 0 | INTRON | 4.48187397 | 7.40E-06 | 0.01995967 |
| 10 | 76531254 | 76531254 | 1 | 10_76531254 | ENSG00000148655 | LRMDA | 0 | INTRON | -4.4818428 | 7.40E-06 | 0.01995967 |
| 5 | 124333035 | 124333035 | 1 | 5_124333035 | ENSG00000253807 | LINC01170 | 0 | INTRON | -4.4818309 | 7.40E-06 | 0.01995967 |
| 13 | 96883248 | 96883248 | 1 | 13_96883248 | ENSG00000235137 | HSP90AB6P | 593 | Downstream | -4.4816744 | 7.41E-06 | 0.01997114 |
| 14 | 41799733 | 41799733 | 1 | 14_41799733 | ENSG00000165379 | LRFN5 | 0 | INTRON | 4.48164073 | 7.41E-06 | 0.01997114 |
| 17 | 72673293 | 72673293 | 1 | 17_72673293 | ENSG00000133195 | SLC39A11 | 0 | INTRON | -4.4815924 | 7.41E-06 | 0.01997139 |
| 6 | 69907376 | 69907376 | 1 | 6_69907376 | ENSG00000082293 | COL19A1 | 0 | INTRON | 4.48157044 | 7.41E-06 | 0.01997139 |
| 5 | 90058084 | 90058084 | 1 | 5_90058084 | ENSG00000264342 | MIR3660 | 41364 | Upstream | 4.48148209 | 7.41E-06 | 0.01997649 |
| 4 | 37943508 | 37943508 | 1 | 4_37943508 | ENSG00000065882 | TBC1D1 | 0 | INTRON | 4.48143281 | 7.41E-06 | 0.01997795 |
| 11 | 100953417 | 100953417 | 1 | 11_100953417 | ENSG00000165895 | ARHGAP42 | 0 | INTRON | -4.4813378 | 7.42E-06 | 0.01997892 |
| 5 | 161914773 | 161914773 | 1 | 5_161914773 | ENSG00000280776 | LINC01202 | 0 | INTRON | -4.4813325 | 7.42E-06 | 0.01997892 |
| 1 | 20575326 | 20575326 | 1 | 1_20575326 | ENSG00000158825 | CDA | 13759 | Upstream | 4.48127437 | 7.42E-06 | 0.01997892 |
| 2 | 152285829 | 152285829 | 1 | 2_152285829 | ENSG00000199884 | Y_RNA | 1369 | Upstream | -4.4812701 | 7.42E-06 | 0.01997892 |
| 1 | 220916534 | 220916534 | 1 | 1_220916534 | ENSG00000136630 | HLX | 31475 | Downstream | -4.4812535 | 7.42E-06 | 0.01997892 |
| 5 | 146579060 | 146579060 | 1 | 5_146579060 | ENSG00000250407 | AC008728.1 | 0 | INTRON | -4.481148 | 7.42E-06 | 0.01998276 |
| 20 | 22919455 | 22919455 | 1 | 20_22919455 | ENSG00000213882 | CYB5AP4 | 33387 | Upstream | 4.48114501 | 7.42E-06 | 0.01998276 |
| 18 | 21161366 | 21161366 | 1 | 18_21161366 | ENSG00000263748 | EXOGP1 | 21136 | Downstream | 4.48107413 | 7.43E-06 | 0.01998623 |
| 21 | 38856466 | 38856466 | 1 | 21_38856466 | ENSG00000205622 | AP001042.1 | 0 | INTRON | 4.48097953 | 7.43E-06 | 0.01999193 |
| 1 | 90778069 | 90778069 | 1 | 1_90778069 | ENSG00000233593 | LINC02609 | 0 | INTRON | -4.4807302 | 7.44E-06 | 0.02001155 |
| 17 | 47240005 | 47240005 | 1 | 17_47240005 | ENSG00000259207 | ITGB3 | 13840 | Upstream | 4.48068524 | 7.44E-06 | 0.02001155 |
| X | 18774192 | 18774192 | 1 | X_18774192 | ENSG00000086717 | PPEF1 | 0 | INTRON | 4.48066901 | 7.44E-06 | 0.02001155 |
| 20 | 49030200 | 49030200 | 1 | 20_49030200 | ENSG00000124198 | ARFGEF2 | 0 | INTRON | 4.48047553 | 7.45E-06 | 0.02002434 |
| 14 | 100765792 | 100765792 | 1 | 14_100765792 | ENSG00000214548 | MEG3 | 13617 | Upstream | 4.48046521 | 7.45E-06 | 0.02002434 |
| 16 | 84345280 | 84345280 | 1 | 16_84345280 | ENSG00000260504 | AC010551.1 | 1873 | Upstream | -4.4804183 | 7.45E-06 | 0.02002456 |
| 22 | 39342968 | 39342968 | 1 | 22_39342968 | ENSG00000100321 | SYNGR1 | 6956 | Upstream | 4.48039548 | 7.45E-06 | 0.02002456 |
| 6 | 33016068 | 33016068 | 1 | 6_33016068 | ENSG00000204252 | HLA-DOA | 6477 | Upstream | 4.48034232 | 7.45E-06 | 0.02002638 |
| 3 | 65742037 | 65742037 | 1 | 3_65742037 | ENSG00000151276 | MAGI1 | 0 | INTRON | -4.4802292 | 7.46E-06 | 0.02003383 |
| 3 | 108655571 | 108655571 | 1 | 3_108655571 | ENSG00000198919 | DZIP3 | 0 | INTRON | -4.4800886 | 7.46E-06 | 0.02004016 |
| X | 122300156 | 122300156 | 1 | X_122300156 | ENSG00000280142 | AL357562.1 | 57540 | Downstream | 4.48007645 | 7.46E-06 | 0.02004016 |
| 8 | 123515848 | 123515848 | 1 | 8_123515848 | ENSG00000156804 | FBXO32 | 0 | INTRON | 4.48006077 | 7.46E-06 | 0.02004016 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 13526116 | 13526116 | 1 | 2_13526116 | ENSG00000229370 | AC073062.1 | 11556 | Upstream | 4.47992418 | 7.47E-06 | 0.02004982 |
| 2 | 18997253 | 18997253 | 1 | 2_18997253 | ENSG00000236204 | LINC01376 | 0 | INTRON | -4.4798097 | 7.47E-06 | 0.02005741 |
| 7 | 106377458 | 106377458 | 1 | 7_106377458 | ENSG00000243797 | AC004917.1 | 0 | INTRON | 4.479713 | 7.47E-06 | 0.02006334 |
| 8 | 38070626 | 38070626 | 1 | 8_38070626 | ENSG00000260949 | AP006545.1 | 6835 | Downstream | 4.4794978 | 7.48E-06 | 0.02007189 |
| 10 | 132989313 | 132989313 | 1 | 10_132989313 | ENSG00000240707 | LINC01168 | 12959 | Downstream | 4.47948198 | 7.48E-06 | 0.02007189 |
| 12 | 263093 | 263093 | 1 | 12_263093 | ENSG00000010379 | SLC6A13 | 220 | Upstream | -4.4794434 | 7.48E-06 | 0.02007189 |
| 6 | 27283962 | 27283962 | 1 | 6_27283962 | ENSG00000158553 | POM121L2 | 1940 | Downstream | -4.4794359 | 7.48E-06 | 0.02007189 |
| 11 | 60805055 | 60805055 | 1 | 11_60805055 | ENSG00000172689 | MS4A10 | 3750 | Downstream | -4.479428 | 7.48E-06 | 0.02007189 |
| X | 53297616 | 53297616 | 1 | X_53297616 | ENSG00000124313 | IQSEC2 | 0 | INTRON | 4.4794201 | 7.48E-06 | 0.02007189 |
| 21 | 43802681 | 43802681 | 1 | 21_43802681 | ENSG00000160214 | RRP1 | 0 | INTRON | -4.47933 | 7.49E-06 | 0.0200772 |
| 2 | 54504338 | 54504338 | 1 | 2_54504338 | ENSG00000115306 | SPTBN1 | 0 | INTRON | -4.4792738 | 7.49E-06 | 0.02007932 |
| 4 | 94941167 | 94941167 | 1 | 4_94941167 | ENSG00000138696 | BMPR1B | 0 | INTRON | -4.4791564 | 7.49E-06 | 0.02008719 |
| 3 | 17603936 | 17603936 | 1 | 3_17603936 | ENSG00000131374 | TBC1D5 | 0 | INTRON | -4.479039 | 7.50E-06 | 0.02008966 |
| X | 153541344 | 153541344 | 1 | X_153541344 | ENSG00000067842 | ATP2B3 | 0 | INTRON | -4.4790359 | 7.50E-06 | 0.02008966 |
| 18 | 8163371 | 8163371 | 1 | 18_8163371 | ENSG00000173482 | PTPRM | 0 | INTRON | 4.47900293 | 7.50E-06 | 0.02008966 |
| 16 | 72400576 | 72400576 | 1 | 16_72400576 | ENSG00000261008 | LINC01572 | 0 | INTRON | -4.4789834 | 7.50E-06 | 0.02008966 |
| 8 | 105646340 | 105646340 | 1 | 8_105646340 | ENSG00000251003 | ZFPM2-AS1 | 0 | INTRON | -4.4788789 | 7.50E-06 | 0.02008966 |
| 5 | 134817154 | 134817154 | 1 | 5_134817154 | ENSG00000145833 | DDX46 | 0 | EXON | 4.47885876 | 7.50E-06 | 0.02008966 |
| 1 | 154922899 | 154922899 | 1 | 1_154922899 | ENSG00000163344 | PMVK | 1840 | Downstream | 4.47883876 | 7.51E-06 | 0.02008966 |
| 11 | 65152297 | 65152297 | 1 | 11_65152297 | ENSG00000222477 | RNU2-23P | 4519 | Downstream | -4.478835 | 7.51E-06 | 0.02008966 |
| 1 | 118245398 | 118245398 | 1 | 1_118245398 | ENSG00000222209 | RNA5SP56 | 18973 | Downstream | 4.47882782 | 7.51E-06 | 0.02008966 |
| 3 | 6992997 | 6992997 | 1 | 3_6992997 | ENSG00000196277 | GRM7 | 0 | INTRON | -4.4787355 | 7.51E-06 | 0.02009347 |
| 16 | 10439785 | 10439785 | 1 | 16_10439785 | ENSG00000166669 | ATF7IP2 | 0 | INTRON | 4.47871308 | 7.51E-06 | 0.02009347 |
| 4 | 164817608 | 164817608 | 1 | 4_164817608 | ENSG00000248771 | SMIM31 | 13813 | Downstream | 4.47867725 | 7.51E-06 | 0.02009347 |
| 9 | 109200387 | 109200387 | 1 | 9_109200387 | ENSG00000095203 | EPB41L4B | 0 | INTRON | -4.478653 | 7.51E-06 | 0.02009347 |
| 7 | 20824094 | 20824094 | 1 | 7_20824094 | ENSG00000219451 | RPL23P8 | 3231 | Upstream | -4.4785823 | 7.51E-06 | 0.02009695 |
| 12 | 103613387 | 103613387 | 1 | 12_103613387 | ENSG00000136011 | STAB2 | 0 | INTRON | -4.4785136 | 7.52E-06 | 0.02009695 |
| 7 | 76978600 | 76978600 | 1 | 7_76978600 | ENSG00000265479 | DTX2P1-UPK3BP1-PMS2P11 | 0 | EXON | 4.47849836 | 7.52E-06 | 0.02009695 |
| 4 | 35041629 | 35041629 | 1 | 4_35041629 | ENSG00000238694 | AC020589.1 | 75285 | Upstream | -4.4784818 | 7.52E-06 | 0.02009695 |
| 11 | 3422776 | 3422776 | 1 | 11_3422776 | ENSG00000166492 | FAM86GP | 280 | Upstream | -4.4784076 | 7.52E-06 | 0.02009897 |
| 15 | 28524615 | 28524615 | 1 | 15_28524615 | ENSG00000183629 | GOLGA8G | 0 | INTRON | 4.47837 | 7.52E-06 | 0.02009897 |
| 13 | 32603972 | 32603972 | 1 | 13_32603972 | ENSG00000083642 | PDS5B | 0 | INTRON | -4.4783313 | 7.52E-06 | 0.02009897 |
| 16 | 51845397 | 51845397 | 1 | 16_51845397 | ENSG00000260057 | LINC01571 | 57189 | Downstream | 4.4783262 | 7.52E-06 | 0.02009897 |
| 13 | 27130737 | 27130737 | 1 | 13_27130737 | ENSG00000152484 | USP12 | 0 | INTRON | -4.4781157 | 7.53E-06 | 0.02011564 |
| X | 101128062 | 101128062 | 1 | X_101128062 | ENSG00000102384 | CENPI | 0 | INTRON | -4.4779548 | 7.54E-06 | 0.02012304 |
| 4 | 165811520 | 165811520 | 1 | 4_165811520 | ENSG00000249500 | LINC01179 | 48742 | Downstream | -4.4779449 | 7.54E-06 | 0.02012304 |
| 11 | 41626198 | 41626198 | 1 | 11_41626198 | ENSG00000255388 | LINC02741 | 0 | INTRON | -4.4779365 | 7.54E-06 | 0.02012304 |
| 20 | 33722989 | 33722989 | 1 | 20_33722989 | ENSG00000101417 | PXMP4 | 2670 | Upstream | 4.4777915 | 7.54E-06 | 0.02013356 |
| 20 | 57060341 | 57060341 | 1 | 20_57060341 | ENSG00000231078 | AL157414.2 | 45399 | Upstream | 4.4776495 | 7.55E-06 | 0.02013941 |
| 1 | 23155753 | 23155753 | 1 | 1_23155753 | ENSG00000169641 | LUZP1 | 0 | INTRON | 4.47764453 | 7.55E-06 | 0.02013941 |
| 2 | 66523581 | 66523581 | 1 | 2_66523581 | ENSG00000143995 | MEIS1 | 0 | INTRON | 4.47762892 | 7.55E-06 | 0.02013941 |
| 4 | 1367509 | 1367509 | 1 | 4_1367509 | ENSG00000163945 | UVSSA | 0 | INTRON | 4.47750969 | 7.55E-06 | 0.02014246 |
| 6 | 130374501 | 130374501 | 1 | 6_130374501 | ENSG00000164484 | TMEM200A | 0 | INTRON | -4.4775082 | 7.55E-06 | 0.02014246 |
| 14 | 32616462 | 32616462 | 1 | 14_32616462 | ENSG00000151320 | AKAP6 | 0 | INTRON | -4.4774514 | 7.55E-06 | 0.02014246 |
| 7 | 153158418 | 153158418 | 1 | 7_153158418 | ENSG00000224104 | AC079809.1 | 13830 | Upstream | 4.47744817 | 7.55E-06 | 0.02014246 |
| 16 | 89355307 | 89355307 | 1 | 16_89355307 | ENSG00000167522 | ANKRD11 | 0 | INTRON | 4.47742929 | 7.55E-06 | 0.02014246 |
| 20 | 2605162 | 2605162 | 1 | 20_2605162 | ENSG00000149488 | TMC2 | 0 | INTRON | 4.47729691 | 7.56E-06 | 0.02014954 |
| 5 | 175405039 | 175405039 | 1 | 5_175405039 | ENSG00000184845 | DRD1 | 34996 | Downstream | 4.47725183 | 7.56E-06 | 0.02014954 |
| 17 | 17294700 | 17294700 | 1 | 17_17294700 | ENSG00000205309 | NT5M | 8634 | Upstream | -4.4771595 | 7.56E-06 | 0.02014954 |
| 16 | 87324211 | 87324211 | 1 | 16_87324211 | ENSG00000131152 | AC010531.1 | 0 | INTRON | 4.47713016 | 7.57E-06 | 0.02014954 |
| 4 | 63309102 | 63309102 | 1 | 4_63309102 | ENSG00000231442 | LARP1BP1 | 41011 | Upstream | 4.47712445 | 7.57E-06 | 0.02014954 |
| X | 103740684 | 103740684 | 1 | X_103740684 | ENSG00000188828 | GLRA4 | 12029 | Upstream | -4.4771087 | 7.57E-06 | 0.02014954 |
| 6 | 13061964 | 13061964 | 1 | 6_13061964 | ENSG00000112137 | PHACTR1 | 0 | INTRON | -4.4771018 | 7.57E-06 | 0.02014954 |
| 11 | 15666153 | 15666153 | 1 | 11_15666153 | ENSG00000254695 | AC087379.2 | 0 | INTRON | 4.47704801 | 7.57E-06 | 0.02014954 |
| 20 | 24380834 | 24380834 | 1 | 20_24380834 | ENSG00000232200 | AL158090.1 | 62748 | Upstream | 4.4770338 | 7.57E-06 | 0.02014954 |
| 2 | 25336221 | 25336221 | 1 | 2_25336221 | ENSG00000119772 | DNMT3A | 0 | INTRON | 4.47693394 | 7.57E-06 | 0.02014954 |
| 11 | 14693348 | 14693348 | 1 | 11_14693348 | ENSG00000152270 | PDE3B | 0 | INTRON | -4.4769329 | 7.57E-06 | 0.02014954 |
| 3 | 10743936 | 10743936 | 1 | 3_10743936 | ENSG00000226567 | LINC00606 | 15413 | Downstream | 4.47692081 | 7.57E-06 | 0.02014954 |
| 1 | 64446363 | 64446363 | 1 | 1_64446363 | ENSG00000158966 | CACHD1 | 23765 | Upstream | -4.4769196 | 7.57E-06 | 0.02014954 |
| 7 | 24628135 | 24628135 | 1 | 7_24628135 | ENSG00000105926 | MPP6 | 0 | INTRON | 4.47685871 | 7.57E-06 | 0.02015205 |
| 4 | 28336140 | 28336140 | 1 | 4_28336140 | ENSG00000250038 | AC093791.1 | 7721 | Downstream | 4.47682622 | 7.58E-06 | 0.02015205 |
| 13 | 41938511 | 41938511 | 1 | 13_41938511 | ENSG00000102763 | VWA8 | 0 | INTRON | 4.47663799 | 7.58E-06 | 0.02016062 |
| 13 | 96785605 | 96785605 | 1 | 13_96785605 | ENSG00000185352 | HS6ST3 | 0 | INTRON | 4.47662622 | 7.58E-06 | 0.02016062 |
| 8 | 9859106 | 9859106 | 1 | 8_9859106 | ENSG00000253230 | LINC00599 | 40764 | Downstream | -4.4765913 | 7.58E-06 | 0.02016062 |
| 1 | 18885143 | 18885143 | 1 | 1_18885143 | ENSG00000159423 | ALDH4A1 | 0 | INTRON | -4.476586 | 7.58E-06 | 0.02016062 |
| 11 | 8570736 | 8570736 | 1 | 11_8570736 | ENSG00000130413 | STK33 | 0 | INTRON | 4.47656854 | 7.59E-06 | 0.02016062 |
| 10 | 125500294 | 125500294 | 1 | 10_125500294 | ENSG00000233135 | RPS27P18 | 26362 | Upstream | 4.47644466 | 7.59E-06 | 0.02016678 |
| 12 | 3009651 | 3009651 | 1 | 12_3009651 | ENSG00000197905 | TEAD4 | 0 | INTRON | 4.4764047 | 7.59E-06 | 0.02016678 |
| 19 | 43903060 | 43903060 | 1 | 19_43903060 | ENSG00000267191 | AC006213.3 | 0 | INTRON | 4.47640322 | 7.59E-06 | 0.02016678 |
| 1 | 234382802 | 234382802 | 1 | 1_234382802 | ENSG00000168275 | COA6 | 0 | INTRON | 4.47635226 | 7.59E-06 | 0.02016844 |
| 1 | 19072871 | 19072871 | 1 | 1_19072871 | ENSG00000272084 | AL137127.1 | 0 | EXON | -4.4760932 | 7.60E-06 | 0.02018976 |
| 1 | 72576628 | 72576628 | 1 | 1_72576628 | ENSG00000286863 | AL513166.1 | 0 | INTRON | -4.4759766 | 7.61E-06 | 0.02019458 |
| 1 | 13310243 | 13310243 | 1 | 1_13310243 | ENSG00000237700 | PRAMEF33 | 1336 | Downstream | -4.4759756 | 7.61E-06 | 0.02019458 |
| 5 | 14209339 | 14209339 | 1 | 5_14209339 | ENSG00000038382 | TRIO | 0 | INTRON | -4.4759409 | 7.61E-06 | 0.02019471 |
| 8 | 21669465 | 21669465 | 1 | 8_21669465 | ENSG00000168546 | GFRA2 | 20932 | Downstream | 4.47580462 | 7.61E-06 | 0.02020098 |
| 3 | 7294102 | 7294102 | 1 | 3_7294102 | ENSG00000196277 | GRM7 | 0 | INTRON | 4.47579504 | 7.61E-06 | 0.02020098 |
| 6 | 111434613 | 111434613 | 1 | 6_111434613 | ENSG00000009413 | REV3L | 0 | INTRON | 4.47577457 | 7.61E-06 | 0.02020098 |
| 2 | 107053159 | 107053159 | 1 | 2_107053159 | ENSG00000286218 | AC005040.2 | 56625 | Upstream | 4.47569809 | 7.62E-06 | 0.02020372 |
| 8 | 30562801 | 30562801 | 1 | 8_30562801 | ENSG00000157110 | RBPMS | 0 | INTRON | 4.47567904 | 7.62E-06 | 0.02020372 |
| 4 | 120550963 | 120550963 | 1 | 4_120550963 | ENSG00000250938 | AC073475.1 | 0 | INTRON | 4.4756423 | 7.62E-06 | 0.02020404 |
| 12 | 11170419 | 11170419 | 1 | 12_11170419 | ENSG00000256712 | AC134349.1 | 0 | INTRON | -4.4754431 | 7.63E-06 | 0.02021974 |
| 8 | 62633891 | 62633891 | 1 | 8_62633891 | ENSG00000185942 | NKAIN3 | 0 | INTRON | -4.4753946 | 7.63E-06 | 0.02022118 |
| 16 | 25253974 | 25253974 | 1 | 16_25253974 | ENSG00000155592 | ZKSCAN2 | 0 | INTRON | 4.47510911 | 7.64E-06 | 0.02024232 |
| 4 | 131122779 | 131122779 | 1 | 4_131122779 | ENSG00000250213 | AC025554.1 | 9524 | Downstream | -4.4751048 | 7.64E-06 | 0.02024232 |
| 18 | 12583269 | 12583269 | 1 | 18_12583269 | ENSG00000134278 | SPIRE1 | 0 | INTRON | -4.4750418 | 7.64E-06 | 0.02024514 |
| 15 | 48763598 | 48763598 | 1 | 15_48763598 | ENSG00000103995 | CEP152 | 0 | INTRON | -4.4749574 | 7.64E-06 | 0.02024998 |
| 6 | 61233296 | 61233296 | 1 | 6_61233296 | ENSG00000220030 | AL356131.1 | 7601 | Upstream | 4.4748988 | 7.64E-06 | 0.02025238 |
| 5 | 79303688 | 79303688 | 1 | 5_79303688 | ENSG00000152409 | JMY | 0 | INTRON | 4.47476059 | 7.65E-06 | 0.0202592 |

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| 11 | 32403178 | 32403178 | 1 | 11_32403178 | ENSG00000184937 | WT1 | 0 | INTRON | -4.4747603 | 7.65E-06 | 0.0202592 |
| 2 | 70992014 | 70992014 | 1 | 2_70992014 | ENSG00000258881 | AC007040.2 | 0 | INTRON | 4.47461776 | 7.65E-06 | 0.02026654 |
| 18 | 8663462 | 8663462 | 1 | 18_8663462 | ENSG00000206418 | RAB12 | 24080 | Downstream | 4.47458703 | 7.66E-06 | 0.02026654 |
| 12 | 9775477 | 9775477 | 1 | 12_9775477 | ENSG00000110848 | CD69 | 14576 | Upstream | 4.47458321 | 7.66E-06 | 0.02026654 |
| 10 | 98607224 | 98607224 | 1 | 10_98607224 | ENSG00000172987 | HPSE2 | 0 | INTRON | 4.47446569 | 7.66E-06 | 0.02027358 |
| 10 | 43427146 | 43427146 | 1 | 10_43427146 | ENSG00000230555 | AL450326.1 | 5046 | Downstream | 4.47441297 | 7.66E-06 | 0.02027358 |
| 1 | 12137995 | 12137995 | 1 | 1_12137995 | ENSG00000120949 | TNFRSF8 | 0 | INTRON | 4.47436335 | 7.66E-06 | 0.02027358 |
| 2 | 231006359 | 231006359 | 1 | 2_231006359 | ENSG00000173699 | SPATA3 | 0 | INTRON | -4.4743502 | 7.66E-06 | 0.02027358 |
| 7 | 69928897 | 69928897 | 1 | 7_69928897 | ENSG00000158321 | AUTS2 | 0 | INTRON | 4.47434281 | 7.66E-06 | 0.02027358 |
| 5 | 92640782 | 92640782 | 1 | 5_92640782 | ENSG00000249776 | AC124854.1 | 0 | INTRON | -4.4743034 | 7.67E-06 | 0.02027417 |
| 4 | 125380911 | 125380911 | 1 | 4_125380911 | ENSG00000196159 | FAT4 | 0 | INTRON | 4.47404561 | 7.68E-06 | 0.02029549 |
| 9 | 85418623 | 85418623 | 1 | 9_85418623 | ENSG00000285634 | AL583827.1 | 0 | INTRON | -4.4739752 | 7.68E-06 | 0.020298 |
| 20 | 30851485 | 30851485 | 1 | 20_30851485 | ENSG00000275305 | RNA5SP528 | 35211 | Upstream | -4.4739283 | 7.68E-06 | 0.020298 |
| 10 | 111203240 | 111203240 | 1 | 10_111203240 | ENSG00000213247 | AL355863.1 | 97992 | Downstream | 4.47388207 | 7.68E-06 | 0.020298 |
| 10 | 30573444 | 30573444 | 1 | 10_30573444 | ENSG00000230298 | AL590068.2 | 3254 | Upstream | -4.4738568 | 7.68E-06 | 0.020298 |
| 2 | 102029748 | 102029748 | 1 | 2_102029748 | ENSG00000115590 | IL1R2 | 1204 | Downstream | 4.47385314 | 7.68E-06 | 0.020298 |
| 10 | 24501809 | 24501809 | 1 | 10_24501809 | ENSG00000120549 | KIAA1217 | 0 | INTRON | -4.4737421 | 7.69E-06 | 0.020303 |
| 2 | 234096273 | 234096273 | 1 | 2_234096273 | ENSG00000279218 | AC006037.2 | 11783 | Downstream | -4.4737273 | 7.69E-06 | 0.020303 |
| 8 | 70716621 | 70716621 | 1 | 8_70716621 | ENSG00000285579 | AC015687.1 | 0 | INTRON | 4.47368521 | 7.69E-06 | 0.020303 |
| 2 | 57657595 | 57657595 | 1 | 2_57657595 | ENSG00000271615 | ACTG1P22 | 97832 | Upstream | -4.4736659 | 7.69E-06 | 0.020303 |
| 2 | 75215284 | 75215284 | 1 | 2_75215284 | ENSG00000115353 | TACR1 | 15764 | Upstream | 4.47363464 | 7.69E-06 | 0.020303 |
| 2 | 204965557 | 204965557 | 1 | 2_204965557 | ENSG00000116117 | PARD3B | 0 | INTRON | -4.4735536 | 7.69E-06 | 0.02030444 |
| 13 | 76503003 | 76503003 | 1 | 13_76503003 | ENSG00000285572 | AL136441.1 | 49803 | Downstream | 4.47355316 | 7.69E-06 | 0.02030444 |
| 13 | 113538857 | 113538857 | 1 | 13_113538857 | ENSG00000150403 | TMCO3 | 0 | INTRON | -4.4734875 | 7.70E-06 | 0.02030753 |
| 1 | 143859670 | 143859670 | 1 | 1_143859670 | ENSG00000237503 | AC239798.3 | 13166 | Upstream | 4.47338712 | 7.70E-06 | 0.02031392 |
| 4 | 49803549 | 49803549 | 1 | 4_49803549 | ENSG00000249337 | SNX18P25 | 214020 | Downstream | -4.4733271 | 7.70E-06 | 0.02031561 |
| 6 | 79205491 | 79205491 | 1 | 6_79205491 | ENSG00000118418 | HMGN3 | 0 | INTRON | -4.4733031 | 7.70E-06 | 0.02031561 |
| 13 | 102623455 | 102623455 | 1 | 13_102623455 | ENSG00000134900 | TPP2 | 0 | INTRON | 4.47322758 | 7.70E-06 | 0.02031885 |
| 16 | 9576931 | 9576931 | 1 | 16_9576931 | ENSG00000283003 | AC007221.1 | 0 | INTRON | 4.47320269 | 7.71E-06 | 0.02031885 |
| 14 | 45093499 | 45093499 | 1 | 14_45093499 | ENSG00000185246 | PRPF39 | 0 | INTRON | -4.473158 | 7.71E-06 | 0.0203198 |
| 2 | 109219534 | 109219534 | 1 | 2_109219534 | ENSG00000172985 | SH3RF3 | 0 | INTRON | -4.4731265 | 7.71E-06 | 0.0203198 |
| 17 | 1152105 | 1152105 | 1 | 17_1152105 | ENSG00000159842 | ABR | 0 | INTRON | 4.47290345 | 7.72E-06 | 0.0203323 |
| 7 | 109882741 | 109882741 | 1 | 7_109882741 | ENSG00000237064 | EIF3IP1 | 76476 | Downstream | -4.4729018 | 7.72E-06 | 0.0203323 |
| 5 | 21038855 | 21038855 | 1 | 5_21038855 | ENSG00000286751 | AC140168.1 | 6010 | Upstream | -4.4728957 | 7.72E-06 | 0.0203323 |
| 1 | 248075553 | 248075553 | 1 | 1_248075553 | ENSG00000197067 | OR2T32P | 7968 | Downstream | 4.4726937 | 7.72E-06 | 0.02034123 |
| 11 | 119323156 | 119323156 | 1 | 11_119323156 | ENSG00000252119 | AP002956.1 | 136 | Downstream | 4.47268429 | 7.72E-06 | 0.02034123 |
| 2 | 99448117 | 99448117 | 1 | 2_99448117 | ENSG00000135945 | REV1 | 0 | INTRON | 4.47267312 | 7.72E-06 | 0.02034123 |
| 17 | 80043413 | 80043413 | 1 | 17_80043413 | ENSG00000141519 | CCDC40 | 0 | INTRON | 4.47265468 | 7.73E-06 | 0.02034123 |
| 5 | 64621595 | 64621595 | 1 | 5_64621595 | ENSG00000186479 | RGS7BP | 9276 | Downstream | 4.47263646 | 7.73E-06 | 0.02034123 |
| 12 | 13363762 | 13363762 | 1 | 12_13363762 | ENSG00000180861 | LINC01559 | 7326 | Downstream | 4.47252027 | 7.73E-06 | 0.02034726 |
| 2 | 133283735 | 133283735 | 1 | 2_133283735 | ENSG00000226953 | NCKAP5-AS2 | 0 | INTRON | 4.47243949 | 7.73E-06 | 0.02034726 |
| 1 | 235639539 | 235639539 | 1 | 1_235639539 | ENSG00000168243 | GNG4 | 0 | INTRON | -4.4723726 | 7.74E-06 | 0.02034726 |
| 3 | 72772354 | 72772354 | 1 | 3_72772354 | ENSG00000144736 | SHQ1 | 0 | INTRON | 4.47228298 | 7.74E-06 | 0.02034726 |
| 16 | 84278964 | 84278964 | 1 | 16_84278964 | ENSG00000103175 | WFDC1 | 15881 | Upstream | -4.4722812 | 7.74E-06 | 0.02034726 |
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| 8 | 93547326 | 93547326 | 1 | 8_93547326 | ENSG00000246662 | LINC00535 | 0 | INTRON | 4.47226586 | 7.74E-06 | 0.02034726 |
| 2 | 241914266 | 241914266 | 1 | 2_241914266 | ENSG00000233806 | LINC01237 | 0 | INTRON | -4.4722284 | 7.74E-06 | 0.02034726 |
| 11 | 115873950 | 115873950 | 1 | 11_115873950 | ENSG00000256717 | LINC02698 | 30804 | Downstream | 4.4722024 | 7.74E-06 | 0.02034726 |
| 11 | 5658365 | 5658365 | 1 | 11_5658365 | ENSG00000239920 | AC104389.5 | 0 | INTRON | -4.4721965 | 7.74E-06 | 0.02034726 |
| 4 | 15509737 | 15509737 | 1 | 4_15509737 | ENSG00000048342 | CC2D2A | 0 | INTRON | 4.47215617 | 7.74E-06 | 0.02034726 |
| 4 | 181707210 | 181707210 | 1 | 4_181707210 | ENSG00000287948 | AC084741.1 | 7068 | Upstream | -4.4721528 | 7.74E-06 | 0.02034726 |
| 1 | 92501806 | 92501806 | 1 | 1_92501806 | ENSG00000067208 | EVI5 | 6889 | Downstream | 4.47214347 | 7.74E-06 | 0.02034726 |
| 4 | 29475581 | 29475581 | 1 | 4_29475581 | ENSG00000251113 | AC092593.1 | 7731 | Upstream | -4.4720261 | 7.75E-06 | 0.02035529 |
| 8 | 48282325 | 48282325 | 1 | 8_48282325 | ENSG00000253654 | AC105029.1 | 11700 | Downstream | 4.47187188 | 7.75E-06 | 0.02036684 |
| 9 | 94382769 | 94382769 | 1 | 9_94382769 | ENSG00000148110 | MFSD14B | 0 | INTRON | -4.4717362 | 7.76E-06 | 0.02037662 |
| 13 | 74857316 | 74857316 | 1 | 13_74857316 | ENSG00000225944 | RIOK3P1 | 27236 | Downstream | -4.4715993 | 7.76E-06 | 0.02038652 |
| 8 | 143864502 | 143864502 | 1 | 8_143864502 | ENSG00000261150 | EPPK1 | 0 | EXON | -4.4715129 | 7.77E-06 | 0.02039162 |
| 14 | 104123615 | 104123615 | 1 | 14_104123615 | ENSG00000207568 | MIR203A | 6101 | Downstream | -4.4714724 | 7.77E-06 | 0.02039167 |
| 13 | 46606791 | 46606791 | 1 | 13_46606791 | ENSG00000136141 | LRCH1 | 0 | INTRON | 4.47144641 | 7.77E-06 | 0.02039167 |
| 3 | 24758068 | 24758068 | 1 | 3_24758068 | ENSG00000237838 | AC092422.1 | 0 | INTRON | -4.4713563 | 7.77E-06 | 0.02039408 |
| 9 | 111306760 | 111306760 | 1 | 9_111306760 | ENSG00000171133 | OR2K2 | 20722 | Downstream | 4.47132257 | 7.77E-06 | 0.02039408 |
| 15 | 44980007 | 44980007 | 1 | 15_44980007 | ENSG00000167014 | TERB2 | 778 | Downstream | 4.47132222 | 7.77E-06 | 0.02039408 |
| 17 | 80227879 | 80227879 | 1 | 17_80227879 | ENSG00000181045 | SLC26A11 | 0 | EXON | 4.47125708 | 7.78E-06 | 0.02039464 |
| 2 | 180215246 | 180215246 | 1 | 2_180215246 | ENSG00000163510 | CWC22 | 207949 | Upstream | 4.47125041 | 7.78E-06 | 0.02039464 |
| 13 | 60601503 | 60601503 | 1 | 13_60601503 | ENSG00000223076 | RNA5SP31 | 12104 | Upstream | -4.4711821 | 7.78E-06 | 0.02039801 |
| 11 | 16482291 | 16482291 | 1 | 11_16482291 | ENSG00000110693 | SOX6 | 0 | INTRON | 4.47108393 | 7.78E-06 | 0.02040423 |
| 7 | 82425742 | 82425742 | 1 | 7_82425742 | ENSG00000153956 | CACNA2D1 | 0 | INTRON | -4.4710293 | 7.78E-06 | 0.02040631 |
| 3 | 194400601 | 194400601 | 1 | 3_194400601 | ENSG00000133657 | ATP13A3 | 2070 | Downstream | 4.47091666 | 7.79E-06 | 0.02041391 |
| 12 | 132755318 | 132755318 | 1 | 12_132755318 | ENSG00000176915 | ANKLE2 | 0 | EXON | 4.47078276 | 7.79E-06 | 0.02042117 |
| 4 | 69195742 | 69195742 | 1 | 4_69195742 | ENSG00000250696 | AC111000.4 | 0 | EXON | 4.47077466 | 7.79E-06 | 0.02042117 |
| 16 | 30851746 | 30851746 | 1 | 16_30851746 | ENSG00000099385 | BCL7C | 0 | 3UTR | 4.4707418 | 7.79E-06 | 0.02042117 |
| 6 | 45712089 | 45712089 | 1 | 6_45712089 | ENSG00000124813 | RUNX2 | 47740 | Downstream | 4.4706373 | 7.80E-06 | 0.02042801 |
| 4 | 169286888 | 169286888 | 1 | 4_169286888 | ENSG00000154447 | SH3RF1 | 15932 | Upstream | -4.4704584 | 7.81E-06 | 0.02044045 |
| 10 | 45869824 | 45869824 | 1 | 10_45869824 | ENSG00000239883 | PARGP1 | 0 | INTRON | -4.4704413 | 7.81E-06 | 0.02044045 |
| 8 | 41952444 | 41952444 | 1 | 8_41952444 | ENSG00000083168 | KAT6A | 0 | INTRON | -4.4703944 | 7.81E-06 | 0.02044099 |
| 8 | 36036731 | 36036731 | 1 | 8_36036731 | ENSG00000253452 | AC124290.1 | 0 | INTRON | -4.4703698 | 7.81E-06 | 0.02044099 |
| 20 | 63370516 | 63370516 | 1 | 20_63370516 | ENSG00000203900 | AL121827.1 | 0 | EXON | 4.47031325 | 7.81E-06 | 0.02044325 |
| 16 | 57603320 | 57603320 | 1 | 16_57603320 | ENSG00000260828 | HMGB3P32 | 0 | EXON | 4.47017746 | 7.82E-06 | 0.02045309 |
| 17 | 57420512 | 57420512 | 1 | 17_57420512 | ENSG00000153944 | MSI2 | 0 | INTRON | 4.47007083 | 7.82E-06 | 0.02046002 |
| 6 | 44676269 | 44676269 | 1 | 6_44676269 | ENSG00000286417 | AL133334.1 | 51651 | Upstream | 4.47003922 | 7.82E-06 | 0.02046002 |
| 13 | 21377577 | 21377577 | 1 | 13_21377577 | ENSG00000180776 | ZDHHC20 | 0 | INTRON | -4.4699829 | 7.82E-06 | 0.02046227 |
| X | 123511803 | 123511803 | 1 | X_123511803 | ENSG00000179101 | AL590139.1 | 2669 | Upstream | 4.4698435 | 7.83E-06 | 0.02047245 |
| 10 | 117578515 | 117578515 | 1 | 10_117578515 | ENSG00000288172 | AL356419.1 | 1338 | Upstream | 4.46967566 | 7.83E-06 | 0.02048368 |
| 10 | 98320601 | 98320601 | 1 | 10_98320601 | ENSG00000138131 | LOXL4 | 52407 | Upstream | -4.469639 | 7.84E-06 | 0.02048368 |
| 10 | 48229827 | 48229827 | 1 | 10_48229827 | ENSG00000170324 | FRMPD2 | 0 | INTRON | -4.4696276 | 7.84E-06 | 0.02048368 |
| 1 | 165781578 | 165781578 | 1 | 1_165781578 | ENSG00000143183 | TMCO1 | 0 | INTRON | 4.469501 | 7.84E-06 | 0.02049266 |
| 11 | 129774788 | 129774788 | 1 | 11_129774788 | ENSG00000287426 | AP003327.2 | 0 | INTRON | 4.46945616 | 7.84E-06 | 0.02049381 |
| 17 | 18091540 | 18091540 | 1 | 17_18091540 | ENSG00000108591 | DRG2 | 0 | INTRON | 4.46939565 | 7.84E-06 | 0.02049646 |

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| 9 | 107719332 | 107719332 | 1 | 9_107719332 | ENSG00000202308 | RNU6-996P | 56086 | Upstream | 4.46935162 | 7.85E-06 | 0.02049753 |
| 1 | 106901386 | 106901386 | 1 | 1_106901386 | ENSG00000237460 | LINC01661 | 36070 | Downstream | -4.469265 | 7.85E-06 | 0.02050017 |
| 22 | 20593400 | 20593400 | 1 | 22_20593400 | ENSG00000250261 | CCDC74BP1 | 1182 | Upstream | -4.4692585 | 7.85E-06 | 0.02050017 |
| 1 | 54959927 | 54959927 | 1 | 1_54959927 | ENSG00000284601 | AL590440.2 | 14972 | Downstream | 4.46918069 | 7.85E-06 | 0.02050148 |
| 5 | 93630664 | 93630664 | 1 | 5_93630664 | ENSG00000113391 | FAM172A | 0 | INTRON | -4.4691696 | 7.85E-06 | 0.02050148 |
| 8 | 98305318 | 98305318 | 1 | 8_98305318 | ENSG00000104361 | NIPAL2 | 10925 | Upstream | -4.4691463 | 7.85E-06 | 0.02050148 |
| 14 | 72715253 | 72715253 | 1 | 14_72715253 | ENSG00000205683 | DPF3 | 0 | INTRON | 4.46910774 | 7.85E-06 | 0.02050203 |
| 7 | 40107639 | 40107639 | 1 | 7_40107639 | ENSG00000273444 | AC006023.2 | 185 | Downstream | 4.46903779 | 7.86E-06 | 0.02050372 |
| 8 | 23186747 | 23186747 | 1 | 8_23186747 | ENSG00000253930 | TNFRSF10A-AS1 | 2531 | Upstream | -4.4690245 | 7.86E-06 | 0.02050372 |
| 20 | 58787851 | 58787851 | 1 | 20_58787851 | ENSG00000237121 | PIEZO1P2 | 4030 | Upstream | 4.4689732 | 7.86E-06 | 0.02050549 |
| 1 | 227060192 | 227060192 | 1 | 1_227060192 | ENSG00000143776 | CDC42BPA | 0 | INTRON | -4.4688733 | 7.86E-06 | 0.02051193 |
| 8 | 10524697 | 10524697 | 1 | 8_10524697 | ENSG00000253649 | PRSS51 | 0 | INTRON | 4.46879533 | 7.87E-06 | 0.02051626 |
| 4 | 135980076 | 135980076 | 1 | 4_135980076 | ENSG00000207322 | RNU1-89P | 15852 | Downstream | -4.4685978 | 7.87E-06 | 0.02053206 |
| 3 | 67905321 | 67905321 | 1 | 3_67905321 | ENSG00000241316 | SUCLG2-AS1 | 0 | INTRON | 4.46856156 | 7.87E-06 | 0.02053239 |
| 8 | 20501149 | 20501149 | 1 | 8_20501149 | ENSG00000253178 | AC022559.1 | 50051 | Upstream | -4.4684838 | 7.88E-06 | 0.02053638 |
| X | 152747377 | 152747377 | 1 | X_152747377 | ENSG00000231447 | AC244102.1 | 0 | EXON | -4.4684544 | 7.88E-06 | 0.02053638 |
| 3 | 82798518 | 82798518 | 1 | 3_82798518 | ENSG00000241095 | CYP51A1P1 | 7996 | Downstream | -4.468371 | 7.88E-06 | 0.02053705 |
| 14 | 22769094 | 22769094 | 1 | 14_22769094 | ENSG00000155463 | OXA1L | 0 | INTRON | -4.4683519 | 7.88E-06 | 0.02053705 |
| 3 | 81250183 | 81250183 | 1 | 3_81250183 | ENSG00000241593 | AC099542.1 | 0 | INTRON | -4.4683492 | 7.88E-06 | 0.02053705 |
| 2 | 119144161 | 119144161 | 1 | 2_119144161 | ENSG00000144119 | C1QL2 | 12081 | Downstream | 4.46819395 | 7.89E-06 | 0.02054428 |
| 11 | 38348767 | 38348767 | 1 | 11_38348767 | ENSG00000254784 | LRRC6P1 | 135968 | Downstream | 4.46819224 | 7.89E-06 | 0.02054428 |
| 12 | 128747071 | 128747071 | 1 | 12_128747071 | ENSG00000181234 | TMEM132C | 39156 | Downstream | 4.4681756 | 7.89E-06 | 0.02054428 |
| 15 | 26235263 | 26235263 | 1 | 15_26235263 | ENSG00000286884 | AC012060.1 | 26405 | Upstream | -4.4681207 | 7.89E-06 | 0.02054548 |
| 12 | 132295896 | 132295896 | 1 | 12_132295896 | ENSG00000182870 | GALNT9 | 0 | INTRON | -4.4680769 | 7.89E-06 | 0.02054548 |
| 19 | 16230125 | 16230125 | 1 | 19_16230125 | ENSG00000072958 | AP1M1 | 0 | INTRON | -4.4680466 | 7.89E-06 | 0.02054548 |
| 2 | 222924251 | 222924251 | 1 | 2_222924251 | ENSG00000123983 | ACSL3 | 0 | INTRON | 4.4680321 | 7.89E-06 | 0.02054548 |
| 14 | 51901557 | 51901557 | 1 | 14_51901557 | ENSG00000186469 | GNG2 | 0 | INTRON | -4.4679115 | 7.90E-06 | 0.02055126 |
| 5 | 101719848 | 101719848 | 1 | 5_101719848 | ENSG00000251261 | OR7H2P | 96626 | Downstream | -4.4679066 | 7.90E-06 | 0.02055126 |
| 1 | 72148277 | 72148277 | 1 | 1_72148277 | ENSG00000172260 | NEGR1 | 0 | INTRON | -4.4678109 | 7.90E-06 | 0.02055731 |
| 10 | 14020127 | 14020127 | 1 | 10_14020127 | ENSG00000151474 | FRMD4A | 0 | INTRON | 4.46774054 | 7.91E-06 | 0.02055982 |
| 6 | 118761977 | 118761977 | 1 | 6_118761977 | ENSG00000225549 | SELENOKP3 | 0 | INTRON | 4.46770026 | 7.91E-06 | 0.02055982 |
| 6 | 136154635 | 136154635 | 1 | 6_136154635 | ENSG00000237596 | AL138828.1 | 0 | INTRON | 4.46768658 | 7.91E-06 | 0.02055982 |
| 2 | 86300250 | 86300250 | 1 | 2_86300250 | ENSG00000068615 | REEP1 | 0 | INTRON | 4.46762999 | 7.91E-06 | 0.02056212 |
| 7 | 105440276 | 105440276 | 1 | 7_105440276 | ENSG00000091127 | PUS7 | 0 | INTRON | 4.46757873 | 7.91E-06 | 0.02056346 |
| 9 | 23328168 | 23328168 | 1 | 9_23328168 | ENSG00000284418 | AL391117.1 | 0 | INTRON | 4.46753914 | 7.91E-06 | 0.02056346 |
| 13 | 28530454 | 28530454 | 1 | 13_28530454 | ENSG00000279393 | AL139005.1 | 33187 | Downstream | 4.46750862 | 7.91E-06 | 0.02056346 |
| 20 | 45007870 | 45007870 | 1 | 20_45007870 | ENSG00000101109 | STK4 | 0 | INTRON | 4.46748454 | 7.91E-06 | 0.02056346 |
| 11 | 88013675 | 88013675 | 1 | 11_88013675 | ENSG00000285835 | AP000676.5 | 0 | INTRON | 4.46745262 | 7.92E-06 | 0.02056346 |
| 11 | 102055043 | 102055043 | 1 | 11_102055043 | ENSG00000137691 | CFAP300 | 0 | INTRON | -4.4671478 | 7.93E-06 | 0.02058836 |
| 12 | 110540169 | 110540169 | 1 | 12_110540169 | ENSG00000196850 | PPTC7 | 0 | INTRON | 4.46712831 | 7.93E-06 | 0.02058836 |
| 5 | 159720318 | 159720318 | 1 | 5_159720318 | ENSG00000249738 | AC008691.1 | 0 | INTRON | 4.46705648 | 7.93E-06 | 0.02059212 |
| 16 | 81366885 | 81366885 | 1 | 16_81366885 | ENSG00000261609 | GAN | 0 | INTRON | -4.4669649 | 7.93E-06 | 0.02059779 |
| 18 | 23705305 | 23705305 | 1 | 18_23705305 | ENSG00000053747 | LAMA3 | 0 | INTRON | -4.466912 | 7.94E-06 | 0.02059975 |
| 8 | 26638188 | 26638188 | 1 | 8_26638188 | ENSG00000092964 | DPYSL2 | 0 | INTRON | 4.466825 | 7.94E-06 | 0.02060498 |
| 22 | 21870656 | 21870656 | 1 | 22_21870656 | ENSG00000100030 | MAPK1 | 2976 | Upstream | 4.46675308 | 7.94E-06 | 0.02060876 |
| 14 | 31388912 | 31388912 | 1 | 14_31388912 | ENSG00000203546 | AL139353.1 | 0 | 3UTR | 4.46668121 | 7.94E-06 | 0.02060913 |
| 14 | 19448697 | 19448697 | 1 | 14_19448697 | ENSG00000187537 | POTEG | 14356 | Upstream | 4.4666133 | 7.95E-06 | 0.02060913 |
| 1 | 174681254 | 174681254 | 1 | 1_174681254 | ENSG00000152061 | RABGAP1L | 0 | INTRON | 4.4665864 | 7.95E-06 | 0.02060913 |
| 6 | 167666625 | 167666625 | 1 | 6_167666625 | ENSG00000272549 | LINC02538 | 214 | Downstream | 4.46657857 | 7.95E-06 | 0.02060913 |
| 15 | 57914958 | 57914958 | 1 | 15_57914958 | ENSG00000128918 | ALDH1A2 | 38465 | Downstream | 4.46656776 | 7.95E-06 | 0.02060913 |
| 16 | 76793183 | 76793183 | 1 | 16_76793183 | ENSG00000287694 | AC106741.1 | 0 | INTRON | -4.4665534 | 7.95E-06 | 0.02060913 |
| 1 | 34596271 | 34596271 | 1 | 1_34596271 | ENSG00000287703 | AC099565.1 | 43885 | Downstream | -4.466443 | 7.95E-06 | 0.02061148 |
| 17 | 38138292 | 38138292 | 1 | 17_38138292 | ENSG00000278599 | TBC1D3E | 0 | EXON | 4.46643637 | 7.95E-06 | 0.02061148 |
| 17 | 15962807 | 15962807 | 1 | 17_15962807 | ENSG00000170425 | ADORA2B | 0 | INTRON | 4.46642356 | 7.95E-06 | 0.02061148 |
| 20 | 47427883 | 47427883 | 1 | 20_47427883 | ENSG00000224565 | LINC01754 | 15556 | Upstream | -4.4663987 | 7.95E-06 | 0.02061148 |
| 20 | 60724563 | 60724563 | 1 | 20_60724563 | ENSG00000276627 | AL117372.1 | 30437 | Upstream | -4.4662885 | 7.96E-06 | 0.02061329 |
| 7 | 85038606 | 85038606 | 1 | 7_85038606 | ENSG00000153993 | SEMA3D | 0 | INTRON | -4.4662838 | 7.96E-06 | 0.02061329 |
| 6 | 34752406 | 34752406 | 1 | 6_34752406 | ENSG00000124562 | SNRPC | 5098 | Upstream | -4.466265 | 7.96E-06 | 0.02061329 |
| 7 | 17251123 | 17251123 | 1 | 7_17251123 | ENSG00000237773 | AC073332.1 | 0 | INTRON | 4.46623941 | 7.96E-06 | 0.02061329 |
| 14 | 79340706 | 79340706 | 1 | 14_79340706 | ENSG00000021645 | NRXN3 | 0 | INTRON | 4.4661944 | 7.96E-06 | 0.02061329 |
| 8 | 4181129 | 4181129 | 1 | 8_4181129 | ENSG00000183117 | CSMD1 | 0 | INTRON | -4.466165 | 7.96E-06 | 0.02061329 |
| 10 | 12317044 | 12317044 | 1 | 10_12317044 | ENSG00000264036 | RN7SL198P | 11087 | Downstream | 4.46615177 | 7.96E-06 | 0.02061329 |
| 11 | 127959859 | 127959859 | 1 | 11_127959859 | ENSG00000254612 | AP001000.1 | 18205 | Upstream | -4.466066 | 7.97E-06 | 0.02061842 |
| 7 | 121499037 | 121499037 | 1 | 7_121499037 | ENSG00000234985 | AC074085.2 | 57776 | Upstream | 4.46591794 | 7.97E-06 | 0.02062871 |
| 2 | 3552329 | 3552329 | 1 | 2_3552329 | ENSG00000286905 | AC108488.2 | 0 | INTRON | -4.4658379 | 7.98E-06 | 0.02062871 |
| 12 | 131683908 | 131683908 | 1 | 12_131683908 | ENSG00000243499 | RPS6P21 | 15662 | Downstream | -4.4658077 | 7.98E-06 | 0.02062871 |
| 4 | 117860103 | 117860103 | 1 | 4_117860103 | ENSG00000229565 | LINC02264 | 0 | INTRON | -4.465793 | 7.98E-06 | 0.02062871 |
| 16 | 64980916 | 64980916 | 1 | 16_64980916 | ENSG00000140937 | CDH11 | 0 | INTRON | 4.46576368 | 7.98E-06 | 0.02062871 |
| 10 | 1427387 | 1427387 | 1 | 10_1427387 | ENSG00000185736 | ADARB2 | 0 | INTRON | -4.465737 | 7.98E-06 | 0.02062871 |
| 14 | 104948130 | 104948130 | 1 | 14_104948130 | ENSG00000185567 | AHNAK2 | 0 | EXON | 4.46573136 | 7.98E-06 | 0.02062871 |
| 12 | 53534005 | 53534005 | 1 | 12_53534005 | ENSG00000170653 | ATF7 | 0 | INTRON | 4.46565498 | 7.98E-06 | 0.02063294 |
| 6 | 160059319 | 160059319 | 1 | 6_160059319 | ENSG00000197081 | IGF2R | 0 | INTRON | 4.46555717 | 7.99E-06 | 0.02063797 |
| 3 | 63337029 | 63337029 | 1 | 3_63337029 | ENSG00000163630 | SYNPR | 0 | INTRON | -4.4655378 | 7.99E-06 | 0.02063797 |
| 16 | 27644241 | 27644241 | 1 | 16_27644241 | ENSG00000261736 | AC002551.1 | 0 | EXON | 4.4653501 | 7.99E-06 | 0.02064933 |
| 2 | 20043417 | 20043417 | 1 | 2_20043417 | ENSG00000068697 | LAPTM4A | 0 | INTRON | -4.4653145 | 8.00E-06 | 0.02064933 |
| 15 | 45021634 | 45021634 | 1 | 15_45021634 | ENSG00000140263 | SORD | 1546 | Upstream | 4.46530844 | 8.00E-06 | 0.02064933 |
| 12 | 60289517 | 60289517 | 1 | 12_60289517 | ENSG00000287014 | AC087883.2 | 19831 | Upstream | 4.46528994 | 8.00E-06 | 0.02064933 |
| 7 | 125464146 | 125464146 | 1 | 7_125464146 | ENSG00000224897 | POT1-AS1 | 0 | INTRON | 4.46522688 | 8.00E-06 | 0.02065228 |
| 7 | 125914806 | 125914806 | 1 | 7_125914806 | ENSG00000197462 | AC003975.1 | 3064 | Upstream | 4.46514943 | 8.00E-06 | 0.02065598 |
| 13 | 82259084 | 82259084 | 1 | 13_82259084 | ENSG00000286385 | AL445255.1 | 519123 | Downstream | 4.46512358 | 8.00E-06 | 0.02065598 |
| 2 | 130735019 | 130735019 | 1 | 2_130735019 | ENSG00000173302 | GPR148 | 4683 | Downstream | 4.46503563 | 8.01E-06 | 0.02066086 |
| 2 | 98128443 | 98128443 | 1 | 2_98128443 | ENSG00000168658 | VWA3B | 0 | INTRON | 4.46500808 | 8.01E-06 | 0.02066086 |
| 17 | 81710621 | 81710621 | 1 | 17_81710621 | ENSG00000262660 | AC139530.2 | 0 | INTRON | 4.46493925 | 8.01E-06 | 0.02066133 |
| 9 | 115509219 | 115509219 | 1 | 9_115509219 | ENSG00000228714 | AL691420.1 | 0 | INTRON | -4.4649382 | 8.01E-06 | 0.02066133 |
| 4 | 7169853 | 7169853 | 1 | 4_7169853 | ENSG00000184985 | SORCS2 | 22684 | Upstream | 4.46486505 | 8.01E-06 | 0.02066526 |
| 5 | 124222274 | 124222274 | 1 | 5_124222274 | ENSG00000253807 | LINC01170 | 0 | INTRON | 4.46464137 | 8.02E-06 | 0.02068373 |
| 8 | 6033752 | 6033752 | 1 | 8_6033752 | ENSG00000253189 | AC079054.1 | 2680 | Downstream | 4.46458637 | 8.02E-06 | 0.02068591 |
| 17 | 762419 | 762419 | 1 | 17_762419 | ENSG00000167699 | GLOD4 | 0 | INTRON | -4.4645285 | 8.02E-06 | 0.02068617 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 20 | 36192423 | 36192423 | 1 | 20_36192423 | ENSG00000088367 | EPB41L1 | 0 | INTRON | 4.46447857 | 8.03E-06 | 0.02068617 |
| 15 | 75511967 | 75511967 | 1 | 15_75511967 | ENSG00000169410 | PTPN9 | 0 | INTRON | -4.4644724 | 8.03E-06 | 0.02068617 |
| 6 | 22585954 | 22585954 | 1 | 6_22585954 | ENSG00000272168 | CASC15 | 0 | INTRON | 4.46445391 | 8.03E-06 | 0.02068617 |
| 2 | 61050658 | 61050658 | 1 | 2_61050658 | ENSG00000162928 | PEX13 | 0 | 3UTR | 4.46441642 | 8.03E-06 | 0.02068666 |
| 13 | 102487262 | 102487262 | 1 | 13_102487262 | ENSG00000102466 | FGF14 | 84805 | Upstream | -4.4643455 | 8.03E-06 | 0.02069038 |
| 11 | 103927891 | 103927891 | 1 | 11_103927891 | ENSG00000170962 | PDGFD | 0 | INTRON | -4.4642651 | 8.03E-06 | 0.02069368 |
| 9 | 107153807 | 107153807 | 1 | 9_107153807 | ENSG00000226535 | AL445487.1 | 15761 | Downstream | 4.46424648 | 8.04E-06 | 0.02069368 |
| 17 | 62902256 | 62902256 | 1 | 17_62902256 | ENSG00000283538 | AC005972.3 | 7764 | Downstream | 4.46411108 | 8.04E-06 | 0.02070169 |
| 12 | 8516762 | 8516762 | 1 | 12_8516762 | ENSG00000166527 | CLEC4D | 0 | INTRON | 4.46409029 | 8.04E-06 | 0.02070169 |
| 9 | 128606153 | 128606153 | 1 | 9_128606153 | ENSG00000197694 | SPTAN1 | 0 | INTRON | 4.46406639 | 8.04E-06 | 0.02070169 |
| 3 | 62549951 | 62549951 | 1 | 3_62549951 | ENSG00000163618 | CADPS | 0 | EXON | 4.46361047 | 8.06E-06 | 0.02074267 |
| 20 | 37447458 | 37447458 | 1 | 20_37447458 | ENSG00000213979 | RPL7AP14 | 1924 | Upstream | 4.46350989 | 8.06E-06 | 0.02074814 |
| 10 | 128103007 | 128103007 | 1 | 10_128103007 | ENSG00000148773 | MKI67 | 0 | EXON | 4.4634736 | 8.06E-06 | 0.02074814 |
| 9 | 136023241 | 136023241 | 1 | 9_136023241 | ENSG00000148411 | NACC2 | 0 | INTRON | -4.4633989 | 8.07E-06 | 0.02074814 |
| 11 | 8737097 | 8737097 | 1 | 11_8737097 | ENSG00000166444 | ST5 | 0 | INTRON | 4.46334332 | 8.07E-06 | 0.02074814 |
| 16 | 79189538 | 79189538 | 1 | 16_79189538 | ENSG00000186153 | WWOX | 0 | INTRON | 4.46334125 | 8.07E-06 | 0.02074814 |
| 6 | 138727775 | 138727775 | 1 | 6_138727775 | ENSG00000279968 | GVQW2 | 0 | INTRON | 4.4633385 | 8.07E-06 | 0.02074814 |
| 4 | 139256239 | 139256239 | 1 | 4_139256239 | ENSG00000206722 | RNU6-1074P | 417 | Downstream | 4.46332742 | 8.07E-06 | 0.02074814 |
| 6 | 163184582 | 163184582 | 1 | 6_163184582 | ENSG00000225683 | PACRG-AS3 | 0 | INTRON | -4.4632704 | 8.07E-06 | 0.02075052 |
| 13 | 35454919 | 35454919 | 1 | 13_35454919 | ENSG00000172915 | NBEA | 0 | INTRON | -4.463208 | 8.07E-06 | 0.02075344 |
| 19 | 35521923 | 35521923 | 1 | 19_35521923 | ENSG00000189001 | SBSN | 1443 | Downstream | 4.46314165 | 8.08E-06 | 0.02075378 |
| 17 | 7150660 | 7150660 | 1 | 17_7150660 | ENSG00000213876 | RPL7AP64 | 9068 | Downstream | -4.4631397 | 8.08E-06 | 0.02075378 |
| 13 | 109203586 | 109203586 | 1 | 13_109203586 | ENSG00000041515 | MYO16 | 0 | INTRON | -4.4630115 | 8.08E-06 | 0.02076307 |
| 16 | 27402960 | 27402960 | 1 | 16_27402960 | ENSG00000103522 | IL21R | 0 | INTRON | 4.46270515 | 8.09E-06 | 0.02078554 |
| 7 | 148042740 | 148042740 | 1 | 7_148042740 | ENSG00000174469 | CNTNAP2 | 0 | INTRON | -4.4626844 | 8.09E-06 | 0.02078554 |
| 10 | 72604474 | 72604474 | 1 | 10_72604474 | ENSG00000107745 | MICU1 | 0 | INTRON | 4.46268284 | 8.09E-06 | 0.02078554 |
| 3 | 160557293 | 160557293 | 1 | 3_160557293 | ENSG00000186432 | KPNA4 | 0 | INTRON | -4.4626368 | 8.10E-06 | 0.02078687 |
| 15 | 55472129 | 55472129 | 1 | 15_55472129 | ENSG00000256061 | DNAAF4 | 0 | INTRON | -4.4625625 | 8.10E-06 | 0.02079095 |
| 6 | 98518237 | 98518237 | 1 | 6_98518237 | ENSG00000271860 | AL589740.1 | 117368 | Downstream | -4.4623785 | 8.11E-06 | 0.02079604 |
| 4 | 128631220 | 128631220 | 1 | 4_128631220 | ENSG00000248802 | AC078850.2 | 29813 | Upstream | -4.4623568 | 8.11E-06 | 0.02079604 |
| 17 | 43967409 | 43967409 | 1 | 17_43967409 | ENSG00000131096 | PYY | 0 | INTRON | -4.4623565 | 8.11E-06 | 0.02079604 |
| 10 | 122100960 | 122100960 | 1 | 10_122100960 | ENSG00000138162 | TACC2 | 0 | INTRON | -4.4623456 | 8.11E-06 | 0.02079604 |
| 14 | 49668042 | 49668042 | 1 | 14_49668042 | ENSG00000100479 | POLE2 | 0 | INTRON | 4.46233344 | 8.11E-06 | 0.02079604 |
| 20 | 35752605 | 35752605 | 1 | 20_35752605 | ENSG00000225357 | RPF2P1 | 208 | Upstream | -4.4623162 | 8.11E-06 | 0.02079604 |
| 17 | 63721296 | 63721296 | 1 | 17_63721296 | ENSG00000266173 | STRADA | 0 | INTRON | 4.46214573 | 8.11E-06 | 0.02080724 |
| X | 40245004 | 40245004 | 1 | X_40245004 | ENSG00000236393 | AC091806.1 | 17912 | Upstream | 4.46213482 | 8.11E-06 | 0.02080724 |
| 2 | 222621442 | 222621442 | 1 | 2_222621442 | ENSG00000116120 | FARSB | 0 | INTRON | 4.4620926 | 8.12E-06 | 0.02080724 |
| 20 | 4769099 | 4769099 | 1 | 20_4769099 | ENSG00000278595 | AL133396.2 | 7403 | Downstream | -4.4620717 | 8.12E-06 | 0.02080724 |
| 1 | 209932450 | 209932450 | 1 | 1_209932450 | ENSG00000143469 | SYT14 | 0 | INTRON | 4.46185663 | 8.13E-06 | 0.02082441 |
| 16 | 83431901 | 83431901 | 1 | 16_83431901 | ENSG00000140945 | CDH13 | 0 | INTRON | -4.4618188 | 8.13E-06 | 0.02082441 |
| 3 | 23941274 | 23941274 | 1 | 3_23941274 | ENSG00000197885 | NKIRAS1 | 0 | INTRON | 4.46179827 | 8.13E-06 | 0.02082441 |
| 7 | 121863459 | 121863459 | 1 | 7_121863459 | ENSG00000106278 | PTPRZ1 | 9629 | Upstream | -4.4617387 | 8.13E-06 | 0.02082706 |
| 3 | 65709641 | 65709641 | 1 | 3_65709641 | ENSG00000151276 | MAGI1 | 0 | INTRON | 4.4616077 | 8.13E-06 | 0.02083429 |
| 19 | 54362855 | 54362855 | 1 | 19_54362855 | ENSG00000167613 | LAIR1 | 0 | INTRON | -4.4615999 | 8.14E-06 | 0.02083429 |
| 8 | 122345812 | 122345812 | 1 | 8_122345812 | ENSG00000255364 | SMILR | 68519 | Downstream | 4.46151366 | 8.14E-06 | 0.02083954 |
| 1 | 28207600 | 28207600 | 1 | 1_28207600 | ENSG00000126698 | DNAJC8 | 0 | INTRON | -4.4614026 | 8.14E-06 | 0.0208472 |
| 2 | 177973110 | 177973110 | 1 | 2_177973110 | ENSG00000128655 | PDE11A | 0 | INTRON | 4.4613134 | 8.15E-06 | 0.02085166 |
| 14 | 103361205 | 103361205 | 1 | 14_103361205 | ENSG00000259428 | HMGB3P26 | 3033 | Downstream | 4.46129231 | 8.15E-06 | 0.02085166 |
| 17 | 9593402 | 9593402 | 1 | 17_9593402 | ENSG00000166596 | CFAP52 | 0 | INTRON | 4.46115734 | 8.15E-06 | 0.02086075 |
| 12 | 100481458 | 100481458 | 1 | 12_100481458 | ENSG00000012504 | NR1H4 | 0 | INTRON | 4.46113453 | 8.15E-06 | 0.02086075 |
| 5 | 22461102 | 22461102 | 1 | 5_22461102 | ENSG00000154162 | CDH12 | 0 | INTRON | -4.4610777 | 8.15E-06 | 0.02086315 |
| 16 | 2999929 | 2999929 | 1 | 16_2999929 | ENSG00000262152 | LINC00514 | 0 | EXON | -4.460942 | 8.16E-06 | 0.02087322 |
| 8 | 1001959 | 1001959 | 1 | 8_1001959 | ENSG00000198010 | DLGAP2 | 0 | INTRON | -4.4607951 | 8.17E-06 | 0.02088061 |
| 4 | 48581201 | 48581201 | 1 | 4_48581201 | ENSG00000075539 | FRYL | 0 | INTRON | -4.4607775 | 8.17E-06 | 0.02088061 |
| 17 | 5979694 | 5979694 | 1 | 17_5979694 | ENSG00000285471 | AC007846.2 | 0 | INTRON | 4.46076959 | 8.17E-06 | 0.02088061 |
| 8 | 100727485 | 100727485 | 1 | 8_100727485 | ENSG00000070756 | PABPC1 | 4676 | Upstream | 4.46073162 | 8.17E-06 | 0.02088117 |
| 18 | 40667455 | 40667455 | 1 | 18_40667455 | ENSG00000286844 | AC068688.1 | 420088 | Downstream | -4.4606009 | 8.17E-06 | 0.02088468 |
| 2 | 202417395 | 202417395 | 1 | 2_202417395 | ENSG00000204217 | BMPR2 | 0 | INTRON | 4.46058237 | 8.17E-06 | 0.02088468 |
| 20 | 34225678 | 34225678 | 1 | 20_34225678 | ENSG00000101440 | ASIP | 0 | INTRON | 4.46055851 | 8.17E-06 | 0.02088468 |
| 8 | 79102056 | 79102056 | 1 | 8_79102056 | ENSG00000285744 | AC083837.1 | 145974 | Downstream | -4.46054 | 8.18E-06 | 0.02088468 |
| 5 | 139052284 | 139052284 | 1 | 5_139052284 | ENSG00000120725 | SIL1 | 0 | INTRON | -4.4605347 | 8.18E-06 | 0.02088468 |
| 15 | 100246134 | 100246134 | 1 | 15_100246134 | ENSG00000140470 | ADAMTS17 | 0 | INTRON | 4.46036955 | 8.18E-06 | 0.02089764 |
| 12 | 60345592 | 60345592 | 1 | 12_60345592 | ENSG00000252607 | Y_RNA | 3651 | Upstream | -4.4602752 | 8.19E-06 | 0.0209037 |
| 7 | 100928568 | 100928568 | 1 | 7_100928568 | ENSG00000235926 | RPS29P15 | 28 | Downstream | 4.4600511 | 8.19E-06 | 0.02092243 |
| 22 | 24629343 | 24629343 | 1 | 22_24629343 | ENSG00000286070 | GGT1 | 338 | Downstream | 4.45997502 | 8.20E-06 | 0.02092368 |
| 17 | 72303449 | 72303449 | 1 | 17_72303449 | ENSG00000227036 | LINC00511 | 0 | INTRON | -4.4599642 | 8.20E-06 | 0.02092368 |
| 6 | 21826368 | 21826368 | 1 | 6_21826368 | ENSG00000272168 | CASC15 | 0 | INTRON | -4.4599419 | 8.20E-06 | 0.02092368 |
| 16 | 71951477 | 71951477 | 1 | 16_71951477 | ENSG00000277481 | PKD1L3 | 0 | INTRON | -4.4598901 | 8.20E-06 | 0.02092557 |
| 21 | 42257582 | 42257582 | 1 | 21_42257582 | ENSG00000160179 | ABCG1 | 0 | INTRON | 4.45985827 | 8.20E-06 | 0.02092557 |
| 3 | 163780185 | 163780185 | 1 | 3_163780185 | ENSG00000214210 | AC084017.1 | 221420 | Downstream | 4.45975444 | 8.21E-06 | 0.02093257 |
| 6 | 135774494 | 135774494 | 1 | 6_135774494 | ENSG00000231028 | LINC00271 | 0 | INTRON | -4.4596997 | 8.21E-06 | 0.02093273 |
| 9 | 26351882 | 26351882 | 1 | 9_26351882 | ENSG00000276759 | AL353753.1 | 233474 | Downstream | 4.45967201 | 8.21E-06 | 0.02093273 |
| 1 | 77072706 | 77072706 | 1 | 1_77072706 | ENSG00000230498 | AL035409.1 | 0 | INTRON | 4.45963533 | 8.21E-06 | 0.02093273 |
| 3 | 43320615 | 43320615 | 1 | 3_43320615 | ENSG00000163788 | SNRK | 0 | INTRON | 4.45962425 | 8.21E-06 | 0.02093273 |
| 1 | 2906824 | 2906824 | 1 | 1_2906824 | ENSG00000284745 | AL589702.1 | 53833 | Downstream | 4.45951537 | 8.21E-06 | 0.02094023 |
| 17 | 55227316 | 55227316 | 1 | 17_55227316 | ENSG00000108924 | HLF | 37643 | Upstream | 4.45946883 | 8.22E-06 | 0.02094164 |
| X | 66622601 | 66622601 | 1 | X_66622601 | ENSG00000131080 | EDA2R | 0 | INTRON | 4.45934989 | 8.22E-06 | 0.02094265 |
| 19 | 39780993 | 39780993 | 1 | 19_39780993 | ENSG00000213921 | LEUTX | 0 | INTRON | -4.459337 | 8.22E-06 | 0.02094265 |
| 7 | 113688335 | 113688335 | 1 | 7_113688335 | ENSG00000154415 | PPP1R3A | 188441 | Downstream | -4.4592763 | 8.22E-06 | 0.02094265 |
| 10 | 61583212 | 61583212 | 1 | 10_61583212 | ENSG00000183346 | CABCOCO1 | 79748 | Upstream | -4.4592671 | 8.22E-06 | 0.02094265 |
| 1 | 173819327 | 173819327 | 1 | 1_173819327 | ENSG00000120334 | CENPL | 0 | INTRON | -4.4592555 | 8.22E-06 | 0.02094265 |
| 14 | 88287422 | 88287422 | 1 | 14_88287422 | ENSG00000100433 | KCNK10 | 0 | INTRON | 4.45921015 | 8.23E-06 | 0.02094265 |
| 22 | 22307270 | 22307270 | 1 | 22_22307270 | ENSG00000272779 | AC245060.4 | 0 | EXON | -4.4592097 | 8.23E-06 | 0.02094265 |
| 3 | 192213575 | 192213575 | 1 | 3_192213575 | ENSG00000114279 | FGF12 | 0 | INTRON | 4.45920179 | 8.23E-06 | 0.02094265 |
| 12 | 133249373 | 133249373 | 1 | 12_133249373 | ENSG00000238443 | Y_RNA | 10824 | Downstream | 4.45898732 | 8.23E-06 | 0.02095762 |
| 1 | 236156958 | 236156958 | 1 | 1_236156958 | ENSG00000077585 | GPR137B | 0 | INTRON | 4.45898454 | 8.23E-06 | 0.02095762 |
| 12 | 131850823 | 131850823 | 1 | 12_131850823 | ENSG00000198598 | MMP17 | 0 | INTRON | -4.4589347 | 8.24E-06 | 0.02095935 |
| 6 | 57303854 | 57303854 | 1 | 6_57303854 | ENSG00000146143 | PRIM2 | 10950 | Upstream | 4.45876771 | 8.24E-06 | 0.02096995 |

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| 7 | 121553600 | 121553600 | 1 | 7_121553600 | ENSG00000227743 | AC004875.1 | 89733 | Downstream | -4.4587185 | 8.25E-06 | 0.02096995 |
| 3 | 3963452 | 3963452 | 1 | 3_3963452 | ENSG00000287720 | AC023480.1 | 0 | INTRON | 4.45871636 | 8.25E-06 | 0.02096995 |
| 3 | 157108511 | 157108511 | 1 | 3_157108511 | ENSG00000241135 | LINC00881 | 0 | INTRON | 4.45869813 | 8.25E-06 | 0.02096995 |
| 16 | 160723 | 160723 | 1 | 16_160723 | ENSG00000206177 | HBM | 0 | INTRON | 4.45854103 | 8.25E-06 | 0.02098206 |
| 21 | 27825256 | 27825256 | 1 | 21_27825256 | ENSG00000225298 | LINC00113 | 74023 | Downstream | 4.45851027 | 8.25E-06 | 0.02098206 |
| 2 | 139979336 | 139979336 | 1 | 2_139979336 | ENSG00000240977 | RN7SL283P | 3347 | Upstream | 4.45845904 | 8.26E-06 | 0.02098394 |
| 1 | 25361976 | 25361976 | 1 | 1_25361976 | ENSG00000183726 | TMEM50A | 0 | 3UTR | 4.45829814 | 8.26E-06 | 0.02099656 |
| 1 | 27471119 | 27471119 | 1 | 1_27471119 | ENSG00000158195 | WASF2 | 0 | INTRON | 4.45823066 | 8.26E-06 | 0.02099726 |
| 18 | 75634699 | 75634699 | 1 | 18_75634699 | ENSG00000287993 | AC090338.1 | 7794 | Upstream | -4.4582153 | 8.26E-06 | 0.02099726 |
| 5 | 16898963 | 16898963 | 1 | 5_16898963 | ENSG00000145555 | MYO10 | 0 | INTRON | -4.458195 | 8.27E-06 | 0.02099726 |
| 1 | 118557636 | 118557636 | 1 | 1_118557636 | ENSG00000226126 | PSMC1P12 | 56696 | Downstream | 4.45814784 | 8.27E-06 | 0.02099874 |
| X | 56341423 | 56341423 | 1 | X_56341423 | ENSG00000102349 | KLF8 | 49892 | Downstream | -4.4580883 | 8.27E-06 | 0.02100144 |
| 11 | 134721863 | 134721863 | 1 | 11_134721863 | ENSG00000255344 | LINC02706 | 5613 | Downstream | 4.45803636 | 8.27E-06 | 0.02100339 |
| 13 | 24358189 | 24358189 | 1 | 13_24358189 | ENSG00000261498 | LINC00566 | 21068 | Downstream | 4.45794789 | 8.27E-06 | 0.0210072 |
| 14 | 68993066 | 68993066 | 1 | 14_68993066 | ENSG00000259062 | ACTN1-AS1 | 5603 | Downstream | 4.45793346 | 8.28E-06 | 0.0210072 |
| 11 | 93645441 | 93645441 | 1 | 11_93645441 | ENSG00000166004 | CEP295 | 16240 | Upstream | -4.4578556 | 8.28E-06 | 0.02100919 |
| 7 | 65619742 | 65619742 | 1 | 7_65619742 | ENSG00000230386 | AC104057.1 | 589 | Downstream | -4.4578425 | 8.28E-06 | 0.02100919 |
| 18 | 3336225 | 3336225 | 1 | 18_3336225 | ENSG00000266578 | AP001025.1 | 5241 | Downstream | -4.4578173 | 8.28E-06 | 0.02100919 |
| 11 | 54663369 | 54663369 | 1 | 11_54663369 | ENSG00000254464 | OR4A3P | 0 | EXON | 4.45768042 | 8.29E-06 | 0.02101617 |
| 2 | 81483999 | 81483999 | 1 | 2_81483999 | ENSG00000200890 | RNA5SP99 | 12214 | Downstream | 4.45764791 | 8.29E-06 | 0.02101617 |
| 12 | 128120684 | 128120684 | 1 | 12_128120684 | ENSG00000256659 | LINC02368 | 0 | EXON | -4.4575855 | 8.29E-06 | 0.02101617 |
| 10 | 37250702 | 37250702 | 1 | 10_37250702 | ENSG00000148513 | ANKRD30A | 0 | INTRON | 4.45757917 | 8.29E-06 | 0.02101617 |
| 7 | 74650557 | 74650557 | 1 | 7_74650557 | ENSG00000263001 | GTF2I | 0 | EXON | 4.45756449 | 8.29E-06 | 0.02101617 |
| 5 | 76529582 | 76529582 | 1 | 5_76529582 | ENSG00000145703 | IQGAP2 | 0 | INTRON | -4.4575542 | 8.29E-06 | 0.02101617 |
| 13 | 34866592 | 34866592 | 1 | 13_34866592 | ENSG00000273886 | Metazoa_SRP | 43952 | Downstream | -4.4575191 | 8.29E-06 | 0.02101648 |
| 3 | 94319219 | 94319219 | 1 | 3_94319219 | ENSG00000178694 | NSUN3 | 187387 | Downstream | 4.45738285 | 8.30E-06 | 0.02102671 |
| 2 | 2693379 | 2693379 | 1 | 2_2693379 | ENSG00000234929 | AC018685.2 | 0 | INTRON | -4.4573237 | 8.30E-06 | 0.02102826 |
| 19 | 15753437 | 15753437 | 1 | 19_15753437 | ENSG00000267594 | CYP4F24P | 6803 | Downstream | -4.4572679 | 8.30E-06 | 0.02102826 |
| 12 | 156654 | 156654 | 1 | 12_156654 | ENSG00000120645 | IQSEC3 | 0 | INTRON | 4.45725147 | 8.30E-06 | 0.02102826 |
| 11 | 68341018 | 68341018 | 1 | 11_68341018 | ENSG00000162337 | LRP5 | 0 | INTRON | -4.4572116 | 8.30E-06 | 0.02102826 |
| 19 | 55119686 | 55119686 | 1 | 19_55119686 | ENSG00000287170 | AC010327.8 | 0 | INTRON | 4.45720392 | 8.30E-06 | 0.02102826 |
| X | 49588282 | 49588282 | 1 | X_49588282 | ENSG00000224902 | GAGE12H | 981 | Downstream | -4.4571297 | 8.31E-06 | 0.02102826 |
| 3 | 149818779 | 149818779 | 1 | 3_149818779 | ENSG00000082996 | RNF13 | 0 | INTRON | -4.457106 | 8.31E-06 | 0.02102826 |
| 14 | 54269387 | 54269387 | 1 | 14_54269387 | ENSG00000100526 | CDKN3 | 127461 | Upstream | 4.45709619 | 8.31E-06 | 0.02102826 |
| 13 | 30983818 | 30983818 | 1 | 13_30983818 | ENSG00000238185 | AL353680.1 | 6195 | Upstream | 4.45707933 | 8.31E-06 | 0.02102826 |
| 1 | 9902701 | 9902701 | 1 | 1_9902701 | ENSG00000285701 | AL357140.4 | 0 | INTRON | 4.45702788 | 8.31E-06 | 0.02102826 |
| 20 | 35351259 | 35351259 | 1 | 20_35351259 | ENSG00000101019 | UQCC1 | 0 | INTRON | -4.457016 | 8.31E-06 | 0.02102826 |
| 9 | 127464366 | 127464366 | 1 | 9_127464366 | ENSG00000148356 | LRSAM1 | 0 | INTRON | 4.45694485 | 8.31E-06 | 0.02103211 |
| 3 | 67518290 | 67518290 | 1 | 3_67518290 | ENSG00000172340 | SUCLG2 | 0 | EXON | -4.4569126 | 8.31E-06 | 0.02103214 |
| 7 | 68625156 | 68625156 | 1 | 7_68625156 | ENSG00000228429 | AC004910.1 | 15641 | Upstream | 4.45680665 | 8.32E-06 | 0.02103941 |
| 10 | 67967055 | 67967055 | 1 | 10_67967055 | ENSG00000148634 | HERC4 | 0 | INTRON | 4.45671294 | 8.32E-06 | 0.02104548 |
| 20 | 17077131 | 17077131 | 1 | 20_17077131 | ENSG00000212165 | U3 | 94098 | Upstream | -4.4566554 | 8.32E-06 | 0.02104799 |
| 10 | 33354161 | 33354161 | 1 | 10_33354161 | ENSG00000273012 | AL353600.1 | 12256 | Downstream | -4.4565936 | 8.33E-06 | 0.0210501 |
| 1 | 97766928 | 97766928 | 1 | 1_97766928 | ENSG00000188641 | DPYD | 0 | INTRON | 4.4565702 | 8.33E-06 | 0.0210501 |
| 4 | 15610012 | 15610012 | 1 | 4_15610012 | ENSG00000118564 | FBXL5 | 0 | INTRON | 4.45643848 | 8.33E-06 | 0.02105513 |
| 3 | 126603729 | 126603729 | 1 | 3_126603729 | ENSG00000288436 | AC024558.2 | 0 | INTRON | 4.45641301 | 8.33E-06 | 0.02105513 |
| 9 | 115239417 | 115239417 | 1 | 9_115239417 | ENSG00000173077 | 1-Dec | 0 | INTRON | -4.4563843 | 8.34E-06 | 0.02105513 |
| 12 | 97146376 | 97146376 | 1 | 12_97146376 | ENSG00000258131 | AC007656.2 | 0 | INTRON | -4.4563826 | 8.34E-06 | 0.02105513 |
| 19 | 4408189 | 4408189 | 1 | 19_4408189 | ENSG00000167670 | CHAF1A | 0 | INTRON | -4.4563325 | 8.34E-06 | 0.02105513 |
| 2 | 23524395 | 23524395 | 1 | 2_23524395 | ENSG00000119771 | KLHL29 | 0 | INTRON | 4.45632164 | 8.34E-06 | 0.02105513 |
| 2 | 151561726 | 151561726 | 1 | 2_151561726 | ENSG00000183091 | NEB | 0 | INTRON | -4.4562934 | 8.34E-06 | 0.02105513 |
| 5 | 22688460 | 22688460 | 1 | 5_22688460 | ENSG00000154162 | CDH12 | 0 | INTRON | -4.4562643 | 8.34E-06 | 0.02105513 |
| 1 | 177018007 | 177018007 | 1 | 1_177018007 | ENSG00000152092 | ASTN1 | 0 | INTRON | -4.4559626 | 8.35E-06 | 0.02108163 |
| 6 | 16234255 | 16234255 | 1 | 6_16234255 | ENSG00000207193 | Y_RNA | 1925 | Upstream | 4.45580977 | 8.36E-06 | 0.02109353 |
| 9 | 99844761 | 99844761 | 1 | 9_99844761 | ENSG00000119508 | NR4A3 | 0 | EXON | 4.45572474 | 8.36E-06 | 0.02109708 |
| 1 | 42003356 | 42003356 | 1 | 1_42003356 | ENSG00000127124 | HIVEP3 | 0 | INTRON | 4.45569686 | 8.36E-06 | 0.02109708 |
| 2 | 4621117 | 4621117 | 1 | 2_4621117 | ENSG00000231532 | LINC01249 | 7098 | Downstream | -4.4556782 | 8.36E-06 | 0.02109708 |
| 2 | 11082226 | 11082226 | 1 | 2_11082226 | ENSG00000226080 | AC062028.2 | 19915 | Upstream | 4.45561002 | 8.37E-06 | 0.02110066 |
| 3 | 37103819 | 37103819 | 1 | 3_37103819 | ENSG00000093167 | LRRFIP2 | 0 | INTRON | 4.45548968 | 8.37E-06 | 0.02110814 |
| 8 | 143864337 | 143864337 | 1 | 8_143864337 | ENSG00000261150 | EPPK1 | 0 | EXON | -4.4554704 | 8.37E-06 | 0.02110814 |
| 12 | 52587641 | 52587641 | 1 | 12_52587641 | ENSG00000170486 | KRT72 | 0 | 3UTR | -4.4554151 | 8.37E-06 | 0.02111046 |
| 19 | 57783644 | 57783644 | 1 | 19_57783644 | ENSG00000083828 | ZNF586 | 0 | INTRON | -4.4552833 | 8.38E-06 | 0.02111818 |
| 14 | 71895244 | 71895244 | 1 | 14_71895244 | ENSG00000266869 | AC005993.1 | 0 | INTRON | -4.4552731 | 8.38E-06 | 0.02111818 |
| 22 | 50292254 | 50292254 | 1 | 22_50292254 | ENSG00000196576 | PLXNB2 | 0 | INTRON | 4.45519849 | 8.38E-06 | 0.02112239 |
| 4 | 53966279 | 53966279 | 1 | 4_53966279 | ENSG00000282278 | AC058822.1 | 0 | INTRON | 4.4551172 | 8.38E-06 | 0.02112525 |
| 11 | 10252592 | 10252592 | 1 | 11_10252592 | ENSG00000133812 | SBF2 | 0 | INTRON | -4.4550684 | 8.39E-06 | 0.02112525 |
| 4 | 26698309 | 26698309 | 1 | 4_26698309 | ENSG00000109680 | TBC1D19 | 0 | INTRON | 4.45500553 | 8.39E-06 | 0.02112525 |
| 17 | 10739729 | 10739729 | 1 | 17_10739729 | ENSG00000263400 | TMEM220-AS1 | 0 | INTRON | -4.4549728 | 8.39E-06 | 0.02112525 |
| 12 | 127119572 | 127119572 | 1 | 12_127119572 | ENSG00000286016 | AC079949.3 | 10432 | Upstream | 4.45494111 | 8.39E-06 | 0.02112525 |
| 1 | 117575604 | 117575604 | 1 | 1_117575604 | ENSG00000236866 | AL157902.1 | 21227 | Downstream | -4.4549168 | 8.39E-06 | 0.02112525 |
| 22 | 21512948 | 21512948 | 1 | 22_21512948 | ENSG00000183506 | PI4KAP2 | 0 | INTRON | 4.45490144 | 8.39E-06 | 0.02112525 |
| 1 | 13942311 | 13942311 | 1 | 1_13942311 | ENSG00000189337 | KAZN | 0 | INTRON | 4.45486251 | 8.39E-06 | 0.02112525 |
| 8 | 96123568 | 96123568 | 1 | 8_96123568 | ENSG00000271349 | AC007992.2 | 3398 | Downstream | -4.4548522 | 8.40E-06 | 0.02112525 |
| 1 | 236947463 | 236947463 | 1 | 1_236947463 | ENSG00000116984 | MTR | 26185 | Downstream | 4.45485201 | 8.40E-06 | 0.02112525 |
| 2 | 225521838 | 225521838 | 1 | 2_225521838 | ENSG00000144460 | NYAP2 | 0 | INTRON | 4.45471872 | 8.40E-06 | 0.02113525 |
| 4 | 117324707 | 117324707 | 1 | 4_117324707 | ENSG00000224932 | LINC02262 | 0 | INTRON | -4.4546387 | 8.40E-06 | 0.02114 |
| 3 | 111118824 | 111118824 | 1 | 3_111118824 | ENSG00000177707 | NECTIN3 | 0 | EXON | 4.45454371 | 8.41E-06 | 0.02114585 |
| 17 | 29503192 | 29503192 | 1 | 17_29503192 | ENSG00000160551 | TAOK1 | 0 | INTRON | 4.45451601 | 8.41E-06 | 0.02114585 |
| 15 | 47674343 | 47674343 | 1 | 15_47674343 | ENSG00000137872 | SEMA6D | 0 | INTRON | 4.45441346 | 8.41E-06 | 0.02115283 |
| 9 | 69128667 | 69128667 | 1 | 9_69128667 | ENSG00000119139 | TJP2 | 0 | INTRON | 4.45430833 | 8.42E-06 | 0.021157 |
| 10 | 96914478 | 96914478 | 1 | 10_96914478 | ENSG00000196233 | LCOR | 0 | INTRON | 4.45427769 | 8.42E-06 | 0.021157 |
| X | 49608638 | 49608638 | 1 | X_49608638 | ENSG00000205777 | GAGE1 | 102 | Downstream | -4.454276 | 8.42E-06 | 0.021157 |
| 17 | 72086598 | 72086598 | 1 | 17_72086598 | ENSG00000234899 | SOX9-AS1 | 0 | INTRON | -4.4542283 | 8.42E-06 | 0.02115858 |
| 20 | 31805697 | 31805697 | 1 | 20_31805697 | ENSG00000230801 | AL160175.1 | 2805 | Downstream | -4.454108 | 8.42E-06 | 0.02116569 |
| 6 | 19568349 | 19568349 | 1 | 6_19568349 | ENSG00000228412 | AL022068.1 | 0 | INTRON | -4.4540929 | 8.42E-06 | 0.02116569 |
| 4 | 119323561 | 119323561 | 1 | 4_119323561 | ENSG00000145384 | FABP2 | 1423 | Upstream | -4.4539267 | 8.43E-06 | 0.02117896 |
| 9 | 31868911 | 31868911 | 1 | 9_31868911 | ENSG00000235148 | HMGB3P23 | 223751 | Upstream | 4.45389428 | 8.43E-06 | 0.02117903 |
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| 20 | 39098507 | 39098507 | 1 | 20_39098507 | ENSG00000101452 | DHX35 | 58784 | Downstream | 4.45367466 | 8.44E-06 | 0.02119133 |
| 1 | 65116577 | 65116577 | 1 | 1_65116577 | ENSG00000234496 | MRPS21P1 | 23963 | Upstream | 4.45363482 | 8.44E-06 | 0.02119157 |
| 3 | 54644220 | 54644220 | 1 | 3_54644220 | ENSG00000157445 | CACNA2D3 | 0 | INTRON | 4.45360894 | 8.44E-06 | 0.02119157 |
| 6 | 107314771 | 107314771 | 1 | 6_107314771 | ENSG00000164494 | PDSS2 | 0 | INTRON | -4.4535027 | 8.45E-06 | 0.02119894 |
| 15 | 98908047 | 98908047 | 1 | 15_98908047 | ENSG00000140443 | IGF1R | 0 | INTRON | 4.45343486 | 8.45E-06 | 0.02120202 |
| 7 | 41768505 | 41768505 | 1 | 7_41768505 | ENSG00000224116 | INHBA-AS1 | 0 | INTRON | 4.45340103 | 8.45E-06 | 0.02120202 |
| 18 | 79218289 | 79218289 | 1 | 18_79218289 | ENSG00000166377 | ATP9B | 0 | INTRON | 4.45336715 | 8.45E-06 | 0.02120202 |
| 17 | 76979844 | 76979844 | 1 | 17_76979844 | ENSG00000280122 | AC016168.3 | 10314 | Upstream | -4.4532872 | 8.46E-06 | 0.02120202 |
| 7 | 19262829 | 19262829 | 1 | 7_19262829 | ENSG00000223838 | AC007091.1 | 90701 | Upstream | 4.45322676 | 8.46E-06 | 0.02120202 |
| 6 | 148602158 | 148602158 | 1 | 6_148602158 | ENSG00000217824 | SNRPEP6 | 34504 | Upstream | 4.45321406 | 8.46E-06 | 0.02120202 |
| 1 | 3705848 | 3705848 | 1 | 1_3705848 | ENSG00000078900 | TP73 | 0 | INTRON | 4.45315036 | 8.46E-06 | 0.02120202 |
| 17 | 62052594 | 62052594 | 1 | 17_62052594 | ENSG00000108510 | MED13 | 0 | EXON | -4.4531313 | 8.46E-06 | 0.02120202 |
| 11 | 18497069 | 18497069 | 1 | 11_18497069 | ENSG00000074319 | TSG101 | 0 | INTRON | 4.45312881 | 8.46E-06 | 0.02120202 |
| 12 | 31133342 | 31133342 | 1 | 12_31133342 | ENSG00000177359 | AC024940.2 | 0 | INTRON | 4.45312756 | 8.46E-06 | 0.02120202 |
| 5 | 172138364 | 172138364 | 1 | 5_172138364 | ENSG00000072786 | STK10 | 0 | INTRON | 4.45312368 | 8.46E-06 | 0.02120202 |
| 10 | 72181259 | 72181259 | 1 | 10_72181259 | ENSG00000138303 | ASCC1 | 0 | INTRON | 4.45292917 | 8.47E-06 | 0.02121478 |
| 1 | 212026009 | 212026009 | 1 | 1_212026009 | ENSG00000143493 | INTS7 | 0 | INTRON | 4.45290179 | 8.47E-06 | 0.02121478 |
| 22 | 41575464 | 41575464 | 1 | 22_41575464 | ENSG00000172346 | CSDC2 | 0 | 3UTR | 4.45289971 | 8.47E-06 | 0.02121478 |
| 13 | 89582695 | 89582695 | 1 | 13_89582695 | ENSG00000271395 | LINC02336 | 0 | INTRON | -4.4528185 | 8.48E-06 | 0.02121969 |
| 21 | 25755680 | 25755680 | 1 | 21_25755680 | ENSG00000154727 | GABPA | 0 | INTRON | 4.4526974 | 8.48E-06 | 0.02122701 |
| 3 | 73603412 | 73603412 | 1 | 3_73603412 | ENSG00000121440 | PDZRN3 | 0 | INTRON | 4.45268123 | 8.48E-06 | 0.02122701 |
| 4 | 67831664 | 67831664 | 1 | 4_67831664 | ENSG00000153802 | TMPRSS11D | 0 | INTRON | -4.4526297 | 8.48E-06 | 0.02122899 |
| 3 | 46541281 | 46541281 | 1 | 3_46541281 | ENSG00000163827 | LRRC2 | 0 | INTRON | -4.4525547 | 8.49E-06 | 0.02123328 |
| 2 | 50434208 | 50434208 | 1 | 2_50434208 | ENSG00000179915 | NRXN1 | 0 | INTRON | 4.45244974 | 8.49E-06 | 0.02124055 |
| 10 | 51962354 | 51962354 | 1 | 10_51962354 | ENSG00000185532 | PRKG1 | 0 | INTRON | 4.4523569 | 8.49E-06 | 0.02124661 |
| 3 | 2105693 | 2105693 | 1 | 3_2105693 | ENSG00000144619 | CNTN4 | 0 | INTRON | -4.4522642 | 8.50E-06 | 0.02125266 |
| 5 | 96247147 | 96247147 | 1 | 5_96247147 | ENSG00000251314 | AC104123.1 | 0 | INTRON | 4.45211125 | 8.50E-06 | 0.02126233 |
| 2 | 162779389 | 162779389 | 1 | 2_162779389 | ENSG00000237750 | AC011900.1 | 0 | INTRON | 4.4521035 | 8.50E-06 | 0.02126233 |
| 5 | 42154338 | 42154338 | 1 | 5_42154338 | ENSG00000260786 | AC108099.1 | 33927 | Upstream | -4.4520686 | 8.50E-06 | 0.02126266 |
| 6 | 60478726 | 60478726 | 1 | 6_60478726 | ENSG00000283453 | AC244258.1 | 0 | INTRON | -4.4520074 | 8.51E-06 | 0.0212656 |
| 19 | 34333002 | 34333002 | 1 | 19_34333002 | ENSG00000166398 | KIAA0355 | 0 | INTRON | 4.45187463 | 8.51E-06 | 0.02127079 |
| 11 | 9607580 | 9607580 | 1 | 11_9607580 | ENSG00000243964 | RPL23AP65 | 971 | Downstream | 4.45187292 | 8.51E-06 | 0.02127079 |
| 12 | 90549851 | 90549851 | 1 | 12_90549851 | ENSG00000286021 | LINC02822 | 26550 | Upstream | -4.4518512 | 8.51E-06 | 0.02127079 |
| 2 | 165347142 | 165347142 | 1 | 2_165347142 | ENSG00000136531 | SCN2A | 0 | INTRON | -4.4518289 | 8.51E-06 | 0.02127079 |
| 6 | 37968557 | 37968557 | 1 | 6_37968557 | ENSG00000156639 | ZFAND3 | 0 | INTRON | 4.45171659 | 8.52E-06 | 0.02127879 |
| 11 | 63815660 | 63815660 | 1 | 11_63815660 | ENSG00000168005 | SPINDOC | 0 | INTRON | 4.45167723 | 8.52E-06 | 0.02127957 |
| 8 | 73816509 | 73816509 | 1 | 8_73816509 | ENSG00000258677 | AC022826.2 | 0 | INTRON | 4.4515488 | 8.53E-06 | 0.02128629 |
| 10 | 20671473 | 20671473 | 1 | 10_20671473 | ENSG00000078114 | NEBL | 108499 | Downstream | 4.45153257 | 8.53E-06 | 0.02128629 |
| X | 155314164 | 155314164 | 1 | X_155314164 | ENSG00000155962 | CLIC2 | 0 | INTRON | 4.45151493 | 8.53E-06 | 0.02128629 |
| 11 | 23029373 | 23029373 | 1 | 11_23029373 | ENSG00000246225 | AC006299.1 | 83980 | Downstream | 4.45148238 | 8.53E-06 | 0.0212864 |
| 7 | 99792672 | 99792672 | 1 | 7_99792672 | ENSG00000160868 | CYP3A4 | 8424 | Upstream | 4.45141386 | 8.53E-06 | 0.02129007 |
| 3 | 74206820 | 74206820 | 1 | 3_74206820 | ENSG00000113805 | CNTN3 | 55747 | Downstream | 4.45135013 | 8.53E-06 | 0.02129327 |
| 17 | 26731468 | 26731468 | 1 | 17_26731468 | ENSG00000263433 | AC069061.1 | 250225 | Upstream | -4.4513183 | 8.53E-06 | 0.0212933 |
| 21 | 33819474 | 33819474 | 1 | 21_33819474 | ENSG00000249209 | AP000311.1 | 0 | INTRON | -4.4511958 | 8.54E-06 | 0.02129906 |
| 19 | 46241369 | 46241369 | 1 | 19_46241369 | ENSG00000277748 | AC006262.4 | 8024 | Downstream | 4.45117994 | 8.54E-06 | 0.02129906 |
| 7 | 139490379 | 139490379 | 1 | 7_139490379 | ENSG00000188883 | KLRG2 | 6706 | Upstream | -4.4511658 | 8.54E-06 | 0.02129906 |
| 22 | 19806807 | 19806807 | 1 | 22_19806807 | ENSG00000185838 | GNB1L | 0 | INTRON | 4.45113358 | 8.54E-06 | 0.02129913 |
| 19 | 10951566 | 10951566 | 1 | 19_10951566 | ENSG00000127616 | SMARCA4 | 9258 | Upstream | -4.4509589 | 8.55E-06 | 0.02131132 |
| 5 | 125376438 | 125376438 | 1 | 5_125376438 | ENSG00000248752 | AC116362.1 | 0 | INTRON | -4.4509432 | 8.55E-06 | 0.02131132 |
| 12 | 81169302 | 81169302 | 1 | 12_81169302 | ENSG00000111058 | ACSS3 | 0 | INTRON | -4.4509164 | 8.55E-06 | 0.02131132 |
| 18 | 58600332 | 58600332 | 1 | 18_58600332 | ENSG00000198796 | ALPK2 | 0 | INTRON | 4.45070254 | 8.56E-06 | 0.02132701 |
| 2 | 68181185 | 68181185 | 1 | 2_68181185 | ENSG00000273398 | AC017083.3 | 0 | INTRON | 4.45068867 | 8.56E-06 | 0.02132701 |
| 9 | 73882994 | 73882994 | 1 | 9_73882994 | ENSG00000223368 | AL513124.1 | 9697 | Upstream | 4.45066406 | 8.56E-06 | 0.02132701 |
| 17 | 28344520 | 28344520 | 1 | 17_28344520 | ENSG00000109079 | TNFAIP1 | 0 | EXON | -4.4506186 | 8.56E-06 | 0.0213284 |
| 8 | 29623469 | 29623469 | 1 | 8_29623469 | ENSG00000243844 | RPL17P33 | 8621 | Upstream | -4.4505862 | 8.56E-06 | 0.0213285 |
| 1 | 92501946 | 92501946 | 1 | 1_92501946 | ENSG00000067208 | EVI5 | 6749 | Downstream | 4.45045136 | 8.57E-06 | 0.02133827 |
| 18 | 70089165 | 70089165 | 1 | 18_70089165 | ENSG00000176225 | RTTN | 0 | INTRON | -4.450425 | 8.57E-06 | 0.02133827 |
| 9 | 34569828 | 34569828 | 1 | 9_34569828 | ENSG00000237159 | CNTFR-AS1 | 0 | EXON | 4.45034277 | 8.57E-06 | 0.02134103 |
| 7 | 53474411 | 53474411 | 1 | 7_53474411 | ENSG00000222154 | RN7SKP218 | 15736 | Downstream | 4.45033435 | 8.57E-06 | 0.02134103 |
| 16 | 87528850 | 87528850 | 1 | 16_87528850 | ENSG00000260750 | AC092720.1 | 11910 | Downstream | -4.4502559 | 8.58E-06 | 0.02134571 |
| 10 | 103447359 | 103447359 | 1 | 10_103447359 | ENSG00000138172 | CALHM2 | 0 | EXON | 4.45016943 | 8.58E-06 | 0.02135118 |
| 13 | 71978397 | 71978397 | 1 | 13_71978397 | ENSG00000232881 | RPS10P21 | 64219 | Upstream | 4.4501112 | 8.58E-06 | 0.02135385 |
| 12 | 90152601 | 90152601 | 1 | 12_90152601 | ENSG00000257194 | AC126178.1 | 39822 | Downstream | 4.44987648 | 8.59E-06 | 0.02137407 |
| 22 | 40371782 | 40371782 | 1 | 22_40371782 | ENSG00000100359 | SGSM3 | 0 | INTRON | 4.44981541 | 8.59E-06 | 0.02137521 |
| 18 | 57153812 | 57153812 | 1 | 18_57153812 | ENSG00000228075 | BOD1L2 | 3402 | Downstream | 4.44977214 | 8.60E-06 | 0.02137521 |
| 7 | 21351642 | 21351642 | 1 | 7_21351642 | ENSG00000195024 | RNU1-15P | 29720 | Upstream | -4.4497551 | 8.60E-06 | 0.02137521 |
| 7 | 4158891 | 4158891 | 1 | 7_4158891 | ENSG00000146555 | SDK1 | 0 | INTRON | -4.4497395 | 8.60E-06 | 0.02137521 |
| 14 | 64370297 | 64370297 | 1 | 14_64370297 | ENSG00000234911 | TEX21P | 0 | INTRON | -4.4496823 | 8.60E-06 | 0.02137777 |
| 1 | 195306291 | 195306291 | 1 | 1_195306291 | ENSG00000285718 | AL353072.2 | 374981 | Upstream | -4.4494493 | 8.61E-06 | 0.02139786 |
| 8 | 75750626 | 75750626 | 1 | 8_75750626 | ENSG00000164749 | HNF4G | 183792 | Downstream | 4.44931251 | 8.61E-06 | 0.02140836 |
| 10 | 79711555 | 79711555 | 1 | 10_79711555 | ENSG00000225484 | NUTM2B-AS1 | 0 | INTRON | -4.4492377 | 8.62E-06 | 0.02141046 |
| 5 | 113673159 | 113673159 | 1 | 5_113673159 | ENSG00000286839 | AC093240.1 | 64946 | Downstream | -4.4492167 | 8.62E-06 | 0.02141046 |
| 15 | 72304345 | 72304345 | 1 | 15_72304345 | ENSG00000140488 | CELF6 | 0 | INTRON | -4.4491973 | 8.62E-06 | 0.02141046 |
| 1 | 47194869 | 47194869 | 1 | 1_47194869 | ENSG00000162366 | PDZK1IP1 | 3825 | Upstream | -4.4490953 | 8.62E-06 | 0.02141751 |
| 1 | 232610571 | 232610571 | 1 | 1_232610571 | ENSG00000116991 | SIPA1L2 | 49013 | Upstream | 4.44905419 | 8.62E-06 | 0.02141848 |
| 12 | 89771922 | 89771922 | 1 | 12_89771922 | ENSG00000258216 | AC009522.1 | 0 | INTRON | 4.44897827 | 8.63E-06 | 0.02142292 |
| 22 | 43415899 | 43415899 | 1 | 22_43415899 | ENSG00000186732 | MPPED1 | 0 | INTRON | 4.4489302 | 8.63E-06 | 0.02142459 |
| 19 | 32707870 | 32707870 | 1 | 19_32707870 | ENSG00000213965 | NUDT19 | 0 | INTRON | 4.44884806 | 8.63E-06 | 0.02142939 |
| 1 | 200518341 | 200518341 | 1 | 1_200518341 | ENSG00000118193 | KIF14 | 33155 | Downstream | -4.4488194 | 8.63E-06 | 0.02142939 |
| 4 | 73520582 | 73520582 | 1 | 4_73520582 | ENSG00000250436 | LINC02499 | 0 | INTRON | -4.4487711 | 8.64E-06 | 0.02143035 |
| 11 | 74838570 | 74838570 | 1 | 11_74838570 | ENSG00000166439 | RNF169 | 0 | 3UTR | -4.4487471 | 8.64E-06 | 0.02143035 |
| 17 | 11557755 | 11557755 | 1 | 17_11557755 | ENSG00000188803 | SHISA6 | 0 | EXON | 4.44870744 | 8.64E-06 | 0.02143119 |
| 2 | 116612556 | 116612556 | 1 | 2_116612556 | ENSG00000271667 | AC104408.1 | 74661 | Downstream | -4.4486526 | 8.64E-06 | 0.02143353 |
| 2 | 44080921 | 44080921 | 1 | 2_44080921 | ENSG00000219391 | AC019129.1 | 14767 | Upstream | 4.44860548 | 8.64E-06 | 0.02143511 |
| 14 | 93973311 | 93973311 | 1 | 14_93973311 | ENSG00000100628 | ASB2 | 0 | INTRON | 4.44852258 | 8.65E-06 | 0.02143734 |
| 1 | 110695703 | 110695703 | 1 | 1_110695703 | ENSG00000177272 | KCNA3 | 20763 | Upstream | -4.4484947 | 8.65E-06 | 0.02143734 |
| 12 | 106627363 | 106627363 | 1 | 12_106627363 | ENSG00000257545 | AC079385.1 | 0 | INTRON | 4.44848919 | 8.65E-06 | 0.02143734 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 16 | 84222882 | 84222882 | 1 | 16_84222882 | ENSG00000168418 | KCNG4 | 0 | EXON | 4.44843375 | 8.65E-06 | 0.02143949 |
| 3 | 183732321 | 183732321 | 1 | 3_183732321 | ENSG00000163872 | YEATS2 | 0 | INTRON | 4.44840509 | 8.65E-06 | 0.02143949 |
| 12 | 133138862 | 133138862 | 1 | 12_133138862 | ENSG00000256223 | ZNF10 | 0 | INTRON | 4.44835039 | 8.65E-06 | 0.02144111 |
| 8 | 18761516 | 18761516 | 1 | 8_18761516 | ENSG00000156011 | PSD3 | 0 | INTRON | 4.44832633 | 8.65E-06 | 0.02144111 |
| 10 | 38328323 | 38328323 | 1 | 10_38328323 | ENSG00000283930 | AL117339.5 | 0 | INTRON | 4.44827189 | 8.66E-06 | 0.02144342 |
| 2 | 117947936 | 117947936 | 1 | 2_117947936 | ENSG00000125633 | CCDC93 | 0 | INTRON | 4.44802947 | 8.67E-06 | 0.0214645 |
| 14 | 71239087 | 71239087 | 1 | 14_71239087 | ENSG00000286423 | AC004817.5 | 0 | INTRON | 4.447992 | 8.67E-06 | 0.02146512 |
| 4 | 67870278 | 67870278 | 1 | 4_67870278 | ENSG00000153802 | TMPRSS11D | 0 | INTRON | -4.4478645 | 8.67E-06 | 0.02147318 |
| 8 | 58355459 | 58355459 | 1 | 8_58355459 | ENSG00000215114 | UBXN2B | 55899 | Upstream | 4.44783291 | 8.67E-06 | 0.02147318 |
| 18 | 64811514 | 64811514 | 1 | 18_64811514 | ENSG00000286800 | AC090348.1 | 60749 | Downstream | 4.44773816 | 8.68E-06 | 0.02147318 |
| 8 | 8508803 | 8508803 | 1 | 8_8508803 | ENSG00000253343 | AC114550.2 | 46934 | Downstream | 4.44772962 | 8.68E-06 | 0.02147318 |
| 14 | 89450806 | 89450806 | 1 | 14_89450806 | ENSG00000053254 | FOXN3 | 0 | INTRON | 4.44772405 | 8.68E-06 | 0.02147318 |
| 1 | 90935741 | 90935741 | 1 | 1_90935741 | ENSG00000122482 | ZNF644 | 0 | INTRON | -4.4477239 | 8.68E-06 | 0.02147318 |
| 13 | 23751947 | 23751947 | 1 | 13_23751947 | ENSG00000027001 | MIPEP | 0 | INTRON | 4.44762455 | 8.68E-06 | 0.02147503 |
| 12 | 79226799 | 79226799 | 1 | 12_79226799 | ENSG00000067715 | SYT1 | 0 | INTRON | 4.44760981 | 8.68E-06 | 0.02147503 |
| 3 | 19305300 | 19305300 | 1 | 3_19305300 | ENSG00000183960 | KCNH8 | 0 | INTRON | -4.4475901 | 8.68E-06 | 0.02147503 |
| 7 | 146943622 | 146943622 | 1 | 7_146943622 | ENSG00000174469 | CNTNAP2 | 0 | INTRON | 4.4475531 | 8.69E-06 | 0.02147503 |
| 8 | 87248911 | 87248911 | 1 | 8_87248911 | ENSG00000176571 | CNBD1 | 0 | INTRON | 4.44753805 | 8.69E-06 | 0.02147503 |
| 2 | 235273240 | 235273240 | 1 | 2_235273240 | ENSG00000235293 | AC114814.3 | 94335 | Downstream | 4.44750725 | 8.69E-06 | 0.02147503 |
| 10 | 409340 | 409340 | 1 | 10_409340 | ENSG00000151240 | DIP2C | 0 | INTRON | 4.44745662 | 8.69E-06 | 0.02147503 |
| 12 | 63240729 | 63240729 | 1 | 12_63240729 | ENSG00000257332 | HNRNPA1P69 | 30674 | Upstream | -4.4474555 | 8.69E-06 | 0.02147503 |
| 5 | 15890547 | 15890547 | 1 | 5_15890547 | ENSG00000183580 | FBXL7 | 0 | INTRON | -4.4471681 | 8.70E-06 | 0.02150064 |
| 3 | 69928881 | 69928881 | 1 | 3_69928881 | ENSG00000187098 | MITF | 0 | INTRON | 4.44705667 | 8.71E-06 | 0.0215065 |
| 12 | 19281495 | 19281495 | 1 | 12_19281495 | ENSG00000052126 | PLEKHA5 | 0 | INTRON | 4.44704721 | 8.71E-06 | 0.0215065 |
| X | 154083252 | 154083252 | 1 | X_154083252 | ENSG00000169057 | MECP2 | 0 | INTRON | -4.4469531 | 8.71E-06 | 0.02150997 |
| 10 | 91957511 | 91957511 | 1 | 10_91957511 | ENSG00000095564 | BTAF1 | 0 | INTRON | 4.44695012 | 8.71E-06 | 0.02150997 |
| 4 | 145845919 | 145845919 | 1 | 4_145845919 | ENSG00000151612 | ZNF827 | 0 | INTRON | -4.4468078 | 8.72E-06 | 0.0215211 |
| 6 | 113227974 | 113227974 | 1 | 6_113227974 | ENSG00000216904 | SOCS5P5 | 3902 | Downstream | 4.44674025 | 8.72E-06 | 0.02152361 |
| 7 | 31263678 | 31263678 | 1 | 7_31263678 | ENSG00000286487 | AC006398.1 | 28030 | Downstream | -4.4467204 | 8.72E-06 | 0.02152361 |
| 7 | 74594113 | 74594113 | 1 | 7_74594113 | ENSG00000006704 | GTF2IRD1 | 0 | INTRON | -4.4465989 | 8.72E-06 | 0.02153266 |
| 6 | 163052949 | 163052949 | 1 | 6_163052949 | ENSG00000112530 | PACRG | 0 | INTRON | 4.44655491 | 8.73E-06 | 0.02153394 |
| 12 | 58964385 | 58964385 | 1 | 12_58964385 | ENSG00000257443 | AC068305.2 | 0 | INTRON | 4.44646598 | 8.73E-06 | 0.02153956 |
| 12 | 53392636 | 53392636 | 1 | 12_53392636 | ENSG00000185591 | SP1 | 0 | INTRON | 4.44643652 | 8.73E-06 | 0.02153956 |
| 3 | 54672918 | 54672918 | 1 | 3_54672918 | ENSG00000157445 | CACNA2D3 | 0 | INTRON | 4.44629245 | 8.74E-06 | 0.02155087 |
| X | 134916470 | 134916470 | 1 | X_134916470 | ENSG00000101928 | MOSPD1 | 1213 | Upstream | 4.44624304 | 8.74E-06 | 0.02155224 |
| 15 | 80973709 | 80973709 | 1 | 15_80973709 | ENSG00000117899 | MESD | 0 | INTRON | -4.4462166 | 8.74E-06 | 0.02155224 |
| 6 | 64047371 | 64047371 | 1 | 6_64047371 | ENSG00000188107 | EYS | 0 | INTRON | -4.446172 | 8.74E-06 | 0.02155359 |
| 3 | 164651980 | 164651980 | 1 | 3_164651980 | ENSG00000241636 | LINC01323 | 18897 | Downstream | -4.4459792 | 8.75E-06 | 0.0215698 |
| 9 | 124993446 | 124993446 | 1 | 9_124993446 | ENSG00000173611 | SCAI | 0 | INTRON | -4.445881 | 8.75E-06 | 0.02157559 |
| 13 | 30929111 | 30929111 | 1 | 13_30929111 | ENSG00000224743 | TEX26-AS1 | 0 | EXON | -4.44584 | 8.75E-06 | 0.02157559 |
| 19 | 19614359 | 19614359 | 1 | 19_19614359 | ENSG00000105717 | PBX4 | 0 | INTRON | 4.44582809 | 8.76E-06 | 0.02157559 |
| 7 | 105104148 | 105104148 | 1 | 7_105104148 | ENSG00000272918 | AC005070.3 | 0 | EXON | 4.44571739 | 8.76E-06 | 0.02158358 |
| 12 | 4926650 | 4926650 | 1 | 12_4926650 | ENSG00000256654 | AC005906.2 | 0 | INTRON | -4.4455159 | 8.77E-06 | 0.02160069 |
| 5 | 5232822 | 5232822 | 1 | 5_5232822 | ENSG00000145536 | ADAMTS16 | 0 | INTRON | -4.4454049 | 8.77E-06 | 0.02160872 |
| 21 | 33682939 | 33682939 | 1 | 21_33682939 | ENSG00000205726 | ITSN1 | 0 | INTRON | -4.4452901 | 8.78E-06 | 0.02161713 |
| 12 | 107794209 | 107794209 | 1 | 12_107794209 | ENSG00000257398 | AC126177.3 | 15273 | Downstream | 4.44507187 | 8.79E-06 | 0.02163596 |
| 18 | 24265414 | 24265414 | 1 | 18_24265414 | ENSG00000141447 | OSBPL1A | 0 | INTRON | -4.4449847 | 8.79E-06 | 0.02164105 |
| 22 | 11323093 | 11323093 | 1 | 22_11323093 | ENSG00000276871 | 5_8S_rRNA | 73134 | Upstream | -4.4449435 | 8.79E-06 | 0.02164105 |
| 12 | 31435596 | 31435596 | 1 | 12_31435596 | ENSG00000170456 | DENND5B | 0 | INTRON | -4.444871 | 8.79E-06 | 0.02164105 |
| 4 | 44063794 | 44063794 | 1 | 4_44063794 | ENSG00000250863 | AC114757.1 | 38278 | Upstream | 4.44485927 | 8.79E-06 | 0.02164105 |
| 4 | 24369010 | 24369010 | 1 | 4_24369010 | ENSG00000109606 | DHX15 | 148430 | Downstream | -4.4448547 | 8.80E-06 | 0.02164105 |
| 3 | 21039576 | 21039576 | 1 | 3_21039576 | ENSG00000282987 | AC099753.1 | 0 | INTRON | 4.44482479 | 8.80E-06 | 0.02164105 |
| 7 | 72814400 | 72814400 | 1 | 7_72814400 | ENSG00000277149 | TYW1B | 0 | INTRON | 4.44480082 | 8.80E-06 | 0.02164105 |
| 19 | 46805220 | 46805220 | 1 | 19_46805220 | ENSG00000275862 | AC008622.3 | 4362 | Upstream | -4.4447575 | 8.80E-06 | 0.02164105 |
| 5 | 164346195 | 164346195 | 1 | 5_164346195 | ENSG00000241956 | AC109466.1 | 0 | INTRON | -4.4446779 | 8.80E-06 | 0.02164105 |
| 20 | 47374851 | 47374851 | 1 | 20_47374851 | ENSG00000224565 | LINC01754 | 17073 | Downstream | 4.44466118 | 8.80E-06 | 0.02164105 |
| 16 | 30422472 | 30422472 | 1 | 16_30422472 | ENSG00000179965 | ZNF771 | 0 | INTRON | -4.4446402 | 8.80E-06 | 0.02164105 |
| 12 | 132064033 | 132064033 | 1 | 12_132064033 | ENSG00000183495 | EP400 | 0 | INTRON | 4.44462029 | 8.80E-06 | 0.02164105 |
| 3 | 76928617 | 76928617 | 1 | 3_76928617 | ENSG00000185008 | ROBO2 | 0 | INTRON | 4.44461713 | 8.80E-06 | 0.02164105 |
| 1 | 38034920 | 38034920 | 1 | 1_38034920 | ENSG00000185668 | POU3F1 | 8908 | Downstream | 4.4445253 | 8.81E-06 | 0.02164434 |
| 6 | 23652331 | 23652331 | 1 | 6_23652331 | ENSG00000219453 | AL133270.1 | 2557 | Downstream | -4.4445224 | 8.81E-06 | 0.02164434 |
| 1 | 68377099 | 68377099 | 1 | 1_68377099 | ENSG00000237622 | ELOCP18 | 1436 | Upstream | 4.44444406 | 8.81E-06 | 0.02164523 |
| 5 | 68681326 | 68681326 | 1 | 5_68681326 | ENSG00000249335 | AC093523.1 | 111282 | Downstream | 4.44443734 | 8.81E-06 | 0.02164523 |
| 3 | 100177307 | 100177307 | 1 | 3_100177307 | ENSG00000184220 | CMSS1 | 0 | INTRON | 4.44439216 | 8.81E-06 | 0.02164523 |
| 14 | 36642354 | 36642354 | 1 | 14_36642354 | ENSG00000283098 | AL132857.1 | 0 | INTRON | -4.4443893 | 8.81E-06 | 0.02164523 |
| 18 | 6023435 | 6023435 | 1 | 18_6023435 | ENSG00000266846 | AP001021.3 | 0 | INTRON | 4.44424684 | 8.82E-06 | 0.02165368 |
| 17 | 3731274 | 3731274 | 1 | 17_3731274 | ENSG00000083457 | ITGAE | 0 | INTRON | -4.4442434 | 8.82E-06 | 0.02165368 |
| 3 | 129344234 | 129344234 | 1 | 3_129344234 | ENSG00000270773 | AC137695.2 | 1176 | Upstream | -4.4441401 | 8.82E-06 | 0.02166096 |
| 6 | 118952067 | 118952067 | 1 | 6_118952067 | ENSG00000253194 | AL137009.1 | 0 | INTRON | -4.4440143 | 8.83E-06 | 0.02167051 |
| 18 | 76779014 | 76779014 | 1 | 18_76779014 | ENSG00000264278 | ZNF236-DT | 15717 | Downstream | 4.44396619 | 8.83E-06 | 0.02167082 |
| 7 | 52282108 | 52282108 | 1 | 7_52282108 | ENSG00000253028 | AC006320.1 | 12539 | Upstream | 4.4439483 | 8.83E-06 | 0.02167082 |
| 16 | 62842645 | 62842645 | 1 | 16_62842645 | ENSG00000260332 | AC010546.1 | 33939 | Upstream | -4.4439182 | 8.83E-06 | 0.02167082 |
| 4 | 67222009 | 67222009 | 1 | 4_67222009 | ENSG00000250075 | AC104806.2 | 195295 | Downstream | -4.443838 | 8.84E-06 | 0.02167578 |
| 5 | 98490492 | 98490492 | 1 | 5_98490492 | ENSG00000249448 | MTCO1P24 | 78700 | Upstream | -4.4437983 | 8.84E-06 | 0.02167666 |
| 11 | 125255736 | 125255736 | 1 | 11_125255736 | ENSG00000165495 | PKNOX2 | 0 | INTRON | 4.44374216 | 8.84E-06 | 0.02167919 |
| 13 | 106975072 | 106975072 | 1 | 13_106975072 | ENSG00000285643 | AL354741.1 | 13680 | Upstream | 4.44360278 | 8.85E-06 | 0.02168939 |
| 17 | 19876306 | 19876306 | 1 | 17_19876306 | ENSG00000276406 | AC015726.2 | 7617 | Downstream | -4.4435791 | 8.85E-06 | 0.02168939 |
| 9 | 93741334 | 93741334 | 1 | 9_93741334 | ENSG00000197724 | PHF2 | 61747 | Downstream | 4.44351761 | 8.85E-06 | 0.02169246 |
| 8 | 21718201 | 21718201 | 1 | 8_21718201 | ENSG00000168546 | GFRA2 | 0 | INTRON | 4.44340276 | 8.85E-06 | 0.02170092 |
| 13 | 54021322 | 54021322 | 1 | 13_54021322 | ENSG00000261517 | LINC00558 | 81362 | Downstream | 4.44333055 | 8.86E-06 | 0.02170509 |
| 2 | 26198351 | 26198351 | 1 | 2_26198351 | ENSG00000084754 | HADHA | 0 | INTRON | 4.4432266 | 8.86E-06 | 0.02171084 |
| 22 | 31134198 | 31134198 | 1 | 22_31134198 | ENSG00000185133 | INPP5J | 0 | EXON | 4.44321158 | 8.86E-06 | 0.02171084 |
| 1 | 60650589 | 60650589 | 1 | 1_60650589 | ENSG00000231252 | AC099792.1 | 9041 | Downstream | 4.44316575 | 8.86E-06 | 0.02171234 |
| 19 | 34518005 | 34518005 | 1 | 19_34518005 | ENSG00000142279 | WTIP | 5701 | Downstream | -4.4430365 | 8.87E-06 | 0.02171844 |
| 19 | 23299437 | 23299437 | 1 | 19_23299437 | ENSG00000167232 | ZNF91 | 5553 | Downstream | 4.44301627 | 8.87E-06 | 0.02171844 |
| 4 | 89253957 | 89253957 | 1 | 4_89253957 | ENSG00000185477 | GPRIN3 | 0 | INTRON | 4.44301254 | 8.87E-06 | 0.02171844 |
| 1 | 145966767 | 145966767 | 1 | 1_145966767 | ENSG00000280778 | AC243547.3 | 0 | INTRON | 4.44296999 | 8.87E-06 | 0.02171961 |
| 17 | 76864343 | 76864343 | 1 | 17_76864343 | ENSG00000267535 | LINC00868 | 2507 | Downstream | -4.4428561 | 8.88E-06 | 0.02172305 |

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| 7 | 157309693 | 157309693 | 1 | 7_157309693 | ENSG00000105993 | DNAJB6 | 25687 | Upstream | -4.4428465 | 8.88E-06 | 0.02172305 |
| X | 115343612 | 115343612 | 1 | X_115343612 | ENSG00000102021 | LUZP4 | 36049 | Downstream | 4.44284311 | 8.88E-06 | 0.02172305 |
| 9 | 98411869 | 98411869 | 1 | 9_98411869 | ENSG00000136928 | GABBR2 | 0 | INTRON | 4.44273411 | 8.88E-06 | 0.02172781 |
| 3 | 2239858 | 2239858 | 1 | 3_2239858 | ENSG00000144619 | CNTN4 | 0 | INTRON | 4.4427341 | 8.88E-06 | 0.02172781 |
| 19 | 40084664 | 40084664 | 1 | 19_40084664 | ENSG00000269749 | AC005614.2 | 0 | INTRON | 4.44255299 | 8.89E-06 | 0.02174299 |
| 5 | 109744684 | 109744684 | 1 | 5_109744684 | ENSG00000112893 | MAN2A1 | 0 | INTRON | 4.44249772 | 8.89E-06 | 0.0217437 |
| 6 | 503865 | 503865 | 1 | 6_503865 | ENSG00000112685 | EXOC2 | 0 | INTRON | 4.44248414 | 8.89E-06 | 0.0217437 |
| 6 | 35400306 | 35400306 | 1 | 6_35400306 | ENSG00000112033 | PPARD | 0 | INTRON | -4.4423834 | 8.90E-06 | 0.02175077 |
| 1 | 33276488 | 33276488 | 1 | 1_33276488 | ENSG00000160094 | ZNF362 | 0 | EXON | -4.4422932 | 8.90E-06 | 0.02175676 |
| 16 | 8761228 | 8761228 | 1 | 16_8761228 | ENSG00000183044 | ABAT | 0 | INTRON | 4.44217828 | 8.91E-06 | 0.02176526 |
| 5 | 73375284 | 73375284 | 1 | 5_73375284 | ENSG00000249149 | AC099522.1 | 7099 | Upstream | -4.4420943 | 8.91E-06 | 0.02177063 |
| 6 | 37392449 | 37392449 | 1 | 6_37392449 | ENSG00000112130 | RNF8 | 0 | 3UTR | 4.44199899 | 8.91E-06 | 0.02177064 |
| 7 | 11244368 | 11244368 | 1 | 7_11244368 | ENSG00000230333 | AC004160.1 | 0 | EXON | 4.44199008 | 8.91E-06 | 0.02177064 |
| 8 | 24184641 | 24184641 | 1 | 8_24184641 | ENSG00000253891 | AC023202.1 | 7561 | Upstream | -4.4419473 | 8.91E-06 | 0.02177064 |
| 20 | 33847492 | 33847492 | 1 | 20_33847492 | ENSG00000101421 | CHMP4B | 0 | INTRON | -4.4419372 | 8.92E-06 | 0.02177064 |
| 12 | 121520999 | 121520999 | 1 | 12_121520999 | ENSG00000089094 | KDM2B | 0 | 5UTR | -4.4418389 | 8.92E-06 | 0.02177064 |
| 2 | 137983612 | 137983612 | 1 | 2_137983612 | ENSG00000150540 | HNMT | 0 | INTRON | -4.4418045 | 8.92E-06 | 0.02177064 |
| X | 8191302 | 8191302 | 1 | X_8191302 | ENSG00000285679 | AC079142.1 | 0 | INTRON | 4.44176031 | 8.92E-06 | 0.02177064 |
| 18 | 74578224 | 74578224 | 1 | 18_74578224 | ENSG00000150656 | CNDP1 | 0 | EXON | 4.44173656 | 8.92E-06 | 0.02177064 |
| 17 | 7503029 | 7503029 | 1 | 17_7503029 | ENSG00000181222 | POLR2A | 0 | EXON | -4.4417341 | 8.92E-06 | 0.02177064 |
| 22 | 44552634 | 44552634 | 1 | 22_44552634 | ENSG00000215333 | KRT18P23 | 14330 | Upstream | 4.44165805 | 8.93E-06 | 0.02177064 |
| 2 | 80644347 | 80644347 | 1 | 2_80644347 | ENSG00000066032 | CTNNA2 | 0 | INTRON | -4.4416241 | 8.93E-06 | 0.02177064 |
| 2 | 140498590 | 140498590 | 1 | 2_140498590 | ENSG00000168702 | LRP1B | 0 | INTRON | -4.4416232 | 8.93E-06 | 0.02177064 |
| 9 | 20914947 | 20914947 | 1 | 9_20914947 | ENSG00000188352 | FOCAD | 0 | INTRON | 4.44162056 | 8.93E-06 | 0.02177064 |
| 1 | 246798914 | 246798914 | 1 | 1_246798914 | ENSG00000223519 | KIF28P | 0 | INTRON | 4.44161392 | 8.93E-06 | 0.02177064 |
| 1 | 92621404 | 92621404 | 1 | 1_92621404 | ENSG00000067208 | EVI5 | 0 | INTRON | 4.44159028 | 8.93E-06 | 0.02177064 |
| 2 | 127228537 | 127228537 | 1 | 2_127228537 | ENSG00000186684 | CYP27C1 | 8224 | Upstream | -4.4415859 | 8.93E-06 | 0.02177064 |
| 15 | 97237740 | 97237740 | 1 | 15_97237740 | ENSG00000259485 | LINC02253 | 0 | INTRON | -4.4415696 | 8.93E-06 | 0.02177064 |
| 16 | 49220634 | 49220634 | 1 | 16_49220634 | ENSG00000287469 | AC044798.3 | 0 | INTRON | -4.4414398 | 8.94E-06 | 0.02178066 |
| 9 | 22836399 | 22836399 | 1 | 9_22836399 | ENSG00000284418 | AL391117.1 | 0 | INTRON | -4.4413547 | 8.94E-06 | 0.02178322 |
| 1 | 120845502 | 120845502 | 1 | 1_120845502 | ENSG00000273136 | NBPF26 | 3392 | Downstream | -4.441328 | 8.94E-06 | 0.02178322 |
| 16 | 88715952 | 88715952 | 1 | 16_88715952 | ENSG00000103335 | PIEZO1 | 0 | 3UTR | -4.4413221 | 8.94E-06 | 0.02178322 |
| 8 | 25453383 | 25453383 | 1 | 8_25453383 | ENSG00000104756 | KCTD9 | 0 | INTRON | -4.441224 | 8.94E-06 | 0.02179003 |
| 16 | 5318191 | 5318191 | 1 | 16_5318191 | ENSG00000078328 | RBFOX1 | 0 | INTRON | 4.44111044 | 8.95E-06 | 0.02179842 |
| 9 | 63691155 | 63691155 | 1 | 9_63691155 | ENSG00000234042 | AL591438.2 | 11909 | Upstream | -4.4410442 | 8.95E-06 | 0.02180201 |
| 5 | 35675591 | 35675591 | 1 | 5_35675591 | ENSG00000152582 | SPEF2 | 0 | INTRON | 4.44095548 | 8.96E-06 | 0.02180323 |
| 8 | 58970231 | 58970231 | 1 | 8_58970231 | ENSG00000198846 | TOX | 0 | INTRON | -4.4409519 | 8.96E-06 | 0.02180323 |
| 15 | 101447890 | 101447890 | 1 | 15_101447890 | ENSG00000140479 | PCSK6 | 0 | INTRON | -4.4409397 | 8.96E-06 | 0.02180323 |
| 3 | 167182443 | 167182443 | 1 | 3_167182443 | ENSG00000169064 | ZBBX | 57843 | Downstream | -4.4407407 | 8.96E-06 | 0.02181884 |
| 16 | 83168179 | 83168179 | 1 | 16_83168179 | ENSG00000140945 | CDH13 | 0 | INTRON | -4.4407242 | 8.97E-06 | 0.02181884 |
| 14 | 79705020 | 79705020 | 1 | 14_79705020 | ENSG00000021645 | NRXN3 | 0 | INTRON | 4.44069204 | 8.97E-06 | 0.02181898 |
| 7 | 134633654 | 134633654 | 1 | 7_134633654 | ENSG00000172331 | BPGM | 13156 | Upstream | 4.44050254 | 8.97E-06 | 0.02182931 |
| 2 | 128834233 | 128834233 | 1 | 2_128834233 | ENSG00000238277 | AC068483.1 | 229612 | Downstream | -4.4404824 | 8.98E-06 | 0.02182931 |
| 7 | 138095998 | 138095998 | 1 | 7_138095998 | ENSG00000122787 | AKR1D1 | 0 | INTRON | 4.44046167 | 8.98E-06 | 0.02182931 |
| 22 | 45184659 | 45184659 | 1 | 22_45184659 | ENSG00000093000 | NUP50 | 0 | 3UTR | -4.4404543 | 8.98E-06 | 0.02182931 |
| 2 | 9431940 | 9431940 | 1 | 2_9431940 | ENSG00000119203 | CPSF3 | 0 | INTRON | 4.44043641 | 8.98E-06 | 0.02182931 |
| 17 | 41426113 | 41426113 | 1 | 17_41426113 | ENSG00000234859 | AC003958.2 | 1064 | Downstream | -4.4403049 | 8.98E-06 | 0.02183362 |
| 4 | 57781389 | 57781389 | 1 | 4_57781389 | ENSG00000249831 | AC093725.1 | 56734 | Downstream | -4.4402931 | 8.98E-06 | 0.02183362 |
| 3 | 141537038 | 141537038 | 1 | 3_141537038 | ENSG00000155903 | RASA2 | 0 | INTRON | 4.44029063 | 8.98E-06 | 0.02183362 |
| 10 | 84296660 | 84296660 | 1 | 10_84296660 | ENSG00000229404 | LINC00858 | 2001 | Downstream | -4.4402513 | 8.99E-06 | 0.02183362 |
| 1 | 21796181 | 21796181 | 1 | 1_21796181 | ENSG00000090686 | USP48 | 12575 | Upstream | -4.4402402 | 8.99E-06 | 0.02183362 |
| 5 | 130914093 | 130914093 | 1 | 5_130914093 | ENSG00000287390 | AC006525.1 | 0 | INTRON | -4.4402076 | 8.99E-06 | 0.02183372 |
| 20 | 46159838 | 46159838 | 1 | 20_46159838 | ENSG00000229957 | AL031687.1 | 8565 | Downstream | 4.44016482 | 8.99E-06 | 0.02183372 |
| 4 | 169691310 | 169691310 | 1 | 4_169691310 | ENSG00000109572 | CLCN3 | 0 | INTRON | -4.4401471 | 8.99E-06 | 0.02183372 |
| 7 | 1736403 | 1736403 | 1 | 7_1736403 | ENSG00000225968 | ELFN1 | 0 | INTRON | -4.440099 | 8.99E-06 | 0.02183497 |
| 13 | 62250956 | 62250956 | 1 | 13_62250956 | ENSG00000230142 | LINC01075 | 1009 | Downstream | 4.44007329 | 8.99E-06 | 0.02183497 |
| 11 | 1397606 | 1397606 | 1 | 11_1397606 | ENSG00000174672 | BRSK2 | 0 | INTRON | 4.4398839 | 9.00E-06 | 0.02184116 |
| X | 115506569 | 115506569 | 1 | X_115506569 | ENSG00000271826 | PLS3-AS1 | 11612 | Downstream | 4.4398708 | 9.00E-06 | 0.02184116 |
| 1 | 9387816 | 9387816 | 1 | 1_9387816 | ENSG00000171621 | SPSB1 | 18284 | Downstream | 4.43986611 | 9.00E-06 | 0.02184116 |
| 4 | 112794835 | 112794835 | 1 | 4_112794835 | ENSG00000250500 | AC017007.4 | 2214 | Downstream | 4.43985893 | 9.00E-06 | 0.02184116 |
| 5 | 149660518 | 149660518 | 1 | 5_149660518 | ENSG00000183111 | ARHGEF37 | 25550 | Downstream | -4.4398588 | 9.00E-06 | 0.02184116 |
| 19 | 3950646 | 3950646 | 1 | 19_3950646 | ENSG00000167657 | DAPK3 | 7806 | Downstream | -4.439784 | 9.00E-06 | 0.02184564 |
| 6 | 113926036 | 113926036 | 1 | 6_113926036 | ENSG00000175967 | FO393415.1 | 4394 | Downstream | 4.43965169 | 9.01E-06 | 0.02185526 |
| 4 | 153386353 | 153386353 | 1 | 4_153386353 | ENSG00000121211 | MND1 | 0 | INTRON | -4.4396259 | 9.01E-06 | 0.02185526 |
| 10 | 34155309 | 34155309 | 1 | 10_34155309 | ENSG00000148498 | PARD3 | 0 | INTRON | 4.4395756 | 9.01E-06 | 0.02185526 |
| 2 | 107382260 | 107382260 | 1 | 2_107382260 | ENSG00000225588 | AC096669.1 | 0 | INTRON | 4.43954572 | 9.01E-06 | 0.02185526 |
| 5 | 92399952 | 92399952 | 1 | 5_92399952 | ENSG00000250049 | AC114316.1 | 0 | INTRON | 4.43948826 | 9.02E-06 | 0.02185526 |
| 2 | 21944726 | 21944726 | 1 | 2_21944726 | ENSG00000228999 | AC096570.1 | 0 | EXON | -4.4394558 | 9.02E-06 | 0.02185526 |
| 22 | 45327939 | 45327939 | 1 | 22_45327939 | ENSG00000100376 | FAM118A | 0 | EXON | -4.4394365 | 9.02E-06 | 0.02185526 |
| 2 | 55486272 | 55486272 | 1 | 2_55486272 | ENSG00000239189 | RNU6-634P | 13677 | Upstream | 4.43938597 | 9.02E-06 | 0.02185526 |
| 11 | 107775348 | 107775348 | 1 | 11_107775348 | ENSG00000110660 | SLC35F2 | 15642 | Downstream | 4.43937425 | 9.02E-06 | 0.02185526 |
| 8 | 33682893 | 33682893 | 1 | 8_33682893 | ENSG00000253642 | AF279873.3 | 0 | INTRON | -4.4393508 | 9.02E-06 | 0.02185526 |
| 14 | 75232013 | 75232013 | 1 | 14_75232013 | ENSG00000258740 | AL691403.1 | 6602 | Downstream | 4.43933344 | 9.02E-06 | 0.02185526 |
| 5 | 135215615 | 135215615 | 1 | 5_135215615 | ENSG00000224186 | C5orf66 | 0 | INTRON | 4.43924352 | 9.03E-06 | 0.02185526 |
| 1 | 18413642 | 18413642 | 1 | 1_18413642 | ENSG00000225387 | AL591896.1 | 25128 | Downstream | -4.4392353 | 9.03E-06 | 0.02185526 |
| 3 | 103258792 | 103258792 | 1 | 3_103258792 | ENSG00000236691 | NDUFA4P2 | 17562 | Downstream | -4.4392299 | 9.03E-06 | 0.02185526 |
| 5 | 91931257 | 91931257 | 1 | 5_91931257 | ENSG00000248826 | PCBP2P3 | 86728 | Upstream | -4.4392295 | 9.03E-06 | 0.02185526 |
| 7 | 47631080 | 47631080 | 1 | 7_47631080 | ENSG00000236078 | LINC01447 | 1187 | Downstream | 4.43914012 | 9.03E-06 | 0.02185819 |
| 5 | 55592171 | 55592171 | 1 | 5_55592171 | ENSG00000177058 | SLC38A9 | 33673 | Downstream | -4.4390942 | 9.03E-06 | 0.02185819 |
| 8 | 100923988 | 100923988 | 1 | 8_100923988 | ENSG00000164924 | YWHAZ | 0 | EXON | 4.43904619 | 9.04E-06 | 0.02185819 |
| 3 | 31541867 | 31541867 | 1 | 3_31541867 | ENSG00000163527 | STT3B | 0 | INTRON | 4.43903313 | 9.04E-06 | 0.02185819 |
| 17 | 81174687 | 81174687 | 1 | 17_81174687 | ENSG00000225180 | PVALEF | 0 | INTRON | -4.4390053 | 9.04E-06 | 0.02185819 |
| 17 | 71464052 | 71464052 | 1 | 17_71464052 | ENSG00000225818 | AC118653.1 | 132285 | Upstream | -4.4389944 | 9.04E-06 | 0.02185819 |
| 3 | 63946377 | 63946377 | 1 | 3_63946377 | ENSG00000285258 | ATXN7 | 0 | INTRON | 4.43898634 | 9.04E-06 | 0.02185819 |
| 19 | 29437213 | 29437213 | 1 | 19_29437213 | ENSG00000264515 | AC011474.1 | 0 | INTRON | 4.43881493 | 9.05E-06 | 0.02187249 |
| 15 | 85115844 | 85115844 | 1 | 15_85115844 | ENSG00000073417 | PDE8A | 0 | EXON | 4.43866289 | 9.05E-06 | 0.02188459 |
| 7 | 113435577 | 113435577 | 1 | 7_113435577 | ENSG00000278894 | AC073348.1 | 15494 | Upstream | 4.43863476 | 9.05E-06 | 0.02188459 |
| 6 | 121810781 | 121810781 | 1 | 6_121810781 | ENSG00000220184 | HMGB3P18 | 47397 | Downstream | -4.43856 | 9.06E-06 | 0.02188908 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
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| 13 | 50202787 | 50202787 | 1 | 13_50202787 | ENSG00000176124 | DLEU1 | 0 | INTRON | 4.43851871 | 9.06E-06 | 0.0218901 |
| 10 | 84667149 | 84667149 | 1 | 10_84667149 | ENSG00000178429 | RPS3AP5 | 105886 | Downstream | -4.4384547 | 9.06E-06 | 0.0218901 |
| 18 | 55385526 | 55385526 | 1 | 18_55385526 | ENSG00000196628 | TCF4 | 0 | INTRON | -4.43841 | 9.06E-06 | 0.0218901 |
| 10 | 73893379 | 73893379 | 1 | 10_73893379 | ENSG00000122861 | PLAU | 15797 | Upstream | 4.43839573 | 9.06E-06 | 0.0218901 |
| 3 | 69901629 | 69901629 | 1 | 3_69901629 | ENSG00000187098 | MITF | 0 | INTRON | -4.4383047 | 9.07E-06 | 0.0218901 |
| 22 | 30531300 | 30531300 | 1 | 22_30531300 | ENSG00000214491 | SEC14L6 | 0 | INTRON | -4.4382927 | 9.07E-06 | 0.0218901 |
| 20 | 3662946 | 3662946 | 1 | 20_3662946 | ENSG00000125861 | GFRA4 | 0 | INTRON | -4.4382655 | 9.07E-06 | 0.0218901 |
| 20 | 42168700 | 42168700 | 1 | 20_42168700 | ENSG00000196090 | PTPRT | 0 | INTRON | -4.4382516 | 9.07E-06 | 0.0218901 |
| 2 | 147726571 | 147726571 | 1 | 2_147726571 | ENSG00000253083 | RNA5SP106 | 13017 | Upstream | 4.43824897 | 9.07E-06 | 0.0218901 |
| 16 | 76005424 | 76005424 | 1 | 16_76005424 | ENSG00000260223 | AC099511.1 | 101858 | Downstream | -4.4382444 | 9.07E-06 | 0.0218901 |
| 11 | 38958179 | 38958179 | 1 | 11_38958179 | ENSG00000285751 | AC021723.2 | 66451 | Downstream | -4.4381966 | 9.07E-06 | 0.02189101 |
| 11 | 111575259 | 111575259 | 1 | 11_111575259 | ENSG00000204381 | LAYN | 13514 | Downstream | -4.4381573 | 9.07E-06 | 0.02189101 |
| 8 | 72197465 | 72197465 | 1 | 8_72197465 | ENSG00000253317 | AC078906.1 | 0 | INTRON | 4.43814382 | 9.07E-06 | 0.02189101 |
| 2 | 119902059 | 119902059 | 1 | 2_119902059 | ENSG00000088179 | PTPN4 | 0 | INTRON | 4.43792505 | 9.08E-06 | 0.02190778 |
| 10 | 14814680 | 14814680 | 1 | 10_14814680 | ENSG00000185267 | CDNF | 4564 | Downstream | 4.43791797 | 9.08E-06 | 0.02190778 |
| 11 | 106652134 | 106652134 | 1 | 11_106652134 | ENSG00000152402 | GUCY1A2 | 21877 | Downstream | 4.43779902 | 9.09E-06 | 0.02190975 |
| 2 | 24886625 | 24886625 | 1 | 2_24886625 | ENSG00000138031 | ADCY3 | 0 | INTRON | 4.43776215 | 9.09E-06 | 0.02190975 |
| 1 | 31407204 | 31407204 | 1 | 1_31407204 | ENSG00000168528 | SERINC2 | 2360 | Upstream | 4.43776022 | 9.09E-06 | 0.02190975 |
| 1 | 21009717 | 21009717 | 1 | 1_21009717 | ENSG00000075151 | EIF4G3 | 0 | INTRON | 4.43774428 | 9.09E-06 | 0.02190975 |
| 9 | 133562723 | 133562723 | 1 | 9_133562723 | ENSG00000197859 | ADAMTSL2 | 0 | INTRON | -4.4377224 | 9.09E-06 | 0.02190975 |
| 10 | 99154636 | 99154636 | 1 | 10_99154636 | ENSG00000172987 | HPSE2 | 0 | INTRON | 4.43771553 | 9.09E-06 | 0.02190975 |
| 12 | 6046840 | 6046840 | 1 | 12_6046840 | ENSG00000110799 | VWF | 0 | INTRON | 4.43768212 | 9.09E-06 | 0.02191005 |
| 4 | 177330100 | 177330100 | 1 | 4_177330100 | ENSG00000109674 | NEIL3 | 0 | INTRON | -4.4375402 | 9.10E-06 | 0.0219214 |
| 7 | 40828973 | 40828973 | 1 | 7_40828973 | ENSG00000175600 | SUGCT | 0 | INTRON | 4.43744419 | 9.10E-06 | 0.02192173 |
| 12 | 106275672 | 106275672 | 1 | 12_106275672 | ENSG00000136026 | CKAP4 | 0 | INTRON | -4.4374251 | 9.10E-06 | 0.02192173 |
| 1 | 95222596 | 95222596 | 1 | 1_95222596 | ENSG00000271092 | TLCD4-RWDD3 | 0 | INTRON | 4.43741832 | 9.10E-06 | 0.02192173 |
| 19 | 7968290 | 7968290 | 1 | 19_7968290 | ENSG00000066044 | ELAVL1 | 0 | INTRON | 4.43740734 | 9.10E-06 | 0.02192173 |
| 18 | 50079725 | 50079725 | 1 | 18_50079725 | ENSG00000167306 | MYO5B | 0 | INTRON | -4.4373845 | 9.11E-06 | 0.02192173 |
| 13 | 27722206 | 27722206 | 1 | 13_27722206 | ENSG00000186184 | POLR1D | 0 | INTRON | 4.43732548 | 9.11E-06 | 0.02192464 |
| 11 | 1856459 | 1856459 | 1 | 11_1856459 | ENSG00000130592 | LSP1 | 0 | INTRON | -4.4371462 | 9.12E-06 | 0.02193971 |
| 5 | 119112250 | 119112250 | 1 | 5_119112250 | ENSG00000172869 | DMXL1 | 0 | INTRON | -4.4371166 | 9.12E-06 | 0.02193971 |
| 6 | 96934124 | 96934124 | 1 | 6_96934124 | ENSG00000186231 | KLHL32 | 0 | INTRON | 4.43706481 | 9.12E-06 | 0.02194188 |
| 6 | 165174016 | 165174016 | 1 | 6_165174016 | ENSG00000217878 | AL136100.1 | 56492 | Upstream | -4.4369978 | 9.12E-06 | 0.02194561 |
| 16 | 73956001 | 73956001 | 1 | 16_73956001 | ENSG00000261404 | AC138627.1 | 0 | INTRON | -4.4369433 | 9.12E-06 | 0.02194806 |
| 3 | 189004498 | 189004498 | 1 | 3_189004498 | ENSG00000188001 | TPRG1 | 0 | INTRON | 4.43687643 | 9.13E-06 | 0.02195177 |
| 3 | 10463934 | 10463934 | 1 | 3_10463934 | ENSG00000157087 | ATP2B2 | 0 | INTRON | -4.4368395 | 9.13E-06 | 0.02195244 |
| 7 | 41566836 | 41566836 | 1 | 7_41566836 | ENSG00000122641 | INHBA | 100331 | Downstream | -4.4367992 | 9.13E-06 | 0.02195344 |
| 22 | 36155296 | 36155296 | 1 | 22_36155296 | ENSG00000128284 | APOL3 | 0 | INTRON | 4.43675913 | 9.13E-06 | 0.02195443 |
| 20 | 34323968 | 34323968 | 1 | 20_34323968 | ENSG00000101444 | AHCY | 12166 | Upstream | -4.4367019 | 9.13E-06 | 0.02195715 |
| 10 | 20005722 | 20005722 | 1 | 10_20005722 | ENSG00000120594 | PLXDC2 | 0 | INTRON | 4.43658642 | 9.14E-06 | 0.02196583 |
| 9 | 129013406 | 129013406 | 1 | 9_129013406 | ENSG00000148341 | SH3GLB2 | 0 | EXON | 4.4365267 | 9.14E-06 | 0.02196731 |
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| 20 | 3707667 | 3707667 | 1 | 20_3707667 | ENSG00000088827 | SIGLEC1 | 539 | Upstream | 4.43641017 | 9.15E-06 | 0.02196731 |
| 16 | 28455756 | 28455756 | 1 | 16_28455756 | ENSG00000275654 | AC138894.4 | 400 | Downstream | 4.4364035 | 9.15E-06 | 0.02196731 |
| 11 | 89750636 | 89750636 | 1 | 11_89750636 | ENSG00000234376 | UBTFL2 | 2148 | Downstream | -4.4363939 | 9.15E-06 | 0.02196731 |
| 1 | 231648486 | 231648486 | 1 | 1_231648486 | ENSG00000162946 | DISC1 | 0 | INTRON | 4.43636449 | 9.15E-06 | 0.02196731 |
| 19 | 39066487 | 39066487 | 1 | 19_39066487 | ENSG00000183760 | ACP7 | 17425 | Upstream | 4.43635913 | 9.15E-06 | 0.02196731 |
| 8 | 34382593 | 34382593 | 1 | 8_34382593 | ENSG00000253108 | AC090993.1 | 35862 | Downstream | 4.43627914 | 9.15E-06 | 0.02197237 |
| 12 | 128575435 | 128575435 | 1 | 12_128575435 | ENSG00000181234 | TMEM132C | 0 | INTRON | 4.4360947 | 9.16E-06 | 0.02198512 |
| 15 | 50676834 | 50676834 | 1 | 15_50676834 | ENSG00000092439 | TRPM7 | 0 | INTRON | 4.43609337 | 9.16E-06 | 0.02198512 |
| 6 | 105161133 | 105161133 | 1 | 6_105161133 | ENSG00000132429 | POPDC3 | 0 | INTRON | 4.43593334 | 9.17E-06 | 0.02199644 |
| 3 | 11561938 | 11561938 | 1 | 3_11561938 | ENSG00000144560 | VGLL4 | 0 | INTRON | 4.43592181 | 9.17E-06 | 0.02199644 |
| 19 | 58480236 | 58480236 | 1 | 19_58480236 | ENSG00000083807 | SLC27A5 | 0 | 3UTR | 4.43580358 | 9.17E-06 | 0.02200541 |
| 13 | 34304225 | 34304225 | 1 | 13_34304225 | ENSG00000278477 | AL356321.1 | 41135 | Downstream | 4.43571871 | 9.18E-06 | 0.02201098 |
| 12 | 114412285 | 114412285 | 1 | 12_114412285 | ENSG00000255399 | TBX5-AS1 | 0 | EXON | -4.4356259 | 9.18E-06 | 0.0220153 |
| 20 | 20118560 | 20118560 | 1 | 20_20118560 | ENSG00000089101 | CFAP61 | 0 | INTRON | 4.43561569 | 9.18E-06 | 0.0220153 |
| 22 | 49469997 | 49469997 | 1 | 22_49469997 | ENSG00000188511 | C22orf34 | 0 | INTRON | 4.43551347 | 9.19E-06 | 0.02202265 |
| 8 | 11556694 | 11556694 | 1 | 8_11556694 | ENSG00000136573 | BLK | 0 | EXON | -4.4353788 | 9.19E-06 | 0.02202744 |
| 2 | 24593022 | 24593022 | 1 | 2_24593022 | ENSG00000084676 | NCOA1 | 0 | INTRON | 4.4353673 | 9.19E-06 | 0.02202744 |
| 13 | 101160057 | 101160057 | 1 | 13_101160057 | ENSG00000102452 | NALCN | 0 | INTRON | -4.435348 | 9.19E-06 | 0.02202744 |
| 11 | 62975505 | 62975505 | 1 | 11_62975505 | ENSG00000197901 | SLC22A6 | 0 | INTRON | -4.4353094 | 9.19E-06 | 0.02202744 |
| 3 | 4584682 | 4584682 | 1 | 3_4584682 | ENSG00000150995 | ITPR1 | 0 | INTRON | -4.4353024 | 9.19E-06 | 0.02202744 |
| 22 | 40389673 | 40389673 | 1 | 22_40389673 | ENSG00000100359 | SGSM3 | 0 | INTRON | -4.4352846 | 9.20E-06 | 0.02202744 |
| 6 | 157465581 | 157465581 | 1 | 6_157465581 | ENSG00000175048 | ZDHHC14 | 0 | INTRON | 4.43519339 | 9.20E-06 | 0.02203367 |
| X | 55343171 | 55343171 | 1 | X_55343171 | ENSG00000232765 | AL158819.1 | 54386 | Downstream | 4.4350031 | 9.21E-06 | 0.02204205 |
| 10 | 37363899 | 37363899 | 1 | 10_37363899 | ENSG00000148513 | ANKRD30A | 0 | INTRON | 4.43499701 | 9.21E-06 | 0.02204205 |
| 15 | 50450654 | 50450654 | 1 | 15_50450654 | ENSG00000138592 | USP8 | 0 | INTRON | -4.4349666 | 9.21E-06 | 0.02204205 |
| 6 | 161458369 | 161458369 | 1 | 6_161458369 | ENSG00000185345 | PRKN | 0 | INTRON | 4.4349176 | 9.21E-06 | 0.02204205 |
| 6 | 129801362 | 129801362 | 1 | 6_129801362 | ENSG00000218725 | B3GALNT2P1 | 0 | EXON | -4.4349041 | 9.21E-06 | 0.02204205 |
| 16 | 34847409 | 34847409 | 1 | 16_34847409 | ENSG00000279165 | AC135776.4 | 94567 | Upstream | -4.4348521 | 9.21E-06 | 0.02204205 |
| 1 | 14934106 | 14934106 | 1 | 1_14934106 | ENSG00000189337 | KAZN | 0 | INTRON | 4.43484773 | 9.21E-06 | 0.02204205 |
| 10 | 1106017 | 1106017 | 1 | 10_1106017 | ENSG00000047056 | WDR37 | 0 | INTRON | 4.43483765 | 9.21E-06 | 0.02204205 |
| 9 | 128325835 | 128325835 | 1 | 9_128325835 | ENSG00000167113 | COQ4 | 0 | EXON | 4.43482162 | 9.21E-06 | 0.02204205 |
| 15 | 86747940 | 86747940 | 1 | 15_86747940 | ENSG00000273540 | AGBL1 | 0 | INTRON | -4.4347917 | 9.22E-06 | 0.02204205 |
| 20 | 22033969 | 22033969 | 1 | 20_22033969 | ENSG00000234435 | LINC01432 | 20104 | Upstream | -4.4347782 | 9.22E-06 | 0.02204205 |
| 12 | 56415972 | 56415972 | 1 | 12_56415972 | ENSG00000111602 | TIMELESS | 390 | Downstream | 4.43473233 | 9.22E-06 | 0.02204364 |
| 7 | 2875727 | 2875727 | 1 | 7_2875727 | ENSG00000198286 | CARD11 | 30413 | Downstream | 4.43457624 | 9.23E-06 | 0.02204944 |
| 10 | 49892016 | 49892016 | 1 | 10_49892016 | ENSG00000227345 | PARG | 0 | INTRON | -4.4345645 | 9.23E-06 | 0.02204944 |
| 13 | 51224881 | 51224881 | 1 | 13_51224881 | ENSG00000150510 | FAM124A | 0 | INTRON | 4.4345008 | 9.23E-06 | 0.02204944 |
| 2 | 92241460 | 92241460 | 1 | 2_92241460 | ENSG00000223816 | IGKV1OR2-2 | 206460 | Upstream | -4.4345001 | 9.23E-06 | 0.02204944 |
| 6 | 22736503 | 22736503 | 1 | 6_22736503 | ENSG00000233358 | AL035401.1 | 7891 | Downstream | -4.4344742 | 9.23E-06 | 0.02204944 |
| 6 | 89122426 | 89122426 | 1 | 6_89122426 | ENSG00000154548 | SRSF12 | 4355 | Upstream | 4.43446511 | 9.23E-06 | 0.02204944 |
| 13 | 67909685 | 67909685 | 1 | 13_67909685 | ENSG00000226537 | OR7E33P | 1300 | Upstream | -4.4344638 | 9.23E-06 | 0.02204944 |
| 14 | 47684837 | 47684837 | 1 | 14_47684837 | ENSG00000139915 | MDGA2 | 9232 | Upstream | -4.4342957 | 9.24E-06 | 0.02206355 |
| 22 | 17140139 | 17140139 | 1 | 22_17140139 | ENSG00000069998 | HDHD5 | 0 | INTRON | 4.43421744 | 9.24E-06 | 0.02206847 |
| 5 | 96827389 | 96827389 | 1 | 5_96827389 | ENSG00000247121 | AC009126.1 | 0 | INTRON | 4.43414437 | 9.24E-06 | 0.02207285 |
| 5 | 166240668 | 166240668 | 1 | 5_166240668 | ENSG00000254171 | AC114321.1 | 85229 | Downstream | -4.4340667 | 9.25E-06 | 0.02207468 |
| 8 | 79989629 | 79989629 | 1 | 8_79989629 | ENSG00000147586 | MRPS28 | 0 | INTRON | 4.43404011 | 9.25E-06 | 0.02207468 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 | 2782531 | 2782531 | 1 | 12_2782531 | ENSG00000256150 | ITFG2-AS1 | 0 | INTRON | -4.4340358 | 9.25E-06 | 0.02207468 |
| 12 | 97253026 | 97253026 | 1 | 12_97253026 | ENSG00000257920 | LINC02409 | 19665 | Downstream | 4.43386012 | 9.26E-06 | 0.02208684 |
| 4 | 146965799 | 146965799 | 1 | 4_146965799 | ENSG00000248346 | AC092435.1 | 0 | INTRON | 4.4338322 | 9.26E-06 | 0.02208684 |
| 2 | 57538205 | 57538205 | 1 | 2_57538205 | ENSG00000212168 | AC073875.1 | 6329 | Upstream | -4.4338055 | 9.26E-06 | 0.02208684 |
| 8 | 109400234 | 109400234 | 1 | 8_109400234 | ENSG00000205038 | PKHD1L1 | 0 | EXON | -4.4337858 | 9.26E-06 | 0.02208684 |
| 5 | 148974526 | 148974526 | 1 | 5_148974526 | ENSG00000169247 | SH3TC2 | 0 | INTRON | 4.43376612 | 9.26E-06 | 0.02208684 |
| 15 | 29395699 | 29395699 | 1 | 15_29395699 | ENSG00000104059 | FAM189A1 | 0 | INTRON | -4.4336543 | 9.26E-06 | 0.02209521 |
| 10 | 64442357 | 64442357 | 1 | 10_64442357 | ENSG00000228566 | AC013287.1 | 0 | INTRON | 4.43349746 | 9.27E-06 | 0.0221082 |
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| 17 | 43344976 | 43344976 | 1 | 17_43344976 | ENSG00000188825 | LINC00910 | 0 | INTRON | -4.4333038 | 9.28E-06 | 0.02211877 |
| 2 | 188009523 | 188009523 | 1 | 2_188009523 | ENSG00000231689 | LINC01090 | 0 | INTRON | 4.43326453 | 9.28E-06 | 0.02211971 |
| 7 | 107361718 | 107361718 | 1 | 7_107361718 | ENSG00000164597 | COG5 | 0 | INTRON | 4.43321533 | 9.28E-06 | 0.02212166 |
| 8 | 52347387 | 52347387 | 1 | 8_52347387 | ENSG00000147488 | ST18 | 0 | INTRON | 4.43310415 | 9.29E-06 | 0.02212738 |
| 17 | 19352543 | 19352543 | 1 | 17_19352543 | ENSG00000108641 | B9D1 | 0 | INTRON | 4.43309922 | 9.29E-06 | 0.02212738 |
| 9 | 16004488 | 16004488 | 1 | 9_16004488 | ENSG00000164989 | CCDC171 | 0 | INTRON | -4.4330221 | 9.29E-06 | 0.02213087 |
| 10 | 128939683 | 128939683 | 1 | 10_128939683 | ENSG00000232985 | AL355537.1 | 19088 | Downstream | -4.4329952 | 9.29E-06 | 0.02213087 |
| 4 | 186410784 | 186410784 | 1 | 4_186410784 | ENSG00000251165 | F11-AS1 | 0 | INTRON | -4.4329584 | 9.29E-06 | 0.02213087 |
| 22 | 43200413 | 43200413 | 1 | 22_43200413 | ENSG00000159307 | SCUBE1 | 0 | 3UTR | 4.43294456 | 9.30E-06 | 0.02213087 |
| 6 | 137875099 | 137875099 | 1 | 6_137875099 | ENSG00000118503 | TNFAIP3 | 0 | INTRON | 4.43288477 | 9.30E-06 | 0.02213089 |
| 5 | 90182402 | 90182402 | 1 | 5_90182402 | ENSG00000248555 | LINC01339 | 0 | INTRON | 4.43288407 | 9.30E-06 | 0.02213089 |
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| 7 | 78187774 | 78187774 | 1 | 7_78187774 | ENSG00000187391 | MAGI2 | 0 | INTRON | 4.43278989 | 9.30E-06 | 0.02213128 |
| 21 | 40155555 | 40155555 | 1 | 21_40155555 | ENSG00000171587 | DSCAM | 0 | INTRON | 4.43275195 | 9.30E-06 | 0.02213208 |
| Y | 10932244 | 10932244 | 1 | Y_10932244 | ENSG00000273858 | AC140113.4 | 110477 | Downstream | 4.43268089 | 9.31E-06 | 0.0221335 |
| X | 115330082 | 115330082 | 1 | X_115330082 | ENSG00000102021 | LUZP4 | 22519 | Downstream | -4.4326533 | 9.31E-06 | 0.0221335 |
| 2 | 228905814 | 228905814 | 1 | 2_228905814 | ENSG00000153823 | PID1 | 0 | INTRON | -4.432634 | 9.31E-06 | 0.0221335 |
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| 17 | 3971599 | 3971599 | 1 | 17_3971599 | ENSG00000263312 | LINC01975 | 5503 | Upstream | 4.43245104 | 9.32E-06 | 0.02214443 |
| 13 | 92459327 | 92459327 | 1 | 13_92459327 | ENSG00000179399 | GPC5 | 0 | INTRON | 4.43227696 | 9.32E-06 | 0.02215676 |
| 10 | 49166028 | 49166028 | 1 | 10_49166028 | ENSG00000204161 | TMEM273 | 0 | INTRON | 4.43227076 | 9.32E-06 | 0.02215676 |
| 13 | 107013573 | 107013573 | 1 | 13_107013573 | ENSG00000285643 | AL354741.1 | 52181 | Upstream | 4.43217854 | 9.33E-06 | 0.0221593 |
| 7 | 58045415 | 58045415 | 1 | 7_58045415 | ENSG00000231484 | AC023141.7 | 208369 | Downstream | 4.43217614 | 9.33E-06 | 0.0221593 |
| 2 | 150826541 | 150826541 | 1 | 2_150826541 | ENSG00000228064 | AC023469.2 | 155964 | Upstream | -4.4321237 | 9.33E-06 | 0.0221593 |
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| 12 | 56135245 | 56135245 | 1 | 12_56135245 | ENSG00000139641 | ESYT1 | 0 | INTRON | -4.4320957 | 9.33E-06 | 0.0221593 |
| 1 | 192831783 | 192831783 | 1 | 1_192831783 | ENSG00000285280 | AL390957.1 | 0 | INTRON | -4.432048 | 9.33E-06 | 0.02216111 |
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| 5 | 124425159 | 124425159 | 1 | 5_124425159 | ENSG00000253807 | LINC01170 | 0 | INTRON | 4.43190739 | 9.34E-06 | 0.02216938 |
| 5 | 160820346 | 160820346 | 1 | 5_160820346 | ENSG00000118322 | ATP10B | 0 | INTRON | -4.4318167 | 9.34E-06 | 0.02217561 |
| 4 | 146830700 | 146830700 | 1 | 4_146830700 | ENSG00000137473 | TTC29 | 0 | INTRON | -4.431783 | 9.35E-06 | 0.02217591 |
| 1 | 213224944 | 213224944 | 1 | 1_213224944 | ENSG00000136643 | RPS6KC1 | 0 | INTRON | 4.4317274 | 9.35E-06 | 0.02217591 |
| 17 | 82019480 | 82019480 | 1 | 17_82019480 | ENSG00000169689 | CENPX | 0 | EXON | 4.43172363 | 9.35E-06 | 0.02217591 |
| 2 | 241625654 | 241625654 | 1 | 2_241625654 | ENSG00000176946 | THAP4 | 0 | INTRON | 4.43166345 | 9.35E-06 | 0.02217901 |
| 7 | 50299118 | 50299118 | 1 | 7_50299118 | ENSG00000185811 | IKZF1 | 4949 | Upstream | -4.4314954 | 9.36E-06 | 0.02219053 |
| 2 | 11534993 | 11534993 | 1 | 2_11534993 | ENSG00000196208 | GREB1 | 0 | INTRON | -4.4314553 | 9.36E-06 | 0.02219053 |
| 8 | 123835943 | 123835943 | 1 | 8_123835943 | ENSG00000214814 | FER1L6 | 16043 | Upstream | 4.43144672 | 9.36E-06 | 0.02219053 |
| 18 | 3728410 | 3728410 | 1 | 18_3728410 | ENSG00000170579 | DLGAP1 | 0 | INTRON | -4.4314152 | 9.36E-06 | 0.02219053 |
| 20 | 32532442 | 32532442 | 1 | 20_32532442 | ENSG00000197183 | NOL4L | 0 | INTRON | 4.43137496 | 9.36E-06 | 0.02219053 |
| 7 | 130652600 | 130652600 | 1 | 7_130652600 | ENSG00000158623 | COPG2 | 0 | INTRON | 4.43134529 | 9.36E-06 | 0.02219053 |
| 12 | 124663941 | 124663941 | 1 | 12_124663941 | ENSG00000279087 | AC073592.4 | 25497 | Upstream | 4.43131129 | 9.37E-06 | 0.02219053 |
| 12 | 129363670 | 129363670 | 1 | 12_129363670 | ENSG00000151952 | TMEM132D | 0 | INTRON | 4.43131122 | 9.37E-06 | 0.02219053 |
| 16 | 73615181 | 73615181 | 1 | 16_73615181 | ENSG00000140836 | ZFHX3 | 0 | INTRON | 4.43124523 | 9.37E-06 | 0.02219346 |
| 1 | 51507959 | 51507959 | 1 | 1_51507959 | ENSG00000085832 | EPS15 | 0 | INTRON | 4.43118245 | 9.37E-06 | 0.02219346 |
| 7 | 120609443 | 120609443 | 1 | 7_120609443 | ENSG00000184408 | KCND2 | 0 | INTRON | -4.4311212 | 9.37E-06 | 0.02219346 |
| 18 | 9277452 | 9277452 | 1 | 18_9277452 | ENSG00000101745 | ANKRD12 | 0 | INTRON | 4.43107002 | 9.38E-06 | 0.02219346 |
| 13 | 41587952 | 41587952 | 1 | 13_41587952 | ENSG00000102763 | VWA8 | 0 | INTRON | -4.4310643 | 9.38E-06 | 0.02219346 |
| 3 | 184084704 | 184084704 | 1 | 3_184084704 | ENSG00000233576 | HTR3C2P | 485 | Downstream | 4.43105889 | 9.38E-06 | 0.02219346 |
| 5 | 146881062 | 146881062 | 1 | 5_146881062 | ENSG00000156475 | PPP2R2B | 0 | INTRON | 4.4310486 | 9.38E-06 | 0.02219346 |
| 12 | 104687768 | 104687768 | 1 | 12_104687768 | ENSG00000171310 | CHST11 | 0 | INTRON | 4.43104272 | 9.38E-06 | 0.02219346 |
| 13 | 19638025 | 19638025 | 1 | 13_19638025 | ENSG00000196199 | MPHOSPH8 | 0 | INTRON | -4.4309885 | 9.38E-06 | 0.02219596 |
| 22 | 23872277 | 23872277 | 1 | 22_23872277 | ENSG00000279467 | AP000350.7 | 0 | EXON | -4.4309533 | 9.38E-06 | 0.02219649 |
| Y | 5325055 | 5325055 | 1 | Y_5325055 | ENSG00000099715 | PCDH11Y | 0 | INTRON | 4.43058919 | 9.40E-06 | 0.02222718 |
| 12 | 43191788 | 43191788 | 1 | 12_43191788 | ENSG00000258331 | LINC02461 | 28678 | Downstream | -4.4305875 | 9.40E-06 | 0.02222718 |
| 11 | 56612783 | 56612783 | 1 | 11_56612783 | ENSG00000255012 | OR5M1 | 0 | EXON | -4.4305535 | 9.40E-06 | 0.02222718 |
| 5 | 67644220 | 67644220 | 1 | 5_67644220 | ENSG00000249364 | AC112206.2 | 0 | INTRON | 4.43051993 | 9.40E-06 | 0.02222718 |
| 17 | 76318804 | 76318804 | 1 | 17_76318804 | ENSG00000161542 | PRPSAP1 | 0 | INTRON | 4.43050559 | 9.40E-06 | 0.02222718 |
| 18 | 23124778 | 23124778 | 1 | 18_23124778 | ENSG00000134508 | CABLES1 | 9785 | Upstream | -4.4304616 | 9.40E-06 | 0.02222863 |
| 19 | 54939759 | 54939759 | 1 | 19_54939759 | ENSG00000167634 | NLRP7 | 0 | EXON | -4.4303117 | 9.41E-06 | 0.02223658 |
| 17 | 51021541 | 51021541 | 1 | 17_51021541 | ENSG00000008294 | SPAG9 | 0 | INTRON | 4.43031099 | 9.41E-06 | 0.02223658 |
| 18 | 7075536 | 7075536 | 1 | 18_7075536 | ENSG00000101680 | LAMA1 | 0 | INTRON | 4.43029455 | 9.41E-06 | 0.02223658 |
| 11 | 70525132 | 70525132 | 1 | 11_70525132 | ENSG00000162105 | SHANK2 | 0 | INTRON | 4.43017333 | 9.42E-06 | 0.022246 |
| 17 | 58682549 | 58682549 | 1 | 17_58682549 | ENSG00000121101 | TEX14 | 0 | INTRON | 4.42998873 | 9.42E-06 | 0.02226063 |
| 19 | 42525044 | 42525044 | 1 | 19_42525044 | ENSG00000213904 | LIPE-AS1 | 0 | INTRON | -4.4299716 | 9.42E-06 | 0.02226063 |
| 10 | 25586188 | 25586188 | 1 | 10_25586188 | ENSG00000151025 | GPR158 | 0 | INTRON | 4.42985374 | 9.43E-06 | 0.02226681 |
| 17 | 51290134 | 51290134 | 1 | 17_51290134 | ENSG00000011260 | UTP18 | 0 | INTRON | -4.429852 | 9.43E-06 | 0.02226681 |
| 15 | 75745155 | 75745155 | 1 | 15_75745155 | ENSG00000260288 | AC019294.2 | 0 | INTRON | 4.4298176 | 9.43E-06 | 0.02226726 |
| 12 | 106122402 | 106122402 | 1 | 12_106122402 | ENSG00000074590 | NUAK1 | 0 | INTRON | 4.42976534 | 9.43E-06 | 0.02226957 |
| 15 | 96825983 | 96825983 | 1 | 15_96825983 | ENSG00000223120 | RN7SKP181 | 16085 | Upstream | 4.42968557 | 9.44E-06 | 0.02227472 |
| 12 | 65523342 | 65523342 | 1 | 12_65523342 | ENSG00000250748 | AC025419.1 | 0 | EXON | 4.42956082 | 9.44E-06 | 0.02228171 |
| 10 | 129113783 | 129113783 | 1 | 10_129113783 | ENSG00000287361 | AL355537.2 | 145043 | Upstream | 4.4295359 | 9.44E-06 | 0.02228171 |
| 2 | 176785219 | 176785219 | 1 | 2_176785219 | ENSG00000224577 | LINC01117 | 0 | INTRON | -4.4295041 | 9.45E-06 | 0.02228171 |
| 2 | 47073192 | 47073192 | 1 | 2_47073192 | ENSG00000239605 | STPG4 | 0 | INTRON | 4.42949737 | 9.45E-06 | 0.02228171 |
| 11 | 102918975 | 102918975 | 1 | 11_102918975 | ENSG00000238562 | RNU7-159P | 15022 | Upstream | -4.4294604 | 9.45E-06 | 0.02228171 |
| 14 | 52476612 | 52476612 | 1 | 14_52476612 | ENSG00000087301 | TXNDC16 | 0 | INTRON | 4.42943848 | 9.45E-06 | 0.02228171 |
| 5 | 96475654 | 96475654 | 1 | 5_96475654 | ENSG00000251314 | AC104123.1 | 0 | INTRON | -4.4293472 | 9.45E-06 | 0.02228743 |

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| 9 | 16907344 | 16907344 | 1 | 9_16907344 | ENSG00000237153 | AL162725.2 | 10166 | Upstream | -4.4292607 | 9.46E-06 | 0.02229082 |
| 5 | 40032429 | 40032429 | 1 | 5_40032429 | ENSG00000250048 | LINC00603 | 0 | INTRON | -4.4290741 | 9.46E-06 | 0.02230702 |
| 7 | 29946353 | 29946353 | 1 | 7_29946353 | ENSG00000136193 | SCRN1 | 0 | INTRON | 4.42903113 | 9.47E-06 | 0.02230837 |
| 5 | 131360206 | 131360206 | 1 | 5_131360206 | ENSG00000158985 | CDC42SE2 | 0 | INTRON | 4.42899542 | 9.47E-06 | 0.02230897 |
| 5 | 160179642 | 160179642 | 1 | 5_160179642 | ENSG00000170231 | FABP6 | 7724 | Upstream | -4.4289154 | 9.47E-06 | 0.02230899 |
| 10 | 70309740 | 70309740 | 1 | 10_70309740 | ENSG00000172731 | LRRC20 | 0 | INTRON | 4.42890298 | 9.47E-06 | 0.02230899 |
| 4 | 185387219 | 185387219 | 1 | 4_185387219 | ENSG00000109771 | LRP2BP | 0 | INTRON | 4.42887824 | 9.47E-06 | 0.02230899 |
| 7 | 112353922 | 112353922 | 1 | 7_112353922 | ENSG00000226851 | AC004112.1 | 0 | INTRON | 4.42887585 | 9.47E-06 | 0.02230899 |
| 5 | 23861370 | 23861370 | 1 | 5_23861370 | ENSG00000248874 | C5orf17 | 89977 | Upstream | -4.4287931 | 9.48E-06 | 0.02231445 |
| 3 | 75930677 | 75930677 | 1 | 3_75930677 | ENSG00000185008 | ROBO2 | 0 | INTRON | -4.4287589 | 9.48E-06 | 0.02231491 |
| 19 | 46616402 | 46616402 | 1 | 19_46616402 | ENSG00000160013 | PTGIR | 4065 | Downstream | 4.42870707 | 9.48E-06 | 0.02231718 |
| 13 | 28470942 | 28470942 | 1 | 13_28470942 | ENSG00000102755 | FLT1 | 0 | INTRON | 4.42863242 | 9.48E-06 | 0.02232182 |
| 1 | 156953162 | 156953162 | 1 | 1_156953162 | ENSG00000132694 | ARHGEF11 | 0 | INTRON | -4.428568 | 9.49E-06 | 0.02232539 |
| 8 | 68954687 | 68954687 | 1 | 8_68954687 | ENSG00000253658 | LINC01592 | 0 | INTRON | 4.42831948 | 9.50E-06 | 0.02234457 |
| 12 | 23107140 | 23107140 | 1 | 12_23107140 | ENSG00000256995 | AC084816.1 | 0 | INTRON | 4.42830348 | 9.50E-06 | 0.02234457 |
| 19 | 194911 | 194911 | 1 | 19_194911 | ENSG00000282059 | CICP19 | 0 | EXON | 4.42821495 | 9.50E-06 | 0.02234457 |
| 6 | 153133142 | 153133142 | 1 | 6_153133142 | ENSG00000091844 | RGS17 | 1860 | Upstream | 4.42821114 | 9.50E-06 | 0.02234457 |
| 22 | 29462645 | 29462645 | 1 | 22_29462645 | ENSG00000225465 | RFPL1S | 0 | INTRON | 4.42820405 | 9.50E-06 | 0.02234457 |
| X | 140499328 | 140499328 | 1 | X_140499328 | ENSG00000134595 | SOX3 | 3656 | Downstream | 4.42816024 | 9.50E-06 | 0.02234457 |
| 12 | 51169583 | 51169583 | 1 | 12_51169583 | ENSG00000135457 | TFCP2 | 0 | INTRON | 4.42815119 | 9.50E-06 | 0.02234457 |
| 7 | 154969381 | 154969381 | 1 | 7_154969381 | ENSG00000157212 | PAXIP1 | 0 | INTRON | 4.42814421 | 9.50E-06 | 0.02234457 |
| 7 | 17245513 | 17245513 | 1 | 7_17245513 | ENSG00000237773 | AC073332.1 | 0 | INTRON | 4.428026 | 9.51E-06 | 0.02234998 |
| 12 | 91856887 | 91856887 | 1 | 12_91856887 | ENSG00000258224 | AC090049.2 | 14234 | Downstream | -4.4279947 | 9.51E-06 | 0.02234998 |
| 7 | 95465708 | 95465708 | 1 | 7_95465708 | ENSG00000233942 | AC004012.1 | 6126 | Upstream | -4.4279784 | 9.51E-06 | 0.02234998 |
| 2 | 191263677 | 191263677 | 1 | 2_191263677 | ENSG00000128641 | MYO1B | 0 | 5UTR | 4.42797283 | 9.51E-06 | 0.02234998 |
| 17 | 13298637 | 13298637 | 1 | 17_13298637 | ENSG00000234634 | LINC02093 | 546 | Downstream | 4.42783196 | 9.52E-06 | 0.02235856 |
| 4 | 9372872 | 9372872 | 1 | 4_9372872 | ENSG00000288075 | AC108519.1 | 0 | INTRON | -4.4278305 | 9.52E-06 | 0.02235856 |
| 17 | 31084657 | 31084657 | 1 | 17_31084657 | ENSG00000266865 | AC138207.8 | 0 | INTRON | 4.42775073 | 9.52E-06 | 0.02236373 |
| 19 | 47033532 | 47033532 | 1 | 19_47033532 | ENSG00000130751 | NPAS1 | 0 | INTRON | 4.42769081 | 9.52E-06 | 0.02236686 |
| 20 | 19439830 | 19439830 | 1 | 20_19439830 | ENSG00000185052 | SLC24A3 | 0 | INTRON | 4.42744827 | 9.54E-06 | 0.02238893 |
| 13 | 66005229 | 66005229 | 1 | 13_66005229 | ENSG00000286395 | AL158038.1 | 31530 | Downstream | 4.42733075 | 9.54E-06 | 0.02239424 |
| 16 | 62292677 | 62292677 | 1 | 16_62292677 | ENSG00000280261 | AC009161.2 | 49742 | Upstream | 4.42729708 | 9.54E-06 | 0.02239424 |
| 17 | 5239751 | 5239751 | 1 | 17_5239751 | ENSG00000261879 | AC087500.1 | 0 | INTRON | 4.42729643 | 9.54E-06 | 0.02239424 |
| 19 | 17993494 | 17993494 | 1 | 19_17993494 | ENSG00000105642 | KCNN1 | 0 | EXON | 4.427278 | 9.54E-06 | 0.02239424 |
| 1 | 64114509 | 64114509 | 1 | 1_64114509 | ENSG00000185483 | ROR1 | 0 | INTRON | -4.427226 | 9.55E-06 | 0.02239654 |
| 10 | 22643746 | 22643746 | 1 | 10_22643746 | ENSG00000150867 | PIP4K2A | 0 | INTRON | 4.4269677 | 9.56E-06 | 0.02241902 |
| 8 | 2978238 | 2978238 | 1 | 8_2978238 | ENSG00000183117 | CSMD1 | 0 | INTRON | 4.42695008 | 9.56E-06 | 0.02241902 |
| 6 | 48953157 | 48953157 | 1 | 6_48953157 | ENSG00000271162 | AL022099.1 | 376 | Upstream | -4.4268962 | 9.56E-06 | 0.02242153 |
| 7 | 137551040 | 137551040 | 1 | 7_137551040 | ENSG00000157680 | DGKI | 0 | INTRON | -4.4266636 | 9.57E-06 | 0.02244004 |
| 3 | 144465760 | 144465760 | 1 | 3_144465760 | ENSG00000280397 | AC011592.1 | 19916 | Upstream | -4.4266587 | 9.57E-06 | 0.02244004 |
| 1 | 37841207 | 37841207 | 1 | 1_37841207 | ENSG00000235673 | AL929472.4 | 0 | EXON | 4.42659603 | 9.57E-06 | 0.0224414 |
| 1 | 19847196 | 19847196 | 1 | 1_19847196 | ENSG00000235434 | AL391883.1 | 27694 | Downstream | 4.42658611 | 9.57E-06 | 0.0224414 |
| 20 | 6049290 | 6049290 | 1 | 20_6049290 | ENSG00000125872 | LRRN4 | 0 | INTRON | 4.42647783 | 9.58E-06 | 0.02244923 |
| 1 | 6406216 | 6406216 | 1 | 1_6406216 | ENSG00000069812 | HES2 | 6201 | Downstream | 4.42642735 | 9.58E-06 | 0.02244923 |
| 14 | 100141305 | 100141305 | 1 | 14_100141305 | ENSG00000196405 | EVL | 0 | INTRON | 4.42642159 | 9.58E-06 | 0.02244923 |
| 21 | 26364017 | 26364017 | 1 | 21_26364017 | ENSG00000229025 | AP001595.1 | 13383 | Upstream | -4.4263568 | 9.58E-06 | 0.02245229 |
| 1 | 242829871 | 242829871 | 1 | 1_242829871 | ENSG00000270818 | AL445675.1 | 52194 | Downstream | 4.42633278 | 9.58E-06 | 0.02245229 |
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| 10 | 27364473 | 27364473 | 1 | 10_27364473 | ENSG00000237956 | TRIAP1P1 | 13664 | Downstream | -4.426103 | 9.60E-06 | 0.02247003 |
| 4 | 67497234 | 67497234 | 1 | 4_67497234 | ENSG00000145241 | CENPC | 0 | INTRON | -4.4259499 | 9.60E-06 | 0.02248209 |
| 1 | 223246469 | 223246469 | 1 | 1_223246469 | ENSG00000143502 | SUSD4 | 0 | INTRON | 4.42592771 | 9.60E-06 | 0.02248209 |
| 1 | 216825947 | 216825947 | 1 | 1_216825947 | ENSG00000196482 | ESRRG | 0 | INTRON | -4.4258951 | 9.60E-06 | 0.0224824 |
| 8 | 12606921 | 12606921 | 1 | 8_12606921 | ENSG00000283674 | AC068587.4 | 0 | INTRON | -4.4258151 | 9.61E-06 | 0.02248764 |
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| 15 | 64603726 | 64603726 | 1 | 15_64603726 | ENSG00000180357 | ZNF609 | 0 | INTRON | 4.42568428 | 9.61E-06 | 0.0224921 |
| 9 | 88570828 | 88570828 | 1 | 9_88570828 | ENSG00000130045 | NXNL2 | 0 | INTRON | -4.4256831 | 9.61E-06 | 0.0224921 |
| 20 | 54008828 | 54008828 | 1 | 20_54008828 | ENSG00000064787 | BCAS1 | 0 | INTRON | 4.42564052 | 9.62E-06 | 0.02249345 |
| 3 | 71799588 | 71799588 | 1 | 3_71799588 | ENSG00000287131 | AC096970.1 | 13163 | Downstream | -4.4255886 | 9.62E-06 | 0.02249578 |
| 9 | 32481827 | 32481827 | 1 | 9_32481827 | ENSG00000107201 | DDX58 | 0 | INTRON | 4.42552664 | 9.62E-06 | 0.02249797 |
| 20 | 22154468 | 22154468 | 1 | 20_22154468 | ENSG00000234862 | AL035258.1 | 66085 | Upstream | -4.4254976 | 9.62E-06 | 0.02249797 |
| 10 | 73996020 | 73996020 | 1 | 10_73996020 | ENSG00000035403 | VCL | 0 | INTRON | 4.42547036 | 9.62E-06 | 0.02249797 |
| 22 | 26005764 | 26005764 | 1 | 22_26005764 | ENSG00000133454 | MYO18B | 0 | INTRON | 4.42544891 | 9.62E-06 | 0.02249797 |
| 2 | 104218634 | 104218634 | 1 | 2_104218634 | ENSG00000228968 | AC096554.1 | 71405 | Upstream | 4.42540672 | 9.63E-06 | 0.02249865 |
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| 20 | 13580798 | 13580798 | 1 | 20_13580798 | ENSG00000089123 | TASP1 | 0 | INTRON | -4.4252281 | 9.63E-06 | 0.02251171 |
| 6 | 143954731 | 143954731 | 1 | 6_143954731 | ENSG00000118495 | PLAGL1 | 0 | INTRON | -4.4250814 | 9.64E-06 | 0.0225208 |
| 9 | 131822820 | 131822820 | 1 | 9_131822820 | ENSG00000236687 | AL160271.2 | 1832 | Downstream | -4.4250482 | 9.64E-06 | 0.0225208 |
| 5 | 124426999 | 124426999 | 1 | 5_124426999 | ENSG00000253807 | LINC01170 | 0 | INTRON | 4.42503696 | 9.64E-06 | 0.0225208 |
| 8 | 49603930 | 49603930 | 1 | 8_49603930 | ENSG00000253206 | AC090155.1 | 49516 | Upstream | -4.425021 | 9.64E-06 | 0.0225208 |
| 3 | 170832672 | 170832672 | 1 | 3_170832672 | ENSG00000285051 | SLC7A14-AS1 | 0 | INTRON | -4.4249928 | 9.64E-06 | 0.0225208 |
| 5 | 139736401 | 139736401 | 1 | 5_139736401 | ENSG00000249526 | AC008667.1 | 0 | INTRON | 4.4249531 | 9.65E-06 | 0.02252185 |
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| 7 | 32414073 | 32414073 | 1 | 7_32414073 | ENSG00000154678 | PDE1C | 0 | INTRON | 4.42483285 | 9.65E-06 | 0.02252512 |
| 12 | 49351831 | 49351831 | 1 | 12_49351831 | ENSG00000178401 | DNAJC22 | 0 | 3UTR | 4.42480675 | 9.65E-06 | 0.02252512 |
| 13 | 76596108 | 76596108 | 1 | 13_76596108 | ENSG00000285572 | AL136441.1 | 0 | EXON | 4.42480331 | 9.65E-06 | 0.02252512 |
| 5 | 13576187 | 13576187 | 1 | 5_13576187 | ENSG00000248462 | NENFP3 | 22221 | Upstream | 4.42470489 | 9.66E-06 | 0.0225323 |
| 5 | 156087588 | 156087588 | 1 | 5_156087588 | ENSG00000170624 | SGCD | 0 | INTRON | 4.42463505 | 9.66E-06 | 0.02253355 |
| 16 | 82859448 | 82859448 | 1 | 16_82859448 | ENSG00000140945 | CDH13 | 0 | 3UTR | -4.4246338 | 9.66E-06 | 0.02253355 |
| 21 | 25493508 | 25493508 | 1 | 21_25493508 | ENSG00000229962 | AP000221.1 | 21840 | Downstream | 4.42457257 | 9.66E-06 | 0.02253685 |
| 3 | 47221494 | 47221494 | 1 | 3_47221494 | ENSG00000227398 | KIF9-AS1 | 0 | INTRON | 4.42451759 | 9.67E-06 | 0.0225395 |
| 22 | 21225706 | 21225706 | 1 | 22_21225706 | ENSG00000133475 | GGT2 | 0 | INTRON | -4.4244012 | 9.67E-06 | 0.02254856 |
| 15 | 92087770 | 92087770 | 1 | 15_92087770 | ENSG00000176463 | SLCO3A1 | 0 | INTRON | -4.4243284 | 9.67E-06 | 0.022549 |
| 13 | 20457173 | 20457173 | 1 | 13_20457173 | ENSG00000165475 | CRYL1 | 0 | INTRON | -4.4243103 | 9.68E-06 | 0.022549 |
| 10 | 65094590 | 65094590 | 1 | 10_65094590 | ENSG00000282906 | AL513321.2 | 29076 | Upstream | 4.42430011 | 9.68E-06 | 0.022549 |
| 7 | 103784372 | 103784372 | 1 | 7_103784372 | ENSG00000189056 | RELN | 0 | INTRON | -4.4242787 | 9.68E-06 | 0.022549 |
| 2 | 236832751 | 236832751 | 1 | 2_236832751 | ENSG00000227252 | AC012063.1 | 78045 | Downstream | -4.424135 | 9.68E-06 | 0.02256092 |
| 6 | 119224850 | 119224850 | 1 | 6_119224850 | ENSG00000111885 | MAN1A1 | 0 | INTRON | 4.42404905 | 9.69E-06 | 0.02256181 |

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| 14 | 96219021 | 96219021 | 1 | 14_96219021 | ENSG00000168398 | BDKRB2 | 0 | INTRON | 4.42397764 | 9.69E-06 | 0.02256181 |
| 3 | 123556431 | 123556431 | 1 | 3_123556431 | ENSG00000206527 | HACD2 | 0 | INTRON | 4.42396617 | 9.69E-06 | 0.02256181 |
| 19 | 48665767 | 48665767 | 1 | 19_48665767 | ENSG00000232871 | SEC1P | 0 | INTRON | 4.42389584 | 9.69E-06 | 0.02256181 |
| 6 | 16546112 | 16546112 | 1 | 6_16546112 | ENSG00000124788 | ATXN1 | 0 | INTRON | 4.42389123 | 9.69E-06 | 0.02256181 |
| 9 | 41236365 | 41236365 | 1 | 9_41236365 | ENSG00000277049 | RNA5SP530 | 1074 | Downstream | -4.4238659 | 9.70E-06 | 0.02256181 |
| 12 | 106623876 | 106623876 | 1 | 12_106623876 | ENSG00000257545 | AC079385.1 | 0 | INTRON | 4.42381783 | 9.70E-06 | 0.02256181 |
| 15 | 20507975 | 20507975 | 1 | 15_20507975 | ENSG00000180229 | HERC2P3 | 1795 | Upstream | -4.4237787 | 9.70E-06 | 0.02256181 |
| 16 | 61569275 | 61569275 | 1 | 16_61569275 | ENSG00000286653 | AC092125.2 | 68957 | Downstream | -4.4237697 | 9.70E-06 | 0.02256181 |
| 4 | 150050721 | 150050721 | 1 | 4_150050721 | ENSG00000286711 | AC105343.2 | 0 | INTRON | 4.42376504 | 9.70E-06 | 0.02256181 |
| 13 | 19413166 | 19413166 | 1 | 13_19413166 | ENSG00000237164 | SLC25A15P2 | 0 | INTRON | -4.4237293 | 9.70E-06 | 0.02256181 |
| 15 | 19776577 | 19776577 | 1 | 15_19776577 | ENSG00000215567 | AC138701.1 | 101977 | Upstream | -4.4237179 | 9.70E-06 | 0.02256181 |
| 3 | 13371640 | 13371640 | 1 | 3_13371640 | ENSG00000132182 | NUP210 | 0 | INTRON | 4.42371298 | 9.70E-06 | 0.02256181 |
| 5 | 30976273 | 30976273 | 1 | 5_30976273 | ENSG00000241668 | RPL19P11 | 77291 | Upstream | -4.423665 | 9.70E-06 | 0.02256374 |
| 1 | 230148242 | 230148242 | 1 | 1_230148242 | ENSG00000143641 | GALNT2 | 0 | INTRON | 4.42361328 | 9.71E-06 | 0.02256606 |
| 7 | 27159464 | 27159464 | 1 | 7_27159464 | ENSG00000270182 | AC004080.4 | 488 | Downstream | -4.4234641 | 9.71E-06 | 0.02257856 |
| 6 | 41662997 | 41662997 | 1 | 6_41662997 | ENSG00000230913 | NPM1P51 | 3908 | Upstream | 4.42339712 | 9.72E-06 | 0.02258249 |
| 7 | 131457201 | 131457201 | 1 | 7_131457201 | ENSG00000128585 | MKLN1 | 0 | INTRON | 4.42334385 | 9.72E-06 | 0.02258498 |
| 22 | 35389599 | 35389599 | 1 | 22_35389599 | ENSG00000100292 | HMOX1 | 0 | INTRON | 4.42322918 | 9.72E-06 | 0.02259388 |
| 5 | 38394534 | 38394534 | 1 | 5_38394534 | ENSG00000164318 | EGFLAM | 0 | INTRON | -4.4230493 | 9.73E-06 | 0.02260823 |
| 1 | 34129689 | 34129689 | 1 | 1_34129689 | ENSG00000121904 | CSMD2 | 0 | INTRON | 4.4230331 | 9.73E-06 | 0.02260823 |
| 2 | 122326447 | 122326447 | 1 | 2_122326447 | ENSG00000286481 | AC011246.1 | 0 | INTRON | -4.4229517 | 9.74E-06 | 0.02261162 |
| 11 | 78831511 | 78831511 | 1 | 11_78831511 | ENSG00000149256 | TENM4 | 0 | INTRON | 4.42294181 | 9.74E-06 | 0.02261162 |
| 9 | 11078965 | 11078965 | 1 | 9_11078965 | ENSG00000234146 | AKAP8P1 | 65869 | Downstream | 4.42282219 | 9.74E-06 | 0.02262106 |
| Y | 56857547 | 56857547 | 1 | Y_56857547 | ENSG00000235857 | CTBP2P1 | 2059 | Downstream | -4.4227303 | 9.75E-06 | 0.02262668 |
| 5 | 147425136 | 147425136 | 1 | 5_147425136 | ENSG00000113657 | DPYSL3 | 0 | INTRON | 4.4227096 | 9.75E-06 | 0.02262668 |
| 7 | 102215421 | 102215421 | 1 | 7_102215421 | ENSG00000257923 | CUX1 | 0 | INTRON | 4.42258592 | 9.75E-06 | 0.02263246 |
| 1 | 51307603 | 51307603 | 1 | 1_51307603 | ENSG00000085831 | TTC39A | 0 | INTRON | -4.4225518 | 9.75E-06 | 0.02263246 |
| 7 | 68097903 | 68097903 | 1 | 7_68097903 | ENSG00000232975 | MTCO1P57 | 0 | INTRON | -4.4225172 | 9.76E-06 | 0.02263246 |
| 9 | 128064375 | 128064375 | 1 | 9_128064375 | ENSG00000171169 | NAIF1 | 0 | INTRON | 4.42250889 | 9.76E-06 | 0.02263246 |
| 11 | 27270156 | 27270156 | 1 | 11_27270156 | ENSG00000254560 | BBOX1-AS1 | 50043 | Upstream | 4.42249683 | 9.76E-06 | 0.02263246 |
| 13 | 26956221 | 26956221 | 1 | 13_26956221 | ENSG00000283579 | AL160035.1 | 9745 | Downstream | 4.42247767 | 9.76E-06 | 0.02263246 |
| 15 | 28028905 | 28028905 | 1 | 15_28028905 | ENSG00000104044 | OCA2 | 0 | INTRON | 4.42239918 | 9.76E-06 | 0.02263319 |
| 16 | 90062460 | 90062460 | 1 | 16_90062460 | ENSG00000126856 | PRDM7 | 0 | 3UTR | 4.42239784 | 9.76E-06 | 0.02263319 |
| 1 | 62963166 | 62963166 | 1 | 1_62963166 | ENSG00000229537 | LINC01739 | 12584 | Downstream | 4.42238242 | 9.76E-06 | 0.02263319 |
| 5 | 406037 | 406037 | 1 | 5_406037 | ENSG00000063438 | AHRR | 0 | INTRON | -4.4222943 | 9.77E-06 | 0.02263607 |
| 5 | 177721392 | 177721392 | 1 | 5_177721392 | ENSG00000170074 | FAM153A | 0 | INTRON | -4.4222908 | 9.77E-06 | 0.02263607 |
| 3 | 85573980 | 85573980 | 1 | 3_85573980 | ENSG00000175161 | CADM2 | 0 | INTRON | 4.42226669 | 9.77E-06 | 0.02263607 |
| 17 | 82398856 | 82398856 | 1 | 17_82398856 | ENSG00000181396 | OGFOD3 | 0 | INTRON | 4.42217234 | 9.77E-06 | 0.02264287 |
| 2 | 160304947 | 160304947 | 1 | 2_160304947 | ENSG00000153250 | RBMS1 | 0 | INTRON | 4.42205624 | 9.78E-06 | 0.02264933 |
| 16 | 76624193 | 76624193 | 1 | 16_76624193 | ENSG00000287694 | AC106741.1 | 0 | INTRON | 4.42200849 | 9.78E-06 | 0.02264933 |
| 14 | 100837821 | 100837821 | 1 | 14_100837821 | ENSG00000258663 | AL117190.2 | 0 | INTRON | -4.4219962 | 9.78E-06 | 0.02264933 |
| 1 | 1496970 | 1496970 | 1 | 1_1496970 | ENSG00000160072 | ATAD3B | 0 | 3UTR | 4.42199311 | 9.78E-06 | 0.02264933 |
| 11 | 107751388 | 107751388 | 1 | 11_107751388 | ENSG00000254702 | AP002353.1 | 12670 | Upstream | -4.4219541 | 9.78E-06 | 0.02265003 |
| 18 | 27156641 | 27156641 | 1 | 18_27156641 | ENSG00000154080 | CHST9 | 0 | INTRON | 4.42190458 | 9.78E-06 | 0.02265003 |
| 1 | 151375857 | 151375857 | 1 | 1_151375857 | ENSG00000143416 | SELENBP1 | 3150 | Upstream | 4.42186901 | 9.79E-06 | 0.02265003 |
| 5 | 76906789 | 76906789 | 1 | 5_76906789 | ENSG00000171643 | S100Z | 0 | INTRON | 4.42184492 | 9.79E-06 | 0.02265003 |
| 7 | 22638903 | 22638903 | 1 | 7_22638903 | ENSG00000105889 | STEAP1B | 0 | INTRON | -4.4218395 | 9.79E-06 | 0.02265003 |
| 20 | 62526690 | 62526690 | 1 | 20_62526690 | ENSG00000260542 | AL499627.1 | 10594 | Upstream | -4.4217863 | 9.79E-06 | 0.02265252 |
| 22 | 50439098 | 50439098 | 1 | 22_50439098 | ENSG00000100239 | PPP6R2 | 0 | INTRON | 4.42169231 | 9.79E-06 | 0.0226593 |
| 1 | 86006431 | 86006431 | 1 | 1_86006431 | ENSG00000171502 | COL24A1 | 0 | INTRON | 4.42163618 | 9.80E-06 | 0.02266211 |
| 10 | 15690056 | 15690056 | 1 | 10_15690056 | ENSG00000077943 | ITGA8 | 0 | INTRON | -4.4216002 | 9.80E-06 | 0.0226628 |
| 20 | 19997016 | 19997016 | 1 | 20_19997016 | ENSG00000132669 | RIN2 | 0 | INTRON | -4.4214709 | 9.80E-06 | 0.02266758 |
| 2 | 67829948 | 67829948 | 1 | 2_67829948 | ENSG00000237013 | LINC01812 | 4386 | Upstream | 4.42146794 | 9.80E-06 | 0.02266758 |
| 15 | 96414110 | 96414110 | 1 | 15_96414110 | ENSG00000259275 | AC087477.2 | 8875 | Downstream | -4.4214666 | 9.80E-06 | 0.02266758 |
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| 4 | 5714098 | 5714098 | 1 | 4_5714098 | ENSG00000072840 | EVC | 0 | INTRON | 4.42131981 | 9.81E-06 | 0.02267682 |
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| 4 | 110667860 | 110667860 | 1 | 4_110667860 | ENSG00000164093 | PITX2 | 25737 | Upstream | -4.4212411 | 9.81E-06 | 0.02267892 |
| 3 | 161170567 | 161170567 | 1 | 3_161170567 | ENSG00000169251 | NMD3 | 0 | INTRON | 4.42110073 | 9.82E-06 | 0.02268783 |
| 19 | 9371557 | 9371557 | 1 | 19_9371557 | ENSG00000270011 | ZNF559-ZNF177 | 0 | INTRON | -4.4210975 | 9.82E-06 | 0.02268783 |
| 5 | 88323038 | 88323038 | 1 | 5_88323038 | ENSG00000247828 | TMEM161B-AS1 | 0 | EXON | 4.42102347 | 9.82E-06 | 0.02269253 |
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| 1 | 155587481 | 155587481 | 1 | 1_155587481 | ENSG00000225082 | DAP3P1 | 0 | INTRON | -4.4208031 | 9.83E-06 | 0.02270952 |
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| 1 | 107378367 | 107378367 | 1 | 1_107378367 | ENSG00000162631 | NTNG1 | 0 | INTRON | 4.42063103 | 9.84E-06 | 0.02271871 |
| 17 | 81610163 | 81610163 | 1 | 17_81610163 | ENSG00000182446 | NPLOC4 | 0 | INTRON | 4.42060295 | 9.84E-06 | 0.02271871 |
| 21 | 20123844 | 20123844 | 1 | 21_20123844 | ENSG00000233236 | LINC02573 | 132907 | Downstream | -4.4205984 | 9.84E-06 | 0.02271871 |
| 8 | 93255210 | 93255210 | 1 | 8_93255210 | ENSG00000246662 | LINC00535 | 0 | INTRON | 4.42051983 | 9.85E-06 | 0.02272208 |
| 20 | 60248430 | 60248430 | 1 | 20_60248430 | ENSG00000228340 | MIR646HG | 0 | INTRON | 4.42045251 | 9.85E-06 | 0.02272208 |
| 12 | 40071176 | 40071176 | 1 | 12_40071176 | ENSG00000151229 | SLC2A13 | 0 | INTRON | -4.420452 | 9.85E-06 | 0.02272208 |
| 11 | 72761079 | 72761079 | 1 | 11_72761079 | ENSG00000214530 | STARD10 | 0 | INTRON | 4.42044914 | 9.85E-06 | 0.02272208 |
| 9 | 19663700 | 19663700 | 1 | 9_19663700 | ENSG00000155886 | SLC24A2 | 0 | INTRON | 4.42036424 | 9.85E-06 | 0.02272793 |
| 5 | 172671548 | 172671548 | 1 | 5_172671548 | ENSG00000214357 | NEURL1B | 0 | INTRON | -4.420225 | 9.86E-06 | 0.02273659 |
| 1 | 236480790 | 236480790 | 1 | 1_236480790 | ENSG00000186197 | EDARADD | 0 | INTRON | -4.4202234 | 9.86E-06 | 0.02273659 |
| 17 | 35980304 | 35980304 | 1 | 17_35980304 | ENSG00000275152 | CCL16 | 0 | INTRON | 4.42013273 | 9.86E-06 | 0.02274305 |
| 12 | 111415546 | 111415546 | 1 | 12_111415546 | ENSG00000111252 | SH2B3 | 0 | INTRON | 4.42002601 | 9.87E-06 | 0.02274803 |
| 8 | 20151579 | 20151579 | 1 | 8_20151579 | ENSG00000036565 | SLC18A1 | 0 | INTRON | -4.4199898 | 9.87E-06 | 0.02274803 |
| X | 65705507 | 65705507 | 1 | X_65705507 | ENSG00000147065 | MSN | 0 | INTRON | 4.41996985 | 9.87E-06 | 0.02274803 |
| 5 | 37898348 | 37898348 | 1 | 5_37898348 | ENSG00000248587 | GDNF-AS1 | 0 | INTRON | 4.41996222 | 9.87E-06 | 0.02274803 |
| 6 | 148615806 | 148615806 | 1 | 6_148615806 | ENSG00000231368 | RPSAP40 | 31900 | Downstream | 4.41993899 | 9.87E-06 | 0.02274803 |
| 8 | 701267 | 701267 | 1 | 8_701267 | ENSG00000104714 | ERICH1 | 0 | INTRON | -4.4198513 | 9.88E-06 | 0.02275322 |
| 3 | 17415350 | 17415350 | 1 | 3_17415350 | ENSG00000131374 | TBC1D5 | 0 | INTRON | 4.41983126 | 9.88E-06 | 0.02275322 |
| 17 | 37787079 | 37787079 | 1 | 17_37787079 | ENSG00000275173 | AC243571.1 | 11814 | Downstream | -4.4197086 | 9.88E-06 | 0.02275811 |
| 8 | 37341907 | 37341907 | 1 | 8_37341907 | ENSG00000253123 | AC091182.1 | 9916 | Upstream | -4.4196845 | 9.88E-06 | 0.02275811 |
| 7 | 74111963 | 74111963 | 1 | 7_74111963 | ENSG00000106683 | LIMK1 | 0 | 3UTR | -4.419673 | 9.89E-06 | 0.02275811 |
| 15 | 35335726 | 35335726 | 1 | 15_35335726 | ENSG00000134146 | DPH6 | 0 | INTRON | 4.41966457 | 9.89E-06 | 0.02275811 |
| 2 | 179676213 | 179676213 | 1 | 2_179676213 | ENSG00000144331 | ZNF385B | 0 | INTRON | -4.4196345 | 9.89E-06 | 0.02275811 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| X | 53236363 | 53236363 | 1 | X_53236363 | ENSG00000124313 | IQSEC2 | 0 | EXON | 4.41960927 | 9.89E-06 | 0.02275811 |
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| 17 | 32230804 | 32230804 | 1 | 17_32230804 | ENSG00000126858 | RHOT1 | 0 | INTRON | 4.41945241 | 9.90E-06 | 0.02275975 |
| 1 | 240555650 | 240555650 | 1 | 1_240555650 | ENSG00000180875 | GREM2 | 0 | INTRON | 4.41944267 | 9.90E-06 | 0.02275975 |
| 10 | 7107734 | 7107734 | 1 | 10_7107734 | ENSG00000287277 | AL392086.3 | 0 | INTRON | -4.4194171 | 9.90E-06 | 0.02275975 |
| 3 | 67076154 | 67076154 | 1 | 3_67076154 | ENSG00000163376 | KBTBD8 | 64944 | Downstream | 4.41940699 | 9.90E-06 | 0.02275975 |
| 4 | 47670098 | 47670098 | 1 | 4_47670098 | ENSG00000145244 | CORIN | 0 | INTRON | 4.41940258 | 9.90E-06 | 0.02275975 |
| 8 | 31577737 | 31577737 | 1 | 8_31577737 | ENSG00000222468 | RNA5SP261 | 20361 | Downstream | -4.4193892 | 9.90E-06 | 0.02275975 |
| 7 | 82817737 | 82817737 | 1 | 7_82817737 | ENSG00000186472 | PCLO | 0 | INTRON | -4.4192883 | 9.90E-06 | 0.0227673 |
| 18 | 75436760 | 75436760 | 1 | 18_75436760 | ENSG00000266774 | AC116003.2 | 0 | INTRON | -4.4192548 | 9.90E-06 | 0.02276776 |
| 8 | 22922992 | 22922992 | 1 | 8_22922992 | ENSG00000134020 | PEBP4 | 0 | INTRON | 4.41918196 | 9.91E-06 | 0.02277098 |
| 14 | 89229161 | 89229161 | 1 | 14_89229161 | ENSG00000053254 | FOXN3 | 0 | INTRON | -4.4191658 | 9.91E-06 | 0.02277098 |
| 4 | 137517695 | 137517695 | 1 | 4_137517695 | ENSG00000189184 | PCDH18 | 1222 | Downstream | -4.4191052 | 9.91E-06 | 0.02277429 |
| 11 | 108766840 | 108766840 | 1 | 11_108766840 | ENSG00000178105 | DDX10 | 0 | INTRON | 4.4190482 | 9.91E-06 | 0.02277722 |
| 2 | 230348236 | 230348236 | 1 | 2_230348236 | ENSG00000185404 | SP140L | 0 | INTRON | -4.4190142 | 9.92E-06 | 0.02277773 |
| 2 | 31255317 | 31255317 | 1 | 2_31255317 | ENSG00000013016 | EHD3 | 0 | INTRON | -4.4189576 | 9.92E-06 | 0.02278061 |
| 1 | 207891407 | 207891407 | 1 | 1_207891407 | ENSG00000174059 | CD34 | 0 | INTRON | 4.41892012 | 9.92E-06 | 0.02278149 |
| 22 | 40978375 | 40978375 | 1 | 22_40978375 | ENSG00000100387 | RBX1 | 5066 | Downstream | 4.41880083 | 9.93E-06 | 0.02279099 |
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| 10 | 105002227 | 105002227 | 1 | 10_105002227 | ENSG00000156395 | SORCS3 | 0 | INTRON | -4.4187091 | 9.93E-06 | 0.02279451 |
| 15 | 22472765 | 22472765 | 1 | 15_22472765 | ENSG00000277865 | GOLGA6L22 | 3535 | Downstream | -4.4186203 | 9.93E-06 | 0.02279994 |
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| 3 | 53059287 | 53059287 | 1 | 3_53059287 | ENSG00000272305 | AC096887.1 | 0 | INTRON | 4.41852117 | 9.94E-06 | 0.02280203 |
| 6 | 26510387 | 26510387 | 1 | 6_26510387 | ENSG00000124557 | BTN1A1 | 0 | 3UTR | -4.4184785 | 9.94E-06 | 0.02280346 |
| 17 | 41807090 | 41807090 | 1 | 17_41807090 | ENSG00000141696 | P3H4 | 0 | EXON | 4.41843938 | 9.94E-06 | 0.02280451 |
| 6 | 162643519 | 162643519 | 1 | 6_162643519 | ENSG00000185345 | PRKN | 0 | INTRON | -4.4183722 | 9.94E-06 | 0.02280853 |
| 18 | 56816709 | 56816709 | 1 | 18_56816709 | ENSG00000091157 | WDR7 | 0 | INTRON | -4.4183229 | 9.95E-06 | 0.02281065 |
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| 12 | 125159023 | 125159023 | 1 | 12_125159023 | ENSG00000287240 | AC122688.5 | 307 | Downstream | 4.4182549 | 9.95E-06 | 0.02281168 |
| 8 | 138961739 | 138961739 | 1 | 8_138961739 | ENSG00000169436 | COL22A1 | 47698 | Upstream | -4.4181551 | 9.95E-06 | 0.02281554 |
| 8 | 18223970 | 18223970 | 1 | 8_18223970 | ENSG00000171428 | NAT1 | 281 | Downstream | -4.4181303 | 9.96E-06 | 0.02281554 |
| 7 | 85011077 | 85011077 | 1 | 7_85011077 | ENSG00000153993 | SEMA3D | 0 | INTRON | -4.4181 | 9.96E-06 | 0.02281554 |
| 7 | 55501729 | 55501729 | 1 | 7_55501729 | ENSG00000154978 | VOPP1 | 0 | INTRON | -4.4180939 | 9.96E-06 | 0.02281554 |
| 9 | 113803488 | 113803488 | 1 | 9_113803488 | ENSG00000214669 | AL157702.1 | 44069 | Upstream | 4.41805885 | 9.96E-06 | 0.02281554 |
| 3 | 56173565 | 56173565 | 1 | 3_56173565 | ENSG00000187672 | ERC2 | 0 | EXON | 4.41804366 | 9.96E-06 | 0.02281554 |
| 22 | 16592165 | 16592165 | 1 | 22_16592165 | ENSG00000198445 | CCT8L2 | 0 | EXON | 4.41781665 | 9.97E-06 | 0.02282078 |
| X | 39959927 | 39959927 | 1 | X_39959927 | ENSG00000285709 | AL592164.2 | 45508 | Downstream | -4.4178069 | 9.97E-06 | 0.02282078 |
| 2 | 159111982 | 159111982 | 1 | 2_159111982 | ENSG00000115183 | TANC1 | 0 | INTRON | -4.4178066 | 9.97E-06 | 0.02282078 |
| 3 | 98929373 | 98929373 | 1 | 3_98929373 | ENSG00000239462 | AC091212.1 | 0 | INTRON | 4.4177951 | 9.97E-06 | 0.02282078 |
| 13 | 24417827 | 24417827 | 1 | 13_24417827 | ENSG00000205822 | TPTE2P6 | 0 | INTRON | -4.4177941 | 9.97E-06 | 0.02282078 |
| 10 | 74179775 | 74179775 | 1 | 10_74179775 | ENSG00000156110 | ADK | 0 | INTRON | 4.41779008 | 9.97E-06 | 0.02282078 |
| 9 | 112652330 | 112652330 | 1 | 9_112652330 | ENSG00000165185 | KIAA1958 | 0 | INTRON | -4.4177484 | 9.97E-06 | 0.02282078 |
| 11 | 92881596 | 92881596 | 1 | 11_92881596 | ENSG00000165323 | FAT3 | 0 | INTRON | -4.4177454 | 9.97E-06 | 0.02282078 |
| 11 | 76608069 | 76608069 | 1 | 11_76608069 | ENSG00000255363 | LINC02757 | 0 | EXON | 4.41773054 | 9.97E-06 | 0.02282078 |
| 1 | 117880520 | 117880520 | 1 | 1_117880520 | ENSG00000196505 | GDAP2 | 0 | INTRON | 4.41770309 | 9.98E-06 | 0.02282078 |
| 15 | 66969356 | 66969356 | 1 | 15_66969356 | ENSG00000259289 | LINC02206 | 12838 | Upstream | 4.41762622 | 9.98E-06 | 0.02282583 |
| X | 44753163 | 44753163 | 1 | X_44753163 | ENSG00000214016 | RPSAP61 | 11199 | Downstream | 4.4173512 | 9.99E-06 | 0.02285181 |
| 14 | 44596017 | 44596017 | 1 | 14_44596017 | ENSG00000258747 | AL356022.1 | 28550 | Downstream | -4.4173132 | 9.99E-06 | 0.02285275 |
| 3 | 47190801 | 47190801 | 1 | 3_47190801 | ENSG00000227398 | KIF9-AS1 | 0 | INTRON | 4.41722059 | 1.00E-05 | 0.02285947 |
| 6 | 60363211 | 60363211 | 1 | 6_60363211 | ENSG00000283453 | AC244258.1 | 0 | INTRON | -4.4171694 | 1.00E-05 | 0.02286181 |
| 4 | 38170343 | 38170343 | 1 | 4_38170343 | ENSG00000065882 | TBC1D1 | 31168 | Downstream | 4.41710273 | 1.00E-05 | 0.02286579 |
| 6 | 43741656 | 43741656 | 1 | 6_43741656 | ENSG00000236961 | AL136131.2 | 3822 | Upstream | -4.4170705 | 1.00E-05 | 0.02286613 |
| 18 | 65653899 | 65653899 | 1 | 18_65653899 | ENSG00000265217 | AC090358.1 | 1846 | Downstream | 4.417018 | 1.00E-05 | 0.02286861 |
| 2 | 116243999 | 116243999 | 1 | 2_116243999 | ENSG00000287451 | AC016721.1 | 303708 | Upstream | 4.41687877 | 1.00E-05 | 0.02287551 |
| X | 123263421 | 123263421 | 1 | X_123263421 | ENSG00000125675 | GRIA3 | 0 | INTRON | 4.41686757 | 1.00E-05 | 0.02287551 |
| 6 | 16674506 | 16674506 | 1 | 6_16674506 | ENSG00000124788 | ATXN1 | 0 | INTRON | 4.41682555 | 1.00E-05 | 0.02287551 |
| 3 | 185788788 | 185788788 | 1 | 3_185788788 | ENSG00000073792 | IGF2BP2 | 0 | INTRON | -4.4168159 | 1.00E-05 | 0.02287551 |
| 1 | 99927096 | 99927096 | 1 | 1_99927096 | ENSG00000162688 | AGL | 3073 | Downstream | -4.4168076 | 1.00E-05 | 0.02287551 |
| 2 | 51385329 | 51385329 | 1 | 2_51385329 | ENSG00000231918 | AC007402.1 | 0 | INTRON | -4.4167376 | 1.00E-05 | 0.02287985 |
| 5 | 103039277 | 103039277 | 1 | 5_103039277 | ENSG00000175749 | EIF3KP1 | 6246 | Downstream | -4.4165881 | 1.00E-05 | 0.02289259 |
| 17 | 62247697 | 62247697 | 1 | 17_62247697 | ENSG00000266365 | AC053481.3 | 544 | Upstream | 4.41655759 | 1.00E-05 | 0.02289275 |
| 21 | 43643405 | 43643405 | 1 | 21_43643405 | ENSG00000160207 | HSF2BP | 0 | INTRON | 4.4165084 | 1.00E-05 | 0.02289489 |
| 1 | 25795154 | 25795154 | 1 | 1_25795154 | ENSG00000162430 | SELENON | 5021 | Upstream | 4.4164579 | 1.00E-05 | 0.02289717 |
| 1 | 2668883 | 2668883 | 1 | 1_2668883 | ENSG00000215912 | TTC34 | 0 | INTRON | -4.4163755 | 1.00E-05 | 0.0229007 |
| 17 | 64343346 | 64343346 | 1 | 17_64343346 | ENSG00000261371 | PECAM1 | 0 | INTRON | 4.41634022 | 1.00E-05 | 0.0229007 |
| 4 | 56184156 | 56184156 | 1 | 4_56184156 | ENSG00000109265 | KIAA1211 | 0 | INTRON | 4.41633751 | 1.00E-05 | 0.0229007 |
| Y | 3644073 | 3644073 | 1 | Y_3644073 | ENSG00000232927 | USP12PY | 38731 | Upstream | -4.4162978 | 1.00E-05 | 0.02290184 |
| 10 | 82347316 | 82347316 | 1 | 10_82347316 | ENSG00000185737 | NRG3 | 0 | INTRON | -4.4162062 | 1.00E-05 | 0.02290538 |
| 3 | 188666314 | 188666314 | 1 | 3_188666314 | ENSG00000145012 | LPP | 0 | INTRON | 4.41616634 | 1.00E-05 | 0.02290538 |
| 6 | 102985780 | 102985780 | 1 | 6_102985780 | ENSG00000217120 | Z98755.1 | 16733 | Upstream | -4.4161569 | 1.00E-05 | 0.02290538 |
| 1 | 168624360 | 168624360 | 1 | 1_168624360 | ENSG00000143184 | XCL1 | 42291 | Downstream | -4.416133 | 1.00E-05 | 0.02290538 |
| 5 | 124802099 | 124802099 | 1 | 5_124802099 | ENSG00000242814 | AC113398.1 | 6728 | Downstream | 4.41611948 | 1.00E-05 | 0.02290538 |
| 1 | 81595993 | 81595993 | 1 | 1_81595993 | ENSG00000236676 | AC117944.1 | 0 | INTRON | -4.4160557 | 1.01E-05 | 0.02290647 |
| 4 | 188660226 | 188660226 | 1 | 4_188660226 | ENSG00000249378 | LINC01060 | 0 | INTRON | 4.41602262 | 1.01E-05 | 0.02290647 |
| 8 | 142327743 | 142327743 | 1 | 8_142327743 | ENSG00000171045 | TSNARE1 | 0 | INTRON | 4.41602222 | 1.01E-05 | 0.02290647 |
| 19 | 44011285 | 44011285 | 1 | 19_44011285 | ENSG00000159882 | ZNF230 | 0 | 3UTR | -4.4159709 | 1.01E-05 | 0.02290884 |
| 7 | 2544980 | 2544980 | 1 | 7_2544980 | ENSG00000106009 | BRAT1 | 0 | EXON | 4.41588552 | 1.01E-05 | 0.02291482 |
| 11 | 1489911 | 1489911 | 1 | 11_1489911 | ENSG00000182208 | MOB2 | 0 | INTRON | 4.41579847 | 1.01E-05 | 0.02291948 |
| 8 | 128839504 | 128839504 | 1 | 8_128839504 | ENSG00000229140 | CCDC26 | 0 | INTRON | -4.4157826 | 1.01E-05 | 0.02291948 |
| 1 | 76080169 | 76080169 | 1 | 1_76080169 | ENSG00000184005 | ST6GALNAC3 | 0 | INTRON | 4.41574197 | 1.01E-05 | 0.02291948 |
| 9 | 112515239 | 112515239 | 1 | 9_112515239 | ENSG00000165185 | KIAA1958 | 0 | INTRON | 4.41572575 | 1.01E-05 | 0.02291948 |
| 4 | 65744340 | 65744340 | 1 | 4_65744340 | ENSG00000248479 | AC104137.1 | 38787 | Downstream | 4.41566503 | 1.01E-05 | 0.02292285 |
| 13 | 92624172 | 92624172 | 1 | 13_92624172 | ENSG00000287159 | AL356737.2 | 0 | INTRON | -4.4155982 | 1.01E-05 | 0.0229249 |
| 12 | 80677034 | 80677034 | 1 | 12_80677034 | ENSG00000139304 | PTPRQ | 0 | INTRON | 4.41558777 | 1.01E-05 | 0.0229249 |
| 3 | 157515649 | 157515649 | 1 | 3_157515649 | ENSG00000197415 | VEPH1 | 0 | INTRON | -4.4154759 | 1.01E-05 | 0.02293326 |
| 1 | 247389236 | 247389236 | 1 | 1_247389236 | ENSG00000287116 | AC104335.2 | 1006 | Upstream | -4.4154511 | 1.01E-05 | 0.02293326 |
| 15 | 50440728 | 50440728 | 1 | 15_50440728 | ENSG00000138592 | USP8 | 0 | INTRON | 4.41541614 | 1.01E-05 | 0.0229339 |

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| 10 | 102509265 | 102509265 | 1 | 10_102509265 | ENSG00000107882 | SUFU | 0 | EXON | -4.4153131 | 1.01E-05 | 0.02294176 |
| 16 | 658225 | 658225 | 1 | 16_658225 | ENSG00000161996 | WDR90 | 0 | EXON | 4.41521817 | 1.01E-05 | 0.02294238 |
| 2 | 38543228 | 38543228 | 1 | 2_38543228 | ENSG00000271443 | AC011247.2 | 6979 | Upstream | 4.41520362 | 1.01E-05 | 0.02294238 |
| 2 | 101137177 | 101137177 | 1 | 2_101137177 | ENSG00000204634 | TBC1D8 | 0 | INTRON | 4.41519606 | 1.01E-05 | 0.02294238 |
| 1 | 14965266 | 14965266 | 1 | 1_14965266 | ENSG00000189337 | KAZN | 0 | INTRON | 4.41519162 | 1.01E-05 | 0.02294238 |
| 3 | 22544269 | 22544269 | 1 | 3_22544269 | ENSG00000234723 | AC092421.1 | 125931 | Downstream | -4.4150483 | 1.01E-05 | 0.02295411 |
| 4 | 134303182 | 134303182 | 1 | 4_134303182 | ENSG00000251199 | AC015631.1 | 0 | INTRON | -4.4150127 | 1.01E-05 | 0.02295411 |
| 8 | 101649855 | 101649855 | 1 | 8_101649855 | ENSG00000083307 | GRHL2 | 0 | INTRON | -4.4149943 | 1.01E-05 | 0.02295411 |
| 3 | 87264299 | 87264299 | 1 | 3_87264299 | ENSG00000064835 | POU1F1 | 0 | EXON | -4.414673 | 1.01E-05 | 0.02297963 |
| 22 | 28507868 | 28507868 | 1 | 22_28507868 | ENSG00000100154 | TTC28 | 0 | INTRON | 4.41466033 | 1.01E-05 | 0.02297963 |
| 12 | 124068187 | 124068187 | 1 | 12_124068187 | ENSG00000178882 | RFLNA | 0 | INTRON | 4.41463692 | 1.01E-05 | 0.02297963 |
| 6 | 83012192 | 83012192 | 1 | 6_83012192 | ENSG00000118420 | UBE3D | 0 | INTRON | 4.4145986 | 1.01E-05 | 0.02297963 |
| 8 | 26084212 | 26084212 | 1 | 8_26084212 | ENSG00000221818 | EBF2 | 38799 | Upstream | -4.4145881 | 1.01E-05 | 0.02297963 |
| 12 | 103299264 | 103299264 | 1 | 12_103299264 | ENSG00000179088 | C12orf42 | 0 | INTRON | -4.4145807 | 1.01E-05 | 0.02297963 |
| X | 115898489 | 115898489 | 1 | X_115898489 | ENSG00000235244 | DANT2 | 0 | INTRON | -4.4144699 | 1.01E-05 | 0.02298552 |
| 8 | 142769281 | 142769281 | 1 | 8_142769281 | ENSG00000283992 | SLURP2 | 0 | INTRON | -4.4144675 | 1.01E-05 | 0.02298552 |
| 4 | 21577562 | 21577562 | 1 | 4_21577562 | ENSG00000185774 | KCNIP4 | 0 | INTRON | 4.41437727 | 1.01E-05 | 0.02298803 |
| 6 | 160532750 | 160532750 | 1 | 6_160532750 | ENSG00000198670 | LPA | 0 | INTRON | 4.41437088 | 1.01E-05 | 0.02298803 |
| 16 | 2109397 | 2109397 | 1 | 16_2109397 | ENSG00000008710 | PKD1 | 0 | EXON | -4.4143462 | 1.01E-05 | 0.02298803 |
| 1 | 190186315 | 190186315 | 1 | 1_190186315 | ENSG00000162670 | BRINP3 | 0 | INTRON | -4.4143285 | 1.01E-05 | 0.02298803 |
| 7 | 123618957 | 123618957 | 1 | 7_123618957 | ENSG00000230442 | AC006333.1 | 0 | INTRON | -4.4142605 | 1.01E-05 | 0.02298876 |
| 20 | 14137558 | 14137558 | 1 | 20_14137558 | ENSG00000172264 | MACROD2 | 0 | INTRON | -4.4142547 | 1.01E-05 | 0.02298876 |
| 2 | 195644434 | 195644434 | 1 | 2_195644434 | ENSG00000196950 | SLC39A10 | 0 | INTRON | 4.41420424 | 1.01E-05 | 0.02298876 |
| 1 | 84241460 | 84241460 | 1 | 1_84241460 | ENSG00000226970 | AL450063.1 | 2873 | Upstream | -4.4141967 | 1.01E-05 | 0.02298876 |
| 4 | 179053333 | 179053333 | 1 | 4_179053333 | ENSG00000250839 | AC018710.1 | 16103 | Upstream | 4.41408589 | 1.01E-05 | 0.02298876 |
| 15 | 92149970 | 92149970 | 1 | 15_92149970 | ENSG00000176463 | SLCO3A1 | 0 | INTRON | 4.41408272 | 1.01E-05 | 0.02298876 |
| 7 | 86475500 | 86475500 | 1 | 7_86475500 | ENSG00000198822 | GRM3 | 168413 | Upstream | 4.41407454 | 1.01E-05 | 0.02298876 |
| 10 | 47871569 | 47871569 | 1 | 10_47871569 | ENSG00000276850 | AC245041.2 | 36494 | Downstream | 4.41405805 | 1.01E-05 | 0.02298876 |
| 1 | 195645643 | 195645643 | 1 | 1_195645643 | ENSG00000287364 | AL353709.1 | 101380 | Downstream | 4.41405366 | 1.01E-05 | 0.02298876 |
| 9 | 71831430 | 71831430 | 1 | 9_71831430 | ENSG00000135048 | CEMIP2 | 14740 | Upstream | 4.41403335 | 1.01E-05 | 0.02298876 |
| 3 | 124610607 | 124610607 | 1 | 3_124610607 | ENSG00000160145 | KALRN | 0 | INTRON | 4.41394707 | 1.02E-05 | 0.02299486 |
| 14 | 70711283 | 70711283 | 1 | 14_70711283 | ENSG00000258689 | LINC01269 | 0 | INTRON | 4.41388085 | 1.02E-05 | 0.02299661 |
| 17 | 67464985 | 67464985 | 1 | 17_67464985 | ENSG00000154217 | PITPNC1 | 0 | INTRON | 4.41387302 | 1.02E-05 | 0.02299661 |
| 2 | 8913897 | 8913897 | 1 | 2_8913897 | ENSG00000143797 | MBOAT2 | 0 | INTRON | 4.41380684 | 1.02E-05 | 0.02300058 |
| 10 | 59261712 | 59261712 | 1 | 10_59261712 | ENSG00000148541 | FAM13C | 0 | INTRON | -4.4137022 | 1.02E-05 | 0.02300778 |
| 12 | 19373583 | 19373583 | 1 | 12_19373583 | ENSG00000052126 | PLEKHA5 | 0 | 3UTR | -4.4136491 | 1.02E-05 | 0.02300778 |
| 11 | 130731470 | 130731470 | 1 | 11_130731470 | ENSG00000175728 | C11orf44 | 14118 | Downstream | -4.4136399 | 1.02E-05 | 0.02300778 |
| X | 19499289 | 19499289 | 1 | X_19499289 | ENSG00000180815 | MAP3K15 | 0 | INTRON | 4.41362404 | 1.02E-05 | 0.02300778 |
| 15 | 61267905 | 61267905 | 1 | 15_61267905 | ENSG00000276473 | AC107905.1 | 27574 | Downstream | -4.4135773 | 1.02E-05 | 0.02300969 |
| 7 | 156669892 | 156669892 | 1 | 7_156669892 | ENSG00000105982 | RNF32 | 0 | INTRON | 4.41354233 | 1.02E-05 | 0.02301009 |
| 6 | 149245262 | 149245262 | 1 | 6_149245262 | ENSG00000228408 | AL031056.1 | 0 | EXON | 4.41350714 | 1.02E-05 | 0.02301009 |
| 4 | 175462830 | 175462830 | 1 | 4_175462830 | ENSG00000249945 | AC131094.1 | 0 | INTRON | 4.41346571 | 1.02E-05 | 0.02301009 |
| 13 | 76941742 | 76941742 | 1 | 13_76941742 | ENSG00000102794 | ACOD1 | 6768 | Upstream | -4.4134584 | 1.02E-05 | 0.02301009 |
| 21 | 39390796 | 39390796 | 1 | 21_39390796 | ENSG00000182093 | GET1 | 0 | EXON | -4.4133538 | 1.02E-05 | 0.02301816 |
| 12 | 122959686 | 122959686 | 1 | 12_122959686 | ENSG00000150967 | ABCB9 | 0 | EXON | 4.41320139 | 1.02E-05 | 0.02303131 |
| 14 | 65012652 | 65012652 | 1 | 14_65012652 | ENSG00000125952 | MAX | 0 | INTRON | 4.41300923 | 1.02E-05 | 0.02304871 |
| 9 | 3472919 | 3472919 | 1 | 9_3472919 | ENSG00000080298 | RFX3 | 0 | INTRON | 4.41297849 | 1.02E-05 | 0.02304892 |
| 10 | 34938051 | 34938051 | 1 | 10_34938051 | ENSG00000222909 | RNU6-193P | 4917 | Upstream | -4.4129269 | 1.02E-05 | 0.02305135 |
| 15 | 98686545 | 98686545 | 1 | 15_98686545 | ENSG00000140443 | IGF1R | 0 | INTRON | 4.4127864 | 1.02E-05 | 0.02306326 |
| 20 | 57800897 | 57800897 | 1 | 20_57800897 | ENSG00000278709 | NKILA | 88117 | Downstream | -4.4127263 | 1.02E-05 | 0.02306521 |
| 11 | 84782895 | 84782895 | 1 | 11_84782895 | ENSG00000150672 | DLG2 | 0 | INTRON | 4.4127082 | 1.02E-05 | 0.02306521 |
| 22 | 28704624 | 28704624 | 1 | 22_28704624 | ENSG00000183765 | CHEK2 | 0 | INTRON | 4.41263476 | 1.02E-05 | 0.02306521 |
| 12 | 24467541 | 24467541 | 1 | 12_24467541 | ENSG00000134532 | SOX5 | 0 | INTRON | 4.41263219 | 1.02E-05 | 0.02306521 |
| 19 | 53728565 | 53728565 | 1 | 19_53728565 | ENSG00000207987 | MIR518E | 1272 | Upstream | 4.41262441 | 1.02E-05 | 0.02306521 |
| 22 | 46429420 | 46429420 | 1 | 22_46429420 | ENSG00000075275 | CELSR1 | 0 | INTRON | -4.4125407 | 1.02E-05 | 0.02306906 |
| 11 | 5600483 | 5600483 | 1 | 11_5600483 | ENSG00000121236 | TRIM6 | 0 | INTRON | 4.41253084 | 1.02E-05 | 0.02306906 |
| 19 | 30300759 | 30300759 | 1 | 19_30300759 | ENSG00000198597 | ZNF536 | 0 | INTRON | 4.41248325 | 1.02E-05 | 0.02307004 |
| 12 | 72248246 | 72248246 | 1 | 12_72248246 | ENSG00000072657 | TRHDE | 0 | INTRON | -4.4124157 | 1.02E-05 | 0.02307004 |
| 19 | 30127028 | 30127028 | 1 | 19_30127028 | ENSG00000288072 | AC008507.5 | 41135 | Downstream | 4.41240171 | 1.02E-05 | 0.02307004 |
| 2 | 144484751 | 144484751 | 1 | 2_144484751 | ENSG00000169554 | ZEB2 | 0 | INTRON | 4.41236996 | 1.02E-05 | 0.02307004 |
| 4 | 181761238 | 181761238 | 1 | 4_181761238 | ENSG00000251336 | TEMN3-AS1 | 58780 | Downstream | -4.4123063 | 1.02E-05 | 0.02307004 |
| 5 | 36535715 | 36535715 | 1 | 5_36535715 | ENSG00000222178 | RNA5SP181 | 50275 | Downstream | 4.41228187 | 1.02E-05 | 0.02307004 |
| X | 33249370 | 33249370 | 1 | X_33249370 | ENSG00000198947 | DMD | 0 | INTRON | -4.4122768 | 1.02E-05 | 0.02307004 |
| 10 | 4484012 | 4484012 | 1 | 10_4484012 | ENSG00000286687 | AC022535.2 | 13436 | Upstream | -4.4122647 | 1.02E-05 | 0.02307004 |
| 2 | 82930334 | 82930334 | 1 | 2_82930334 | ENSG00000286211 | AC098817.1 | 63826 | Downstream | -4.4122401 | 1.02E-05 | 0.02307004 |
| 16 | 70688818 | 70688818 | 1 | 16_70688818 | ENSG00000103043 | VAC14 | 0 | EXON | 4.41220509 | 1.02E-05 | 0.02307004 |
| 5 | 153116680 | 153116680 | 1 | 5_153116680 | ENSG00000249484 | LINC01470 | 0 | INTRON | 4.41216447 | 1.02E-05 | 0.02307004 |
| 7 | 138630411 | 138630411 | 1 | 7_138630411 | ENSG00000157703 | SVOPL | 0 | INTRON | -4.41216 | 1.02E-05 | 0.02307004 |
| 19 | 11581502 | 11581502 | 1 | 19_11581502 | ENSG00000198551 | ZNF627 | 0 | INTRON | 4.41214856 | 1.02E-05 | 0.02307004 |
| X | 137138770 | 137138770 | 1 | X_137138770 | ENSG00000165370 | GPR101 | 104923 | Upstream | -4.4120846 | 1.02E-05 | 0.02307366 |
| 3 | 134825252 | 134825252 | 1 | 3_134825252 | ENSG00000154928 | EPHB1 | 0 | INTRON | -4.412032 | 1.02E-05 | 0.02307366 |
| 10 | 2724908 | 2724908 | 1 | 10_2724908 | ENSG00000286858 | AL355361.1 | 0 | EXON | -4.4120109 | 1.02E-05 | 0.02307366 |
| X | 7150472 | 7150472 | 1 | X_7150472 | ENSG00000101846 | STS | 0 | INTRON | -4.4119999 | 1.02E-05 | 0.02307366 |
| 6 | 146903649 | 146903649 | 1 | 6_146903649 | ENSG00000233452 | STXBP5-AS1 | 0 | INTRON | 4.41192749 | 1.02E-05 | 0.02307805 |
| 6 | 154911177 | 154911177 | 1 | 6_154911177 | ENSG00000146426 | TIAM2 | 0 | INTRON | -4.4119015 | 1.02E-05 | 0.02307805 |
| 10 | 97240629 | 97240629 | 1 | 10_97240629 | ENSG00000269891 | ARHGAP19-SLIT1 | 0 | INTRON | 4.41177094 | 1.03E-05 | 0.02308891 |
| 7 | 73502827 | 73502827 | 1 | 7_73502827 | ENSG00000009954 | BAZ1B | 0 | INTRON | 4.4116947 | 1.03E-05 | 0.02309399 |
| 1 | 112068649 | 112068649 | 1 | 1_112068649 | ENSG00000231437 | LINC01750 | 69807 | Downstream | -4.4116498 | 1.03E-05 | 0.02309492 |
| 5 | 149522307 | 149522307 | 1 | 5_149522307 | ENSG00000113712 | CSNK1A1 | 0 | INTRON | 4.4116256 | 1.03E-05 | 0.02309492 |
| 2 | 91732569 | 91732569 | 1 | 2_91732569 | ENSG00000223703 | AC027612.1 | 4156 | Upstream | 4.41160004 | 1.03E-05 | 0.02309492 |
| X | 1354378 | 1354378 | 1 | X_1354378 | ENSG00000185291 | IL3RA | 0 | INTRON | -4.4115563 | 1.03E-05 | 0.02309653 |
| 7 | 151863125 | 151863125 | 1 | 7_151863125 | ENSG00000106617 | PRKAG2 | 0 | INTRON | 4.41143961 | 1.03E-05 | 0.02310593 |
| 14 | 42062685 | 42062685 | 1 | 14_42062685 | ENSG00000165379 | LRFN5 | 158136 | Downstream | 4.41134519 | 1.03E-05 | 0.02311295 |
| 7 | 125332943 | 125332943 | 1 | 7_125332943 | ENSG00000224897 | POT1-AS1 | 0 | INTRON | -4.4112171 | 1.03E-05 | 0.02312251 |
| 14 | 81412338 | 81412338 | 1 | 14_81412338 | ENSG00000140022 | STON2 | 0 | INTRON | -4.4111985 | 1.03E-05 | 0.02312251 |
| 15 | 72764172 | 72764172 | 1 | 15_72764172 | ENSG00000159322 | ADPGK | 0 | INTRON | 4.41113976 | 1.03E-05 | 0.02312265 |
| 4 | 186012686 | 186012686 | 1 | 4_186012686 | ENSG00000222727 | RNU4-64P | 13769 | Downstream | 4.41109799 | 1.03E-05 | 0.02312265 |
| 8 | 113945037 | 113945037 | 1 | 8_113945037 | ENSG00000206719 | Y_RNA | 5848 | Upstream | 4.41106098 | 1.03E-05 | 0.02312265 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
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| 9 | 72205268 | 72205268 | 1 | 9_72205268 | ENSG00000119125 | GDA | 0 | INTRON | 4.41105611 | 1.03E-05 | 0.02312265 |
| 10 | 2645383 | 2645383 | 1 | 10_2645383 | ENSG00000235281 | AL713851.1 | 26644 | Downstream | -4.4110535 | 1.03E-05 | 0.02312265 |
| 5 | 15523354 | 15523354 | 1 | 5_15523354 | ENSG00000183580 | FBXL7 | 0 | INTRON | 4.41102553 | 1.03E-05 | 0.02312265 |
| 19 | 34370544 | 34370544 | 1 | 19_34370544 | ENSG00000105220 | GPI | 0 | INTRON | 4.41089094 | 1.03E-05 | 0.02312797 |
| 6 | 14851662 | 14851662 | 1 | 6_14851662 | ENSG00000234261 | AL138720.1 | 0 | INTRON | 4.41080945 | 1.03E-05 | 0.02312797 |
| 1 | 225632164 | 225632164 | 1 | 1_225632164 | ENSG00000154380 | ENAH | 0 | INTRON | -4.4108011 | 1.03E-05 | 0.02312797 |
| 6 | 1756811 | 1756811 | 1 | 6_1756811 | ENSG00000112699 | GMDS | 0 | INTRON | 4.41079507 | 1.03E-05 | 0.02312797 |
| 5 | 160204532 | 160204532 | 1 | 5_160204532 | ENSG00000170231 | FABP6 | 0 | INTRON | -4.4107696 | 1.03E-05 | 0.02312797 |
| 18 | 764980 | 764980 | 1 | 18_764980 | ENSG00000176105 | YES1 | 0 | INTRON | 4.41076874 | 1.03E-05 | 0.02312797 |
| 3 | 37323356 | 37323356 | 1 | 3_37323356 | ENSG00000144674 | GOLGA4 | 0 | INTRON | 4.4107535 | 1.03E-05 | 0.02312797 |
| 4 | 153872176 | 153872176 | 1 | 4_153872176 | ENSG00000280241 | AC079298.3 | 76541 | Upstream | -4.410747 | 1.03E-05 | 0.02312797 |
| 10 | 128998785 | 128998785 | 1 | 10_128998785 | ENSG00000287361 | AL355537.2 | 30045 | Upstream | -4.4106917 | 1.03E-05 | 0.0231286 |
| 12 | 95276825 | 95276825 | 1 | 12_95276825 | ENSG00000028203 | VEZT | 0 | INTRON | 4.41068281 | 1.03E-05 | 0.0231286 |
| X | 153974158 | 153974158 | 1 | X_153974158 | ENSG00000177854 | TMEM187 | 0 | INTRON | -4.4106554 | 1.03E-05 | 0.0231286 |
| 13 | 33114853 | 33114853 | 1 | 13_33114853 | ENSG00000133121 | STARD13 | 0 | INTRON | -4.410541 | 1.03E-05 | 0.02313498 |
| 14 | 92381326 | 92381326 | 1 | 14_92381326 | ENSG00000140090 | SLC24A4 | 0 | INTRON | 4.41053865 | 1.03E-05 | 0.02313498 |
| 1 | 248769368 | 248769368 | 1 | 1_248769368 | ENSG00000229663 | DPY19L4P1 | 2266 | Downstream | -4.4105015 | 1.03E-05 | 0.02313589 |
| 9 | 113619686 | 113619686 | 1 | 9_113619686 | ENSG00000233817 | AL162727.1 | 0 | INTRON | 4.41047133 | 1.03E-05 | 0.02313607 |
| 1 | 64678258 | 64678258 | 1 | 1_64678258 | ENSG00000158966 | CACHD1 | 0 | EXON | 4.41039914 | 1.03E-05 | 0.02314074 |
| X | 56763997 | 56763997 | 1 | X_56763997 | ENSG00000204272 | NBDY | 0 | INTRON | 4.4102541 | 1.03E-05 | 0.02315286 |
| 8 | 131857912 | 131857912 | 1 | 8_131857912 | ENSG00000132294 | EFR3A | 46180 | Upstream | 4.41022865 | 1.03E-05 | 0.02315286 |
| 5 | 37052863 | 37052863 | 1 | 5_37052863 | ENSG00000164190 | NIPBL | 0 | INTRON | -4.4101792 | 1.03E-05 | 0.02315509 |
| 13 | 45089803 | 45089803 | 1 | 13_45089803 | ENSG00000223732 | AL359706.1 | 6678 | Upstream | 4.41011726 | 1.03E-05 | 0.02315732 |
| 2 | 87508725 | 87508725 | 1 | 2_87508725 | ENSG00000222041 | CYTOR | 0 | INTRON | -4.4100821 | 1.03E-05 | 0.02315732 |
| 12 | 489038 | 489038 | 1 | 12_489038 | ENSG00000139044 | B4GALNT3 | 0 | INTRON | 4.41007282 | 1.03E-05 | 0.02315732 |
| 1 | 218650083 | 218650083 | 1 | 1_218650083 | ENSG00000212610 | U3 | 108184 | Upstream | 4.40997631 | 1.03E-05 | 0.02316398 |
| 1 | 18558676 | 18558676 | 1 | 1_18558676 | ENSG00000225478 | AL031737.1 | 36737 | Upstream | 4.4099535 | 1.03E-05 | 0.02316398 |
| 3 | 41113428 | 41113428 | 1 | 3_41113428 | ENSG00000233919 | AC009743.1 | 48858 | Downstream | 4.40992293 | 1.03E-05 | 0.0231642 |
| 1 | 172655767 | 172655767 | 1 | 1_172655767 | ENSG00000117560 | FASLG | 3335 | Upstream | 4.40986342 | 1.03E-05 | 0.02316752 |
| 8 | 35272060 | 35272060 | 1 | 8_35272060 | ENSG00000156687 | UNC5D | 0 | INTRON | -4.4098159 | 1.03E-05 | 0.02316955 |
| X | 32010596 | 32010596 | 1 | X_32010596 | ENSG00000198947 | DMD | 0 | INTRON | -4.4097022 | 1.04E-05 | 0.02317867 |
| 4 | 109674919 | 109674919 | 1 | 4_109674919 | ENSG00000005059 | MCUB | 0 | INTRON | 4.40966922 | 1.04E-05 | 0.02317915 |
| 6 | 35464955 | 35464955 | 1 | 6_35464955 | ENSG00000112039 | FANCE | 0 | INTRON | 4.4095183 | 1.04E-05 | 0.02319226 |
| 14 | 31959041 | 31959041 | 1 | 14_31959041 | ENSG00000275002 | AL352984.2 | 5508 | Upstream | -4.409418 | 1.04E-05 | 0.02319678 |
| 5 | 8258907 | 8258907 | 1 | 5_8258907 | ENSG00000288002 | AC091912.3 | 0 | INTRON | -4.4093871 | 1.04E-05 | 0.02319678 |
| 9 | 4518970 | 4518970 | 1 | 9_4518970 | ENSG00000106688 | SLC1A1 | 0 | INTRON | -4.4093573 | 1.04E-05 | 0.02319678 |
| 9 | 7209206 | 7209206 | 1 | 9_7209206 | ENSG00000285688 | AL161443.1 | 5748 | Downstream | -4.4093446 | 1.04E-05 | 0.02319678 |
| 4 | 28093324 | 28093324 | 1 | 4_28093324 | ENSG00000251410 | AC007106.1 | 108261 | Upstream | -4.4093336 | 1.04E-05 | 0.02319678 |
| 4 | 25462440 | 25462440 | 1 | 4_25462440 | ENSG00000249320 | AC133963.2 | 10076 | Upstream | 4.40923613 | 1.04E-05 | 0.02320418 |
| 8 | 17176771 | 17176771 | 1 | 8_17176771 | ENSG00000104219 | ZDHHC2 | 0 | INTRON | -4.4091955 | 1.04E-05 | 0.02320548 |
| 4 | 163285748 | 163285748 | 1 | 4_163285748 | ENSG00000250547 | AC079238.1 | 19165 | Upstream | 4.409125 | 1.04E-05 | 0.0232087 |
| 22 | 42384618 | 42384618 | 1 | 22_42384618 | ENSG00000235568 | NFAM1 | 0 | 3UTR | -4.4091085 | 1.04E-05 | 0.0232087 |
| 1 | 12505358 | 12505358 | 1 | 1_12505358 | ENSG00000048707 | VPS13D | 0 | INTRON | 4.4090185 | 1.04E-05 | 0.02321252 |
| 12 | 25145944 | 25145944 | 1 | 12_25145944 | ENSG00000118307 | CASC1 | 0 | INTRON | -4.409016 | 1.04E-05 | 0.02321252 |
| 8 | 33127771 | 33127771 | 1 | 8_33127771 | ENSG00000247134 | AC090204.1 | 82326 | Downstream | 4.40889252 | 1.04E-05 | 0.02322178 |
| 19 | 21437343 | 21437343 | 1 | 19_21437343 | ENSG00000269237 | AC010615.4 | 0 | INTRON | 4.40886422 | 1.04E-05 | 0.02322178 |
| 6 | 131701350 | 131701350 | 1 | 6_131701350 | ENSG00000180658 | OR2A4 | 0 | EXON | -4.4088413 | 1.04E-05 | 0.02322178 |
| 19 | 42485154 | 42485154 | 1 | 19_42485154 | ENSG00000213904 | LIPE-AS1 | 0 | EXON | 4.40881573 | 1.04E-05 | 0.02322178 |
| 14 | 26386536 | 26386536 | 1 | 14_26386536 | ENSG00000139910 | NOVA1 | 56553 | Downstream | -4.4087672 | 1.04E-05 | 0.02322271 |
| 1 | 203918710 | 203918710 | 1 | 1_203918710 | ENSG00000232917 | HSPE1P6 | 14697 | Upstream | 4.40873902 | 1.04E-05 | 0.02322271 |
| 11 | 86749650 | 86749650 | 1 | 11_86749650 | ENSG00000255250 | AP003059.2 | 0 | INTRON | -4.4087218 | 1.04E-05 | 0.02322271 |
| 2 | 31528909 | 31528909 | 1 | 2_31528909 | ENSG00000277893 | SRD5A2 | 0 | INTRON | -4.408642 | 1.04E-05 | 0.02322822 |
| 4 | 123381118 | 123381118 | 1 | 4_123381118 | ENSG00000164056 | SPRY1 | 15676 | Upstream | -4.4085385 | 1.04E-05 | 0.02323627 |
| 5 | 175132935 | 175132935 | 1 | 5_175132935 | ENSG00000204754 | LINC01951 | 137422 | Upstream | 4.4085054 | 1.04E-05 | 0.02323677 |
| 16 | 50108523 | 50108523 | 1 | 16_50108523 | ENSG00000260381 | AC007610.2 | 0 | INTRON | 4.408469 | 1.04E-05 | 0.02323763 |
| 5 | 10145245 | 10145245 | 1 | 5_10145245 | ENSG00000249807 | AC034229.1 | 6880 | Downstream | 4.40828668 | 1.04E-05 | 0.02325414 |
| 16 | 87664647 | 87664647 | 1 | 16_87664647 | ENSG00000154118 | JPH3 | 0 | INTRON | 4.40824322 | 1.04E-05 | 0.02325576 |
| 5 | 96087726 | 96087726 | 1 | 5_96087726 | ENSG00000251314 | AC104123.1 | 0 | INTRON | 4.40816673 | 1.04E-05 | 0.02325953 |
| 9 | 132166759 | 132166759 | 1 | 9_132166759 | ENSG00000196358 | NTNG2 | 0 | 5UTR | 4.40815132 | 1.04E-05 | 0.02325953 |
| 12 | 32432558 | 32432558 | 1 | 12_32432558 | ENSG00000139132 | FGD4 | 0 | INTRON | 4.40807888 | 1.04E-05 | 0.02325995 |
| 19 | 37695931 | 37695931 | 1 | 19_37695931 | ENSG00000267552 | AC093227.2 | 0 | INTRON | 4.40805996 | 1.04E-05 | 0.02325995 |
| 22 | 41785419 | 41785419 | 1 | 22_41785419 | ENSG00000167077 | MEI1 | 0 | INTRON | 4.40804267 | 1.04E-05 | 0.02325995 |
| 1 | 93423134 | 93423134 | 1 | 1_93423134 | ENSG00000137942 | FNBP1L | 24996 | Upstream | -4.4080317 | 1.04E-05 | 0.02325995 |
| 21 | 16222448 | 16222448 | 1 | 21_16222448 | ENSG00000215386 | MIR99AHG | 0 | EXON | -4.4080054 | 1.04E-05 | 0.02325995 |
| 17 | 70041568 | 70041568 | 1 | 17_70041568 | ENSG00000230258 | AC005208.1 | 0 | INTRON | -4.4079684 | 1.04E-05 | 0.02326087 |
| 5 | 76502130 | 76502130 | 1 | 5_76502130 | ENSG00000145703 | IQGAP2 | 0 | INTRON | 4.40788098 | 1.04E-05 | 0.02326275 |
| 3 | 139253030 | 139253030 | 1 | 3_139253030 | ENSG00000175110 | MRPS22 | 0 | INTRON | -4.4078749 | 1.04E-05 | 0.02326275 |
| 1 | 70110819 | 70110819 | 1 | 1_70110819 | ENSG00000033122 | LRRC7 | 0 | INTRON | 4.40786169 | 1.04E-05 | 0.02326275 |
| 5 | 1568554 | 1568554 | 1 | 5_1568554 | ENSG00000185986 | SDHAP3 | 0 | EXON | -4.4078374 | 1.04E-05 | 0.02326275 |
| 11 | 77202704 | 77202704 | 1 | 11_77202704 | ENSG00000137474 | MYO7A | 0 | INTRON | -4.4076666 | 1.04E-05 | 0.02327284 |
| 16 | 64427170 | 64427170 | 1 | 16_64427170 | ENSG00000259846 | AC092131.1 | 0 | INTRON | 4.40766167 | 1.04E-05 | 0.02327284 |
| 4 | 3565174 | 3565174 | 1 | 4_3565174 | ENSG00000216560 | LINC00955 | 11694 | Upstream | -4.4076584 | 1.04E-05 | 0.02327284 |
| 4 | 28688129 | 28688129 | 1 | 4_28688129 | ENSG00000243548 | RN7SL101P | 23068 | Upstream | 4.40755699 | 1.05E-05 | 0.02328069 |
| 12 | 126165135 | 126165135 | 1 | 12_126165135 | ENSG00000284848 | LINC02359 | 0 | INTRON | -4.4075039 | 1.05E-05 | 0.02328266 |
| 9 | 32832870 | 32832870 | 1 | 9_32832870 | ENSG00000236796 | AL157884.3 | 3704 | Downstream | -4.4074486 | 1.05E-05 | 0.02328266 |
| 2 | 26965232 | 26965232 | 1 | 2_26965232 | ENSG00000230286 | AC013472.2 | 0 | INTRON | 4.4074481 | 1.05E-05 | 0.02328266 |
| 3 | 359200 | 359200 | 1 | 3_359200 | ENSG00000134121 | CHL1 | 0 | INTRON | -4.4074067 | 1.05E-05 | 0.02328266 |
| 5 | 31000333 | 31000333 | 1 | 5_31000333 | ENSG00000241668 | RPL19P11 | 53231 | Upstream | -4.4073913 | 1.05E-05 | 0.02328266 |
| 19 | 39828282 | 39828282 | 1 | 19_39828282 | ENSG00000105204 | DYRK1B | 0 | INTRON | -4.407365 | 1.05E-05 | 0.02328266 |
| 19 | 45534212 | 45534212 | 1 | 19_45534212 | ENSG00000125741 | OPA3 | 0 | INTRON | -4.4073402 | 1.05E-05 | 0.02328266 |
| 15 | 62096894 | 62096894 | 1 | 15_62096894 | ENSG00000259466 | NPM1P47 | 13589 | Upstream | -4.4072582 | 1.05E-05 | 0.02328843 |
| 12 | 14252481 | 14252481 | 1 | 12_14252481 | ENSG00000251908 | RNU6-491P | 2140 | Upstream | 4.4071752 | 1.05E-05 | 0.02328893 |
| 1 | 31112192 | 31112192 | 1 | 1_31112192 | ENSG00000225142 | AC114495.1 | 3569 | Upstream | -4.4071514 | 1.05E-05 | 0.02328893 |
| 19 | 32571943 | 32571943 | 1 | 19_32571943 | ENSG00000105185 | PDCD5 | 9246 | Upstream | 4.4071514 | 1.05E-05 | 0.02328893 |
| 11 | 40373647 | 40373647 | 1 | 11_40373647 | ENSG00000148948 | LRRC4C | 0 | INTRON | 4.40714033 | 1.05E-05 | 0.02328893 |
| 15 | 36914631 | 36914631 | 1 | 15_36914631 | ENSG00000134138 | MEIS2 | 0 | INTRON | 4.40710238 | 1.05E-05 | 0.02328996 |
| 1 | 174919255 | 174919255 | 1 | 1_174919255 | ENSG00000152061 | RABGAP1L | 0 | INTRON | 4.40700096 | 1.05E-05 | 0.02329782 |
| 12 | 20271583 | 20271583 | 1 | 12_20271583 | ENSG00000256879 | AC129102.1 | 90148 | Downstream | -4.4069627 | 1.05E-05 | 0.02329889 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
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| 7 | 139859194 | 139859194 | 1 | 7_139859194 | ENSG00000059377 | TBXAS1 | 0 | INTRON | -4.4068885 | 1.05E-05 | 0.02330383 |
| 16 | 88727635 | 88727635 | 1 | 16_88727635 | ENSG00000103335 | PIEZO1 | 0 | EXON | -4.4068542 | 1.05E-05 | 0.02330447 |
| 4 | 88877189 | 88877189 | 1 | 4_88877189 | ENSG00000138640 | FAM13A | 0 | INTRON | 4.40661494 | 1.05E-05 | 0.02332204 |
| 1 | 186186395 | 186186395 | 1 | 1_186186395 | ENSG00000143341 | HMCN1 | 0 | INTRON | 4.40657819 | 1.05E-05 | 0.02332204 |
| 17 | 13322794 | 13322794 | 1 | 17_13322794 | ENSG00000234634 | LINC02093 | 16023 | Upstream | 4.40656908 | 1.05E-05 | 0.02332204 |
| 4 | 115593141 | 115593141 | 1 | 4_115593141 | ENSG00000250693 | RPF2P2 | 35670 | Upstream | 4.4065634 | 1.05E-05 | 0.02332204 |
| 10 | 50027474 | 50027474 | 1 | 10_50027474 | ENSG00000235618 | FAM21EP | 0 | INTRON | 4.40654946 | 1.05E-05 | 0.02332204 |
| 21 | 10601300 | 10601300 | 1 | 21_10601300 | ENSG00000274391 | TPTE | 0 | INTRON | -4.4063901 | 1.05E-05 | 0.02333616 |
| 9 | 33862756 | 33862756 | 1 | 9_33862756 | ENSG00000107341 | UBE2R2 | 0 | INTRON | 4.40635004 | 1.05E-05 | 0.02333731 |
| 7 | 106709997 | 106709997 | 1 | 7_106709997 | ENSG00000243797 | AC004917.1 | 0 | INTRON | 4.40632276 | 1.05E-05 | 0.02333731 |
| 12 | 5131747 | 5131747 | 1 | 12_5131747 | ENSG00000285523 | AC005906.3 | 39005 | Downstream | -4.4062193 | 1.05E-05 | 0.02334503 |
| 3 | 44263378 | 44263378 | 1 | 3_44263378 | ENSG00000173769 | TOPAZ1 | 0 | INTRON | -4.4061896 | 1.05E-05 | 0.02334503 |
| 22 | 25127505 | 25127505 | 1 | 22_25127505 | ENSG00000197077 | KIAA1671 | 0 | INTRON | -4.4061419 | 1.05E-05 | 0.02334503 |
| 4 | 180273062 | 180273062 | 1 | 4_180273062 | ENSG00000287775 | AC096747.1 | 155899 | Upstream | -4.4061381 | 1.05E-05 | 0.02334503 |
| 9 | 85095126 | 85095126 | 1 | 9_85095126 | ENSG00000226590 | UBE2V1P10 | 64555 | Upstream | -4.4061085 | 1.05E-05 | 0.02334517 |
| 3 | 194783713 | 194783713 | 1 | 3_194783713 | ENSG00000237222 | LINC01968 | 0 | INTRON | 4.40600533 | 1.05E-05 | 0.02335321 |
| 12 | 71318626 | 71318626 | 1 | 12_71318626 | ENSG00000127324 | TSPAN8 | 0 | INTRON | 4.40597739 | 1.05E-05 | 0.02335321 |
| 3 | 146734342 | 146734342 | 1 | 3_146734342 | ENSG00000231213 | PLSCR5 | 128126 | Upstream | 4.40584965 | 1.05E-05 | 0.02336243 |
| 18 | 23525456 | 23525456 | 1 | 18_23525456 | ENSG00000141452 | RMC1 | 0 | INTRON | 4.40582395 | 1.05E-05 | 0.02336243 |
| 16 | 89480805 | 89480805 | 1 | 16_89480805 | ENSG00000167522 | ANKRD11 | 0 | INTRON | -4.4057673 | 1.05E-05 | 0.02336243 |
| 7 | 25972995 | 25972995 | 1 | 7_25972995 | ENSG00000199085 | MIR148A | 23009 | Upstream | -4.4057569 | 1.05E-05 | 0.02336243 |
| 8 | 15460400 | 15460400 | 1 | 8_15460400 | ENSG00000104723 | TUSC3 | 0 | INTRON | -4.4057507 | 1.05E-05 | 0.02336243 |
| 10 | 130893662 | 130893662 | 1 | 10_130893662 | ENSG00000264803 | MIR378C | 68925 | Downstream | 4.40570124 | 1.05E-05 | 0.02336471 |
| 1 | 202795522 | 202795522 | 1 | 1_202795522 | ENSG00000117139 | KDM5B | 0 | INTRON | -4.405661 | 1.05E-05 | 0.0233651 |
| 10 | 17568422 | 17568422 | 1 | 10_17568422 | ENSG00000236582 | PRPF38AP2 | 8939 | Upstream | 4.40564123 | 1.05E-05 | 0.0233651 |
| 10 | 83024994 | 83024994 | 1 | 10_83024994 | ENSG00000185737 | NRG3 | 37815 | Downstream | -4.4055497 | 1.06E-05 | 0.02337193 |
| 8 | 23929461 | 23929461 | 1 | 8_23929461 | ENSG00000159167 | STC1 | 74655 | Upstream | -4.4054987 | 1.06E-05 | 0.02337212 |
| 3 | 46993485 | 46993485 | 1 | 3_46993485 | ENSG00000160796 | NBEAL2 | 0 | INTRON | 4.40549143 | 1.06E-05 | 0.02337212 |
| 15 | 50666601 | 50666601 | 1 | 15_50666601 | ENSG00000092439 | TRPM7 | 0 | INTRON | 4.40541275 | 1.06E-05 | 0.02337757 |
| 8 | 69347769 | 69347769 | 1 | 8_69347769 | ENSG00000253479 | LINC01603 | 77079 | Downstream | 4.40532108 | 1.06E-05 | 0.02338441 |
| 7 | 7382130 | 7382130 | 1 | 7_7382130 | ENSG00000215018 | COL28A1 | 0 | INTRON | 4.4051719 | 1.06E-05 | 0.02339738 |
| 18 | 58778612 | 58778612 | 1 | 18_58778612 | ENSG00000267501 | AC104365.2 | 20770 | Upstream | 4.40514451 | 1.06E-05 | 0.02339738 |
| 12 | 94750159 | 94750159 | 1 | 12_94750159 | ENSG00000216306 | KRT19P2 | 83987 | Upstream | 4.40510271 | 1.06E-05 | 0.02339885 |
| 7 | 55134592 | 55134592 | 1 | 7_55134592 | ENSG00000146648 | EGFR | 0 | INTRON | 4.4050651 | 1.06E-05 | 0.02339986 |
| 4 | 42245929 | 42245929 | 1 | 4_42245929 | ENSG00000285454 | AC111006.1 | 0 | INTRON | 4.40500022 | 1.06E-05 | 0.02340383 |
| X | 136050429 | 136050429 | 1 | X_136050429 | ENSG00000198689 | SLC9A6 | 3160 | Downstream | -4.4049682 | 1.06E-05 | 0.02340424 |
| 2 | 220186044 | 220186044 | 1 | 2_220186044 | ENSG00000239498 | AC019211.1 | 0 | INTRON | -4.4049114 | 1.06E-05 | 0.02340733 |
| 22 | 44299269 | 44299269 | 1 | 22_44299269 | ENSG00000138944 | SHISAL1 | 0 | INTRON | 4.40480478 | 1.06E-05 | 0.02341319 |
| 12 | 53853684 | 53853684 | 1 | 12_53853684 | ENSG00000286069 | AC076968.2 | 0 | INTRON | -4.4048008 | 1.06E-05 | 0.02341319 |
| 15 | 101554446 | 101554446 | 1 | 15_101554446 | ENSG00000259464 | SNRPCP18 | 8089 | Upstream | 4.40476949 | 1.06E-05 | 0.02341321 |
| 3 | 115550533 | 115550533 | 1 | 3_115550533 | ENSG00000242880 | AC026341.1 | 0 | INTRON | 4.40473596 | 1.06E-05 | 0.02341321 |
| 18 | 22789878 | 22789878 | 1 | 18_22789878 | ENSG00000265943 | AC090912.1 | 0 | INTRON | 4.40471611 | 1.06E-05 | 0.02341321 |
| 1 | 17240482 | 17240482 | 1 | 1_17240482 | ENSG00000142623 | PADI1 | 0 | EXON | -4.4046269 | 1.06E-05 | 0.0234198 |
| 7 | 99853717 | 99853717 | 1 | 7_99853717 | ENSG00000021461 | CYP3A43 | 0 | INTRON | -4.4045483 | 1.06E-05 | 0.02342525 |
| 10 | 127759481 | 127759481 | 1 | 10_127759481 | ENSG00000186766 | FOXI2 | 18298 | Downstream | -4.4044829 | 1.06E-05 | 0.02342928 |
| 4 | 118490211 | 118490211 | 1 | 4_118490211 | ENSG00000154608 | CEP170P1 | 0 | INTRON | -4.404397 | 1.06E-05 | 0.02343304 |
| 6 | 13400182 | 13400182 | 1 | 6_13400182 | ENSG00000145990 | GFOD1 | 0 | INTRON | -4.4043918 | 1.06E-05 | 0.02343304 |
| 1 | 1289998 | 1289998 | 1 | 1_1289998 | ENSG00000162572 | SCNN1D | 0 | INTRON | -4.4041421 | 1.06E-05 | 0.02345699 |
| 7 | 155469739 | 155469739 | 1 | 7_155469739 | ENSG00000146910 | CNPY1 | 4466 | Downstream | -4.4040634 | 1.06E-05 | 0.02346247 |
| 9 | 39825038 | 39825038 | 1 | 9_39825038 | ENSG00000204837 | FGF7P3 | 0 | INTRON | -4.4039673 | 1.06E-05 | 0.02346982 |
| 11 | 44841944 | 44841944 | 1 | 11_44841944 | ENSG00000157570 | TSPAN18 | 0 | INTRON | 4.40390205 | 1.06E-05 | 0.02347384 |
| 6 | 23696329 | 23696329 | 1 | 6_23696329 | ENSG00000219453 | AL133270.1 | 46555 | Downstream | 4.40387367 | 1.06E-05 | 0.02347387 |
| 22 | 40022708 | 40022708 | 1 | 22_40022708 | ENSG00000133477 | FAM83F | 0 | INTRON | 4.40381897 | 1.06E-05 | 0.02347675 |
| 6 | 160075033 | 160075033 | 1 | 6_160075033 | ENSG00000197081 | IGF2R | 0 | INTRON | 4.40373752 | 1.06E-05 | 0.02348252 |
| 8 | 132865098 | 132865098 | 1 | 8_132865098 | ENSG00000042832 | TG | 1859 | Upstream | 4.40363062 | 1.06E-05 | 0.02349105 |
| 6 | 155309728 | 155309728 | 1 | 6_155309728 | ENSG00000029639 | TFB1M | 0 | INTRON | -4.4034948 | 1.07E-05 | 0.02350272 |
| 13 | 112700979 | 112700979 | 1 | 13_112700979 | ENSG00000068650 | ATP11A | 0 | INTRON | 4.40342379 | 1.07E-05 | 0.02350737 |
| 8 | 45943741 | 45943741 | 1 | 8_45943741 | ENSG00000276685 | AC118650.1 | 85062 | Downstream | -4.4033486 | 1.07E-05 | 0.02351248 |
| 5 | 5274130 | 5274130 | 1 | 5_5274130 | ENSG00000145536 | ADAMTS16 | 0 | INTRON | 4.4032651 | 1.07E-05 | 0.02351848 |
| 3 | 91598648 | 91598648 | 1 | 3_91598648 | ENSG00000283544 | ABBA01000935.2 | 84873 | Upstream | -4.4032086 | 1.07E-05 | 0.02351887 |
| 2 | 137932744 | 137932744 | 1 | 2_137932744 | ENSG00000150540 | HNMT | 31275 | Upstream | -4.4031787 | 1.07E-05 | 0.02351887 |
| 8 | 57164402 | 57164402 | 1 | 8_57164402 | ENSG00000253301 | LINC01606 | 0 | INTRON | 4.40317725 | 1.07E-05 | 0.02351887 |
| 15 | 27978721 | 27978721 | 1 | 15_27978721 | ENSG00000104044 | OCA2 | 0 | INTRON | -4.4029589 | 1.07E-05 | 0.02353951 |
| 3 | 179681953 | 179681953 | 1 | 3_179681953 | ENSG00000058056 | USP13 | 0 | EXON | 4.40266608 | 1.07E-05 | 0.02356552 |
| 14 | 72522725 | 72522725 | 1 | 14_72522725 | ENSG00000182732 | RGS6 | 0 | INTRON | -4.4026632 | 1.07E-05 | 0.02356552 |
| 8 | 79874597 | 79874597 | 1 | 8_79874597 | ENSG00000249328 | AC036214.1 | 2838 | Upstream | -4.4026193 | 1.07E-05 | 0.02356724 |
| 4 | 98669794 | 98669794 | 1 | 4_98669794 | ENSG00000260641 | AC114811.2 | 5244 | Downstream | -4.4025132 | 1.07E-05 | 0.02357102 |
| 5 | 167432454 | 167432454 | 1 | 5_167432454 | ENSG00000145934 | TENM2 | 0 | INTRON | -4.4025032 | 1.07E-05 | 0.02357102 |
| 2 | 58095077 | 58095077 | 1 | 2_58095077 | ENSG00000028116 | VRK2 | 0 | INTRON | 4.40250026 | 1.07E-05 | 0.02357102 |
| 1 | 111102346 | 111102346 | 1 | 1_111102346 | ENSG00000156171 | DRAM2 | 14986 | Downstream | -4.4024289 | 1.07E-05 | 0.02357572 |
| 3 | 153730241 | 153730241 | 1 | 3_153730241 | ENSG00000238755 | LINC02006 | 0 | INTRON | -4.4023827 | 1.07E-05 | 0.02357769 |
| 16 | 4640386 | 4640386 | 1 | 16_4640386 | ENSG00000261442 | AC023830.1 | 0 | EXON | -4.4023425 | 1.07E-05 | 0.02357901 |
| 9 | 130765503 | 130765503 | 1 | 9_130765503 | ENSG00000097007 | ABL1 | 0 | INTRON | -4.4022956 | 1.07E-05 | 0.02358106 |
| 8 | 141943546 | 141943546 | 1 | 8_141943546 | ENSG00000254183 | AC104417.1 | 24544 | Downstream | 4.40216457 | 1.07E-05 | 0.02358934 |
| 11 | 43516045 | 43516045 | 1 | 11_43516045 | ENSG00000213697 | CTBP2P6 | 5990 | Upstream | -4.4021193 | 1.07E-05 | 0.02358934 |
| 1 | 27471126 | 27471126 | 1 | 1_27471126 | ENSG00000158195 | WASF2 | 0 | INTRON | 4.40210878 | 1.07E-05 | 0.02358934 |
| 14 | 33651131 | 33651131 | 1 | 14_33651131 | ENSG00000151322 | NPAS3 | 0 | INTRON | -4.4020885 | 1.07E-05 | 0.02358934 |
| 19 | 49857401 | 49857401 | 1 | 19_49857401 | ENSG00000104960 | PTOV1 | 0 | EXON | 4.40206103 | 1.07E-05 | 0.02358934 |
| 2 | 132308515 | 132308515 | 1 | 2_132308515 | ENSG00000018607 | ZNF806 | 793 | Upstream | 4.40205113 | 1.07E-05 | 0.02358934 |
| 15 | 67180539 | 67180539 | 1 | 15_67180539 | ENSG00000166949 | SMAD3 | 0 | INTRON | -4.4020075 | 1.07E-05 | 0.02359103 |
| 10 | 121479907 | 121479907 | 1 | 10_121479907 | ENSG00000066468 | FGFR2 | 0 | 3UTR | -4.4019514 | 1.07E-05 | 0.02359409 |
| 2 | 38081683 | 38081683 | 1 | 2_38081683 | ENSG00000232973 | CYP1B1-AS1 | 0 | INTRON | 4.40190635 | 1.07E-05 | 0.02359594 |
| 5 | 175635229 | 175635229 | 1 | 5_175635229 | ENSG00000222111 | RN7SKP148 | 6767 | Downstream | 4.40180737 | 1.07E-05 | 0.02359984 |
| 2 | 135731358 | 135731358 | 1 | 2_135731358 | ENSG00000048991 | R3HDM1 | 6088 | Downstream | 4.40177119 | 1.07E-05 | 0.02359984 |
| 3 | 188558921 | 188558921 | 1 | 3_188558921 | ENSG00000145012 | LPP | 0 | INTRON | -4.4017671 | 1.07E-05 | 0.02359984 |
| X | 154348148 | 154348148 | 1 | X_154348148 | ENSG00000196924 | FLNA | 375 | Downstream | -4.4017584 | 1.07E-05 | 0.02359984 |
| 1 | 10668880 | 10668880 | 1 | 1_10668880 | ENSG00000130940 | CASZ1 | 0 | INTRON | -4.401579 | 1.07E-05 | 0.02361631 |
| 3 | 142608764 | 142608764 | 1 | 3_142608764 | ENSG00000120756 | PLS1 | 0 | INTRON | 4.40152106 | 1.07E-05 | 0.02361957 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 216394867 | 216394867 | 1 | 1_216394867 | ENSG00000042781 | USH2A | 0 | INTRON | -4.4014749 | 1.08E-05 | 0.02361972 |
| 12 | 126009 | 126009 | 1 | 12_126009 | ENSG00000120645 | IQSEC3 | 0 | INTRON | 4.40141518 | 1.08E-05 | 0.02361972 |
| 21 | 34613406 | 34613406 | 1 | 21_34613406 | ENSG00000159200 | RCAN1 | 0 | INTRON | -4.4014091 | 1.08E-05 | 0.02361972 |
| 7 | 98069846 | 98069846 | 1 | 7_98069846 | ENSG00000164715 | LMTK2 | 37015 | Upstream | 4.40138298 | 1.08E-05 | 0.02361972 |
| 14 | 36925675 | 36925675 | 1 | 14_36925675 | ENSG00000183032 | SLC25A21 | 0 | INTRON | 4.40137967 | 1.08E-05 | 0.02361972 |
| 4 | 186631486 | 186631486 | 1 | 4_186631486 | ENSG00000083857 | FAT1 | 0 | INTRON | 4.4012546 | 1.08E-05 | 0.02362876 |
| 1 | 214749591 | 214749591 | 1 | 1_214749591 | ENSG00000117724 | CENPF | 85020 | Downstream | 4.40123988 | 1.08E-05 | 0.02362876 |
| 12 | 32594322 | 32594322 | 1 | 12_32594322 | ENSG00000139132 | FGD4 | 0 | INTRON | 4.40121271 | 1.08E-05 | 0.02362876 |
| 8 | 3090080 | 3090080 | 1 | 8_3090080 | ENSG00000183117 | CSMD1 | 0 | INTRON | -4.40117 | 1.08E-05 | 0.02362924 |
| 3 | 4459074 | 4459074 | 1 | 3_4459074 | ENSG00000144455 | SUMF1 | 0 | INTRON | 4.40115234 | 1.08E-05 | 0.02362924 |
| 21 | 14442863 | 14442863 | 1 | 21_14442863 | ENSG00000155307 | SAMSN1 | 42364 | Downstream | 4.40111382 | 1.08E-05 | 0.02363039 |
| 3 | 7399639 | 7399639 | 1 | 3_7399639 | ENSG00000196277 | GRM7 | 0 | INTRON | 4.40084523 | 1.08E-05 | 0.0236551 |
| 10 | 9677315 | 9677315 | 1 | 10_9677315 | ENSG00000235838 | HSP90AB7P | 44647 | Downstream | 4.4008311 | 1.08E-05 | 0.0236551 |
| 4 | 55662685 | 55662685 | 1 | 4_55662685 | ENSG00000109255 | NMU | 25987 | Upstream | 4.40067206 | 1.08E-05 | 0.02366672 |
| 5 | 10401414 | 10401414 | 1 | 5_10401414 | ENSG00000145495 | 6-Mar | 0 | EXON | -4.4006686 | 1.08E-05 | 0.02366672 |
| 18 | 13417525 | 13417525 | 1 | 18_13417525 | ENSG00000168675 | LDLRAD4 | 0 | INTRON | 4.4006024 | 1.08E-05 | 0.02367089 |
| 17 | 16030353 | 16030353 | 1 | 17_16030353 | ENSG00000141027 | NCOR1 | 0 | 3UTR | 4.40050185 | 1.08E-05 | 0.0236779 |
| 2 | 127725389 | 127725389 | 1 | 2_127725389 | ENSG00000136709 | WDR33 | 0 | INTRON | -4.4004631 | 1.08E-05 | 0.0236779 |
| 11 | 1356102 | 1356102 | 1 | 11_1356102 | ENSG00000285985 | LINC02689 | 0 | INTRON | 4.40043243 | 1.08E-05 | 0.0236779 |
| 1 | 16324723 | 16324723 | 1 | 1_16324723 | ENSG00000037637 | FBXO42 | 0 | INTRON | -4.4004085 | 1.08E-05 | 0.0236779 |
| 12 | 122850013 | 122850013 | 1 | 12_122850013 | ENSG00000130787 | HIP1R | 0 | INTRON | 4.40039839 | 1.08E-05 | 0.0236779 |
| 14 | 21566170 | 21566170 | 1 | 14_21566170 | ENSG00000256737 | RBBP4P5 | 1086 | Downstream | 4.40032683 | 1.08E-05 | 0.02368266 |
| 3 | 62140231 | 62140231 | 1 | 3_62140231 | ENSG00000144724 | PTPRG | 0 | INTRON | 4.40027652 | 1.08E-05 | 0.02368315 |
| 16 | 51041721 | 51041721 | 1 | 16_51041721 | ENSG00000260605 | AC027688.1 | 2957 | Upstream | 4.40026632 | 1.08E-05 | 0.02368315 |
| 5 | 423815 | 423815 | 1 | 5_423815 | ENSG00000063438 | AHRR | 0 | INTRON | 4.40017756 | 1.08E-05 | 0.02368315 |
| 10 | 119764971 | 119764971 | 1 | 10_119764971 | ENSG00000198825 | INPP5F | 0 | INTRON | -4.4001746 | 1.08E-05 | 0.02368315 |
| 12 | 96539201 | 96539201 | 1 | 12_96539201 | ENSG00000188596 | CFAP54 | 0 | INTRON | -4.400134 | 1.08E-05 | 0.02368315 |
| 1 | 70433863 | 70433863 | 1 | 1_70433863 | ENSG00000116761 | CTH | 0 | EXON | -4.4001339 | 1.08E-05 | 0.02368315 |
| 1 | 74485153 | 74485153 | 1 | 1_74485153 | ENSG00000259030 | FPGT-TNNI3K | 0 | INTRON | -4.4001063 | 1.08E-05 | 0.02368315 |
| 4 | 184399021 | 184399021 | 1 | 4_184399021 | ENSG00000168310 | IRF2 | 0 | EXON | 4.40009895 | 1.08E-05 | 0.02368315 |
| 10 | 131093136 | 131093136 | 1 | 10_131093136 | ENSG00000176769 | TCERG1L | 0 | 3UTR | 4.40006134 | 1.08E-05 | 0.02368355 |
| 15 | 40557659 | 40557659 | 1 | 15_40557659 | ENSG00000259536 | AC091045.1 | 0 | EXON | 4.40000273 | 1.08E-05 | 0.02368355 |
| 1 | 161458104 | 161458104 | 1 | 1_161458104 | ENSG00000283360 | AL592295.3 | 0 | INTRON | 4.3999948 | 1.08E-05 | 0.02368355 |
| 3 | 100520326 | 100520326 | 1 | 3_100520326 | ENSG00000181458 | TMEM45A | 0 | INTRON | 4.39998365 | 1.08E-05 | 0.02368355 |
| 2 | 25783043 | 25783043 | 1 | 2_25783043 | ENSG00000143970 | ASXL2 | 0 | INTRON | 4.39995497 | 1.08E-05 | 0.02368364 |
| 5 | 14940337 | 14940337 | 1 | 5_14940337 | ENSG00000250247 | SEPHS2P1 | 19894 | Upstream | -4.3998814 | 1.08E-05 | 0.02368571 |
| 10 | 85462566 | 85462566 | 1 | 10_85462566 | ENSG00000230962 | LINC01520 | 0 | INTRON | 4.39986691 | 1.08E-05 | 0.02368571 |
| 20 | 16368299 | 16368299 | 1 | 20_16368299 | ENSG00000089177 | KIF16B | 0 | EXON | 4.39983507 | 1.08E-05 | 0.02368571 |
| 17 | 12719627 | 12719627 | 1 | 17_12719627 | ENSG00000141052 | MYOCD | 0 | INTRON | 4.39982444 | 1.08E-05 | 0.02368571 |
| 5 | 32001757 | 32001757 | 1 | 5_32001757 | ENSG00000133401 | PDZD2 | 0 | INTRON | -4.3997116 | 1.08E-05 | 0.02369167 |
| 2 | 8998616 | 8998616 | 1 | 2_8998616 | ENSG00000143797 | MBOAT2 | 0 | INTRON | -4.3996934 | 1.08E-05 | 0.02369167 |
| 2 | 175039509 | 175039509 | 1 | 2_175039509 | ENSG00000227187 | AC007435.1 | 5317 | Upstream | 4.39968617 | 1.08E-05 | 0.02369167 |
| X | 23681011 | 23681011 | 1 | X_23681011 | ENSG00000123131 | PRDX4 | 0 | INTRON | 4.39962333 | 1.08E-05 | 0.02369549 |
| 1 | 5717947 | 5717947 | 1 | 1_5717947 | ENSG00000236948 | AL365255.1 | 49652 | Upstream | 4.39948733 | 1.09E-05 | 0.0237073 |
| 9 | 23275965 | 23275965 | 1 | 9_23275965 | ENSG00000284418 | AL391117.1 | 0 | INTRON | 4.39945601 | 1.09E-05 | 0.0237076 |
| 1 | 30183911 | 30183911 | 1 | 1_30183911 | ENSG00000233372 | AL137076.1 | 42304 | Downstream | 4.3994289 | 1.09E-05 | 0.0237076 |
| 12 | 4169159 | 4169159 | 1 | 12_4169159 | ENSG00000242444 | AC007207.1 | 51027 | Upstream | 4.39933503 | 1.09E-05 | 0.02370992 |
| 17 | 54954290 | 54954290 | 1 | 17_54954290 | ENSG00000166260 | COX11 | 0 | EXON | 4.39932633 | 1.09E-05 | 0.02370992 |
| 18 | 65867136 | 65867136 | 1 | 18_65867136 | ENSG00000081138 | CDH7 | 0 | INTRON | -4.3993172 | 1.09E-05 | 0.02370992 |
| 9 | 34136204 | 34136204 | 1 | 9_34136204 | ENSG00000239392 | AL354989.2 | 1508 | Upstream | 4.39929624 | 1.09E-05 | 0.02370992 |
| 7 | 76975026 | 76975026 | 1 | 7_76975026 | ENSG00000225703 | AC114737.1 | 0 | INTRON | 4.3992577 | 1.09E-05 | 0.02371109 |
| 2 | 132768800 | 132768800 | 1 | 2_132768800 | ENSG00000176771 | NCKAP5 | 0 | INTRON | 4.39921401 | 1.09E-05 | 0.02371235 |
| 6 | 4065655 | 4065655 | 1 | 6_4065655 | ENSG00000145975 | FAM217A | 0 | INTRON | -4.3991617 | 1.09E-05 | 0.02371235 |
| 3 | 164608132 | 164608132 | 1 | 3_164608132 | ENSG00000241636 | LINC01323 | 62745 | Downstream | 4.39914704 | 1.09E-05 | 0.02371235 |
| 17 | 13933252 | 13933252 | 1 | 17_13933252 | ENSG00000233852 | AC005304.1 | 0 | INTRON | 4.39910575 | 1.09E-05 | 0.02371235 |
| 16 | 59548525 | 59548525 | 1 | 16_59548525 | ENSG00000200062 | RNU4-58P | 8259 | Downstream | 4.39910273 | 1.09E-05 | 0.02371235 |
| 6 | 166138926 | 166138926 | 1 | 6_166138926 | ENSG00000164458 | TBXT | 18729 | Downstream | 4.39907302 | 1.09E-05 | 0.02371235 |
| 21 | 41645669 | 41645669 | 1 | 21_41645669 | ENSG00000227702 | LINC00111 | 33511 | Upstream | 4.39905126 | 1.09E-05 | 0.02371235 |
| 9 | 113382970 | 113382970 | 1 | 9_113382970 | ENSG00000148218 | ALAD | 3341 | Downstream | 4.39896708 | 1.09E-05 | 0.02371851 |
| 15 | 97618852 | 97618852 | 1 | 15_97618852 | ENSG00000251209 | LINC00923 | 0 | INTRON | 4.39888172 | 1.09E-05 | 0.02372225 |
| 2 | 74237133 | 74237133 | 1 | 2_74237133 | ENSG00000188687 | SLC4A5 | 0 | INTRON | 4.39887727 | 1.09E-05 | 0.02372225 |
| 2 | 106392879 | 106392879 | 1 | 2_106392879 | ENSG00000240935 | PLGLA | 0 | EXON | 4.39874933 | 1.09E-05 | 0.0237332 |
| 1 | 245930592 | 245930592 | 1 | 1_245930592 | ENSG00000185420 | SMYD3 | 0 | EXON | -4.3986787 | 1.09E-05 | 0.02373788 |
| 10 | 106493749 | 106493749 | 1 | 10_106493749 | ENSG00000215002 | RPL23AP59 | 56356 | Upstream | 4.39856219 | 1.09E-05 | 0.02374758 |
| X | 153499976 | 153499976 | 1 | X_153499976 | ENSG00000182492 | BGN | 0 | INTRON | 4.398525 | 1.09E-05 | 0.02374861 |
| 9 | 105139713 | 105139713 | 1 | 9_105139713 | ENSG00000286536 | AL591506.1 | 0 | INTRON | -4.398392 | 1.09E-05 | 0.02376013 |
| 7 | 64496961 | 64496961 | 1 | 7_64496961 | ENSG00000228653 | HNRNPCP7 | 3863 | Upstream | -4.3983634 | 1.09E-05 | 0.02376021 |
| 18 | 50011689 | 50011689 | 1 | 18_50011689 | ENSG00000167306 | MYO5B | 0 | INTRON | 4.3983138 | 1.09E-05 | 0.0237626 |
| 2 | 84666912 | 84666912 | 1 | 2_84666912 | ENSG00000115423 | DNAH6 | 0 | INTRON | -4.3982782 | 1.09E-05 | 0.02376345 |
| 14 | 21227481 | 21227481 | 1 | 14_21227481 | ENSG00000092199 | HNRNPC | 0 | INTRON | -4.3981429 | 1.09E-05 | 0.0237734 |
| 3 | 186272787 | 186272787 | 1 | 3_186272787 | ENSG00000058866 | DGKG | 0 | INTRON | 4.3981147 | 1.09E-05 | 0.0237734 |
| 15 | 59347954 | 59347954 | 1 | 15_59347954 | ENSG00000157483 | MYO1E | 0 | INTRON | 4.39806821 | 1.09E-05 | 0.0237734 |
| 7 | 23066744 | 23066744 | 1 | 7_23066744 | ENSG00000230658 | KLHL7-DT | 33469 | Downstream | 4.3980181 | 1.09E-05 | 0.0237734 |
| 6 | 15114429 | 15114429 | 1 | 6_15114429 | ENSG00000242989 | RN7SL332P | 1208 | Downstream | 4.39799629 | 1.09E-05 | 0.0237734 |
| 16 | 63961253 | 63961253 | 1 | 16_63961253 | ENSG00000261653 | AC092337.1 | 24347 | Downstream | 4.39799182 | 1.09E-05 | 0.0237734 |
| 4 | 2115978 | 2115978 | 1 | 4_2115978 | ENSG00000214367 | HAUS3 | 0 | INTRON | 4.39796569 | 1.09E-05 | 0.0237734 |
| 18 | 13453698 | 13453698 | 1 | 18_13453698 | ENSG00000168675 | LDLRAD4 | 0 | INTRON | 4.39796522 | 1.09E-05 | 0.0237734 |
| 5 | 146542677 | 146542677 | 1 | 5_146542677 | ENSG00000250407 | AC008728.1 | 20548 | Upstream | -4.3979016 | 1.09E-05 | 0.02377732 |
| 20 | 40754984 | 40754984 | 1 | 20_40754984 | ENSG00000286972 | AL035665.2 | 0 | INTRON | 4.39777187 | 1.09E-05 | 0.02378774 |
| 7 | 154123836 | 154123836 | 1 | 7_154123836 | ENSG00000130226 | DPP6 | 0 | INTRON | 4.39775104 | 1.09E-05 | 0.02378774 |
| 11 | 17118419 | 17118419 | 1 | 11_17118419 | ENSG00000011405 | PIK3C2A | 0 | INTRON | 4.39769093 | 1.09E-05 | 0.02378975 |
| 17 | 38334723 | 38334723 | 1 | 17_38334723 | ENSG00000277399 | GPR179 | 0 | EXON | 4.39767715 | 1.09E-05 | 0.02378975 |
| 2 | 95661104 | 95661104 | 1 | 2_95661104 | ENSG00000235584 | AC008268.1 | 0 | INTRON | -4.3974647 | 1.10E-05 | 0.02381 |
| 8 | 127684320 | 127684320 | 1 | 8_127684320 | ENSG00000249375 | CASC11 | 2022 | Downstream | 4.39740742 | 1.10E-05 | 0.02381324 |
| 17 | 46894912 | 46894912 | 1 | 17_46894912 | ENSG00000158955 | WNT9B | 8182 | Downstream | 4.39733675 | 1.10E-05 | 0.02381701 |
| 11 | 84398142 | 84398142 | 1 | 11_84398142 | ENSG00000150672 | DLG2 | 0 | INTRON | -4.3973176 | 1.10E-05 | 0.02381701 |
| 3 | 103125760 | 103125760 | 1 | 3_103125760 | ENSG00000201922 | RNU1-43P | 34199 | Upstream | -4.3972358 | 1.10E-05 | 0.02382294 |
| 14 | 47418567 | 47418567 | 1 | 14_47418567 | ENSG00000139915 | MDGA2 | 0 | INTRON | 4.39699625 | 1.10E-05 | 0.02384409 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | 130085604 | 130085604 | 1 | 8_130085604 | ENSG00000153317 | ASAP1 | 0 | INTRON | 4.39698772 | 1.10E-05 | 0.02384409 |
| 7 | 101665758 | 101665758 | 1 | 7_101665758 | ENSG00000106436 | MYL10 | 36462 | Upstream | 4.39694014 | 1.10E-05 | 0.02384627 |
| 16 | 2234710 | 2234710 | 1 | 16_2234710 | ENSG00000167967 | E4F1 | 0 | EXON | -4.3968372 | 1.10E-05 | 0.02385453 |
| 18 | 12681055 | 12681055 | 1 | 18_12681055 | ENSG00000101624 | CEP76 | 0 | INTRON | -4.3966893 | 1.10E-05 | 0.02386774 |
| 1 | 272194 | 272194 | 1 | 1_272194 | ENSG00000228463 | AP006222.1 | 0 | INTRON | -4.3966393 | 1.10E-05 | 0.02387019 |
| 8 | 96095216 | 96095216 | 1 | 8_96095216 | ENSG00000183663 | AC007992.1 | 25535 | Upstream | -4.3965089 | 1.10E-05 | 0.02387467 |
| X | 55598523 | 55598523 | 1 | X_55598523 | ENSG00000235136 | AL627224.1 | 1139 | Downstream | -4.3964844 | 1.10E-05 | 0.02387467 |
| 7 | 140381044 | 140381044 | 1 | 7_140381044 | ENSG00000157800 | SLC37A3 | 0 | INTRON | 4.3964677 | 1.10E-05 | 0.02387467 |
| 8 | 29024977 | 29024977 | 1 | 8_29024977 | ENSG00000147421 | HMBOX1 | 0 | INTRON | -4.396464 | 1.10E-05 | 0.02387467 |
| 20 | 52493482 | 52493482 | 1 | 20_52493482 | ENSG00000234948 | LINC01524 | 0 | INTRON | -4.39646 | 1.10E-05 | 0.02387467 |
| 12 | 53157570 | 53157570 | 1 | 12_53157570 | ENSG00000139631 | CSAD | 92 | Downstream | 4.39641221 | 1.10E-05 | 0.0238767 |
| 3 | 117302174 | 117302174 | 1 | 3_117302174 | ENSG00000185565 | LSAMP | 162785 | Upstream | -4.3963775 | 1.10E-05 | 0.0238767 |
| 6 | 51946299 | 51946299 | 1 | 6_51946299 | ENSG00000170927 | PKHD1 | 0 | INTRON | -4.3963585 | 1.10E-05 | 0.0238767 |
| 18 | 27940697 | 27940697 | 1 | 18_27940697 | ENSG00000170558 | CDH2 | 10268 | Downstream | -4.396279 | 1.10E-05 | 0.0238824 |
| 7 | 36283393 | 36283393 | 1 | 7_36283393 | ENSG00000122547 | EEPD1 | 0 | INTRON | 4.39619828 | 1.10E-05 | 0.02388463 |
| 1 | 145436941 | 145436941 | 1 | 1_145436941 | ENSG00000270384 | U1 | 5248 | Upstream | -4.3961686 | 1.10E-05 | 0.02388463 |
| 1 | 15538702 | 15538702 | 1 | 1_15538702 | ENSG00000116138 | DNAJC16 | 0 | INTRON | 4.39613961 | 1.10E-05 | 0.02388463 |
| 4 | 55663741 | 55663741 | 1 | 4_55663741 | ENSG00000109255 | NMU | 27043 | Upstream | 4.39613953 | 1.10E-05 | 0.02388463 |
| 1 | 2658815 | 2658815 | 1 | 1_2658815 | ENSG00000215912 | TTC34 | 0 | INTRON | -4.3961204 | 1.10E-05 | 0.02388463 |
| 1 | 218300705 | 218300705 | 1 | 1_218300705 | ENSG00000067533 | RRP15 | 0 | INTRON | 4.39607568 | 1.10E-05 | 0.02388509 |
| 3 | 110309864 | 110309864 | 1 | 3_110309864 | ENSG00000240895 | AC117430.1 | 217617 | Downstream | 4.39603388 | 1.10E-05 | 0.02388509 |
| 1 | 96953972 | 96953972 | 1 | 1_96953972 | ENSG00000188641 | DPYD | 123770 | Downstream | -4.3960208 | 1.10E-05 | 0.02388509 |
| 16 | 60942103 | 60942103 | 1 | 16_60942103 | ENSG00000261178 | AC009169.1 | 13562 | Upstream | 4.39599404 | 1.10E-05 | 0.02388509 |
| 8 | 140155066 | 140155066 | 1 | 8_140155066 | ENSG00000167632 | TRAPPC9 | 0 | INTRON | -4.3959779 | 1.10E-05 | 0.02388509 |
| 21 | 8843747 | 8843747 | 1 | 21_8843747 | ENSG00000280243 | MTCO1P1 | 1818 | Upstream | 4.39584968 | 1.10E-05 | 0.02389615 |
| 8 | 13026270 | 13026270 | 1 | 8_13026270 | ENSG00000250305 | TRMT9B | 0 | 3UTR | -4.3957948 | 1.10E-05 | 0.02389691 |
| 11 | 68197399 | 68197399 | 1 | 11_68197399 | ENSG00000110066 | KMT5B | 0 | INTRON | -4.3957875 | 1.10E-05 | 0.02389691 |
| 1 | 146203988 | 146203988 | 1 | 1_146203988 | ENSG00000271425 | NBPF10 | 0 | INTRON | -4.3957318 | 1.10E-05 | 0.0239 |
| 21 | 21576022 | 21576022 | 1 | 21_21576022 | ENSG00000234730 | AP001117.1 | 0 | INTRON | 4.39566135 | 1.10E-05 | 0.02390471 |
| 7 | 76065183 | 76065183 | 1 | 7_76065183 | ENSG00000146701 | MDH2 | 0 | INTRON | -4.3956057 | 1.10E-05 | 0.02390779 |
| 4 | 152083550 | 152083550 | 1 | 4_152083550 | ENSG00000245954 | LINC02273 | 6908 | Upstream | -4.3955765 | 1.10E-05 | 0.02390797 |
| 4 | 159789538 | 159789538 | 1 | 4_159789538 | ENSG00000250488 | LINC02233 | 11710 | Upstream | 4.39551248 | 1.11E-05 | 0.02391198 |
| 16 | 1793616 | 1793616 | 1 | 16_1793616 | ENSG00000099769 | IGFALS | 0 | INTRON | 4.39542651 | 1.11E-05 | 0.02391575 |
| 1 | 164197287 | 164197287 | 1 | 1_164197287 | ENSG00000225719 | NMNAT1P2 | 145717 | Upstream | 4.39542296 | 1.11E-05 | 0.02391575 |
| 3 | 128178545 | 128178545 | 1 | 3_128178545 | ENSG00000132394 | EEFSEC | 0 | INTRON | -4.3953653 | 1.11E-05 | 0.02391906 |
| 19 | 44967588 | 44967588 | 1 | 19_44967588 | ENSG00000104853 | CLPTM1 | 0 | INTRON | 4.39530151 | 1.11E-05 | 0.02392304 |
| 8 | 30770439 | 30770439 | 1 | 8_30770439 | ENSG00000104691 | UBXN8 | 3433 | Downstream | 4.39510561 | 1.11E-05 | 0.02394158 |
| 6 | 148642357 | 148642357 | 1 | 6_148642357 | ENSG00000231368 | RPSAP40 | 5349 | Downstream | 4.39499588 | 1.11E-05 | 0.02395064 |
| 4 | 35276076 | 35276076 | 1 | 4_35276076 | ENSG00000250416 | SEC63P2 | 211735 | Upstream | -4.3949218 | 1.11E-05 | 0.02395539 |
| 14 | 83052299 | 83052299 | 1 | 14_83052299 | ENSG00000252369 | RNU7-51P | 3659 | Downstream | 4.39489757 | 1.11E-05 | 0.02395539 |
| 8 | 73439217 | 73439217 | 1 | 8_73439217 | ENSG00000253302 | STAU2-AS1 | 0 | EXON | 4.39481039 | 1.11E-05 | 0.02396121 |
| 3 | 72841052 | 72841052 | 1 | 3_72841052 | ENSG00000144736 | SHQ1 | 0 | 3UTR | 4.39476816 | 1.11E-05 | 0.02396121 |
| 4 | 113121167 | 113121167 | 1 | 4_113121167 | ENSG00000145362 | ANK2 | 0 | INTRON | -4.394762 | 1.11E-05 | 0.02396121 |
| 11 | 66626470 | 66626470 | 1 | 11_66626470 | ENSG00000239306 | RBM14 | 0 | EXON | -4.3946864 | 1.11E-05 | 0.02396651 |
| 6 | 43117107 | 43117107 | 1 | 6_43117107 | ENSG00000112655 | PTK7 | 0 | INTRON | 4.39465091 | 1.11E-05 | 0.02396738 |
| 6 | 153962455 | 153962455 | 1 | 6_153962455 | ENSG00000217085 | HMGB3P19 | 23463 | Upstream | -4.3946204 | 1.11E-05 | 0.02396771 |
| 6 | 101021095 | 101021095 | 1 | 6_101021095 | ENSG00000270987 | AL133338.2 | 130757 | Downstream | 4.39451957 | 1.11E-05 | 0.02397449 |
| 3 | 181176842 | 181176842 | 1 | 3_181176842 | ENSG00000242808 | SOX2-OT | 0 | INTRON | 4.3944954 | 1.11E-05 | 0.02397449 |
| 13 | 19737726 | 19737726 | 1 | 13_19737726 | ENSG00000121390 | PSPC1 | 0 | INTRON | 4.39443892 | 1.11E-05 | 0.02397449 |
| 2 | 195638442 | 195638442 | 1 | 2_195638442 | ENSG00000196950 | SLC39A10 | 0 | INTRON | 4.39440151 | 1.11E-05 | 0.02397449 |
| 3 | 65316592 | 65316592 | 1 | 3_65316592 | ENSG00000151276 | MAGI1 | 36932 | Downstream | -4.39438 | 1.11E-05 | 0.02397449 |
| X | 56782094 | 56782094 | 1 | X_56782094 | ENSG00000204272 | NBDY | 0 | INTRON | 4.39436948 | 1.11E-05 | 0.02397449 |
| 3 | 2367704 | 2367704 | 1 | 3_2367704 | ENSG00000144619 | CNTN4 | 0 | INTRON | -4.394366 | 1.11E-05 | 0.02397449 |
| 12 | 104273541 | 104273541 | 1 | 12_104273541 | ENSG00000198431 | TXNRD1 | 0 | INTRON | -4.3943213 | 1.11E-05 | 0.02397638 |
| 22 | 46129768 | 46129768 | 1 | 22_46129768 | ENSG00000197182 | MIRLET7BHG | 15840 | Downstream | 4.39426987 | 1.11E-05 | 0.02397902 |
| 12 | 34830386 | 34830386 | 1 | 12_34830386 | ENSG00000256614 | AK6P1 | 580428 | Downstream | 4.39417828 | 1.11E-05 | 0.02398543 |
| 7 | 110335220 | 110335220 | 1 | 7_110335220 | ENSG00000226965 | AC073114.1 | 0 | INTRON | 4.39407825 | 1.11E-05 | 0.02398543 |
| 7 | 23279619 | 23279619 | 1 | 7_23279619 | ENSG00000136235 | GPNMB | 4511 | Downstream | 4.39406874 | 1.11E-05 | 0.02398543 |
| 5 | 61017028 | 61017028 | 1 | 5_61017028 | ENSG00000164182 | NDUFAF2 | 0 | INTRON | 4.39406017 | 1.11E-05 | 0.02398543 |
| 1 | 247225903 | 247225903 | 1 | 1_247225903 | ENSG00000232347 | AL390728.5 | 0 | INTRON | -4.3940369 | 1.11E-05 | 0.02398543 |
| 4 | 108592400 | 108592400 | 1 | 4_108592400 | ENSG00000234492 | RPL34-AS1 | 0 | INTRON | -4.3940184 | 1.11E-05 | 0.02398543 |
| 10 | 1343570 | 1343570 | 1 | 10_1343570 | ENSG00000185736 | ADARB2 | 0 | INTRON | 4.39401454 | 1.11E-05 | 0.02398543 |
| 3 | 180490281 | 180490281 | 1 | 3_180490281 | ENSG00000241696 | LINC02053 | 13503 | Downstream | 4.39399146 | 1.11E-05 | 0.02398543 |
| 7 | 125631817 | 125631817 | 1 | 7_125631817 | ENSG00000224897 | POT1-AS1 | 148851 | Downstream | -4.3938732 | 1.11E-05 | 0.02399546 |
| 12 | 49421290 | 49421290 | 1 | 12_49421290 | ENSG00000123352 | SPATS2 | 0 | INTRON | -4.3938253 | 1.11E-05 | 0.02399771 |
| 5 | 18914420 | 18914420 | 1 | 5_18914420 | ENSG00000249285 | AC114981.1 | 4877 | Downstream | -4.3937819 | 1.11E-05 | 0.02399946 |
| 18 | 77770016 | 77770016 | 1 | 18_77770016 | ENSG00000252260 | RNA5SP461 | 93447 | Downstream | 4.39373121 | 1.11E-05 | 0.02400202 |
| 6 | 63596992 | 63596992 | 1 | 6_63596992 | ENSG00000285976 | AL135905.2 | 13405 | Downstream | 4.39367886 | 1.11E-05 | 0.02400436 |
| 16 | 66227822 | 66227822 | 1 | 16_66227822 | ENSG00000201999 | RNA5SP428 | 73986 | Upstream | 4.39362803 | 1.11E-05 | 0.02400436 |
| 15 | 86860101 | 86860101 | 1 | 15_86860101 | ENSG00000273540 | AGBL1 | 0 | INTRON | 4.39359691 | 1.11E-05 | 0.02400436 |
| 12 | 122567058 | 122567058 | 1 | 12_122567058 | ENSG00000184445 | KNTC1 | 0 | INTRON | -4.3935774 | 1.12E-05 | 0.02400436 |
| 1 | 187333361 | 187333361 | 1 | 1_187333361 | ENSG00000230426 | ERVMER61-1 | 0 | INTRON | 4.39356064 | 1.12E-05 | 0.02400436 |
| 3 | 161311426 | 161311426 | 1 | 3_161311426 | ENSG00000240138 | EEF1GP4 | 13486 | Downstream | -4.3935251 | 1.12E-05 | 0.02400436 |
| 10 | 34520626 | 34520626 | 1 | 10_34520626 | ENSG00000148498 | PARD3 | 0 | INTRON | 4.3934922 | 1.12E-05 | 0.02400436 |
| 3 | 40717425 | 40717425 | 1 | 3_40717425 | ENSG00000231873 | AC099560.1 | 2433 | Upstream | 4.39349009 | 1.12E-05 | 0.02400436 |
| 1 | 25626609 | 25626609 | 1 | 1_25626609 | ENSG00000117643 | MAN1C1 | 0 | INTRON | 4.39345297 | 1.12E-05 | 0.02400542 |
| 4 | 60667808 | 60667808 | 1 | 4_60667808 | ENSG00000249066 | LINC02496 | 82766 | Upstream | 4.39341122 | 1.12E-05 | 0.024007 |
| 2 | 236286160 | 236286160 | 1 | 2_236286160 | ENSG00000233611 | AC019068.1 | 0 | INTRON | 4.39336227 | 1.12E-05 | 0.02400891 |
| 10 | 98207836 | 98207836 | 1 | 10_98207836 | ENSG00000166024 | R3HCC1L | 0 | INTRON | -4.3933248 | 1.12E-05 | 0.02400891 |
| 1 | 233676909 | 233676909 | 1 | 1_233676909 | ENSG00000135750 | KCNK1 | 4395 | Downstream | -4.3932924 | 1.12E-05 | 0.02400891 |
| 10 | 102404309 | 102404309 | 1 | 10_102404309 | ENSG00000059915 | PSD | 0 | INTRON | 4.39328406 | 1.12E-05 | 0.02400891 |
| 9 | 34074824 | 34074824 | 1 | 9_34074824 | ENSG00000228352 | AL354989.1 | 9507 | Upstream | -4.3932024 | 1.12E-05 | 0.02401411 |
| 5 | 160179073 | 160179073 | 1 | 5_160179073 | ENSG00000170231 | FABP6 | 8293 | Upstream | 4.39318204 | 1.12E-05 | 0.02401411 |
| 16 | 58982557 | 58982557 | 1 | 16_58982557 | ENSG00000245768 | AC106793.1 | 0 | INTRON | 4.39315246 | 1.12E-05 | 0.02401435 |
| 6 | 120991071 | 120991071 | 1 | 6_120991071 | ENSG00000146350 | TBC1D32 | 88422 | Downstream | -4.3930554 | 1.12E-05 | 0.02402033 |
| 7 | 99487088 | 99487088 | 1 | 7_99487088 | ENSG00000198556 | ZNF789 | 0 | EXON | -4.3930179 | 1.12E-05 | 0.02402033 |
| 8 | 116811852 | 116811852 | 1 | 8_116811852 | ENSG00000147679 | UTP23 | 0 | INTRON | -4.3929821 | 1.12E-05 | 0.02402033 |
| 1 | 200510583 | 200510583 | 1 | 1_200510583 | ENSG00000282849 | AL359834.1 | 26979 | Upstream | 4.39297337 | 1.12E-05 | 0.02402033 |

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| 11 | 54750559 | 54750559 | 1 | 11_54750559 | ENSG00000255078 | OR4A6P | 24743 | Downstream | 4.39296114 | 1.12E-05 | 0.02402033 |
| 7 | 90298502 | 90298502 | 1 | 7_90298502 | ENSG00000105792 | CFAP69 | 0 | INTRON | 4.39292613 | 1.12E-05 | 0.02402116 |
| 12 | 94869608 | 94869608 | 1 | 12_94869608 | ENSG00000184752 | NDUFA12 | 27446 | Downstream | -4.3928728 | 1.12E-05 | 0.02402402 |
| 2 | 55541187 | 55541187 | 1 | 2_55541187 | ENSG00000163001 | CFAP36 | 0 | INTRON | -4.3927361 | 1.12E-05 | 0.02403611 |
| 12 | 46452215 | 46452215 | 1 | 12_46452215 | ENSG00000257261 | AC008014.1 | 0 | INTRON | -4.39263 | 1.12E-05 | 0.02404481 |
| 12 | 59612076 | 59612076 | 1 | 12_59612076 | ENSG00000118596 | SLC16A7 | 0 | INTRON | 4.3924764 | 1.12E-05 | 0.02405692 |
| 17 | 45596087 | 45596087 | 1 | 17_45596087 | ENSG00000280022 | AC126544.1 | 2718 | Downstream | 4.39246352 | 1.12E-05 | 0.02405692 |
| 18 | 3052065 | 3052065 | 1 | 18_3052065 | ENSG00000101605 | MYOM1 | 14741 | Downstream | 4.39243583 | 1.12E-05 | 0.02405692 |
| X | 116069101 | 116069101 | 1 | X_116069101 | ENSG00000231371 | AKR1B1P8 | 24683 | Downstream | 4.39240412 | 1.12E-05 | 0.02405692 |
| 7 | 65199020 | 65199020 | 1 | 7_65199020 | ENSG00000164669 | INTS4P1 | 0 | INTRON | -4.3923835 | 1.12E-05 | 0.02405692 |
| 6 | 49425438 | 49425438 | 1 | 6_49425438 | ENSG00000146085 | MMUT | 4921 | Downstream | -4.3923379 | 1.12E-05 | 0.02405732 |
| 6 | 4191357 | 4191357 | 1 | 6_4191357 | ENSG00000216307 | AL136309.1 | 1551 | Downstream | 4.39232505 | 1.12E-05 | 0.02405732 |
| 10 | 101682164 | 101682164 | 1 | 10_101682164 | ENSG00000107829 | FBXW4 | 0 | INTRON | 4.39215926 | 1.12E-05 | 0.02406988 |
| 17 | 39006077 | 39006077 | 1 | 17_39006077 | ENSG00000266588 | AC006441.4 | 0 | INTRON | 4.39215682 | 1.12E-05 | 0.02406988 |
| 9 | 73993901 | 73993901 | 1 | 9_73993901 | ENSG00000223368 | AL513124.1 | 120604 | Upstream | -4.392076 | 1.12E-05 | 0.0240758 |
| 8 | 15909186 | 15909186 | 1 | 8_15909186 | ENSG00000287476 | AC018437.3 | 0 | INTRON | -4.3920003 | 1.12E-05 | 0.02408116 |
| 14 | 73103282 | 73103282 | 1 | 14_73103282 | ENSG00000119707 | RBM25 | 0 | 3UTR | 4.39195738 | 1.12E-05 | 0.02408287 |
| 12 | 126628522 | 126628522 | 1 | 12_126628522 | ENSG00000256732 | AC006065.4 | 0 | INTRON | -4.3919003 | 1.12E-05 | 0.02408612 |
| 9 | 28915305 | 28915305 | 1 | 9_28915305 | ENSG00000215939 | MIR873 | 26350 | Upstream | 4.3918733 | 1.12E-05 | 0.02408612 |
| 7 | 99836164 | 99836164 | 1 | 7_99836164 | ENSG00000021461 | CYP3A43 | 0 | INTRON | -4.3917561 | 1.12E-05 | 0.0240921 |
| 8 | 37816653 | 37816653 | 1 | 8_37816653 | ENSG00000020181 | ADGRA2 | 0 | INTRON | 4.39175482 | 1.12E-05 | 0.0240921 |
| 20 | 43392503 | 43392503 | 1 | 20_43392503 | ENSG00000237555 | AL031681.1 | 3462 | Upstream | 4.39173725 | 1.12E-05 | 0.0240921 |
| 1 | 18636036 | 18636036 | 1 | 1_18636036 | ENSG00000009709 | PAX7 | 0 | INTRON | -4.3914985 | 1.13E-05 | 0.02411428 |
| 16 | 2897006 | 2897006 | 1 | 16_2897006 | ENSG00000162076 | FLYWCH2 | 0 | INTRON | 4.39146607 | 1.13E-05 | 0.02411428 |
| 18 | 22506209 | 22506209 | 1 | 18_22506209 | ENSG00000239490 | RPS4XP18 | 80255 | Upstream | 4.39145504 | 1.13E-05 | 0.02411428 |
| 4 | 78195648 | 78195648 | 1 | 4_78195648 | ENSG00000138759 | FRAS1 | 0 | INTRON | 4.39133504 | 1.13E-05 | 0.02412456 |
| 6 | 30634290 | 30634290 | 1 | 6_30634290 | ENSG00000137343 | ATAT1 | 0 | INTRON | 4.39130213 | 1.13E-05 | 0.02412518 |
| 4 | 137100387 | 137100387 | 1 | 4_137100387 | ENSG00000248869 | LINC02511 | 0 | INTRON | 4.3912358 | 1.13E-05 | 0.0241295 |
| 1 | 46625918 | 46625918 | 1 | 1_46625918 | ENSG00000123472 | ATPAF1 | 6818 | Downstream | 4.39119641 | 1.13E-05 | 0.02412992 |
| 1 | 61066144 | 61066144 | 1 | 1_61066144 | ENSG00000162599 | NFIA | 0 | INTRON | -4.3911158 | 1.13E-05 | 0.02412992 |
| 18 | 49851830 | 49851830 | 1 | 18_49851830 | ENSG00000167306 | MYO5B | 0 | INTRON | -4.3911116 | 1.13E-05 | 0.02412992 |
| 11 | 127691763 | 127691763 | 1 | 11_127691763 | ENSG00000254591 | AP003532.1 | 33886 | Downstream | -4.3910578 | 1.13E-05 | 0.02412992 |
| 2 | 229198803 | 229198803 | 1 | 2_229198803 | ENSG00000153823 | PID1 | 0 | INTRON | -4.3910136 | 1.13E-05 | 0.02412992 |
| 5 | 177337363 | 177337363 | 1 | 5_177337363 | ENSG00000169223 | LMAN2 | 0 | EXON | -4.3910075 | 1.13E-05 | 0.02412992 |
| X | 113212500 | 113212500 | 1 | X_113212500 | ENSG00000286072 | AC002072.1 | 314 | Downstream | -4.3910005 | 1.13E-05 | 0.02412992 |
| 8 | 6171703 | 6171703 | 1 | 8_6171703 | ENSG00000253880 | AC009435.1 | 0 | INTRON | 4.39099256 | 1.13E-05 | 0.02412992 |
| 8 | 144606183 | 144606183 | 1 | 8_144606183 | ENSG00000147799 | ARHGAP39 | 367 | Upstream | 4.39087438 | 1.13E-05 | 0.02412992 |
| 15 | 79669667 | 79669667 | 1 | 15_79669667 | ENSG00000259208 | AC023968.1 | 851 | Upstream | 4.39086929 | 1.13E-05 | 0.02412992 |
| 1 | 44605291 | 44605291 | 1 | 1_44605291 | ENSG00000187147 | RNF220 | 0 | INTRON | 4.39086484 | 1.13E-05 | 0.02412992 |
| 9 | 106441062 | 106441062 | 1 | 9_106441062 | ENSG00000234323 | LINC01505 | 0 | INTRON | -4.390851 | 1.13E-05 | 0.02412992 |
| 8 | 48439950 | 48439950 | 1 | 8_48439950 | ENSG00000279881 | AC041040.1 | 8909 | Upstream | -4.3908382 | 1.13E-05 | 0.02412992 |
| 13 | 24989750 | 24989750 | 1 | 13_24989750 | ENSG00000232858 | RPL34P27 | 825 | Upstream | 4.3908344 | 1.13E-05 | 0.02412992 |
| 18 | 65867324 | 65867324 | 1 | 18_65867324 | ENSG00000081138 | CDH7 | 0 | INTRON | -4.3908221 | 1.13E-05 | 0.02412992 |
| X | 12772085 | 12772085 | 1 | X_12772085 | ENSG00000101911 | PRPS2 | 19269 | Upstream | -4.3907776 | 1.13E-05 | 0.02413183 |
| 4 | 51982094 | 51982094 | 1 | 4_51982094 | ENSG00000243929 | AC104784.1 | 3722 | Upstream | 4.3907445 | 1.13E-05 | 0.02413248 |
| 16 | 80562583 | 80562583 | 1 | 16_80562583 | ENSG00000259867 | AC105411.1 | 0 | INTRON | 4.39070518 | 1.13E-05 | 0.02413364 |
| 3 | 124249353 | 124249353 | 1 | 3_124249353 | ENSG00000160145 | KALRN | 0 | INTRON | 4.39067945 | 1.13E-05 | 0.02413364 |
| 16 | 32635080 | 32635080 | 1 | 16_32635080 | ENSG00000261111 | AC133569.1 | 592 | Downstream | 4.39059948 | 1.13E-05 | 0.02413949 |
| 10 | 33237847 | 33237847 | 1 | 10_33237847 | ENSG00000099250 | NRP1 | 0 | INTRON | 4.39046549 | 1.13E-05 | 0.02415055 |
| 11 | 59136099 | 59136099 | 1 | 11_59136099 | ENSG00000245571 | FAM111A-DT | 0 | EXON | 4.39042879 | 1.13E-05 | 0.02415055 |
| 9 | 128373225 | 128373225 | 1 | 9_128373225 | ENSG00000167118 | URM1 | 0 | INTRON | 4.39041798 | 1.13E-05 | 0.02415055 |
| 3 | 42358183 | 42358183 | 1 | 3_42358183 | ENSG00000229572 | EIF4BP4 | 15816 | Downstream | -4.3903887 | 1.13E-05 | 0.02415078 |
| 10 | 17706471 | 17706471 | 1 | 10_17706471 | ENSG00000136738 | STAM | 0 | INTRON | 4.39030702 | 1.13E-05 | 0.02415207 |
| 4 | 6991424 | 6991424 | 1 | 4_6991424 | ENSG00000132405 | TBC1D14 | 0 | INTRON | 4.39029277 | 1.13E-05 | 0.02415207 |
| 1 | 47994458 | 47994458 | 1 | 1_47994458 | ENSG00000269113 | TRABD2B | 0 | EXON | 4.39026066 | 1.13E-05 | 0.02415207 |
| 10 | 133606434 | 133606434 | 1 | 10_133606434 | ENSG00000288107 | AL731769.2 | 0 | INTRON | 4.39024604 | 1.13E-05 | 0.02415207 |
| 17 | 70081590 | 70081590 | 1 | 17_70081590 | ENSG00000153822 | KCNJ16 | 0 | INTRON | -4.3902407 | 1.13E-05 | 0.02415207 |
| 2 | 5081717 | 5081717 | 1 | 2_5081717 | ENSG00000207192 | RNU6-649P | 136334 | Downstream | 4.39017988 | 1.13E-05 | 0.02415374 |
| 2 | 201592154 | 201592154 | 1 | 2_201592154 | ENSG00000155754 | C2CD6 | 0 | INTRON | 4.39014714 | 1.13E-05 | 0.02415374 |
| 11 | 72014033 | 72014033 | 1 | 11_72014033 | ENSG00000137497 | NUMA1 | 0 | EXON | 4.39014391 | 1.13E-05 | 0.02415374 |
| 14 | 65643420 | 65643420 | 1 | 14_65643420 | ENSG00000033170 | FUT8 | 0 | INTRON | 4.39000937 | 1.13E-05 | 0.02416566 |
| 2 | 199146264 | 199146264 | 1 | 2_199146264 | ENSG00000230407 | AC018717.1 | 36176 | Downstream | -4.3899376 | 1.13E-05 | 0.02416628 |
| 9 | 97712876 | 97712876 | 1 | 9_97712876 | ENSG00000236130 | PTCSC2 | 0 | INTRON | -4.3899221 | 1.13E-05 | 0.02416628 |
| 1 | 32138399 | 32138399 | 1 | 1_32138399 | ENSG00000025800 | KPNA6 | 0 | INTRON | 4.38990675 | 1.13E-05 | 0.02416628 |
| 11 | 40554922 | 40554922 | 1 | 11_40554922 | ENSG00000148948 | LRRC4C | 0 | INTRON | -4.3898948 | 1.13E-05 | 0.02416628 |
| 19 | 29741351 | 29741351 | 1 | 19_29741351 | ENSG00000131943 | C19orf12 | 25562 | Upstream | 4.38978366 | 1.13E-05 | 0.02417561 |
| 11 | 124753817 | 124753817 | 1 | 11_124753817 | ENSG00000149564 | ESAM | 0 | 3UTR | -4.3897276 | 1.13E-05 | 0.02417881 |
| 14 | 35873881 | 35873881 | 1 | 14_35873881 | ENSG00000257272 | AL162311.1 | 0 | EXON | 4.38968378 | 1.14E-05 | 0.02418066 |
| 9 | 88804253 | 88804253 | 1 | 9_88804253 | ENSG00000286414 | AL390791.1 | 537 | Upstream | -4.3895929 | 1.14E-05 | 0.02418774 |
| 2 | 5457163 | 5457163 | 1 | 2_5457163 | ENSG00000232835 | AC107057.1 | 92616 | Downstream | 4.38949142 | 1.14E-05 | 0.02419302 |
| 10 | 69325616 | 69325616 | 1 | 10_69325616 | ENSG00000156515 | HK1 | 0 | INTRON | 4.38947483 | 1.14E-05 | 0.02419302 |
| 2 | 129965562 | 129965562 | 1 | 2_129965562 | ENSG00000225449 | RAB6C-AS1 | 1029 | Downstream | 4.38945533 | 1.14E-05 | 0.02419302 |
| 1 | 226700400 | 226700400 | 1 | 1_226700400 | ENSG00000143772 | ITPKB | 0 | INTRON | -4.3894366 | 1.14E-05 | 0.02419302 |
| 1 | 241530378 | 241530378 | 1 | 1_241530378 | ENSG00000117009 | KMO | 1755 | Upstream | 4.38933496 | 1.14E-05 | 0.0242013 |
| 10 | 130773790 | 130773790 | 1 | 10_130773790 | ENSG00000264803 | MIR378C | 188797 | Downstream | 4.38914887 | 1.14E-05 | 0.02421898 |
| 15 | 46552096 | 46552096 | 1 | 15_46552096 | ENSG00000287704 | AC012405.1 | 0 | INTRON | -4.3890712 | 1.14E-05 | 0.0242246 |
| 5 | 55191956 | 55191956 | 1 | 5_55191956 | ENSG00000164287 | CDC20B | 18781 | Upstream | -4.3890149 | 1.14E-05 | 0.02422784 |
| 2 | 178828207 | 178828207 | 1 | 2_178828207 | ENSG00000155657 | TTN | 0 | INTRON | 4.38889539 | 1.14E-05 | 0.02423578 |
| 11 | 123533250 | 123533250 | 1 | 11_123533250 | ENSG00000023171 | GRAMD1B | 0 | INTRON | 4.38888932 | 1.14E-05 | 0.02423578 |
| 8 | 14791288 | 14791288 | 1 | 8_14791288 | ENSG00000185053 | SGCZ | 0 | INTRON | -4.3888306 | 1.14E-05 | 0.02423929 |
| 8 | 25358257 | 25358257 | 1 | 8_25358257 | ENSG00000147459 | DOCK5 | 0 | INTRON | 4.38879655 | 1.14E-05 | 0.02424006 |
| 17 | 80212227 | 80212227 | 1 | 17_80212227 | ENSG00000181523 | SGSH | 0 | 3UTR | 4.38862674 | 1.14E-05 | 0.02424828 |
| 1 | 44314769 | 44314769 | 1 | 1_44314769 | ENSG00000117419 | ERI3 | 0 | INTRON | 4.38860431 | 1.14E-05 | 0.02424828 |
| 8 | 72828733 | 72828733 | 1 | 8_72828733 | ENSG00000182674 | KCNB2 | 0 | INTRON | -4.3885969 | 1.14E-05 | 0.02424828 |
| 11 | 81596028 | 81596028 | 1 | 11_81596028 | ENSG00000255316 | MTND6P25 | 39603 | Upstream | 4.38859522 | 1.14E-05 | 0.02424828 |
| 8 | 4181257 | 4181257 | 1 | 8_4181257 | ENSG00000183117 | CSMD1 | 0 | INTRON | -4.388561 | 1.14E-05 | 0.02424828 |
| 14 | 83651455 | 83651455 | 1 | 14_83651455 | ENSG00000238561 | RNU6ATAC28P | 98928 | Upstream | -4.3885525 | 1.14E-05 | 0.02424828 |
| 18 | 1791036 | 1791036 | 1 | 18_1791036 | ENSG00000266602 | AP005262.2 | 0 | INTRON | -4.3885248 | 1.14E-05 | 0.02424828 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 16 | 77127119 | 77127119 | 1 | 16_77127119 | ENSG00000279856 | AC106733.1 | 21822 | Downstream | 4.38845926 | 1.14E-05 | 0.02424828 |
| X | 48903543 | 48903543 | 1 | X_48903543 | ENSG00000102100 | SLC35A2 | 0 | 3UTR | 4.38845184 | 1.14E-05 | 0.02424828 |
| 9 | 11151288 | 11151288 | 1 | 9_11151288 | ENSG00000230365 | AL451129.1 | 124025 | Downstream | 4.3884511 | 1.14E-05 | 0.02424828 |
| 17 | 79152410 | 79152410 | 1 | 17_79152410 | ENSG00000167281 | RBFOX3 | 0 | INTRON | -4.3882812 | 1.14E-05 | 0.02426357 |
| 7 | 94033935 | 94033935 | 1 | 7_94033935 | ENSG00000236453 | AC003092.1 | 0 | INTRON | -4.3882074 | 1.14E-05 | 0.02426357 |
| 12 | 45891886 | 45891886 | 1 | 12_45891886 | ENSG00000189079 | ARID2 | 0 | EXON | 4.38820438 | 1.14E-05 | 0.02426357 |
| 22 | 36112133 | 36112133 | 1 | 22_36112133 | ENSG00000279714 | Z95114.2 | 18781 | Downstream | 4.38818131 | 1.14E-05 | 0.02426357 |
| 17 | 76500431 | 76500431 | 1 | 17_76500431 | ENSG00000129667 | RHBDF2 | 0 | INTRON | -4.3881782 | 1.14E-05 | 0.02426357 |
| 15 | 84130800 | 84130800 | 1 | 15_84130800 | ENSG00000259404 | EFL1P1 | 4196 | Downstream | 4.38813841 | 1.14E-05 | 0.02426498 |
| 7 | 72804050 | 72804050 | 1 | 7_72804050 | ENSG00000277149 | TYW1B | 0 | INTRON | 4.38808319 | 1.14E-05 | 0.02426616 |
| 21 | 32288008 | 32288008 | 1 | 21_32288008 | ENSG00000170262 | MRAP | 3804 | Upstream | 4.38807365 | 1.14E-05 | 0.02426616 |
| 7 | 150476336 | 150476336 | 1 | 7_150476336 | ENSG00000171115 | GIMAP8 | 0 | INTRON | 4.38804546 | 1.14E-05 | 0.02426619 |
| 16 | 5823193 | 5823193 | 1 | 16_5823193 | ENSG00000078328 | RBFOX1 | 0 | INTRON | 4.38801913 | 1.14E-05 | 0.02426619 |
| 4 | 77612903 | 77612903 | 1 | 4_77612903 | ENSG00000156234 | CXCL13 | 1069 | Downstream | -4.3879483 | 1.14E-05 | 0.02427106 |
| 2 | 225520154 | 225520154 | 1 | 2_225520154 | ENSG00000144460 | NYAP2 | 0 | INTRON | 4.38789491 | 1.14E-05 | 0.02427399 |
| X | 64043545 | 64043545 | 1 | X_64043545 | ENSG00000232794 | HNRNPDP1 | 759 | Upstream | -4.3877909 | 1.15E-05 | 0.02427944 |
| 10 | 1634047 | 1634047 | 1 | 10_1634047 | ENSG00000185736 | ADARB2 | 0 | INTRON | 4.3877725 | 1.15E-05 | 0.02427944 |
| 11 | 69669665 | 69669665 | 1 | 11_69669665 | ENSG00000149716 | LTO1 | 0 | INTRON | 4.38776478 | 1.15E-05 | 0.02427944 |
| 13 | 19506408 | 19506408 | 1 | 13_19506408 | ENSG00000132958 | TPTE2 | 0 | INTRON | 4.38770889 | 1.15E-05 | 0.02428265 |
| 6 | 11611406 | 11611406 | 1 | 6_11611406 | ENSG00000271897 | AL357518.1 | 3425 | Downstream | 4.38750522 | 1.15E-05 | 0.02430237 |
| 5 | 44408451 | 44408451 | 1 | 5_44408451 | ENSG00000248464 | FGF10-AS1 | 0 | INTRON | -4.3874212 | 1.15E-05 | 0.02430872 |
| 6 | 46707607 | 46707607 | 1 | 6_46707607 | ENSG00000146070 | PLA2G7 | 0 | INTRON | 4.38735068 | 1.15E-05 | 0.02431358 |
| 10 | 133453634 | 133453634 | 1 | 10_133453634 | ENSG00000214279 | SCART1 | 293 | Upstream | -4.3872572 | 1.15E-05 | 0.02431452 |
| 11 | 127959830 | 127959830 | 1 | 11_127959830 | ENSG00000254612 | AP001000.1 | 18176 | Upstream | -4.3872255 | 1.15E-05 | 0.02431452 |
| 7 | 157147269 | 157147269 | 1 | 7_157147269 | ENSG00000009335 | UBE3C | 0 | INTRON | -4.3872189 | 1.15E-05 | 0.02431452 |
| 4 | 176508733 | 176508733 | 1 | 4_176508733 | ENSG00000248480 | AC093801.2 | 122658 | Downstream | -4.3872138 | 1.15E-05 | 0.02431452 |
| 17 | 10494633 | 10494633 | 1 | 17_10494633 | ENSG00000109061 | MYH1 | 0 | EXON | -4.3872068 | 1.15E-05 | 0.02431452 |
| 9 | 38523865 | 38523865 | 1 | 9_38523865 | ENSG00000283162 | AL390726.5 | 0 | INTRON | -4.3871463 | 1.15E-05 | 0.02431825 |
| 9 | 129621647 | 129621647 | 1 | 9_129621647 | ENSG00000148335 | NTMT1 | 0 | INTRON | 4.38705082 | 1.15E-05 | 0.0243259 |
| 18 | 47557393 | 47557393 | 1 | 18_47557393 | ENSG00000267761 | MIR4527HG | 0 | INTRON | 4.38701068 | 1.15E-05 | 0.02432736 |
| 16 | 70539504 | 70539504 | 1 | 16_70539504 | ENSG00000189091 | SF3B3 | 0 | INTRON | -4.3868308 | 1.15E-05 | 0.02434445 |
| 15 | 73999897 | 73999897 | 1 | 15_73999897 | ENSG00000140464 | PML | 0 | INTRON | 4.38677009 | 1.15E-05 | 0.02434822 |
| 12 | 15859833 | 15859833 | 1 | 12_15859833 | ENSG00000151491 | EPS8 | 0 | INTRON | 4.38669542 | 1.15E-05 | 0.02435354 |
| 5 | 119314372 | 119314372 | 1 | 5_119314372 | ENSG00000145779 | TNFAIP8 | 0 | INTRON | 4.38665577 | 1.15E-05 | 0.02435355 |
| 4 | 24829704 | 24829704 | 1 | 4_24829704 | ENSG00000181982 | CCDC149 | 0 | EXON | 4.38661453 | 1.15E-05 | 0.02435355 |
| 6 | 152318638 | 152318638 | 1 | 6_152318638 | ENSG00000131018 | SYNE1 | 0 | INTRON | -4.3866142 | 1.15E-05 | 0.02435355 |
| 7 | 98299140 | 98299140 | 1 | 7_98299140 | ENSG00000006453 | BAIAP2L1 | 0 | INTRON | -4.3865836 | 1.15E-05 | 0.02435395 |
| 5 | 30763424 | 30763424 | 1 | 5_30763424 | ENSG00000287940 | AC026433.1 | 19720 | Upstream | -4.3865375 | 1.15E-05 | 0.02435608 |
| 5 | 152345767 | 152345767 | 1 | 5_152345767 | ENSG00000286749 | AC008571.2 | 29230 | Upstream | 4.38645834 | 1.15E-05 | 0.02435772 |
| 22 | 16169111 | 16169111 | 1 | 22_16169111 | ENSG00000278188 | U6 | 27239 | Downstream | 4.38643283 | 1.15E-05 | 0.02435772 |
| 2 | 108965096 | 108965096 | 1 | 2_108965096 | ENSG00000135960 | EDAR | 0 | INTRON | 4.38641552 | 1.15E-05 | 0.02435772 |
| 1 | 42806607 | 42806607 | 1 | 1_42806607 | ENSG00000274386 | TMEM269 | 0 | INTRON | -4.3863965 | 1.15E-05 | 0.02435772 |
| 16 | 6247793 | 6247793 | 1 | 16_6247793 | ENSG00000078328 | RBFOX1 | 0 | INTRON | -4.3863877 | 1.15E-05 | 0.02435772 |
| 19 | 17211982 | 17211982 | 1 | 19_17211982 | ENSG00000099331 | MYO9B | 0 | 3UTR | 4.38626955 | 1.15E-05 | 0.02436648 |
| 4 | 82858372 | 82858372 | 1 | 4_82858372 | ENSG00000138674 | SEC31A | 0 | INTRON | -4.3862553 | 1.15E-05 | 0.02436648 |
| 7 | 106519959 | 106519959 | 1 | 7_106519959 | ENSG00000243797 | AC004917.1 | 0 | INTRON | -4.3862128 | 1.15E-05 | 0.02436822 |
| 6 | 42088972 | 42088972 | 1 | 6_42088972 | ENSG00000137413 | TAF8 | 1511 | Downstream | 4.38613239 | 1.15E-05 | 0.0243742 |
| 1 | 190645585 | 190645585 | 1 | 1_190645585 | ENSG00000231175 | LINC01720 | 0 | INTRON | 4.38609384 | 1.15E-05 | 0.02437549 |
| 20 | 3357246 | 3357246 | 1 | 20_3357246 | ENSG00000088854 | C20orf194 | 0 | INTRON | 4.38597565 | 1.15E-05 | 0.0243857 |
| 7 | 8659377 | 8659377 | 1 | 7_8659377 | ENSG00000122584 | NXPH1 | 0 | INTRON | -4.385891 | 1.16E-05 | 0.02439216 |
| 1 | 143821695 | 143821695 | 1 | 1_143821695 | ENSG00000233430 | AC239798.1 | 0 | INTRON | 4.3857838 | 1.16E-05 | 0.02439624 |
| X | 41402201 | 41402201 | 1 | X_41402201 | ENSG00000215301 | DDX3X | 37729 | Downstream | -4.3857672 | 1.16E-05 | 0.02439624 |
| 1 | 72248680 | 72248680 | 1 | 1_72248680 | ENSG00000172260 | NEGR1 | 0 | INTRON | -4.385752 | 1.16E-05 | 0.02439624 |
| 4 | 187232274 | 187232274 | 1 | 4_187232274 | ENSG00000249747 | LINC02374 | 22928 | Downstream | -4.3857467 | 1.16E-05 | 0.02439624 |
| 10 | 122617881 | 122617881 | 1 | 10_122617881 | ENSG00000187908 | DMBT1 | 0 | INTRON | -4.3856326 | 1.16E-05 | 0.02440506 |
| 15 | 89754041 | 89754041 | 1 | 15_89754041 | ENSG00000259441 | MRPL15P1 | 548 | Downstream | -4.385614 | 1.16E-05 | 0.02440506 |
| 2 | 240856391 | 240856391 | 1 | 2_240856391 | ENSG00000172482 | AGXT | 12432 | Upstream | 4.38558537 | 1.16E-05 | 0.02440524 |
| 7 | 28685426 | 28685426 | 1 | 7_28685426 | ENSG00000146592 | CREB5 | 0 | INTRON | 4.38544857 | 1.16E-05 | 0.02441756 |
| 19 | 51091633 | 51091633 | 1 | 19_51091633 | ENSG00000142544 | CTU1 | 5972 | Downstream | -4.3853684 | 1.16E-05 | 0.02442099 |
| 6 | 155231169 | 155231169 | 1 | 6_155231169 | ENSG00000146426 | TIAM2 | 0 | INTRON | -4.3853517 | 1.16E-05 | 0.02442099 |
| 16 | 86302534 | 86302534 | 1 | 16_86302534 | ENSG00000268754 | LINC01081 | 1231 | Upstream | 4.38533376 | 1.16E-05 | 0.02442099 |
| 6 | 130971398 | 130971398 | 1 | 6_130971398 | ENSG00000079819 | EPB41L2 | 0 | INTRON | -4.38531 | 1.16E-05 | 0.02442099 |
| 2 | 42323799 | 42323799 | 1 | 2_42323799 | ENSG00000143924 | EML4 | 0 | INTRON | 4.38517956 | 1.16E-05 | 0.02443217 |
| 10 | 45583219 | 45583219 | 1 | 10_45583219 | ENSG00000165406 | 8-Mar | 0 | INTRON | -4.38514 | 1.16E-05 | 0.02443217 |
| 16 | 4649408 | 4649408 | 1 | 16_4649408 | ENSG00000102858 | MGRN1 | 0 | EXON | 4.38512954 | 1.16E-05 | 0.02443217 |
| 5 | 125307340 | 125307340 | 1 | 5_125307340 | ENSG00000260192 | LINC02240 | 0 | INTRON | -4.3850806 | 1.16E-05 | 0.02443304 |
| 9 | 127445107 | 127445107 | 1 | 9_127445107 | ENSG00000196152 | ZNF79 | 0 | EXON | 4.38506779 | 1.16E-05 | 0.02443304 |
| 9 | 70883609 | 70883609 | 1 | 9_70883609 | ENSG00000083067 | TRPM3 | 0 | INTRON | -4.3849941 | 1.16E-05 | 0.02443829 |
| 9 | 761703 | 761703 | 1 | 9_761703 | ENSG00000107104 | KANK1 | 15597 | Downstream | 4.38490918 | 1.16E-05 | 0.0244448 |
| 5 | 69122451 | 69122451 | 1 | 5_69122451 | ENSG00000145740 | SLC30A5 | 0 | INTRON | 4.38486172 | 1.16E-05 | 0.0244471 |
| 8 | 9252202 | 9252202 | 1 | 8_9252202 | ENSG00000248538 | AC022784.1 | 0 | INTRON | 4.38482234 | 1.16E-05 | 0.02444806 |
| 4 | 55749881 | 55749881 | 1 | 4_55749881 | ENSG00000251923 | RNU6-276P | 48754 | Upstream | 4.38477236 | 1.16E-05 | 0.02444806 |
| 6 | 22479729 | 22479729 | 1 | 6_22479729 | ENSG00000272168 | CASC15 | 0 | INTRON | -4.3847724 | 1.16E-05 | 0.02444806 |
| 7 | 94210925 | 94210925 | 1 | 7_94210925 | ENSG00000285090 | AC002074.1 | 67754 | Downstream | -4.3847359 | 1.16E-05 | 0.02444863 |
| 7 | 15807791 | 15807791 | 1 | 7_15807791 | ENSG00000286376 | AC006041.2 | 11421 | Upstream | 4.38469873 | 1.16E-05 | 0.02444863 |
| 1 | 63283922 | 63283922 | 1 | 1_63283922 | ENSG00000224209 | LINC00466 | 0 | INTRON | 4.38465423 | 1.16E-05 | 0.02444863 |
| 2 | 177920922 | 177920922 | 1 | 2_177920922 | ENSG00000128655 | PDE11A | 0 | INTRON | 4.38464754 | 1.16E-05 | 0.02444863 |
| 5 | 145137269 | 145137269 | 1 | 5_145137269 | ENSG00000251031 | AC132803.1 | 0 | INTRON | 4.38462673 | 1.16E-05 | 0.02444863 |
| 7 | 77276120 | 77276120 | 1 | 7_77276120 | ENSG00000135205 | CCDC146 | 0 | INTRON | -4.3846057 | 1.16E-05 | 0.02444863 |
| 3 | 101483258 | 101483258 | 1 | 3_101483258 | ENSG00000138468 | SENP7 | 0 | INTRON | 4.38446142 | 1.16E-05 | 0.02445775 |
| 1 | 232318954 | 232318954 | 1 | 1_232318954 | ENSG00000116991 | SIPA1L2 | 79010 | Downstream | 4.38444111 | 1.16E-05 | 0.02445775 |
| 11 | 30160731 | 30160731 | 1 | 11_30160731 | ENSG00000254532 | AL358944.1 | 0 | INTRON | -4.3844208 | 1.16E-05 | 0.02445775 |
| 11 | 129135929 | 129135929 | 1 | 11_129135929 | ENSG00000134909 | ARHGAP32 | 0 | INTRON | -4.3844013 | 1.16E-05 | 0.02445775 |
| 21 | 40671513 | 40671513 | 1 | 21_40671513 | ENSG00000171587 | DSCAM | 0 | INTRON | 4.38438998 | 1.16E-05 | 0.02445775 |
| 1 | 205938873 | 205938873 | 1 | 1_205938873 | ENSG00000174502 | SLC26A9 | 0 | INTRON | -4.3843309 | 1.16E-05 | 0.02445906 |
| 1 | 1987873 | 1987873 | 1 | 1_1987873 | ENSG00000142609 | CFAP74 | 0 | INTRON | 4.38432454 | 1.16E-05 | 0.02445906 |
| 12 | 123221049 | 123221049 | 1 | 12_123221049 | ENSG00000051825 | MPHOSPH9 | 0 | INTRON | 4.38425062 | 1.16E-05 | 0.02446004 |
| 2 | 229941441 | 229941441 | 1 | 2_229941441 | ENSG00000153832 | FBXO36 | 0 | INTRON | -4.3841952 | 1.16E-05 | 0.02446004 |

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| 9 | 92106422 | 92106422 | 1 | 9_92106422 | ENSG00000090054 | SPTLC1 | 0 | INTRON | 4.38418835 | 1.16E-05 | 0.02446004 |
| 7 | 32086585 | 32086585 | 1 | 7_32086585 | ENSG00000154678 | PDE1C | 0 | INTRON | 4.38417966 | 1.16E-05 | 0.02446004 |
| 11 | 86968303 | 86968303 | 1 | 11_86968303 | ENSG00000246523 | FZD4-DT | 0 | INTRON | 4.38415204 | 1.16E-05 | 0.02446004 |
| 16 | 29128303 | 29128303 | 1 | 16_29128303 | ENSG00000284649 | AC009093.8 | 0 | INTRON | 4.38414334 | 1.16E-05 | 0.02446004 |
| 3 | 129215592 | 129215592 | 1 | 3_129215592 | ENSG00000241673 | RPS27P12 | 2500 | Downstream | -4.3840855 | 1.16E-05 | 0.02446004 |
| 10 | 96863423 | 96863423 | 1 | 10_96863423 | ENSG00000196233 | LCOR | 0 | INTRON | 4.38401346 | 1.17E-05 | 0.02446004 |
| 2 | 30277058 | 30277058 | 1 | 2_30277058 | ENSG00000213626 | LBH | 0 | INTRON | -4.3839817 | 1.17E-05 | 0.02446004 |
| 3 | 99588327 | 99588327 | 1 | 3_99588327 | ENSG00000244464 | AC107029.2 | 9736 | Upstream | -4.3839809 | 1.17E-05 | 0.02446004 |
| 14 | 32285243 | 32285243 | 1 | 14_32285243 | ENSG00000259086 | AL136298.3 | 12942 | Upstream | -4.3839766 | 1.17E-05 | 0.02446004 |
| 9 | 33093005 | 33093005 | 1 | 9_33093005 | ENSG00000086062 | B4GALT1 | 11076 | Downstream | 4.38394201 | 1.17E-05 | 0.02446004 |
| 2 | 218703932 | 218703932 | 1 | 2_218703932 | ENSG00000163482 | STK36 | 1216 | Downstream | 4.38390124 | 1.17E-05 | 0.02446004 |
| 1 | 122239448 | 122239448 | 1 | 1_122239448 | ENSG00000224857 | LINC01691 | 658924 | Upstream | -4.3838572 | 1.17E-05 | 0.02446004 |
| 9 | 77981095 | 77981095 | 1 | 9_77981095 | ENSG00000156052 | GNAQ | 0 | INTRON | 4.38384657 | 1.17E-05 | 0.02446004 |
| 22 | 15867324 | 15867324 | 1 | 22_15867324 | ENSG00000223875 | NBEAP3 | 0 | INTRON | 4.38381951 | 1.17E-05 | 0.02446004 |
| 3 | 152711462 | 152711462 | 1 | 3_152711462 | ENSG00000287706 | AC092924.2 | 32012 | Downstream | -4.3838035 | 1.17E-05 | 0.02446004 |
| 11 | 33838574 | 33838574 | 1 | 11_33838574 | ENSG00000255133 | LINC02721 | 16196 | Upstream | 4.38379406 | 1.17E-05 | 0.02446004 |
| 7 | 105040949 | 105040949 | 1 | 7_105040949 | ENSG00000005483 | KMT2E | 0 | 5UTR | 4.38376279 | 1.17E-05 | 0.02446004 |
| 3 | 147317038 | 147317038 | 1 | 3_147317038 | ENSG00000243620 | AC092957.1 | 0 | INTRON | 4.38371865 | 1.17E-05 | 0.02446004 |
| 2 | 60754551 | 60754551 | 1 | 2_60754551 | ENSG00000115421 | PAPOLG | 1701 | Upstream | 4.38371149 | 1.17E-05 | 0.02446004 |
| 8 | 121964567 | 121964567 | 1 | 8_121964567 | ENSG00000248690 | HAS2-AS1 | 0 | INTRON | 4.38371014 | 1.17E-05 | 0.02446004 |
| 13 | 101717593 | 101717593 | 1 | 13_101717593 | ENSG00000198542 | ITGBL1 | 0 | 3UTR | -4.3836979 | 1.17E-05 | 0.02446004 |
| 2 | 149124606 | 149124606 | 1 | 2_149124606 | ENSG00000150556 | LYPD6B | 0 | INTRON | -4.3836154 | 1.17E-05 | 0.0244663 |
| 11 | 133819206 | 133819206 | 1 | 11_133819206 | ENSG00000255258 | LINC02743 | 8830 | Upstream | 4.3835701 | 1.17E-05 | 0.02446662 |
| 2 | 203502865 | 203502865 | 1 | 2_203502865 | ENSG00000173166 | RAPH1 | 0 | INTRON | -4.3835589 | 1.17E-05 | 0.02446662 |
| 17 | 51773876 | 51773876 | 1 | 17_51773876 | ENSG00000154975 | CA10 | 0 | INTRON | 4.38350636 | 1.17E-05 | 0.02446952 |
| 11 | 116907249 | 116907249 | 1 | 11_116907249 | ENSG00000160584 | SIK3 | 0 | INTRON | -4.3834531 | 1.17E-05 | 0.02447041 |
| 14 | 60529378 | 60529378 | 1 | 14_60529378 | ENSG00000258670 | AL049874.3 | 0 | INTRON | 4.38343546 | 1.17E-05 | 0.02447041 |
| 9 | 136632745 | 136632745 | 1 | 9_136632745 | ENSG00000279141 | AL590226.2 | 15564 | Upstream | 4.38341801 | 1.17E-05 | 0.02447041 |
| 20 | 6698223 | 6698223 | 1 | 20_6698223 | ENSG00000228482 | LINC01713 | 32856 | Downstream | 4.38335389 | 1.17E-05 | 0.0244746 |
| 10 | 107680502 | 107680502 | 1 | 10_107680502 | ENSG00000229981 | LINC01435 | 14470 | Downstream | -4.3832428 | 1.17E-05 | 0.02448228 |
| 1 | 222530946 | 222530946 | 1 | 1_222530946 | ENSG00000143512 | HHIPL2 | 0 | INTRON | -4.383232 | 1.17E-05 | 0.02448228 |
| 6 | 47775247 | 47775247 | 1 | 6_47775247 | ENSG00000124818 | OPN5 | 6734 | Upstream | 4.38315518 | 1.17E-05 | 0.0244879 |
| 4 | 176526885 | 176526885 | 1 | 4_176526885 | ENSG00000248480 | AC093801.2 | 104506 | Downstream | 4.38308437 | 1.17E-05 | 0.0244908 |
| 1 | 44945320 | 44945320 | 1 | 1_44945320 | ENSG00000070785 | EIF2B3 | 0 | INTRON | 4.3830508 | 1.17E-05 | 0.0244908 |
| 4 | 3742014 | 3742014 | 1 | 4_3742014 | ENSG00000250986 | LINC02600 | 16733 | Downstream | 4.38304859 | 1.17E-05 | 0.0244908 |
| 1 | 154400115 | 154400115 | 1 | 1_154400115 | ENSG00000228013 | IL6R-AS1 | 2212 | Downstream | -4.3830056 | 1.17E-05 | 0.0244908 |
| 6 | 7333839 | 7333839 | 1 | 6_7333839 | ENSG00000164304 | CAGE1 | 0 | INTRON | 4.38297525 | 1.17E-05 | 0.0244908 |
| 1 | 170105517 | 170105517 | 1 | 1_170105517 | ENSG00000224896 | SIGLEC30P | 10118 | Upstream | 4.38295622 | 1.17E-05 | 0.0244908 |
| 1 | 28908396 | 28908396 | 1 | 1_28908396 | ENSG00000159023 | EPB41 | 0 | INTRON | 4.38294192 | 1.17E-05 | 0.0244908 |
| 10 | 126098067 | 126098067 | 1 | 10_126098067 | ENSG00000148848 | ADAM12 | 0 | INTRON | -4.38287 | 1.17E-05 | 0.0244935 |
| 7 | 135263823 | 135263823 | 1 | 7_135263823 | ENSG00000276067 | AC009542.2 | 0 | INTRON | 4.38283471 | 1.17E-05 | 0.0244935 |
| 12 | 93832810 | 93832810 | 1 | 12_93832810 | ENSG00000169372 | CRADD | 0 | INTRON | 4.38281238 | 1.17E-05 | 0.0244935 |
| 6 | 149049373 | 149049373 | 1 | 6_149049373 | ENSG00000111962 | UST | 0 | INTRON | 4.38281084 | 1.17E-05 | 0.0244935 |
| 6 | 58591333 | 58591333 | 1 | 6_58591333 | ENSG00000225096 | AL445250.1 | 152969 | Downstream | -4.3827532 | 1.17E-05 | 0.02449698 |
| 10 | 629997 | 629997 | 1 | 10_629997 | ENSG00000225140 | AL358216.1 | 0 | EXON | 4.38264124 | 1.17E-05 | 0.0245058 |
| 3 | 161010485 | 161010485 | 1 | 3_161010485 | ENSG00000163590 | PPM1L | 0 | INTRON | 4.3825984 | 1.17E-05 | 0.0245058 |
| 11 | 129003047 | 129003047 | 1 | 11_129003047 | ENSG00000134909 | ARHGAP32 | 0 | INTRON | 4.38259455 | 1.17E-05 | 0.0245058 |
| 7 | 52503841 | 52503841 | 1 | 7_52503841 | ENSG00000286908 | AC006459.1 | 407 | Downstream | -4.3825508 | 1.17E-05 | 0.02450612 |
| 15 | 63903948 | 63903948 | 1 | 15_63903948 | ENSG00000035664 | DAPK2 | 3087 | Downstream | 4.38249965 | 1.17E-05 | 0.02450612 |
| 1 | 50774392 | 50774392 | 1 | 1_50774392 | ENSG00000185104 | FAF1 | 0 | INTRON | 4.38249094 | 1.17E-05 | 0.02450612 |
| 2 | 156026964 | 156026964 | 1 | 2_156026964 | ENSG00000226383 | LINC01876 | 0 | INTRON | 4.38247098 | 1.17E-05 | 0.02450612 |
| 6 | 73760267 | 73760267 | 1 | 6_73760267 | ENSG00000156535 | CD109 | 0 | INTRON | -4.382458 | 1.17E-05 | 0.02450612 |
| 10 | 10527179 | 10527179 | 1 | 10_10527179 | ENSG00000270111 | CELF2-DT | 64818 | Upstream | 4.38229123 | 1.17E-05 | 0.02452166 |
| 3 | 71248611 | 71248611 | 1 | 3_71248611 | ENSG00000114861 | FOXP1 | 0 | INTRON | 4.38225598 | 1.17E-05 | 0.02452166 |
| 7 | 13405212 | 13405212 | 1 | 7_13405212 | ENSG00000229618 | AC011287.1 | 0 | INTRON | 4.38222205 | 1.17E-05 | 0.02452166 |
| 7 | 63752346 | 63752346 | 1 | 7_63752346 | ENSG00000271466 | CICP24 | 15910 | Downstream | -4.3821865 | 1.17E-05 | 0.02452166 |
| 5 | 99688752 | 99688752 | 1 | 5_99688752 | ENSG00000248928 | AC008837.2 | 93455 | Downstream | -4.3821863 | 1.17E-05 | 0.02452166 |
| 4 | 170068931 | 170068931 | 1 | 4_170068931 | ENSG00000109576 | AADAT | 0 | INTRON | -4.3820632 | 1.18E-05 | 0.02452974 |
| 3 | 67658696 | 67658696 | 1 | 3_67658696 | ENSG00000241316 | SUCLG2-AS1 | 0 | INTRON | 4.38203487 | 1.18E-05 | 0.02452974 |
| 12 | 95357268 | 95357268 | 1 | 12_95357268 | ENSG00000257943 | AC084879.1 | 0 | INTRON | -4.3820344 | 1.18E-05 | 0.02452974 |
| 8 | 3963658 | 3963658 | 1 | 8_3963658 | ENSG00000183117 | CSMD1 | 0 | INTRON | -4.3819705 | 1.18E-05 | 0.02453393 |
| 3 | 62942439 | 62942439 | 1 | 3_62942439 | ENSG00000244342 | LINC00698 | 7990 | Upstream | -4.3818934 | 1.18E-05 | 0.02453961 |
| 19 | 44702014 | 44702014 | 1 | 19_44702014 | ENSG00000266903 | AC243964.3 | 0 | INTRON | 4.3817066 | 1.18E-05 | 0.02455612 |
| 14 | 104990025 | 104990025 | 1 | 14_104990025 | ENSG00000140104 | CLBA1 | 0 | 5UTR | 4.38168391 | 1.18E-05 | 0.02455612 |
| 8 | 926825 | 926825 | 1 | 8_926825 | ENSG00000198010 | DLGAP2 | 0 | INTRON | 4.3816668 | 1.18E-05 | 0.02455612 |
| 4 | 88504021 | 88504021 | 1 | 4_88504021 | ENSG00000138646 | HERC5 | 0 | INTRON | 4.38161787 | 1.18E-05 | 0.02455863 |
| 12 | 119461899 | 119461899 | 1 | 12_119461899 | ENSG00000183273 | CCDC60 | 0 | INTRON | -4.3815271 | 1.18E-05 | 0.02456585 |
| 20 | 25449833 | 25449833 | 1 | 20_25449833 | ENSG00000101003 | GINS1 | 0 | INTRON | -4.3814342 | 1.18E-05 | 0.02457086 |
| 10 | 129895153 | 129895153 | 1 | 10_129895153 | ENSG00000108001 | EBF3 | 0 | INTRON | 4.38141034 | 1.18E-05 | 0.02457086 |
| 11 | 70365884 | 70365884 | 1 | 11_70365884 | ENSG00000131626 | PPFIA1 | 0 | EXON | 4.38140265 | 1.18E-05 | 0.02457086 |
| 5 | 122577548 | 122577548 | 1 | 5_122577548 | ENSG00000251538 | LINC02201 | 51403 | Downstream | 4.3813216 | 1.18E-05 | 0.02457699 |
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| 1 | 7309648 | 7309648 | 1 | 1_7309648 | ENSG00000171735 | CAMTA1 | 0 | INTRON | 4.38114276 | 1.18E-05 | 0.02459116 |
| 4 | 17130524 | 17130524 | 1 | 4_17130524 | ENSG00000250819 | LINC02493 | 41232 | Downstream | -4.3810236 | 1.18E-05 | 0.02459881 |
| 6 | 88332826 | 88332826 | 1 | 6_88332826 | ENSG00000234426 | AL139042.1 | 0 | INTRON | 4.38102161 | 1.18E-05 | 0.02459881 |
| 3 | 14565759 | 14565759 | 1 | 3_14565759 | ENSG00000234123 | RHBDF1P1 | 7092 | Downstream | 4.3809732 | 1.18E-05 | 0.02460127 |
| 14 | 102484877 | 102484877 | 1 | 14_102484877 | ENSG00000196663 | TECPR2 | 0 | INTRON | 4.38081536 | 1.18E-05 | 0.02461502 |
| 8 | 312148 | 312148 | 1 | 8_312148 | ENSG00000249868 | AC136777.1 | 0 | INTRON | 4.3807981 | 1.18E-05 | 0.02461502 |
| 1 | 116961433 | 116961433 | 1 | 1_116961433 | ENSG00000134247 | PTGFRN | 0 | EXON | 4.3807686 | 1.18E-05 | 0.02461534 |
| 4 | 174305440 | 174305440 | 1 | 4_174305440 | ENSG00000164118 | CEP44 | 0 | INTRON | 4.38069396 | 1.18E-05 | 0.02462077 |
| 20 | 45531406 | 45531406 | 1 | 20_45531406 | ENSG00000243543 | WFDC6 | 2789 | Downstream | 4.38063962 | 1.18E-05 | 0.0246239 |
| 15 | 35263774 | 35263774 | 1 | 15_35263774 | ENSG00000134146 | DPH6 | 0 | INTRON | 4.38059262 | 1.18E-05 | 0.0246262 |
| 7 | 88201710 | 88201710 | 1 | 7_88201710 | ENSG00000008277 | ADAM22 | 0 | 3UTR | 4.38048189 | 1.18E-05 | 0.02463426 |
| 11 | 48864252 | 48864252 | 1 | 11_48864252 | ENSG00000255551 | AC027369.6 | 15858 | Upstream | -4.3804681 | 1.18E-05 | 0.02463426 |
| X | 40165284 | 40165284 | 1 | X_40165284 | ENSG00000183337 | BCOR | 0 | INTRON | -4.3804208 | 1.18E-05 | 0.02463659 |
| 7 | 45715429 | 45715429 | 1 | 7_45715429 | ENSG00000164742 | ADCY1 | 0 | 3UTR | 4.38035301 | 1.18E-05 | 0.02464094 |
| 1 | 64344302 | 64344302 | 1 | 1_64344302 | ENSG00000238653 | RNU7-62P | 40095 | Downstream | 4.38032907 | 1.19E-05 | 0.02464094 |
| 11 | 107037379 | 107037379 | 1 | 11_107037379 | ENSG00000152402 | GUCY1A2 | 18855 | Upstream | -4.3802303 | 1.19E-05 | 0.02464587 |

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| 1 | 38943578 | 38943578 | 1 | 1_38943578 | ENSG00000228436 | AL139260.1 | 0 | INTRON | 4.38019893 | 1.19E-05 | 0.02464587 |
| 21 | 45366263 | 45366263 | 1 | 21_45366263 | ENSG00000228930 | MTCO1P3 | 9927 | Downstream | -4.3801775 | 1.19E-05 | 0.02464587 |
| 8 | 5251858 | 5251858 | 1 | 8_5251858 | ENSG00000242079 | RN7SL318P | 109151 | Upstream | 4.38016329 | 1.19E-05 | 0.02464587 |
| 15 | 53621225 | 53621225 | 1 | 15_53621225 | ENSG00000166415 | WDR72 | 0 | INTRON | -4.3801523 | 1.19E-05 | 0.02464587 |
| 1 | 94673871 | 94673871 | 1 | 1_94673871 | ENSG00000224081 | SLC44A3-AS1 | 0 | INTRON | 4.38005284 | 1.19E-05 | 0.02465229 |
| 20 | 41102014 | 41102014 | 1 | 20_41102014 | ENSG00000226648 | PLCG1-AS1 | 0 | INTRON | -4.3800424 | 1.19E-05 | 0.02465229 |
| 7 | 4825448 | 4825448 | 1 | 7_4825448 | ENSG00000157927 | RADIL | 0 | INTRON | -4.3799959 | 1.19E-05 | 0.02465453 |
| 14 | 32473808 | 32473808 | 1 | 14_32473808 | ENSG00000151320 | AKAP6 | 0 | 5UTR | -4.3798782 | 1.19E-05 | 0.02466485 |
| 1 | 237672173 | 237672173 | 1 | 1_237672173 | ENSG00000198626 | RYR2 | 0 | INTRON | 4.37976591 | 1.19E-05 | 0.02467455 |
| 4 | 53751857 | 53751857 | 1 | 4_53751857 | ENSG00000282278 | AC058822.1 | 0 | INTRON | 4.37965653 | 1.19E-05 | 0.02468392 |
| 3 | 12984161 | 12984161 | 1 | 3_12984161 | ENSG00000144711 | IQSEC1 | 0 | INTRON | -4.3795607 | 1.19E-05 | 0.02469176 |
| 1 | 77572361 | 77572361 | 1 | 1_77572361 | ENSG00000036549 | AC118549.1 | 0 | INTRON | 4.37937322 | 1.19E-05 | 0.02471 |
| 18 | 75134892 | 75134892 | 1 | 18_75134892 | ENSG00000285915 | AC015819.5 | 9327 | Upstream | 4.37929422 | 1.19E-05 | 0.02471595 |
| 2 | 241603417 | 241603417 | 1 | 2_241603417 | ENSG00000176946 | THAP4 | 0 | INTRON | 4.37913447 | 1.19E-05 | 0.02473105 |
| 8 | 12228896 | 12228896 | 1 | 8_12228896 | ENSG00000254527 | ENPP7P12 | 22507 | Upstream | -4.3790506 | 1.19E-05 | 0.02473756 |
| 11 | 105590395 | 105590395 | 1 | 11_105590395 | ENSG00000152578 | GRIA4 | 19598 | Upstream | -4.3789354 | 1.19E-05 | 0.02474517 |
| 16 | 2164204 | 2164204 | 1 | 16_2164204 | ENSG00000131653 | TRAF7 | 0 | INTRON | -4.3789079 | 1.19E-05 | 0.02474517 |
| 7 | 100624603 | 100624603 | 1 | 7_100624603 | ENSG00000106327 | TFR2 | 0 | INTRON | 4.37890374 | 1.19E-05 | 0.02474517 |
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| 18 | 46646675 | 46646675 | 1 | 18_46646675 | ENSG00000167210 | LOXHD1 | 0 | INTRON | 4.37874047 | 1.19E-05 | 0.02475768 |
| 6 | 156917015 | 156917015 | 1 | 6_156917015 | ENSG00000049618 | ARID1B | 0 | INTRON | 4.37867709 | 1.19E-05 | 0.02476186 |
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| 6 | 76366960 | 76366960 | 1 | 6_76366960 | ENSG00000238697 | RNU6-261P | 80027 | Downstream | 4.37849389 | 1.20E-05 | 0.02477362 |
| 6 | 58612714 | 58612714 | 1 | 6_58612714 | ENSG00000225096 | AL445250.1 | 174350 | Downstream | -4.3784367 | 1.20E-05 | 0.02477711 |
| 7 | 6713053 | 6713053 | 1 | 7_6713053 | ENSG00000187953 | PMS2CL | 0 | INTRON | 4.37821777 | 1.20E-05 | 0.02479898 |
| 2 | 236695058 | 236695058 | 1 | 2_236695058 | ENSG00000232328 | AC084030.1 | 38230 | Upstream | 4.378166 | 1.20E-05 | 0.02480032 |
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| 5 | 129833397 | 129833397 | 1 | 5_129833397 | ENSG00000251680 | AC008591.1 | 0 | INTRON | -4.3780911 | 1.20E-05 | 0.02480032 |
| 4 | 37914816 | 37914816 | 1 | 4_37914816 | ENSG00000065882 | TBC1D1 | 0 | INTRON | -4.3780805 | 1.20E-05 | 0.02480032 |
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| 18 | 4961260 | 4961260 | 1 | 18_4961260 | ENSG00000266268 | AP005203.1 | 0 | INTRON | -4.3780352 | 1.20E-05 | 0.02480032 |
| 2 | 65021573 | 65021573 | 1 | 2_65021573 | ENSG00000115902 | SLC1A4 | 0 | 3UTR | 4.37802025 | 1.20E-05 | 0.02480032 |
| 11 | 74581774 | 74581774 | 1 | 11_74581774 | ENSG00000077514 | POLD3 | 0 | INTRON | 4.37791339 | 1.20E-05 | 0.02480946 |
| 20 | 44173228 | 44173228 | 1 | 20_44173228 | ENSG00000149596 | JPH2 | 0 | INTRON | 4.37785435 | 1.20E-05 | 0.02481316 |
| 19 | 56464668 | 56464668 | 1 | 19_56464668 | ENSG00000198046 | ZNF667 | 0 | INTRON | -4.3778183 | 1.20E-05 | 0.02481424 |
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| 7 | 131241942 | 131241942 | 1 | 7_131241942 | ENSG00000128585 | MKLN1 | 0 | INTRON | 4.37766589 | 1.20E-05 | 0.02482119 |
| 1 | 171615892 | 171615892 | 1 | 1_171615892 | ENSG00000283683 | MYOCOS | 0 | INTRON | 4.37766501 | 1.20E-05 | 0.02482119 |
| 4 | 153651678 | 153651678 | 1 | 4_153651678 | ENSG00000287216 | AC106865.2 | 0 | INTRON | -4.3776255 | 1.20E-05 | 0.02482119 |
| 11 | 3105838 | 3105838 | 1 | 11_3105838 | ENSG00000021762 | OSBPL5 | 0 | INTRON | 4.37761439 | 1.20E-05 | 0.02482119 |
| 7 | 108855798 | 108855798 | 1 | 7_108855798 | ENSG00000205174 | C7orf66 | 28176 | Downstream | 4.37758155 | 1.20E-05 | 0.02482119 |
| 16 | 15750320 | 15750320 | 1 | 16_15750320 | ENSG00000133392 | MYH11 | 0 | 3UTR | 4.37753975 | 1.20E-05 | 0.02482119 |
| 10 | 123450336 | 123450336 | 1 | 10_123450336 | ENSG00000230131 | LINC02641 | 0 | INTRON | 4.3775313 | 1.20E-05 | 0.02482119 |
| 3 | 81101580 | 81101580 | 1 | 3_81101580 | ENSG00000243694 | LINC02027 | 0 | INTRON | 4.37751866 | 1.20E-05 | 0.02482119 |
| 3 | 167149939 | 167149939 | 1 | 3_167149939 | ENSG00000220343 | PPIAP74 | 83619 | Downstream | -4.3774531 | 1.20E-05 | 0.02482564 |
| 3 | 25209573 | 25209573 | 1 | 3_25209573 | ENSG00000077092 | RARB | 0 | INTRON | 4.37716862 | 1.20E-05 | 0.02485375 |
| 8 | 66416032 | 66416032 | 1 | 8_66416032 | ENSG00000287127 | AC009879.4 | 0 | INTRON | 4.37715342 | 1.20E-05 | 0.02485375 |
| 10 | 89069853 | 89069853 | 1 | 10_89069853 | ENSG00000265375 | MIR4679-2 | 6442 | Upstream | -4.3770496 | 1.20E-05 | 0.02486054 |
| 20 | 39449614 | 39449614 | 1 | 20_39449614 | ENSG00000275337 | RN7SL680P | 100222 | Upstream | 4.37702938 | 1.20E-05 | 0.02486054 |
| 3 | 72405956 | 72405956 | 1 | 3_72405956 | ENSG00000163602 | RYBP | 0 | INTRON | -4.3769992 | 1.20E-05 | 0.02486054 |
| 1 | 241034338 | 241034338 | 1 | 1_241034338 | ENSG00000182901 | RGS7 | 0 | INTRON | -4.376939 | 1.20E-05 | 0.02486054 |
| 12 | 95026640 | 95026640 | 1 | 12_95026640 | ENSG00000120798 | NR2C1 | 0 | INTRON | -4.3769384 | 1.20E-05 | 0.02486054 |
| 22 | 38052921 | 38052921 | 1 | 22_38052921 | ENSG00000100151 | PICK1 | 3389 | Upstream | 4.37693495 | 1.20E-05 | 0.02486054 |
| 19 | 34555386 | 34555386 | 1 | 19_34555386 | ENSG00000248830 | ZNF807 | 9991 | Upstream | 4.37683607 | 1.20E-05 | 0.0248688 |
| 4 | 169528889 | 169528889 | 1 | 4_169528889 | ENSG00000137601 | NEK1 | 0 | INTRON | -4.3767618 | 1.20E-05 | 0.02487426 |
| 5 | 108750830 | 108750830 | 1 | 5_108750830 | ENSG00000151422 | FER | 0 | INTRON | -4.3767239 | 1.20E-05 | 0.02487509 |
| 3 | 19165272 | 19165272 | 1 | 3_19165272 | ENSG00000183960 | KCNH8 | 0 | INTRON | 4.37667478 | 1.21E-05 | 0.02487509 |
| 3 | 169289298 | 169289298 | 1 | 3_169289298 | ENSG00000085276 | MECOM | 0 | INTRON | 4.37663516 | 1.21E-05 | 0.02487509 |
| 4 | 92994374 | 92994374 | 1 | 4_92994374 | ENSG00000152208 | GRID2 | 0 | INTRON | -4.376633 | 1.21E-05 | 0.02487509 |
| 20 | 40501806 | 40501806 | 1 | 20_40501806 | ENSG00000204103 | MAFB | 184041 | Downstream | -4.3766222 | 1.21E-05 | 0.02487509 |
| 18 | 62622597 | 62622597 | 1 | 18_62622597 | ENSG00000243549 | RN7SL705P | 27710 | Downstream | -4.3765197 | 1.21E-05 | 0.02488376 |
| 2 | 98925870 | 98925870 | 1 | 2_98925870 | ENSG00000196872 | KIAA1211L | 0 | INTRON | 4.37644431 | 1.21E-05 | 0.02488794 |
| 7 | 65494390 | 65494390 | 1 | 7_65494390 | ENSG00000226767 | AC114501.1 | 14382 | Downstream | -4.3764302 | 1.21E-05 | 0.02488794 |
| 6 | 116277826 | 116277826 | 1 | 6_116277826 | ENSG00000189241 | TSPYL1 | 0 | 3UTR | -4.3763111 | 1.21E-05 | 0.02489475 |
| 1 | 120844010 | 120844010 | 1 | 1_120844010 | ENSG00000273136 | NBPF26 | 1900 | Downstream | -4.3762731 | 1.21E-05 | 0.02489475 |
| 22 | 44217040 | 44217040 | 1 | 22_44217040 | ENSG00000280011 | AL031595.2 | 0 | EXON | -4.3762701 | 1.21E-05 | 0.02489475 |
| 3 | 75504300 | 75504300 | 1 | 3_75504300 | ENSG00000272690 | LINC02018 | 0 | INTRON | -4.3762648 | 1.21E-05 | 0.02489475 |
| 12 | 45561058 | 45561058 | 1 | 12_45561058 | ENSG00000257657 | AC079950.1 | 0 | INTRON | -4.3761118 | 1.21E-05 | 0.0249092 |
| 11 | 113632508 | 113632508 | 1 | 11_113632508 | ENSG00000166682 | TMPRSS5 | 55038 | Downstream | 4.37589002 | 1.21E-05 | 0.02492943 |
| 9 | 9415872 | 9415872 | 1 | 9_9415872 | ENSG00000153707 | PTPRD | 0 | INTRON | -4.375882 | 1.21E-05 | 0.02492943 |
| 1 | 158081275 | 158081275 | 1 | 1_158081275 | ENSG00000183853 | KIRREL1 | 0 | INTRON | 4.37571402 | 1.21E-05 | 0.02493731 |
| 9 | 89749298 | 89749298 | 1 | 9_89749298 | ENSG00000237372 | AL606807.1 | 29539 | Downstream | 4.37570074 | 1.21E-05 | 0.02493731 |
| 7 | 151613865 | 151613865 | 1 | 7_151613865 | ENSG00000106617 | PRKAG2 | 0 | INTRON | 4.37569942 | 1.21E-05 | 0.02493731 |
| 9 | 30073248 | 30073248 | 1 | 9_30073248 | ENSG00000230097 | ME2P1 | 246537 | Upstream | 4.37568173 | 1.21E-05 | 0.02493731 |
| Y | 9388378 | 9388378 | 1 | Y_9388378 | ENSG00000237802 | FAM197Y6 | 0 | EXON | 4.375681 | 1.21E-05 | 0.02493731 |
| 15 | 37370413 | 37370413 | 1 | 15_37370413 | ENSG00000259434 | AC068875.1 | 0 | INTRON | -4.3756166 | 1.21E-05 | 0.02493938 |
| 11 | 73166607 | 73166607 | 1 | 11_73166607 | ENSG00000256568 | AP002761.2 | 0 | INTRON | 4.37561006 | 1.21E-05 | 0.02493938 |
| 15 | 43014865 | 43014865 | 1 | 15_43014865 | ENSG00000159459 | UBR1 | 0 | INTRON | 4.37555566 | 1.21E-05 | 0.02494258 |
| 4 | 141261495 | 141261495 | 1 | 4_141261495 | ENSG00000248747 | AC107220.1 | 0 | INTRON | 4.37548186 | 1.21E-05 | 0.024948 |
| 9 | 90621363 | 90621363 | 1 | 9_90621363 | ENSG00000165023 | DIRAS2 | 0 | INTRON | 4.37535019 | 1.21E-05 | 0.02495833 |
| 12 | 15277840 | 15277840 | 1 | 12_15277840 | ENSG00000134533 | RERG | 0 | INTRON | 4.37533877 | 1.21E-05 | 0.02495833 |
| 13 | 31686822 | 31686822 | 1 | 13_31686822 | ENSG00000133105 | RXFP2 | 52703 | Upstream | -4.3752024 | 1.21E-05 | 0.02497093 |
| 12 | 95439630 | 95439630 | 1 | 12_95439630 | ENSG00000257943 | AC084879.1 | 0 | INTRON | -4.375143 | 1.21E-05 | 0.0249747 |
| 9 | 36324052 | 36324052 | 1 | 9_36324052 | ENSG00000137075 | RNF38 | 12343 | Downstream | 4.3751118 | 1.21E-05 | 0.02497525 |
| 21 | 6127208 | 6127208 | 1 | 21_6127208 | ENSG00000275993 | SIK1B | 3430 | Downstream | 4.37503136 | 1.21E-05 | 0.02498145 |
| 19 | 43739221 | 43739221 | 1 | 19_43739221 | ENSG00000105771 | SMG9 | 0 | INTRON | 4.37492539 | 1.21E-05 | 0.0249883 |
| 12 | 111659608 | 111659608 | 1 | 12_111659608 | ENSG00000089234 | BRAP | 0 | INTRON | -4.3749187 | 1.21E-05 | 0.0249883 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 16 | 12506253 | 12506253 | 1 | 16_12506253 | ENSG00000048471 | SNX29 | 0 | INTRON | 4.37483374 | 1.22E-05 | 0.02499502 |
| 11 | 68021382 | 68021382 | 1 | 11_68021382 | ENSG00000006534 | ALDH3B1 | 0 | INTRON | -4.3747894 | 1.22E-05 | 0.02499708 |
| 2 | 38487361 | 38487361 | 1 | 2_38487361 | ENSG00000231367 | LINC02613 | 0 | INTRON | 4.37472299 | 1.22E-05 | 0.02499963 |
| 10 | 8757737 | 8757737 | 1 | 10_8757737 | ENSG00000270234 | AL355333.1 | 33449 | Downstream | -4.3746898 | 1.22E-05 | 0.02499963 |
| 5 | 172582612 | 172582612 | 1 | 5_172582612 | ENSG00000254299 | LINC01944 | 23410 | Upstream | -4.3746711 | 1.22E-05 | 0.02499963 |
| 9 | 14519234 | 14519234 | 1 | 9_14519234 | ENSG00000237137 | AL159169.1 | 12681 | Downstream | -4.3746572 | 1.22E-05 | 0.02499963 |
| 18 | 43885818 | 43885818 | 1 | 18_43885818 | ENSG00000267716 | AC083760.1 | 153652 | Upstream | 4.37458929 | 1.22E-05 | 0.02499963 |
| 17 | 28850597 | 28850597 | 1 | 17_28850597 | ENSG00000173065 | FAM222B | 0 | INTRON | -4.3745711 | 1.22E-05 | 0.02499963 |
| 19 | 37283573 | 37283573 | 1 | 19_37283573 | ENSG00000267605 | AC016590.1 | 0 | INTRON | 4.37454516 | 1.22E-05 | 0.02499963 |
| 18 | 2879161 | 2879161 | 1 | 18_2879161 | ENSG00000132205 | EMILIN2 | 0 | INTRON | 4.37451701 | 1.22E-05 | 0.02499963 |
| 8 | 9184329 | 9184329 | 1 | 8_9184329 | ENSG00000248538 | AC022784.1 | 0 | INTRON | 4.37448703 | 1.22E-05 | 0.02499963 |
| 8 | 105848325 | 105848325 | 1 | 8_105848325 | ENSG00000251003 | ZFPM2-AS1 | 0 | INTRON | 4.37447424 | 1.22E-05 | 0.02499963 |
| 22 | 43521749 | 43521749 | 1 | 22_43521749 | ENSG00000223843 | EFCAB6-AS1 | 0 | INTRON | 4.37446564 | 1.22E-05 | 0.02499963 |
| 7 | 1849827 | 1849827 | 1 | 7_1849827 | ENSG00000176349 | AC104129.1 | 0 | EXON | 4.37445097 | 1.22E-05 | 0.02499963 |
| 18 | 40396193 | 40396193 | 1 | 18_40396193 | ENSG00000286844 | AC068688.1 | 148826 | Downstream | 4.37436332 | 1.22E-05 | 0.02500666 |
| 21 | 36554246 | 36554246 | 1 | 21_36554246 | ENSG00000159261 | CLDN14 | 0 | INTRON | 4.37428138 | 1.22E-05 | 0.02501303 |
| 21 | 8380516 | 8380516 | 1 | 21_8380516 | ENSG00000280441 | FP236383.3 | 126 | Upstream | -4.3741795 | 1.22E-05 | 0.0250217 |
| 4 | 64333758 | 64333758 | 1 | 4_64333758 | ENSG00000205678 | TECRL | 0 | INTRON | -4.3740887 | 1.22E-05 | 0.02502909 |
| 19 | 58524755 | 58524755 | 1 | 19_58524755 | ENSG00000119574 | ZBTB45 | 0 | INTRON | 4.37403583 | 1.22E-05 | 0.02503214 |
| 3 | 29047935 | 29047935 | 1 | 3_29047935 | ENSG00000144642 | RBMS3 | 0 | INTRON | -4.3739069 | 1.22E-05 | 0.02504103 |
| 1 | 35831099 | 35831099 | 1 | 1_35831099 | ENSG00000134698 | AGO4 | 0 | INTRON | -4.3739057 | 1.22E-05 | 0.02504103 |
| 18 | 1434131 | 1434131 | 1 | 18_1434131 | ENSG00000132204 | LINC00470 | 25787 | Upstream | -4.3738731 | 1.22E-05 | 0.02504142 |
| 2 | 61310155 | 61310155 | 1 | 2_61310155 | ENSG00000115464 | USP34 | 0 | INTRON | 4.37384973 | 1.22E-05 | 0.02504142 |
| 3 | 185212395 | 185212395 | 1 | 3_185212395 | ENSG00000113790 | EHHADH | 0 | INTRON | 4.37379365 | 1.22E-05 | 0.02504237 |
| 2 | 30462023 | 30462023 | 1 | 2_30462023 | ENSG00000172954 | LCLAT1 | 0 | INTRON | 4.3737746 | 1.22E-05 | 0.02504237 |
| 20 | 37862193 | 37862193 | 1 | 20_37862193 | ENSG00000132792 | CTNNBL1 | 0 | INTRON | -4.3737541 | 1.22E-05 | 0.02504237 |
| 16 | 824353 | 824353 | 1 | 16_824353 | ENSG00000287855 | AL023882.1 | 0 | INTRON | 4.37373624 | 1.22E-05 | 0.02504237 |
| 12 | 62921774 | 62921774 | 1 | 12_62921774 | ENSG00000111110 | PPM1H | 0 | INTRON | 4.37368806 | 1.22E-05 | 0.02504398 |
| 4 | 21013880 | 21013880 | 1 | 4_21013880 | ENSG00000185774 | KCNIP4 | 0 | INTRON | 4.37366036 | 1.22E-05 | 0.02504398 |
| 19 | 57049110 | 57049110 | 1 | 19_57049110 | ENSG00000268483 | RPL7AP69 | 16223 | Upstream | -4.3735921 | 1.22E-05 | 0.02504398 |
| 10 | 89672754 | 89672754 | 1 | 10_89672754 | ENSG00000235100 | AL157400.3 | 0 | INTRON | -4.3735527 | 1.22E-05 | 0.02504398 |
| 1 | 66190329 | 66190329 | 1 | 1_66190329 | ENSG00000184588 | PDE4B | 0 | INTRON | 4.37354345 | 1.22E-05 | 0.02504398 |
| 6 | 130186863 | 130186863 | 1 | 6_130186863 | ENSG00000164483 | SAMD3 | 0 | INTRON | 4.37354196 | 1.22E-05 | 0.02504398 |
| 9 | 87359155 | 87359155 | 1 | 9_87359155 | ENSG00000228373 | AL353752.1 | 64478 | Upstream | 4.37353829 | 1.22E-05 | 0.02504398 |
| 16 | 31984666 | 31984666 | 1 | 16_31984666 | ENSG00000260628 | AC142381.3 | 0 | INTRON | -4.3734739 | 1.22E-05 | 0.02504836 |
| 8 | 15808599 | 15808599 | 1 | 8_15808599 | ENSG00000250483 | PPM1AP1 | 1316 | Upstream | -4.3733957 | 1.22E-05 | 0.02504858 |
| 17 | 44472726 | 44472726 | 1 | 17_44472726 | ENSG00000186566 | GPATCH8 | 0 | INTRON | 4.37339157 | 1.22E-05 | 0.02504858 |
| 10 | 21559122 | 21559122 | 1 | 10_21559122 | ENSG00000078403 | MLLT10 | 0 | INTRON | -4.3733798 | 1.22E-05 | 0.02504858 |
| 5 | 149645287 | 149645287 | 1 | 5_149645287 | ENSG00000183111 | ARHGEF37 | 10319 | Downstream | -4.373353 | 1.22E-05 | 0.02504858 |
| 1 | 59657467 | 59657467 | 1 | 1_59657467 | ENSG00000172456 | FGGY | 0 | INTRON | 4.37334064 | 1.22E-05 | 0.02504858 |
| 17 | 16138571 | 16138571 | 1 | 17_16138571 | ENSG00000141027 | NCOR1 | 0 | INTRON | 4.37328597 | 1.22E-05 | 0.02505184 |
| 12 | 22998269 | 22998269 | 1 | 12_22998269 | ENSG00000256995 | AC084816.1 | 0 | INTRON | 4.37322772 | 1.22E-05 | 0.02505551 |
| 11 | 122803805 | 122803805 | 1 | 11_122803805 | ENSG00000285909 | AP002762.2 | 0 | INTRON | 4.3731488 | 1.22E-05 | 0.02506156 |
| 6 | 34095472 | 34095472 | 1 | 6_34095472 | ENSG00000124493 | GRM4 | 0 | INTRON | 4.37306631 | 1.23E-05 | 0.02506802 |
| 8 | 128141242 | 128141242 | 1 | 8_128141242 | ENSG00000249859 | PVT1 | 0 | INTRON | -4.3728864 | 1.23E-05 | 0.0250817 |
| 17 | 50645587 | 50645587 | 1 | 17_50645587 | ENSG00000108846 | ABCC3 | 0 | INTRON | 4.37287883 | 1.23E-05 | 0.0250817 |
| 17 | 19427317 | 19427317 | 1 | 17_19427317 | ENSG00000235979 | AC004448.2 | 0 | INTRON | -4.3728612 | 1.23E-05 | 0.0250817 |
| 15 | 98895876 | 98895876 | 1 | 15_98895876 | ENSG00000140443 | IGF1R | 0 | INTRON | 4.37283234 | 1.23E-05 | 0.0250817 |
| 16 | 24035761 | 24035761 | 1 | 16_24035761 | ENSG00000166501 | PRKCB | 0 | INTRON | 4.3728161 | 1.23E-05 | 0.0250817 |
| 12 | 24416981 | 24416981 | 1 | 12_24416981 | ENSG00000134532 | SOX5 | 0 | INTRON | 4.37274896 | 1.23E-05 | 0.02508529 |
| 6 | 142652566 | 142652566 | 1 | 6_142652566 | ENSG00000236366 | AL359313.1 | 14677 | Upstream | 4.37273241 | 1.23E-05 | 0.02508529 |
| 10 | 100523859 | 100523859 | 1 | 10_100523859 | ENSG00000166136 | NDUFB8 | 0 | EXON | 4.37262383 | 1.23E-05 | 0.02509476 |
| 7 | 56450419 | 56450419 | 1 | 7_56450419 | ENSG00000237268 | AC092447.7 | 2044 | Upstream | -4.3724664 | 1.23E-05 | 0.02510626 |
| 15 | 71994859 | 71994859 | 1 | 15_71994859 | ENSG00000261632 | AC022872.1 | 0 | INTRON | -4.372441 | 1.23E-05 | 0.02510626 |
| 12 | 29357158 | 29357158 | 1 | 12_29357158 | ENSG00000087502 | ERGIC2 | 0 | INTRON | 4.37244039 | 1.23E-05 | 0.02510626 |
| 15 | 89265821 | 89265821 | 1 | 15_89265821 | ENSG00000140525 | FANCI | 0 | INTRON | 4.37241899 | 1.23E-05 | 0.02510626 |
| 10 | 69086720 | 69086720 | 1 | 10_69086720 | ENSG00000122862 | SRGN | 1382 | Upstream | 4.37235775 | 1.23E-05 | 0.02511029 |
| 6 | 138605350 | 138605350 | 1 | 6_138605350 | ENSG00000135540 | NHSL1 | 0 | INTRON | -4.372302 | 1.23E-05 | 0.02511369 |
| 2 | 60658225 | 60658225 | 1 | 2_60658225 | ENSG00000242158 | RN7SL361P | 17223 | Downstream | -4.3722532 | 1.23E-05 | 0.02511628 |
| 1 | 177320021 | 177320021 | 1 | 1_177320021 | ENSG00000224968 | LINC01645 | 31540 | Upstream | 4.37217369 | 1.23E-05 | 0.02511728 |
| 19 | 56054506 | 56054506 | 1 | 19_56054506 | ENSG00000171487 | NLRP5 | 0 | INTRON | 4.37216704 | 1.23E-05 | 0.02511728 |
| 20 | 57504278 | 57504278 | 1 | 20_57504278 | ENSG00000124092 | CTCFL | 0 | INTRON | 4.37216599 | 1.23E-05 | 0.02511728 |
| 5 | 2542758 | 2542758 | 1 | 5_2542758 | ENSG00000281560 | LSINCT5 | 169832 | Upstream | -4.3721163 | 1.23E-05 | 0.02511887 |
| 4 | 26024347 | 26024347 | 1 | 4_26024347 | ENSG00000283314 | LINC02357 | 46406 | Upstream | 4.37208722 | 1.23E-05 | 0.02511887 |
| 18 | 72110330 | 72110330 | 1 | 18_72110330 | ENSG00000265995 | AC069114.1 | 165753 | Upstream | -4.3720076 | 1.23E-05 | 0.02511887 |
| 15 | 98531616 | 98531616 | 1 | 15_98531616 | ENSG00000283597 | FAM169B | 0 | INTRON | 4.37197671 | 1.23E-05 | 0.02511887 |
| 1 | 152164672 | 152164672 | 1 | 1_152164672 | ENSG00000233792 | PUDPP2 | 0 | INTRON | 4.37197491 | 1.23E-05 | 0.02511887 |
| 13 | 99248077 | 99248077 | 1 | 13_99248077 | ENSG00000134882 | UBAC2 | 0 | INTRON | -4.371964 | 1.23E-05 | 0.02511887 |
| 13 | 85880186 | 85880186 | 1 | 13_85880186 | ENSG00000278580 | AL162373.1 | 42654 | Upstream | -4.3719219 | 1.23E-05 | 0.02511887 |
| 15 | 58155197 | 58155197 | 1 | 15_58155197 | ENSG00000259671 | MTCYBP23 | 0 | EXON | -4.3719197 | 1.23E-05 | 0.02511887 |
| 13 | 63038034 | 63038034 | 1 | 13_63038034 | ENSG00000273550 | AL354810.1 | 0 | INTRON | 4.37190244 | 1.23E-05 | 0.02511887 |
| 20 | 61648407 | 61648407 | 1 | 20_61648407 | ENSG00000179242 | CDH4 | 0 | INTRON | 4.37187677 | 1.23E-05 | 0.02511887 |
| 16 | 30151672 | 30151672 | 1 | 16_30151672 | ENSG00000102882 | MAPK3 | 28166 | Upstream | -4.3718643 | 1.23E-05 | 0.02511887 |
| 3 | 119665150 | 119665150 | 1 | 3_119665150 | ENSG00000138495 | COX17 | 0 | INTRON | -4.371801 | 1.23E-05 | 0.02512315 |
| 8 | 83705466 | 83705466 | 1 | 8_83705466 | ENSG00000254202 | AC015522.1 | 207246 | Upstream | -4.3717707 | 1.23E-05 | 0.02512362 |
| 19 | 35404050 | 35404050 | 1 | 19_35404050 | ENSG00000205786 | LINC01531 | 0 | INTRON | 4.37166963 | 1.23E-05 | 0.02513224 |
| 10 | 10821356 | 10821356 | 1 | 10_10821356 | ENSG00000048740 | CELF2 | 0 | INTRON | 4.37158788 | 1.23E-05 | 0.02513865 |
| 16 | 21692649 | 21692649 | 1 | 16_21692649 | ENSG00000155719 | OTOA | 0 | INTRON | 4.37147672 | 1.23E-05 | 0.02514491 |
| 16 | 89143627 | 89143627 | 1 | 16_89143627 | ENSG00000176715 | ACSF3 | 0 | INTRON | 4.37142684 | 1.23E-05 | 0.02514491 |
| 5 | 181108027 | 181108027 | 1 | 5_181108027 | ENSG00000248560 | AC008620.2 | 6078 | Upstream | 4.37142531 | 1.23E-05 | 0.02514491 |
| 2 | 187290415 | 187290415 | 1 | 2_187290415 | ENSG00000224063 | AC007319.1 | 0 | INTRON | -4.3714067 | 1.23E-05 | 0.02514491 |
| 21 | 36062525 | 36062525 | 1 | 21_36062525 | ENSG00000185917 | SETD4 | 0 | INTRON | 4.37140282 | 1.23E-05 | 0.02514491 |
| 6 | 150822777 | 150822777 | 1 | 6_150822777 | ENSG00000120278 | PLEKHG1 | 0 | INTRON | 4.37134488 | 1.23E-05 | 0.02514857 |
| 5 | 75235284 | 75235284 | 1 | 5_75235284 | ENSG00000145700 | ANKRD31 | 0 | INTRON | 4.37130783 | 1.24E-05 | 0.02514983 |
| 14 | 27500514 | 27500514 | 1 | 14_27500514 | ENSG00000258932 | AL390334.1 | 0 | INTRON | -4.3712126 | 1.24E-05 | 0.02515314 |
| 2 | 54686642 | 54686642 | 1 | 2_54686642 | ENSG00000238018 | AC093110.1 | 6597 | Upstream | -4.3711954 | 1.24E-05 | 0.02515314 |
| 4 | 7548518 | 7548518 | 1 | 4_7548518 | ENSG00000184985 | SORCS2 | 0 | INTRON | 4.37117584 | 1.24E-05 | 0.02515314 |
| 11 | 7269047 | 7269047 | 1 | 11_7269047 | ENSG00000170743 | SYT9 | 0 | INTRON | 4.37117459 | 1.24E-05 | 0.02515314 |

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| 16 | 87044247 | 87044247 | 1 | 16_87044247 | ENSG00000232190 | LINC02181 | 13536 | Upstream | 4.37112657 | 1.24E-05 | 0.02515567 |
| 13 | 88126170 | 88126170 | 1 | 13_88126170 | ENSG00000231019 | LINC00373 | 16696 | Upstream | 4.37098398 | 1.24E-05 | 0.02516909 |
| 15 | 47733510 | 47733510 | 1 | 15_47733510 | ENSG00000137872 | SEMA6D | 0 | INTRON | 4.37093064 | 1.24E-05 | 0.02517223 |
| 20 | 633465 | 633465 | 1 | 20_633465 | ENSG00000271303 | SRXN1 | 13149 | Downstream | 4.37083926 | 1.24E-05 | 0.02517976 |
| 12 | 112068017 | 112068017 | 1 | 12_112068017 | ENSG00000111300 | NAA25 | 0 | INTRON | 4.37073051 | 1.24E-05 | 0.02518929 |
| 19 | 6257749 | 6257749 | 1 | 19_6257749 | ENSG00000130382 | MLLT1 | 0 | INTRON | -4.3706295 | 1.24E-05 | 0.02519794 |
| 15 | 101893124 | 101893124 | 1 | 15_101893124 | ENSG00000259454 | WBP1LP5 | 5357 | Upstream | -4.3704862 | 1.24E-05 | 0.02520908 |
| 8 | 108255555 | 108255555 | 1 | 8_108255555 | ENSG00000104408 | EIF3E | 0 | INTRON | 4.37048076 | 1.24E-05 | 0.02520908 |
| 8 | 57560677 | 57560677 | 1 | 8_57560677 | ENSG00000253821 | AC090796.1 | 0 | INTRON | 4.37045244 | 1.24E-05 | 0.02520928 |
| 6 | 32050109 | 32050109 | 1 | 6_32050109 | ENSG00000168477 | TNXB | 0 | EXON | 4.37036164 | 1.24E-05 | 0.02520928 |
| 10 | 22481180 | 22481180 | 1 | 10_22481180 | ENSG00000286810 | AL513128.3 | 1700 | Upstream | 4.37034139 | 1.24E-05 | 0.02520928 |
| 14 | 88616193 | 88616193 | 1 | 14_88616193 | ENSG00000165521 | EML5 | 0 | 3UTR | -4.370337 | 1.24E-05 | 0.02520928 |
| 2 | 180474085 | 180474085 | 1 | 2_180474085 | ENSG00000270289 | AC012669.1 | 666 | Upstream | 4.37032465 | 1.24E-05 | 0.02520928 |
| 9 | 78623626 | 78623626 | 1 | 9_78623626 | ENSG00000270627 | AL592221.1 | 34087 | Downstream | 4.37032255 | 1.24E-05 | 0.02520928 |
| 9 | 10660478 | 10660478 | 1 | 9_10660478 | ENSG00000232035 | AL135790.1 | 28275 | Upstream | -4.3702156 | 1.24E-05 | 0.02521731 |
| 20 | 52715627 | 52715627 | 1 | 20_52715627 | ENSG00000232294 | AL031674.1 | 16155 | Downstream | 4.37020089 | 1.24E-05 | 0.02521731 |
| 2 | 227445069 | 227445069 | 1 | 2_227445069 | ENSG00000284092 | MIR5703 | 27062 | Upstream | 4.37015696 | 1.24E-05 | 0.02521753 |
| 18 | 66082155 | 66082155 | 1 | 18_66082155 | ENSG00000264685 | PRPF19P1 | 12508 | Upstream | -4.370133 | 1.24E-05 | 0.02521753 |
| 4 | 37646758 | 37646758 | 1 | 4_37646758 | ENSG00000181826 | RELL1 | 0 | INTRON | -4.3701208 | 1.24E-05 | 0.02521753 |
| 5 | 156140516 | 156140516 | 1 | 5_156140516 | ENSG00000170624 | SGCD | 0 | INTRON | -4.3700688 | 1.24E-05 | 0.02522053 |
| 13 | 67148033 | 67148033 | 1 | 13_67148033 | ENSG00000285588 | AL160254.1 | 0 | INTRON | 4.3699008 | 1.24E-05 | 0.02523692 |
| 1 | 113954149 | 113954149 | 1 | 1_113954149 | ENSG00000163349 | HIPK1 | 0 | INTRON | -4.3698699 | 1.24E-05 | 0.02523748 |
| 18 | 24407567 | 24407567 | 1 | 18_24407567 | ENSG00000273321 | AC023983.2 | 4853 | Downstream | -4.369681 | 1.24E-05 | 0.02525631 |
| 1 | 22630050 | 22630050 | 1 | 1_22630050 | ENSG00000276835 | MIR6127 | 3207 | Downstream | 4.36960334 | 1.24E-05 | 0.02526228 |
| 6 | 159719508 | 159719508 | 1 | 6_159719508 | ENSG00000285441 | SOD2 | 0 | INTRON | -4.3695519 | 1.25E-05 | 0.02526522 |
| 16 | 74277406 | 74277406 | 1 | 16_74277406 | ENSG00000261404 | AC138627.1 | 0 | INTRON | -4.3694726 | 1.25E-05 | 0.02526794 |
| 3 | 78487415 | 78487415 | 1 | 3_78487415 | ENSG00000239226 | MRPS17P3 | 37685 | Upstream | -4.3694626 | 1.25E-05 | 0.02526794 |
| 9 | 126748145 | 126748145 | 1 | 9_126748145 | ENSG00000286428 | AL161731.1 | 43454 | Upstream | 4.36945021 | 1.25E-05 | 0.02526794 |
| 12 | 32642999 | 32642999 | 1 | 12_32642999 | ENSG00000139132 | FGD4 | 0 | 3UTR | 4.36939432 | 1.25E-05 | 0.02526963 |
| 11 | 108068448 | 108068448 | 1 | 11_108068448 | ENSG00000166266 | CUL5 | 0 | INTRON | -4.3693836 | 1.25E-05 | 0.02526963 |
| 20 | 57396367 | 57396367 | 1 | 20_57396367 | ENSG00000132819 | RBM38 | 0 | INTRON | 4.36935171 | 1.25E-05 | 0.0252703 |
| 19 | 49634967 | 49634967 | 1 | 19_49634967 | ENSG00000126458 | RRAS | 324 | Downstream | -4.3692906 | 1.25E-05 | 0.02527436 |
| 10 | 1983255 | 1983255 | 1 | 10_1983255 | ENSG00000234962 | LINC00700 | 5820 | Downstream | -4.3692261 | 1.25E-05 | 0.02527881 |
| 3 | 122226248 | 122226248 | 1 | 3_122226248 | ENSG00000036828 | CASR | 0 | INTRON | 4.36911559 | 1.25E-05 | 0.0252886 |
| 3 | 88087818 | 88087818 | 1 | 3_88087818 | ENSG00000163320 | CGGBP1 | 0 | INTRON | -4.3690381 | 1.25E-05 | 0.02529455 |
| 1 | 238363567 | 238363567 | 1 | 1_238363567 | ENSG00000234464 | AL356010.2 | 0 | INTRON | 4.36897879 | 1.25E-05 | 0.02529841 |
| 12 | 127159523 | 127159523 | 1 | 12_127159523 | ENSG00000287339 | AC079949.6 | 0 | INTRON | 4.36894661 | 1.25E-05 | 0.02529913 |
| 5 | 95123891 | 95123891 | 1 | 5_95123891 | ENSG00000175471 | MCTP1 | 0 | INTRON | 4.36890369 | 1.25E-05 | 0.02530109 |
| 14 | 79042064 | 79042064 | 1 | 14_79042064 | ENSG00000021645 | NRXN3 | 0 | INTRON | 4.36874143 | 1.25E-05 | 0.02531223 |
| 15 | 67294438 | 67294438 | 1 | 15_67294438 | ENSG00000103599 | IQCH | 0 | INTRON | 4.36872951 | 1.25E-05 | 0.02531223 |
| 10 | 6100097 | 6100097 | 1 | 10_6100097 | ENSG00000134453 | RBM17 | 0 | INTRON | 4.36865797 | 1.25E-05 | 0.02531223 |
| 2 | 4969991 | 4969991 | 1 | 2_4969991 | ENSG00000207192 | RNU6-649P | 24608 | Downstream | 4.36864536 | 1.25E-05 | 0.02531223 |
| 11 | 60781435 | 60781435 | 1 | 11_60781435 | ENSG00000172689 | MS4A10 | 3897 | Upstream | 4.3686434 | 1.25E-05 | 0.02531223 |
| 4 | 43285949 | 43285949 | 1 | 4_43285949 | ENSG00000248939 | AC111198.1 | 50993 | Downstream | -4.3686259 | 1.25E-05 | 0.02531223 |
| 7 | 117596051 | 117596051 | 1 | 7_117596051 | ENSG00000001626 | CFTR | 0 | INTRON | 4.36862557 | 1.25E-05 | 0.02531223 |
| 13 | 56449418 | 56449418 | 1 | 13_56449418 | ENSG00000228319 | SPATA2P1 | 232476 | Downstream | -4.3685856 | 1.25E-05 | 0.02531385 |
| 10 | 35611670 | 35611670 | 1 | 10_35611670 | ENSG00000177291 | GJD4 | 2735 | Downstream | -4.368545 | 1.25E-05 | 0.02531554 |
| 4 | 153020238 | 153020238 | 1 | 4_153020238 | ENSG00000249022 | AC093599.1 | 13972 | Upstream | -4.3684922 | 1.25E-05 | 0.02531667 |
| 3 | 121326855 | 121326855 | 1 | 3_121326855 | ENSG00000145087 | STXBP5L | 0 | INTRON | -4.3684833 | 1.25E-05 | 0.02531667 |
| 12 | 45910161 | 45910161 | 1 | 12_45910161 | ENSG00000189079 | ARID2 | 2121 | Downstream | -4.3684387 | 1.25E-05 | 0.02531883 |
| 12 | 116697742 | 116697742 | 1 | 12_116697742 | ENSG00000257883 | AC125603.2 | 0 | INTRON | 4.36838818 | 1.25E-05 | 0.02532167 |
| 12 | 39609421 | 39609421 | 1 | 12_39609421 | ENSG00000173208 | ABCD2 | 0 | INTRON | 4.36832149 | 1.25E-05 | 0.02532639 |
| 19 | 10449002 | 10449002 | 1 | 19_10449002 | ENSG00000065989 | PDE4A | 0 | INTRON | 4.36826559 | 1.25E-05 | 0.02532737 |
| 7 | 23899671 | 23899671 | 1 | 7_23899671 | ENSG00000227930 | AC003087.1 | 2336 | Upstream | 4.36826119 | 1.25E-05 | 0.02532737 |
| 19 | 38078555 | 38078555 | 1 | 19_38078555 | ENSG00000105738 | SIPA1L3 | 0 | INTRON | 4.36818753 | 1.25E-05 | 0.02533042 |
| 11 | 12880171 | 12880171 | 1 | 11_12880171 | ENSG00000187079 | TEAD1 | 0 | INTRON | 4.36818293 | 1.25E-05 | 0.02533042 |
| 4 | 71660160 | 71660160 | 1 | 4_71660160 | ENSG00000145321 | GC | 81535 | Downstream | 4.36815189 | 1.25E-05 | 0.02533101 |
| 6 | 138649714 | 138649714 | 1 | 6_138649714 | ENSG00000135540 | NHSL1 | 0 | INTRON | -4.3679179 | 1.25E-05 | 0.02535163 |
| 4 | 26739932 | 26739932 | 1 | 4_26739932 | ENSG00000109680 | TBC1D19 | 0 | EXON | 4.36791636 | 1.25E-05 | 0.02535163 |
| 12 | 77582997 | 77582997 | 1 | 12_77582997 | ENSG00000067798 | NAV3 | 0 | INTRON | -4.367869 | 1.25E-05 | 0.02535163 |
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| X | 41304350 | 41304350 | 1 | X_41304350 | ENSG00000199564 | RNA5SP502 | 11434 | Downstream | -4.3677862 | 1.26E-05 | 0.02535163 |
| 9 | 129599382 | 129599382 | 1 | 9_129599382 | ENSG00000148335 | NTMT1 | 9501 | Upstream | 4.3677382 | 1.26E-05 | 0.02535163 |
| 2 | 131933191 | 131933191 | 1 | 2_131933191 | ENSG00000244337 | AJ239322.2 | 25085 | Upstream | -4.3677314 | 1.26E-05 | 0.02535163 |
| 13 | 59506143 | 59506143 | 1 | 13_59506143 | ENSG00000239003 | RNU7-88P | 26011 | Downstream | 4.36771104 | 1.26E-05 | 0.02535163 |
| 6 | 4211791 | 4211791 | 1 | 6_4211791 | ENSG00000216307 | AL136309.1 | 21985 | Downstream | -4.3677033 | 1.26E-05 | 0.02535163 |
| 1 | 37652759 | 37652759 | 1 | 1_37652759 | ENSG00000169218 | RSPO1 | 17867 | Upstream | 4.36768775 | 1.26E-05 | 0.02535163 |
| 13 | 62181615 | 62181615 | 1 | 13_62181615 | ENSG00000230142 | LINC01075 | 30961 | Upstream | -4.3676723 | 1.26E-05 | 0.02535163 |
| 22 | 47522273 | 47522273 | 1 | 22_47522273 | ENSG00000218357 | LINC01644 | 35162 | Upstream | 4.36763907 | 1.26E-05 | 0.02535163 |
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| 10 | 92745450 | 92745450 | 1 | 10_92745450 | ENSG00000201412 | Y_RNA | 34842 | Upstream | 4.36761034 | 1.26E-05 | 0.02535163 |
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| 15 | 63923187 | 63923187 | 1 | 15_63923187 | ENSG00000035664 | DAPK2 | 0 | EXON | -4.3673782 | 1.26E-05 | 0.02537264 |
| 7 | 117888994 | 117888994 | 1 | 7_117888994 | ENSG00000224136 | AC007568.1 | 5319 | Downstream | -4.3673351 | 1.26E-05 | 0.02537464 |
| 9 | 2433850 | 2433850 | 1 | 9_2433850 | ENSG00000236404 | VLDLR-AS1 | 0 | INTRON | -4.3673006 | 1.26E-05 | 0.02537564 |
| 13 | 42880016 | 42880016 | 1 | 13_42880016 | ENSG00000133106 | EPSTI1 | 6371 | Downstream | 4.36727264 | 1.26E-05 | 0.02537588 |
| 16 | 47505370 | 47505370 | 1 | 16_47505370 | ENSG00000102893 | PHKB | 0 | INTRON | -4.3671448 | 1.26E-05 | 0.02538773 |
| 10 | 129825271 | 129825271 | 1 | 10_129825271 | ENSG00000108001 | EBF3 | 10011 | Downstream | -4.3670973 | 1.26E-05 | 0.02539023 |
| 2 | 18504462 | 18504462 | 1 | 2_18504462 | ENSG00000287881 | AC079148.3 | 0 | EXON | -4.3670266 | 1.26E-05 | 0.02539371 |
| 12 | 48245000 | 48245000 | 1 | 12_48245000 | ENSG00000258234 | AC024257.1 | 0 | INTRON | -4.367001 | 1.26E-05 | 0.02539371 |
| 15 | 40751461 | 40751461 | 1 | 15_40751461 | ENSG00000137824 | RMDN3 | 0 | 3UTR | 4.36697668 | 1.26E-05 | 0.02539371 |
| 3 | 161431931 | 161431931 | 1 | 3_161431931 | ENSG00000240567 | LINC02067 | 0 | INTRON | -4.3669455 | 1.26E-05 | 0.02539371 |
| 11 | 126758666 | 126758666 | 1 | 11_126758666 | ENSG00000149571 | KIRREL3 | 0 | INTRON | -4.3669175 | 1.26E-05 | 0.02539371 |
| 4 | 26808589 | 26808589 | 1 | 4_26808589 | ENSG00000109689 | STIM2 | 49011 | Upstream | -4.3668957 | 1.26E-05 | 0.02539371 |
| 5 | 171513310 | 171513310 | 1 | 5_171513310 | ENSG00000156427 | FGF18 | 55684 | Downstream | -4.3668861 | 1.26E-05 | 0.02539371 |
| 8 | 77477680 | 77477680 | 1 | 8_77477680 | ENSG00000254366 | AC062004.1 | 0 | INTRON | -4.3667999 | 1.26E-05 | 0.02539685 |
| 14 | 69317670 | 69317670 | 1 | 14_69317670 | ENSG00000100626 | GALNT16 | 0 | INTRON | 4.36679267 | 1.26E-05 | 0.02539685 |
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| 7 | 19389971 | 19389971 | 1 | 7_19389971 | ENSG00000223838 | AC007091.1 | 0 | INTRON | 4.36675569 | 1.26E-05 | 0.02539685 |
| 1 | 236033125 | 236033125 | 1 | 1_236033125 | ENSG00000116962 | NID1 | 0 | INTRON | 4.36670494 | 1.26E-05 | 0.02539803 |
| 9 | 15371265 | 15371265 | 1 | 9_15371265 | ENSG00000215236 | RPL7P33 | 9131 | Downstream | 4.36665418 | 1.26E-05 | 0.02539803 |
| 2 | 47665823 | 47665823 | 1 | 2_47665823 | ENSG00000095002 | MSH2 | 2677 | Downstream | 4.36664845 | 1.26E-05 | 0.02539803 |
| 10 | 4119515 | 4119515 | 1 | 10_4119515 | ENSG00000236990 | AC025822.2 | 30502 | Downstream | 4.3666395 | 1.26E-05 | 0.02539803 |
| 19 | 56275213 | 56275213 | 1 | 19_56275213 | ENSG00000267710 | EDDM13 | 0 | INTRON | 4.36658997 | 1.26E-05 | 0.02539803 |
| 9 | 82620404 | 82620404 | 1 | 9_82620404 | ENSG00000286612 | AL353774.1 | 0 | INTRON | -4.3665714 | 1.26E-05 | 0.02539803 |
| 4 | 80178474 | 80178474 | 1 | 4_80178474 | ENSG00000248719 | AC021127.1 | 4162 | Downstream | 4.36655463 | 1.26E-05 | 0.02539803 |
| 2 | 221141282 | 221141282 | 1 | 2_221141282 | ENSG00000232089 | AC011233.1 | 21488 | Upstream | 4.36653869 | 1.26E-05 | 0.02539803 |
| 7 | 140123239 | 140123239 | 1 | 7_140123239 | ENSG00000006459 | KDM7A | 0 | INTRON | -4.366482 | 1.26E-05 | 0.02540162 |
| 12 | 29385198 | 29385198 | 1 | 12_29385198 | ENSG00000087502 | ERGIC2 | 4009 | Upstream | 4.36642462 | 1.26E-05 | 0.02540442 |
| 18 | 26103272 | 26103272 | 1 | 18_26103272 | ENSG00000243925 | RPS24P18 | 4046 | Downstream | -4.366328 | 1.26E-05 | 0.02540442 |
| 14 | 79362418 | 79362418 | 1 | 14_79362418 | ENSG00000021645 | NRXN3 | 0 | INTRON | -4.366305 | 1.26E-05 | 0.02540442 |
| 1 | 233099863 | 233099863 | 1 | 1_233099863 | ENSG00000135749 | PCNX2 | 0 | INTRON | 4.36630201 | 1.26E-05 | 0.02540442 |
| 20 | 3865619 | 3865619 | 1 | 20_3865619 | ENSG00000088888 | MAVS | 0 | INTRON | 4.36629994 | 1.26E-05 | 0.02540442 |
| 19 | 51386155 | 51386155 | 1 | 19_51386155 | ENSG00000105370 | LIM2 | 0 | INTRON | 4.36628805 | 1.26E-05 | 0.02540442 |
| 4 | 40641949 | 40641949 | 1 | 4_40641949 | ENSG00000163694 | RBM47 | 11074 | Upstream | 4.36627716 | 1.26E-05 | 0.02540442 |
| 11 | 12756567 | 12756567 | 1 | 11_12756567 | ENSG00000187079 | TEAD1 | 0 | INTRON | -4.3662173 | 1.26E-05 | 0.02540838 |
| 20 | 19339624 | 19339624 | 1 | 20_19339624 | ENSG00000185052 | SLC24A3 | 0 | INTRON | 4.36609971 | 1.26E-05 | 0.02541162 |
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| 6 | 28884573 | 28884573 | 1 | 6_28884573 | ENSG00000233366 | ZNF90P2 | 4258 | Downstream | 4.36602881 | 1.27E-05 | 0.02541162 |
| 1 | 83584477 | 83584477 | 1 | 1_83584477 | ENSG00000233008 | LINC01725 | 0 | INTRON | -4.3660116 | 1.27E-05 | 0.02541162 |
| 15 | 38907381 | 38907381 | 1 | 15_38907381 | ENSG00000175779 | LINC02694 | 0 | INTRON | -4.3660046 | 1.27E-05 | 0.02541162 |
| 9 | 41488199 | 41488199 | 1 | 9_41488199 | ENSG00000275160 | AL354718.1 | 7651 | Downstream | 4.36595444 | 1.27E-05 | 0.02541162 |
| 11 | 113917246 | 113917246 | 1 | 11_113917246 | ENSG00000149305 | HTR3B | 0 | INTRON | 4.36593192 | 1.27E-05 | 0.02541162 |
| 2 | 12595608 | 12595608 | 1 | 2_12595608 | ENSG00000224184 | MIR3681HG | 0 | INTRON | 4.36588403 | 1.27E-05 | 0.02541162 |
| 11 | 113649342 | 113649342 | 1 | 11_113649342 | ENSG00000166682 | TMPRSS5 | 38204 | Downstream | 4.36586875 | 1.27E-05 | 0.02541162 |
| 4 | 125943505 | 125943505 | 1 | 4_125943505 | ENSG00000250149 | AC104664.1 | 0 | INTRON | 4.36585295 | 1.27E-05 | 0.02541162 |
| 4 | 62905459 | 62905459 | 1 | 4_62905459 | ENSG00000180673 | EXOC5P1 | 86665 | Downstream | -4.3658445 | 1.27E-05 | 0.02541162 |
| 1 | 3752378 | 3752378 | 1 | 1_3752378 | ENSG00000162592 | CCDC27 | 0 | INTRON | 4.36583079 | 1.27E-05 | 0.02541162 |
| 2 | 204702643 | 204702643 | 1 | 2_204702643 | ENSG00000116117 | PARD3B | 0 | INTRON | 4.36582146 | 1.27E-05 | 0.02541162 |
| 5 | 2463080 | 2463080 | 1 | 5_2463080 | ENSG00000275733 | AC092266.1 | 201057 | Downstream | -4.3658182 | 1.27E-05 | 0.02541162 |
| 8 | 40501792 | 40501792 | 1 | 8_40501792 | ENSG00000272479 | AC010857.1 | 17772 | Downstream | 4.36580249 | 1.27E-05 | 0.02541162 |
| 16 | 12351364 | 12351364 | 1 | 16_12351364 | ENSG00000048471 | SNX29 | 0 | INTRON | 4.36575506 | 1.27E-05 | 0.02541243 |
| 20 | 13775708 | 13775708 | 1 | 20_13775708 | ENSG00000089048 | ESF1 | 0 | INTRON | 4.36574397 | 1.27E-05 | 0.02541243 |
| 1 | 22907009 | 22907009 | 1 | 1_22907009 | ENSG00000133216 | EPHB2 | 0 | INTRON | 4.36566677 | 1.27E-05 | 0.02541309 |
| 11 | 55372376 | 55372376 | 1 | 11_55372376 | ENSG00000181958 | OR4A15 | 3458 | Downstream | 4.36561686 | 1.27E-05 | 0.02541309 |
| 1 | 235940507 | 235940507 | 1 | 1_235940507 | ENSG00000237845 | AL139161.1 | 2045 | Downstream | 4.36560848 | 1.27E-05 | 0.02541309 |
| 7 | 97581857 | 97581857 | 1 | 7_97581857 | ENSG00000199475 | RN7SKP104 | 17075 | Downstream | -4.3656048 | 1.27E-05 | 0.02541309 |
| 11 | 41865990 | 41865990 | 1 | 11_41865990 | ENSG00000255279 | AC023442.3 | 0 | INTRON | -4.36559 | 1.27E-05 | 0.02541309 |
| 11 | 459289 | 459289 | 1 | 11_459289 | ENSG00000174915 | PTDSS2 | 0 | EXON | -4.3655838 | 1.27E-05 | 0.02541309 |
| 10 | 82985546 | 82985546 | 1 | 10_82985546 | ENSG00000185737 | NRG3 | 0 | 3UTR | -4.3655027 | 1.27E-05 | 0.02541806 |
| 3 | 129600039 | 129600039 | 1 | 3_129600039 | ENSG00000004399 | PLXND1 | 0 | INTRON | 4.36548957 | 1.27E-05 | 0.02541806 |
| 5 | 117582268 | 117582268 | 1 | 5_117582268 | ENSG00000248663 | LINC00992 | 35970 | Downstream | -4.365459 | 1.27E-05 | 0.02541862 |
| 13 | 90341268 | 90341268 | 1 | 13_90341268 | ENSG00000224419 | KRT18P27 | 109586 | Downstream | -4.365176 | 1.27E-05 | 0.02544693 |
| 4 | 122670417 | 122670417 | 1 | 4_122670417 | ENSG00000227145 | IL21-AS1 | 0 | INTRON | 4.36516262 | 1.27E-05 | 0.02544693 |
| 1 | 22645019 | 22645019 | 1 | 1_22645019 | ENSG00000159189 | C1QC | 0 | INTRON | 4.36511674 | 1.27E-05 | 0.02544693 |
| 7 | 127226374 | 127226374 | 1 | 7_127226374 | ENSG00000236340 | AC000099.1 | 0 | INTRON | 4.36509519 | 1.27E-05 | 0.02544693 |
| 4 | 146891020 | 146891020 | 1 | 4_146891020 | ENSG00000137473 | TTC29 | 0 | INTRON | -4.365087 | 1.27E-05 | 0.02544693 |
| 6 | 134732927 | 134732927 | 1 | 6_134732927 | ENSG00000236389 | AL121970.1 | 25578 | Upstream | -4.3650139 | 1.27E-05 | 0.02545154 |
| 22 | 41646302 | 41646302 | 1 | 22_41646302 | ENSG00000196419 | XRCC6 | 0 | INTRON | 4.36498058 | 1.27E-05 | 0.02545154 |
| 16 | 1817222 | 1817222 | 1 | 16_1817222 | ENSG00000063854 | HAGH | 0 | EXON | -4.3649703 | 1.27E-05 | 0.02545154 |
| 17 | 77043358 | 77043358 | 1 | 17_77043358 | ENSG00000276202 | Metazoa_SRP | 28220 | Downstream | 4.3649019 | 1.27E-05 | 0.02545651 |
| 19 | 1235278 | 1235278 | 1 | 19_1235278 | ENSG00000099625 | CBARP | 0 | EXON | -4.3647104 | 1.27E-05 | 0.02547582 |
| 9 | 109331026 | 109331026 | 1 | 9_109331026 | ENSG00000207329 | Y_RNA | 6230 | Downstream | -4.3646784 | 1.27E-05 | 0.02547656 |
| 3 | 2267618 | 2267618 | 1 | 3_2267618 | ENSG00000144619 | CNTN4 | 0 | INTRON | 4.36462877 | 1.27E-05 | 0.02547934 |
| 6 | 6895100 | 6895100 | 1 | 6_6895100 | ENSG00000223342 | AL158817.1 | 5921 | Downstream | 4.36459011 | 1.27E-05 | 0.02548075 |
| 1 | 111909582 | 111909582 | 1 | 1_111909582 | ENSG00000237556 | KCND3-AS1 | 0 | INTRON | 4.36456526 | 1.27E-05 | 0.02548075 |
| 20 | 35989079 | 35989079 | 1 | 20_35989079 | ENSG00000149646 | CNBD2 | 0 | INTRON | -4.3645111 | 1.27E-05 | 0.02548408 |
| 16 | 29139665 | 29139665 | 1 | 16_29139665 | ENSG00000260517 | AC009093.2 | 0 | EXON | 4.36438049 | 1.27E-05 | 0.02549401 |
| 16 | 88792745 | 88792745 | 1 | 16_88792745 | ENSG00000103335 | PIEZO1 | 7525 | Upstream | 4.36436617 | 1.27E-05 | 0.02549401 |
| 2 | 242009699 | 242009699 | 1 | 2_242009699 | ENSG00000233806 | LINC01237 | 0 | INTRON | 4.36434873 | 1.28E-05 | 0.02549401 |
| 14 | 67430935 | 67430935 | 1 | 14_67430935 | ENSG00000265993 | MIR5694 | 10919 | Downstream | 4.36431339 | 1.28E-05 | 0.02549514 |
| 1 | 6404702 | 6404702 | 1 | 1_6404702 | ENSG00000069812 | HES2 | 7715 | Downstream | -4.364222 | 1.28E-05 | 0.02549977 |
| 12 | 12598458 | 12598458 | 1 | 12_12598458 | ENSG00000111269 | CREBL2 | 13368 | Upstream | -4.3642189 | 1.28E-05 | 0.02549977 |
| 1 | 31515460 | 31515460 | 1 | 1_31515460 | ENSG00000284543 | LINC01226 | 0 | INTRON | 4.36417138 | 1.28E-05 | 0.02549977 |
| 11 | 61775925 | 61775925 | 1 | 11_61775925 | ENSG00000124920 | MYRF | 0 | INTRON | 4.36417093 | 1.28E-05 | 0.02549977 |
| 14 | 94643779 | 94643779 | 1 | 14_94643779 | ENSG00000187483 | SERPINA13P | 0 | INTRON | 4.36408969 | 1.28E-05 | 0.0255039 |
| 14 | 28603760 | 28603760 | 1 | 14_28603760 | ENSG00000258175 | LINC02300 | 0 | INTRON | -4.3640842 | 1.28E-05 | 0.0255039 |
| 1 | 192562705 | 192562705 | 1 | 1_192562705 | ENSG00000285280 | AL390957.1 | 0 | INTRON | 4.36400392 | 1.28E-05 | 0.02551027 |
| 21 | 42106288 | 42106288 | 1 | 21_42106288 | ENSG00000177398 | UMODL1 | 0 | INTRON | 4.36390811 | 1.28E-05 | 0.02551372 |
| 17 | 52928383 | 52928383 | 1 | 17_52928383 | ENSG00000226364 | LINC02089 | 28795 | Downstream | 4.36389981 | 1.28E-05 | 0.02551372 |
| 17 | 29140927 | 29140927 | 1 | 17_29140927 | ENSG00000263709 | AC024619.3 | 0 | INTRON | 4.36389312 | 1.28E-05 | 0.02551372 |
| 21 | 16287181 | 16287181 | 1 | 21_16287181 | ENSG00000215386 | MIR99AHG | 0 | INTRON | 4.36387173 | 1.28E-05 | 0.02551372 |
| 22 | 33738528 | 33738528 | 1 | 22_33738528 | ENSG00000133424 | LARGE1 | 0 | INTRON | 4.36384289 | 1.28E-05 | 0.02551409 |
| 18 | 78894057 | 78894057 | 1 | 18_78894057 | ENSG00000266586 | AC091027.2 | 14571 | Downstream | 4.36381372 | 1.28E-05 | 0.0255145 |
| 18 | 9875892 | 9875892 | 1 | 18_9875892 | ENSG00000265564 | PIGPP4 | 4687 | Downstream | 4.36376487 | 1.28E-05 | 0.02551655 |
| 12 | 37130717 | 37130717 | 1 | 12_37130717 | ENSG00000258368 | ZNF970P | 444869 | Upstream | -4.3637449 | 1.28E-05 | 0.02551655 |
| 7 | 144881778 | 144881778 | 1 | 7_144881778 | ENSG00000200673 | RN7SKP174 | 31694 | Upstream | -4.3637167 | 1.28E-05 | 0.02551685 |
| 15 | 64403957 | 64403957 | 1 | 15_64403957 | ENSG00000103671 | TRIP4 | 0 | INTRON | 4.36367124 | 1.28E-05 | 0.02551916 |
| 3 | 27210269 | 27210269 | 1 | 3_27210269 | ENSG00000163491 | NEK10 | 0 | INTRON | 4.36361218 | 1.28E-05 | 0.02552306 |
| 7 | 153650961 | 153650961 | 1 | 7_153650961 | ENSG00000287744 | AC005998.1 | 64112 | Downstream | 4.36357127 | 1.28E-05 | 0.02552484 |
| 8 | 29515847 | 29515847 | 1 | 8_29515847 | ENSG00000253632 | AC084026.2 | 11464 | Upstream | -4.3635253 | 1.28E-05 | 0.02552721 |
| 18 | 14002665 | 14002665 | 1 | 18_14002665 | ENSG00000279352 | AC006557.6 | 7388 | Upstream | -4.3634308 | 1.28E-05 | 0.02552942 |
| 12 | 132134576 | 132134576 | 1 | 12_132134576 | ENSG00000185163 | DDX51 | 2017 | Downstream | -4.3634064 | 1.28E-05 | 0.02552942 |
| 10 | 92348137 | 92348137 | 1 | 10_92348137 | ENSG00000198060 | 5-Mar | 0 | INTRON | 4.36334969 | 1.28E-05 | 0.02552942 |
| 3 | 42114428 | 42114428 | 1 | 3_42114428 | ENSG00000182606 | TRAK1 | 0 | INTRON | 4.36334082 | 1.28E-05 | 0.02552942 |
| 1 | 57859110 | 57859110 | 1 | 1_57859110 | ENSG00000173406 | DAB1 | 0 | INTRON | 4.36329926 | 1.28E-05 | 0.02552942 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 14 | 85900828 | 85900828 | 1 | 14_85900828 | ENSG00000258733 | LINC02328 | 10609 | Upstream | -4.3632935 | 1.28E-05 | 0.02552942 |
| 12 | 129962785 | 129962785 | 1 | 12_129962785 | ENSG00000151952 | TMEM132D | 58760 | Upstream | -4.3632872 | 1.28E-05 | 0.02552942 |
| 16 | 59858010 | 59858010 | 1 | 16_59858010 | ENSG00000261807 | LINC02141 | 0 | INTRON | 4.36327935 | 1.28E-05 | 0.02552942 |
| 2 | 202320981 | 202320981 | 1 | 2_202320981 | ENSG00000264275 | RN7SL753P | 12457 | Upstream | 4.3632758 | 1.28E-05 | 0.02552942 |
| 7 | 50785299 | 50785299 | 1 | 7_50785299 | ENSG00000106070 | GRB10 | 0 | INTRON | 4.36321989 | 1.28E-05 | 0.02553296 |
| 18 | 71293081 | 71293081 | 1 | 18_71293081 | ENSG00000265484 | AC091691.2 | 55923 | Upstream | 4.36297215 | 1.28E-05 | 0.02555891 |
| 7 | 98772298 | 98772298 | 1 | 7_98772298 | ENSG00000207204 | RNU6-393P | 22419 | Downstream | 4.3629 | 1.28E-05 | 0.02556435 |
| 17 | 68328136 | 68328136 | 1 | 17_68328136 | ENSG00000141337 | ARSG | 0 | INTRON | 4.36286353 | 1.28E-05 | 0.02556562 |
| 10 | 65166953 | 65166953 | 1 | 10_65166953 | ENSG00000227173 | MYL6P3 | 2484 | Downstream | 4.36269474 | 1.28E-05 | 0.02557898 |
| 9 | 62807492 | 62807492 | 1 | 9_62807492 | ENSG00000238113 | LINC01410 | 0 | INTRON | -4.362683 | 1.28E-05 | 0.02557898 |
| 10 | 63633456 | 63633456 | 1 | 10_63633456 | ENSG00000286373 | AC022387.2 | 0 | INTRON | -4.3626599 | 1.28E-05 | 0.02557898 |
| 2 | 231400849 | 231400849 | 1 | 2_231400849 | ENSG00000156966 | B3GNT7 | 0 | 3UTR | 4.36264698 | 1.28E-05 | 0.02557898 |
| 4 | 170528739 | 170528739 | 1 | 4_170528739 | ENSG00000250082 | AC074255.1 | 46544 | Upstream | -4.3626184 | 1.29E-05 | 0.02557933 |
| 20 | 13844881 | 13844881 | 1 | 20_13844881 | ENSG00000101251 | SEL1L2 | 4365 | Downstream | 4.36259151 | 1.29E-05 | 0.02557948 |
| 1 | 162300149 | 162300149 | 1 | 1_162300149 | ENSG00000198929 | NOS1AP | 0 | INTRON | -4.3625655 | 1.29E-05 | 0.02557953 |
| 9 | 100589486 | 100589486 | 1 | 9_100589486 | ENSG00000170681 | CAVIN4 | 1097 | Downstream | -4.3624255 | 1.29E-05 | 0.02558995 |
| 3 | 104089294 | 104089294 | 1 | 3_104089294 | ENSG00000214405 | RAP1BP2 | 25712 | Downstream | 4.36242526 | 1.29E-05 | 0.02558995 |
| 6 | 158300949 | 158300949 | 1 | 6_158300949 | ENSG00000130338 | TULP4 | 0 | INTRON | 4.36228857 | 1.29E-05 | 0.02560212 |
| 14 | 29103600 | 29103600 | 1 | 14_29103600 | ENSG00000258028 | AL135878.1 | 0 | INTRON | -4.3622701 | 1.29E-05 | 0.02560212 |
| 19 | 48221833 | 48221833 | 1 | 19_48221833 | ENSG00000105483 | CARD8 | 0 | 3UTR | -4.362206 | 1.29E-05 | 0.02560663 |
| 5 | 1093659 | 1093659 | 1 | 5_1093659 | ENSG00000113504 | SLC12A7 | 0 | INTRON | -4.3621672 | 1.29E-05 | 0.02560716 |
| 4 | 8906750 | 8906750 | 1 | 4_8906750 | ENSG00000215612 | HMX1 | 34911 | Upstream | -4.3621505 | 1.29E-05 | 0.02560716 |
| 14 | 89817719 | 89817719 | 1 | 14_89817719 | ENSG00000259053 | AL137230.2 | 0 | INTRON | 4.36204083 | 1.29E-05 | 0.02561519 |
| 22 | 41857139 | 41857139 | 1 | 22_41857139 | ENSG00000198911 | SREBF2 | 0 | INTRON | -4.3619984 | 1.29E-05 | 0.02561519 |
| 16 | 82257829 | 82257829 | 1 | 16_82257829 | ENSG00000251888 | RN7SKP190 | 65039 | Upstream | -4.3619768 | 1.29E-05 | 0.02561519 |
| 6 | 8229885 | 8229885 | 1 | 6_8229885 | ENSG00000232234 | AL355499.1 | 0 | INTRON | -4.3619605 | 1.29E-05 | 0.02561519 |
| 1 | 54237899 | 54237899 | 1 | 1_54237899 | ENSG00000198711 | SSBP3-AS1 | 0 | EXON | 4.36195407 | 1.29E-05 | 0.02561519 |
| 10 | 80909039 | 80909039 | 1 | 10_80909039 | ENSG00000227209 | WARS2P1 | 31625 | Downstream | 4.36192788 | 1.29E-05 | 0.02561527 |
| X | 40084850 | 40084850 | 1 | X_40084850 | ENSG00000183337 | BCOR | 0 | INTRON | 4.36185886 | 1.29E-05 | 0.02561648 |
| 6 | 121703431 | 121703431 | 1 | 6_121703431 | ENSG00000217139 | AL603865.1 | 19159 | Downstream | 4.36184089 | 1.29E-05 | 0.02561648 |
| 10 | 13508875 | 13508875 | 1 | 10_13508875 | ENSG00000165626 | BEND7 | 0 | INTRON | 4.36182599 | 1.29E-05 | 0.02561648 |
| 22 | 41291029 | 41291029 | 1 | 22_41291029 | ENSG00000100401 | RANGAP1 | 4778 | Upstream | 4.36181535 | 1.29E-05 | 0.02561648 |
| 18 | 77478869 | 77478869 | 1 | 18_77478869 | ENSG00000264015 | AC124254.2 | 0 | INTRON | 4.36176455 | 1.29E-05 | 0.02561944 |
| 11 | 62960699 | 62960699 | 1 | 11_62960699 | ENSG00000197901 | SLC22A6 | 0 | INTRON | 4.36170322 | 1.29E-05 | 0.02562364 |
| 6 | 134097134 | 134097134 | 1 | 6_134097134 | ENSG00000287413 | AL449363.2 | 0 | INTRON | -4.3615978 | 1.29E-05 | 0.025633 |
| 6 | 155155825 | 155155825 | 1 | 6_155155825 | ENSG00000146426 | TIAM2 | 0 | INTRON | 4.36150503 | 1.29E-05 | 0.02563857 |
| 2 | 239321389 | 239321389 | 1 | 2_239321389 | ENSG00000068024 | HDAC4 | 0 | INTRON | 4.36149925 | 1.29E-05 | 0.02563857 |
| 12 | 6857702 | 6857702 | 1 | 12_6857702 | ENSG00000111667 | USP5 | 0 | EXON | 4.36139549 | 1.29E-05 | 0.02564759 |
| 6 | 151442206 | 151442206 | 1 | 6_151442206 | ENSG00000155906 | RMND1 | 0 | INTRON | 4.36137124 | 1.29E-05 | 0.02564759 |
| 19 | 30470754 | 30470754 | 1 | 19_30470754 | ENSG00000198597 | ZNF536 | 0 | INTRON | 4.36125093 | 1.29E-05 | 0.02565613 |
| 5 | 6080858 | 6080858 | 1 | 5_6080858 | ENSG00000259861 | AC010266.1 | 50017 | Downstream | -4.3612474 | 1.29E-05 | 0.02565613 |
| 8 | 2860119 | 2860119 | 1 | 8_2860119 | ENSG00000287740 | AC115485.1 | 13405 | Downstream | -4.361161 | 1.29E-05 | 0.02566327 |
| 7 | 53436447 | 53436447 | 1 | 7_53436447 | ENSG00000222154 | RN7SKP218 | 53700 | Downstream | -4.3610765 | 1.29E-05 | 0.02566735 |
| 19 | 39212003 | 39212003 | 1 | 19_39212003 | ENSG00000179751 | SYCN | 7737 | Upstream | 4.36107524 | 1.29E-05 | 0.02566735 |
| 15 | 64518978 | 64518978 | 1 | 15_64518978 | ENSG00000180357 | ZNF609 | 0 | INTRON | 4.36103705 | 1.29E-05 | 0.02566884 |
| X | 153693390 | 153693390 | 1 | X_153693390 | ENSG00000130821 | SLC6A8 | 0 | INTRON | 4.36089739 | 1.30E-05 | 0.02568015 |
| 11 | 88324203 | 88324203 | 1 | 11_88324203 | ENSG00000109861 | CTSC | 0 | 3UTR | 4.36083864 | 1.30E-05 | 0.02568015 |
| 17 | 56675560 | 56675560 | 1 | 17_56675560 | ENSG00000183691 | NOG | 79962 | Downstream | 4.36082496 | 1.30E-05 | 0.02568015 |
| 5 | 173736238 | 173736238 | 1 | 5_173736238 | ENSG00000253686 | LINC01484 | 0 | INTRON | 4.36081453 | 1.30E-05 | 0.02568015 |
| 8 | 131841983 | 131841983 | 1 | 8_131841983 | ENSG00000132294 | EFR3A | 62109 | Upstream | -4.3608132 | 1.30E-05 | 0.02568015 |
| 5 | 122349211 | 122349211 | 1 | 5_122349211 | ENSG00000064692 | SNCAIP | 0 | INTRON | -4.3607629 | 1.30E-05 | 0.02568199 |
| 1 | 490798 | 490798 | 1 | 1_490798 | ENSG00000237094 | AL732372.2 | 0 | INTRON | 4.36074662 | 1.30E-05 | 0.02568199 |
| 2 | 51007053 | 51007053 | 1 | 2_51007053 | ENSG00000179915 | NRXN1 | 0 | INTRON | 4.36061132 | 1.30E-05 | 0.02569488 |
| 22 | 42531727 | 42531727 | 1 | 22_42531727 | ENSG00000189306 | RRP7A | 11931 | Upstream | -4.3604984 | 1.30E-05 | 0.02569595 |
| 17 | 49345579 | 49345579 | 1 | 17_49345579 | ENSG00000198740 | ZNF652 | 0 | INTRON | 4.36049629 | 1.30E-05 | 0.02569595 |
| 15 | 33465131 | 33465131 | 1 | 15_33465131 | ENSG00000198838 | RYR3 | 0 | INTRON | -4.3604921 | 1.30E-05 | 0.02569595 |
| 1 | 195274950 | 195274950 | 1 | 1_195274950 | ENSG00000285718 | AL353072.2 | 343640 | Upstream | -4.3604869 | 1.30E-05 | 0.02569595 |
| 2 | 234600391 | 234600391 | 1 | 2_234600391 | ENSG00000280744 | LINC01173 | 82276 | Upstream | 4.36045946 | 1.30E-05 | 0.02569595 |
| 6 | 24801675 | 24801675 | 1 | 6_24801675 | ENSG00000282804 | AL512428.1 | 0 | INTRON | 4.36042876 | 1.30E-05 | 0.02569595 |
| 9 | 3678712 | 3678712 | 1 | 9_3678712 | ENSG00000232104 | RFX3-AS1 | 0 | INTRON | -4.3603812 | 1.30E-05 | 0.02569595 |
| 16 | 88974969 | 88974969 | 1 | 16_88974969 | ENSG00000129993 | CBFA2T3 | 0 | INTRON | -4.3603751 | 1.30E-05 | 0.02569595 |
| 15 | 59797738 | 59797738 | 1 | 15_59797738 | ENSG00000286495 | AC092079.2 | 3608 | Downstream | -4.3603583 | 1.30E-05 | 0.02569595 |
| 5 | 85143567 | 85143567 | 1 | 5_85143567 | ENSG00000249349 | AC114928.1 | 30811 | Upstream | -4.3603476 | 1.30E-05 | 0.02569595 |
| 21 | 30691489 | 30691489 | 1 | 21_30691489 | ENSG00000231068 | KRTAP21-3 | 27035 | Downstream | -4.3602139 | 1.30E-05 | 0.02570125 |
| 6 | 136908599 | 136908599 | 1 | 6_136908599 | ENSG00000112357 | PEX7 | 0 | INTRON | 4.36019117 | 1.30E-05 | 0.02570125 |
| 3 | 195875348 | 195875348 | 1 | 3_195875348 | ENSG00000061938 | TNK2 | 0 | INTRON | 4.36017902 | 1.30E-05 | 0.02570125 |
| 1 | 48712842 | 48712842 | 1 | 1_48712842 | ENSG00000186094 | AGBL4 | 0 | INTRON | 4.36017392 | 1.30E-05 | 0.02570125 |
| 9 | 124479759 | 124479759 | 1 | 9_124479759 | ENSG00000180264 | ADGRD2 | 1170 | Downstream | 4.36015674 | 1.30E-05 | 0.02570125 |
| 10 | 13914108 | 13914108 | 1 | 10_13914108 | ENSG00000151474 | FRMD4A | 0 | INTRON | 4.36014986 | 1.30E-05 | 0.02570125 |
| 3 | 98630592 | 98630592 | 1 | 3_98630592 | ENSG00000240827 | AC021660.1 | 9974 | Downstream | -4.3601075 | 1.30E-05 | 0.02570324 |
| 11 | 90089281 | 90089281 | 1 | 11_90089281 | ENSG00000255009 | UBTFL1 | 2150 | Downstream | 4.36004512 | 1.30E-05 | 0.02570758 |
| 1 | 180569190 | 180569190 | 1 | 1_180569190 | ENSG00000236719 | OVAAL | 2670 | Downstream | -4.3598894 | 1.30E-05 | 0.02572289 |
| 22 | 49973046 | 49973046 | 1 | 22_49973046 | ENSG00000198355 | PIM3 | 8974 | Downstream | -4.3598411 | 1.30E-05 | 0.02572559 |
| 7 | 98235572 | 98235572 | 1 | 7_98235572 | ENSG00000205356 | TECPR1 | 0 | INTRON | 4.35979259 | 1.30E-05 | 0.02572615 |
| 12 | 2771679 | 2771679 | 1 | 12_2771679 | ENSG00000255669 | AC092471.1 | 0 | INTRON | 4.35977948 | 1.30E-05 | 0.02572615 |
| 3 | 91542734 | 91542734 | 1 | 3_91542734 | ENSG00000283544 | ABBA01000935.2 | 28959 | Upstream | -4.35976 | 1.30E-05 | 0.02572615 |
| 2 | 5784729 | 5784729 | 1 | 2_5784729 | ENSG00000237266 | LINC01810 | 25911 | Downstream | -4.3596698 | 1.30E-05 | 0.02573313 |
| 15 | 47427403 | 47427403 | 1 | 15_47427403 | ENSG00000137872 | SEMA6D | 0 | INTRON | 4.3596427 | 1.30E-05 | 0.02573313 |
| 10 | 128263494 | 128263494 | 1 | 10_128263494 | ENSG00000280953 | LINC01163 | 0 | INTRON | 4.35962444 | 1.30E-05 | 0.02573313 |
| 19 | 753409 | 753409 | 1 | 19_753409 | ENSG00000099812 | MISP | 0 | INTRON | -4.3595655 | 1.30E-05 | 0.02573707 |
| 5 | 173445766 | 173445766 | 1 | 5_173445766 | ENSG00000253968 | AC016573.1 | 0 | INTRON | -4.3594397 | 1.30E-05 | 0.02574888 |
| X | 153774268 | 153774268 | 1 | X_153774268 | ENSG00000198753 | PLXNB3 | 0 | EXON | -4.3593477 | 1.30E-05 | 0.02575672 |
| 3 | 142678837 | 142678837 | 1 | 3_142678837 | ENSG00000120756 | PLS1 | 0 | INTRON | 4.35929751 | 1.30E-05 | 0.02575812 |
| 1 | 64054162 | 64054162 | 1 | 1_64054162 | ENSG00000185483 | ROR1 | 0 | INTRON | 4.35927742 | 1.30E-05 | 0.02575812 |
| 11 | 134501251 | 134501251 | 1 | 11_134501251 | ENSG00000255545 | AP004608.1 | 0 | INTRON | 4.35924792 | 1.31E-05 | 0.02575812 |
| 4 | 98543454 | 98543454 | 1 | 4_98543454 | ENSG00000168785 | TSPAN5 | 0 | INTRON | -4.3592342 | 1.31E-05 | 0.02575812 |
| 3 | 188293375 | 188293375 | 1 | 3_188293375 | ENSG00000145012 | LPP | 0 | INTRON | 4.35914757 | 1.31E-05 | 0.02576153 |
| 12 | 6952938 | 6952938 | 1 | 12_6952938 | ENSG00000111679 | PTPN6 | 0 | EXON | 4.35913235 | 1.31E-05 | 0.02576153 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
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| 1 | 220389867 | 220389867 | 1 | 1_220389867 | ENSG00000260505 | AC096644.3 | 11254 | Upstream | 4.35912914 | 1.31E-05 | 0.02576153 |
| 5 | 159751632 | 159751632 | 1 | 5_159751632 | ENSG00000253311 | LINC01847 | 0 | INTRON | 4.35904037 | 1.31E-05 | 0.0257667 |
| 7 | 66632857 | 66632857 | 1 | 7_66632857 | ENSG00000243335 | KCTD7 | 0 | INTRON | 4.35903452 | 1.31E-05 | 0.0257667 |
| 11 | 115557525 | 115557525 | 1 | 11_115557525 | ENSG00000257087 | AP003174.3 | 18141 | Upstream | 4.35891485 | 1.31E-05 | 0.0257778 |
| 4 | 163872960 | 163872960 | 1 | 4_163872960 | ENSG00000145416 | 1-Mar | 0 | INTRON | -4.3588208 | 1.31E-05 | 0.02578007 |
| 10 | 58302374 | 58302374 | 1 | 10_58302374 | ENSG00000228527 | AC016396.1 | 2178 | Upstream | -4.35881 | 1.31E-05 | 0.02578007 |
| 3 | 162951927 | 162951927 | 1 | 3_162951927 | ENSG00000241168 | AC128685.1 | 74468 | Upstream | 4.35880608 | 1.31E-05 | 0.02578007 |
| 11 | 128553124 | 128553124 | 1 | 11_128553124 | ENSG00000134954 | ETS1 | 0 | INTRON | 4.3587941 | 1.31E-05 | 0.02578007 |
| 1 | 205850886 | 205850886 | 1 | 1_205850886 | ENSG00000286619 | AC119673.2 | 0 | INTRON | 4.3586942 | 1.31E-05 | 0.02578467 |
| 17 | 67491772 | 67491772 | 1 | 17_67491772 | ENSG00000154217 | PITPNC1 | 0 | INTRON | 4.3586627 | 1.31E-05 | 0.02578467 |
| 13 | 22589453 | 22589453 | 1 | 13_22589453 | ENSG00000287357 | AL512484.1 | 245 | Downstream | -4.3586358 | 1.31E-05 | 0.02578467 |
| 11 | 46101844 | 46101844 | 1 | 11_46101844 | ENSG00000135365 | PHF21A | 0 | INTRON | -4.3586287 | 1.31E-05 | 0.02578467 |
| 5 | 151384702 | 151384702 | 1 | 5_151384702 | ENSG00000253897 | AC034205.2 | 0 | INTRON | -4.3586283 | 1.31E-05 | 0.02578467 |
| X | 115454776 | 115454776 | 1 | X_115454776 | ENSG00000271021 | AC239600.1 | 0 | EXON | 4.35856946 | 1.31E-05 | 0.02578595 |
| 4 | 17848611 | 17848611 | 1 | 4_17848611 | ENSG00000178177 | LCORL | 0 | INTRON | 4.35856675 | 1.31E-05 | 0.02578595 |
| 2 | 48740270 | 48740270 | 1 | 2_48740270 | ENSG00000138039 | LHCGR | 0 | INTRON | -4.3584562 | 1.31E-05 | 0.02579599 |
| 8 | 135020024 | 135020024 | 1 | 8_135020024 | ENSG00000244413 | RPL23AP56 | 40745 | Upstream | -4.3584036 | 1.31E-05 | 0.0257992 |
| 1 | 9992372 | 9992372 | 1 | 1_9992372 | ENSG00000162444 | RBP7 | 4833 | Upstream | -4.3583278 | 1.31E-05 | 0.02580314 |
| 22 | 30571736 | 30571736 | 1 | 22_30571736 | ENSG00000128242 | GAL3ST1 | 0 | INTRON | -4.3583195 | 1.31E-05 | 0.02580314 |
| X | 129681134 | 129681134 | 1 | X_129681134 | ENSG00000287024 | AL022162.1 | 2786 | Upstream | 4.35825495 | 1.31E-05 | 0.0258047 |
| X | 153709590 | 153709590 | 1 | X_153709590 | ENSG00000185825 | BCAP31 | 0 | INTRON | -4.3582547 | 1.31E-05 | 0.0258047 |
| 1 | 11312292 | 11312292 | 1 | 1_11312292 | ENSG00000284646 | AL031291.1 | 0 | EXON | -4.3582296 | 1.31E-05 | 0.0258047 |
| 12 | 55648647 | 55648647 | 1 | 12_55648647 | ENSG00000258921 | AC009779.5 | 0 | INTRON | 4.35820503 | 1.31E-05 | 0.0258047 |
| 10 | 33918127 | 33918127 | 1 | 10_33918127 | ENSG00000223470 | LINC02629 | 323 | Downstream | 4.35815712 | 1.31E-05 | 0.02580737 |
| 6 | 8113944 | 8113944 | 1 | 6_8113944 | ENSG00000232234 | AL355499.1 | 0 | INTRON | 4.35813073 | 1.31E-05 | 0.02580749 |
| 21 | 46039854 | 46039854 | 1 | 21_46039854 | ENSG00000224413 | AP001476.1 | 47 | Downstream | -4.3580858 | 1.31E-05 | 0.02580981 |
| 2 | 85360408 | 85360408 | 1 | 2_85360408 | ENSG00000115459 | ELMOD3 | 0 | INTRON | -4.3580374 | 1.31E-05 | 0.02581253 |
| 8 | 72455486 | 72455486 | 1 | 8_72455486 | ENSG00000254347 | AC011131.1 | 6824 | Upstream | -4.3578916 | 1.31E-05 | 0.02582436 |
| 5 | 1636731 | 1636731 | 1 | 5_1636731 | ENSG00000188002 | AC026412.1 | 2726 | Upstream | 4.35788158 | 1.31E-05 | 0.02582436 |
| 5 | 181286781 | 181286781 | 1 | 5_181286781 | ENSG00000248103 | AC008443.3 | 3129 | Downstream | -4.3578612 | 1.31E-05 | 0.02582436 |
| 3 | 50985021 | 50985021 | 1 | 3_50985021 | ENSG00000088538 | DOCK3 | 0 | INTRON | 4.35782664 | 1.31E-05 | 0.02582545 |
| 7 | 22015782 | 22015782 | 1 | 7_22015782 | ENSG00000164649 | CDCA7L | 69879 | Upstream | -4.3577803 | 1.31E-05 | 0.02582793 |
| 12 | 95767889 | 95767889 | 1 | 12_95767889 | ENSG00000074527 | NTN4 | 0 | INTRON | 4.35766154 | 1.31E-05 | 0.02583746 |
| 4 | 961412 | 961412 | 1 | 4_961412 | ENSG00000145214 | DGKQ | 0 | INTRON | -4.3576329 | 1.31E-05 | 0.02583746 |
| 14 | 76679521 | 76679521 | 1 | 14_76679521 | ENSG00000259124 | AC008050.1 | 0 | INTRON | 4.35762366 | 1.31E-05 | 0.02583746 |
| 17 | 65270049 | 65270049 | 1 | 17_65270049 | ENSG00000108370 | RGS9 | 42346 | Downstream | 4.35752921 | 1.32E-05 | 0.02584173 |
| 10 | 30786921 | 30786921 | 1 | 10_30786921 | ENSG00000183621 | ZNF438 | 33285 | Downstream | 4.35747197 | 1.32E-05 | 0.02584173 |
| 6 | 28796421 | 28796421 | 1 | 6_28796421 | ENSG00000235559 | NOP56P1 | 12417 | Upstream | 4.35746184 | 1.32E-05 | 0.02584173 |
| 11 | 104887850 | 104887850 | 1 | 11_104887850 | ENSG00000204403 | CASP12 | 0 | INTRON | 4.35745881 | 1.32E-05 | 0.02584173 |
| 4 | 20676982 | 20676982 | 1 | 4_20676982 | ENSG00000163138 | PACRGL | 19299 | Upstream | 4.35745517 | 1.32E-05 | 0.02584173 |
| 1 | 222049961 | 222049961 | 1 | 1_222049961 | ENSG00000232679 | LINC01705 | 0 | INTRON | 4.35741602 | 1.32E-05 | 0.02584173 |
| 4 | 1225402 | 1225402 | 1 | 4_1225402 | ENSG00000159692 | CTBP1 | 0 | EXON | 4.35741057 | 1.32E-05 | 0.02584173 |
| Y | 56677942 | 56677942 | 1 | Y_56677942 | ENSG00000235857 | CTBP2P1 | 177301 | Upstream | -4.3572316 | 1.32E-05 | 0.02585643 |
| 3 | 116119785 | 116119785 | 1 | 3_116119785 | ENSG00000185565 | LSAMP | 0 | INTRON | 4.35722928 | 1.32E-05 | 0.02585643 |
| 14 | 101916136 | 101916136 | 1 | 14_101916136 | ENSG00000078304 | PPP2R5C | 0 | INTRON | 4.35721029 | 1.32E-05 | 0.02585643 |
| 2 | 13118609 | 13118609 | 1 | 2_13118609 | ENSG00000285876 | AC093912.1 | 0 | INTRON | -4.3571423 | 1.32E-05 | 0.02586147 |
| 14 | 38017390 | 38017390 | 1 | 14_38017390 | ENSG00000139865 | TTC6 | 0 | INTRON | 4.35710423 | 1.32E-05 | 0.02586299 |
| 22 | 41797957 | 41797957 | 1 | 22_41797957 | ENSG00000167077 | MEI1 | 0 | INTRON | 4.35695453 | 1.32E-05 | 0.02587542 |
| 5 | 141377657 | 141377657 | 1 | 5_141377657 | ENSG00000253731 | PCDHGA6 | 0 | 3UTR | -4.3569486 | 1.32E-05 | 0.02587542 |
| 6 | 80475108 | 80475108 | 1 | 6_80475108 | ENSG00000219361 | RPSAP72 | 4680 | Upstream | 4.35684793 | 1.32E-05 | 0.02588311 |
| 1 | 154455782 | 154455782 | 1 | 1_154455782 | ENSG00000160712 | IL6R | 0 | INTRON | 4.35683297 | 1.32E-05 | 0.02588311 |
| 12 | 120844796 | 120844796 | 1 | 12_120844796 | ENSG00000157837 | SPPL3 | 0 | INTRON | -4.3567656 | 1.32E-05 | 0.0258867 |
| 15 | 68023140 | 68023140 | 1 | 15_68023140 | ENSG00000033800 | PIAS1 | 31038 | Upstream | 4.35675214 | 1.32E-05 | 0.0258867 |
| 2 | 138053624 | 138053624 | 1 | 2_138053624 | ENSG00000150540 | HNMT | 37260 | Downstream | 4.35672261 | 1.32E-05 | 0.02588721 |
| 8 | 89661843 | 89661843 | 1 | 8_89661843 | ENSG00000251136 | AF117829.1 | 0 | INTRON | -4.3566811 | 1.32E-05 | 0.02588824 |
| 9 | 87627420 | 87627420 | 1 | 9_87627420 | ENSG00000196730 | DAPK1 | 0 | INTRON | 4.35666178 | 1.32E-05 | 0.02588824 |
| 6 | 5949782 | 5949782 | 1 | 6_5949782 | ENSG00000215057 | PKMP5 | 22629 | Upstream | 4.35663102 | 1.32E-05 | 0.02588824 |
| 16 | 28312314 | 28312314 | 1 | 16_28312314 | ENSG00000188322 | SBK1 | 0 | INTRON | 4.35661295 | 1.32E-05 | 0.02588824 |
| 21 | 16548651 | 16548651 | 1 | 21_16548651 | ENSG00000215386 | MIR99AHG | 0 | INTRON | -4.3565525 | 1.32E-05 | 0.02588954 |
| 7 | 105562142 | 105562142 | 1 | 7_105562142 | ENSG00000135249 | RINT1 | 0 | INTRON | 4.35655153 | 1.32E-05 | 0.02588954 |
| 16 | 23775396 | 23775396 | 1 | 16_23775396 | ENSG00000166869 | CHP2 | 16461 | Downstream | -4.3564694 | 1.32E-05 | 0.0258945 |
| 5 | 139695701 | 139695701 | 1 | 5_139695701 | ENSG00000249526 | AC008667.1 | 0 | INTRON | -4.3564121 | 1.32E-05 | 0.0258945 |
| 2 | 125993845 | 125993845 | 1 | 2_125993845 | ENSG00000226813 | LINC01941 | 115915 | Downstream | -4.3564043 | 1.32E-05 | 0.0258945 |
| 11 | 62460194 | 62460194 | 1 | 11_62460194 | ENSG00000124942 | AHNAK | 0 | INTRON | 4.35640131 | 1.32E-05 | 0.0258945 |
| 4 | 166775245 | 166775245 | 1 | 4_166775245 | ENSG00000196104 | SPOCK3 | 0 | INTRON | 4.35638353 | 1.32E-05 | 0.0258945 |
| 3 | 66185718 | 66185718 | 1 | 3_66185718 | ENSG00000144741 | SLC25A26 | 0 | INTRON | -4.3563492 | 1.32E-05 | 0.02589558 |
| 19 | 13067461 | 13067461 | 1 | 19_13067461 | ENSG00000008441 | NFIX | 0 | INTRON | 4.356232 | 1.32E-05 | 0.02590499 |
| 3 | 153546219 | 153546219 | 1 | 3_153546219 | ENSG00000238755 | LINC02006 | 0 | INTRON | 4.35621926 | 1.32E-05 | 0.02590499 |
| 21 | 8757802 | 8757802 | 1 | 21_8757802 | ENSG00000279579 | LINC01666 | 1274 | Upstream | -4.3561773 | 1.32E-05 | 0.02590698 |
| 19 | 22338294 | 22338294 | 1 | 19_22338294 | ENSG00000196350 | ZNF729 | 21118 | Downstream | 4.35611164 | 1.32E-05 | 0.02590861 |
| 1 | 33002549 | 33002549 | 1 | 1_33002549 | ENSG00000236065 | AL020995.1 | 0 | INTRON | 4.35610441 | 1.32E-05 | 0.02590861 |
| 22 | 23218947 | 23218947 | 1 | 22_23218947 | ENSG00000186716 | BCR | 0 | INTRON | -4.3560879 | 1.32E-05 | 0.02590861 |
| 4 | 70197757 | 70197757 | 1 | 4_70197757 | ENSG00000109205 | ODAM | 0 | EXON | -4.3559557 | 1.32E-05 | 0.02591536 |
| 10 | 6717229 | 6717229 | 1 | 10_6717229 | ENSG00000285743 | AL158210.1 | 0 | INTRON | 4.355929 | 1.33E-05 | 0.02591536 |
| 4 | 179238049 | 179238049 | 1 | 4_179238049 | ENSG00000250993 | AC020551.1 | 151084 | Downstream | -4.3559194 | 1.33E-05 | 0.02591536 |
| 2 | 105298302 | 105298302 | 1 | 2_105298302 | ENSG00000135966 | TGFBRAP1 | 0 | INTRON | -4.3559135 | 1.33E-05 | 0.02591536 |
| 14 | 105080965 | 105080965 | 1 | 14_105080965 | ENSG00000257556 | LINC02298 | 12643 | Upstream | -4.355905 | 1.33E-05 | 0.02591536 |
| 1 | 153545020 | 153545020 | 1 | 1_153545020 | ENSG00000196154 | S100A4 | 0 | 5UTR | 4.35586871 | 1.33E-05 | 0.02591629 |
| 6 | 106232059 | 106232059 | 1 | 6_106232059 | ENSG00000057663 | ATG5 | 0 | INTRON | -4.3558348 | 1.33E-05 | 0.02591629 |
| 3 | 72026448 | 72026448 | 1 | 3_72026448 | ENSG00000241163 | LINC00877 | 0 | INTRON | -4.3558195 | 1.33E-05 | 0.02591629 |
| 9 | 122715793 | 122715793 | 1 | 9_122715793 | ENSG00000136939 | OR1L4 | 8196 | Upstream | 4.35579639 | 1.33E-05 | 0.02591629 |
| 1 | 113216887 | 113216887 | 1 | 1_113216887 | ENSG00000236887 | AL357055.2 | 17629 | Downstream | -4.3555833 | 1.33E-05 | 0.02593854 |
| 4 | 2341356 | 2341356 | 1 | 4_2341356 | ENSG00000159733 | ZFYVE28 | 0 | EXON | 4.35549453 | 1.33E-05 | 0.02594608 |
| 5 | 133469284 | 133469284 | 1 | 5_133469284 | ENSG00000053108 | FSTL4 | 0 | INTRON | -4.355421 | 1.33E-05 | 0.02594968 |
| 2 | 47248811 | 47248811 | 1 | 2_47248811 | ENSG00000234690 | EPCAM-DT | 0 | INTRON | 4.35541377 | 1.33E-05 | 0.02594968 |
| 16 | 69175228 | 69175228 | 1 | 16_69175228 | ENSG00000141076 | UTP4 | 0 | INTRON | 4.35534213 | 1.33E-05 | 0.02595323 |
| 15 | 22589445 | 22589445 | 1 | 15_22589445 | ENSG00000276550 | HERC2P2 | 0 | INTRON | -4.3553336 | 1.33E-05 | 0.02595323 |
| 5 | 126271378 | 126271378 | 1 | 5_126271378 | ENSG00000248752 | AC116362.1 | 0 | INTRON | 4.35519741 | 1.33E-05 | 0.02596637 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
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| 14 | 36722092 | 36722092 | 1 | 14_36722092 | ENSG00000183032 | SLC25A21 | 0 | INTRON | -4.3551683 | 1.33E-05 | 0.02596637 |
| X | 130081692 | 130081692 | 1 | X_130081692 | ENSG00000102034 | ELF4 | 0 | INTRON | -4.3551473 | 1.33E-05 | 0.02596637 |
| 17 | 62557332 | 62557332 | 1 | 17_62557332 | ENSG00000146872 | TLK2 | 0 | INTRON | -4.3550814 | 1.33E-05 | 0.02597119 |
| 7 | 135772308 | 135772308 | 1 | 7_135772308 | ENSG00000224746 | AC015987.1 | 2212 | Upstream | 4.35503535 | 1.33E-05 | 0.02597368 |
| 5 | 135627183 | 135627183 | 1 | 5_135627183 | ENSG00000250167 | AC034206.1 | 0 | INTRON | 4.35477031 | 1.33E-05 | 0.02600214 |
| 10 | 58075801 | 58075801 | 1 | 10_58075801 | ENSG00000232115 | AC026884.1 | 30621 | Downstream | 4.35468951 | 1.33E-05 | 0.02600875 |
| 16 | 72182403 | 72182403 | 1 | 16_72182403 | ENSG00000118557 | PMFBP1 | 5525 | Upstream | -4.3546421 | 1.33E-05 | 0.02601139 |
| 5 | 73478562 | 73478562 | 1 | 5_73478562 | ENSG00000251324 | LINC01386 | 5666 | Upstream | 4.35453076 | 1.33E-05 | 0.02602163 |
| 11 | 61727178 | 61727178 | 1 | 11_61727178 | ENSG00000134780 | DAGLA | 0 | INTRON | 4.35447365 | 1.33E-05 | 0.02602543 |
| 5 | 23721523 | 23721523 | 1 | 5_23721523 | ENSG00000249607 | AC108103.1 | 32137 | Downstream | -4.3544445 | 1.33E-05 | 0.02602591 |
| 7 | 136442854 | 136442854 | 1 | 7_136442854 | ENSG00000232053 | AC078845.1 | 5069 | Downstream | -4.3544157 | 1.33E-05 | 0.02602635 |
| 20 | 13156546 | 13156546 | 1 | 20_13156546 | ENSG00000172296 | SPTLC3 | 0 | INTRON | 4.35432147 | 1.33E-05 | 0.02602674 |
| 2 | 152626437 | 152626437 | 1 | 2_152626437 | ENSG00000157827 | FMNL2 | 0 | INTRON | 4.35431192 | 1.33E-05 | 0.02602674 |
| 1 | 102430660 | 102430660 | 1 | 1_102430660 | ENSG00000233359 | AC114485.1 | 41030 | Upstream | 4.35431182 | 1.33E-05 | 0.02602674 |
| 10 | 74043829 | 74043829 | 1 | 10_74043829 | ENSG00000035403 | VCL | 0 | INTRON | 4.35429824 | 1.33E-05 | 0.02602674 |
| 5 | 163591991 | 163591991 | 1 | 5_163591991 | ENSG00000285590 | AC010291.1 | 5360 | Downstream | 4.35428684 | 1.34E-05 | 0.02602674 |
| 5 | 122834579 | 122834579 | 1 | 5_122834579 | ENSG00000205302 | SNX2 | 36 | Downstream | -4.3541184 | 1.34E-05 | 0.02604377 |
| 1 | 740268 | 740268 | 1 | 1_740268 | ENSG00000230021 | AL669831.3 | 0 | INTRON | -4.3540884 | 1.34E-05 | 0.02604436 |
| 10 | 45671796 | 45671796 | 1 | 10_45671796 | ENSG00000172671 | ZFAND4 | 0 | INTRON | 4.3539079 | 1.34E-05 | 0.02605909 |
| 5 | 127947947 | 127947947 | 1 | 5_127947947 | ENSG00000245937 | LINC01184 | 0 | INTRON | -4.3538936 | 1.34E-05 | 0.02605909 |
| 2 | 28482078 | 28482078 | 1 | 2_28482078 | ENSG00000163803 | PLB1 | 0 | INTRON | 4.35388925 | 1.34E-05 | 0.02605909 |
| 10 | 102923182 | 102923182 | 1 | 10_102923182 | ENSG00000148842 | CNNM2 | 0 | INTRON | 4.35363957 | 1.34E-05 | 0.02608581 |
| 13 | 33725464 | 33725464 | 1 | 13_33725464 | ENSG00000230490 | AL139383.1 | 48668 | Upstream | 4.35358163 | 1.34E-05 | 0.02608797 |
| 1 | 52419126 | 52419126 | 1 | 1_52419126 | ENSG00000134748 | PRPF38A | 0 | 3UTR | 4.35357127 | 1.34E-05 | 0.02608797 |
| 20 | 36185155 | 36185155 | 1 | 20_36185155 | ENSG00000088367 | EPB41L1 | 0 | EXON | -4.3534782 | 1.34E-05 | 0.02609208 |
| 16 | 25087070 | 25087070 | 1 | 16_25087070 | ENSG00000262155 | LINC02175 | 0 | INTRON | 4.35345852 | 1.34E-05 | 0.02609208 |
| X | 50556541 | 50556541 | 1 | X_50556541 | ENSG00000158352 | SHROOM4 | 35105 | Downstream | 4.35345797 | 1.34E-05 | 0.02609208 |
| 16 | 12733373 | 12733373 | 1 | 16_12733373 | ENSG00000103381 | CPPED1 | 0 | INTRON | 4.35342228 | 1.34E-05 | 0.02609208 |
| 8 | 68755939 | 68755939 | 1 | 8_68755939 | ENSG00000165084 | C8orf34 | 0 | INTRON | -4.3533859 | 1.34E-05 | 0.02609208 |
| X | 136692343 | 136692343 | 1 | X_136692343 | ENSG00000129675 | ARHGEF6 | 0 | INTRON | -4.3533605 | 1.34E-05 | 0.02609208 |
| 4 | 104879407 | 104879407 | 1 | 4_104879407 | ENSG00000248242 | AC004053.1 | 0 | INTRON | -4.353353 | 1.34E-05 | 0.02609208 |
| 13 | 43326023 | 43326023 | 1 | 13_43326023 | ENSG00000120658 | ENOX1 | 0 | INTRON | 4.35332328 | 1.34E-05 | 0.02609208 |
| 5 | 19320817 | 19320817 | 1 | 5_19320817 | ENSG00000249557 | HSPD1P15 | 86330 | Downstream | 4.35331108 | 1.34E-05 | 0.02609208 |
| 4 | 19050437 | 19050437 | 1 | 4_19050437 | ENSG00000279918 | AC006840.1 | 47761 | Upstream | 4.35316307 | 1.34E-05 | 0.02610078 |
| 17 | 82583213 | 82583213 | 1 | 17_82583213 | ENSG00000141568 | FOXK2 | 0 | INTRON | 4.35315631 | 1.34E-05 | 0.02610078 |
| 13 | 23543976 | 23543976 | 1 | 13_23543976 | ENSG00000127863 | TNFRSF19 | 26393 | Upstream | -4.3531219 | 1.34E-05 | 0.02610078 |
| 14 | 32823376 | 32823376 | 1 | 14_32823376 | ENSG00000151320 | AKAP6 | 0 | EXON | -4.3531144 | 1.34E-05 | 0.02610078 |
| 8 | 25346607 | 25346607 | 1 | 8_25346607 | ENSG00000147459 | DOCK5 | 0 | INTRON | 4.3531128 | 1.34E-05 | 0.02610078 |
| 6 | 57651989 | 57651989 | 1 | 6_57651989 | ENSG00000146143 | PRIM2 | 5139 | Downstream | -4.3530758 | 1.34E-05 | 0.0261022 |
| 15 | 37209900 | 37209900 | 1 | 15_37209900 | ENSG00000274216 | Metazoa_SRP | 6716 | Upstream | 4.35288542 | 1.34E-05 | 0.02611802 |
| 7 | 123581595 | 123581595 | 1 | 7_123581595 | ENSG00000146809 | ASB15 | 0 | INTRON | -4.3528772 | 1.34E-05 | 0.02611802 |
| 1 | 7781982 | 7781982 | 1 | 1_7781982 | ENSG00000049245 | VAMP3 | 550 | Downstream | 4.35286793 | 1.34E-05 | 0.02611802 |
| 10 | 52814676 | 52814676 | 1 | 10_52814676 | ENSG00000201196 | Y_RNA | 37930 | Upstream | -4.3528163 | 1.34E-05 | 0.0261212 |
| 10 | 256863 | 256863 | 1 | 10_256863 | ENSG00000015171 | ZMYND11 | 2226 | Downstream | 4.35273095 | 1.34E-05 | 0.02612493 |
| 12 | 130559897 | 130559897 | 1 | 12_130559897 | ENSG00000060709 | RIMBP2 | 0 | INTRON | 4.35272394 | 1.34E-05 | 0.02612493 |
| 2 | 134033554 | 134033554 | 1 | 2_134033554 | ENSG00000286697 | AC092623.1 | 957 | Downstream | 4.35269589 | 1.34E-05 | 0.02612493 |
| 15 | 55427886 | 55427886 | 1 | 15_55427886 | ENSG00000261771 | DNAAF4-CCPG1 | 0 | INTRON | 4.35268482 | 1.34E-05 | 0.02612493 |
| 20 | 60744963 | 60744963 | 1 | 20_60744963 | ENSG00000276627 | AL117372.1 | 10037 | Upstream | 4.35242771 | 1.35E-05 | 0.02615061 |
| 5 | 125776467 | 125776467 | 1 | 5_125776467 | ENSG00000248752 | AC116362.1 | 0 | INTRON | -4.3524195 | 1.35E-05 | 0.02615061 |
| 10 | 126613751 | 126613751 | 1 | 10_126613751 | ENSG00000154493 | C10orf90 | 0 | INTRON | -4.3523823 | 1.35E-05 | 0.02615206 |
| 3 | 187469097 | 187469097 | 1 | 3_187469097 | ENSG00000228952 | LINC02041 | 19647 | Downstream | 4.35230524 | 1.35E-05 | 0.02615827 |
| 16 | 49490115 | 49490115 | 1 | 16_49490115 | ENSG00000102935 | ZNF423 | 0 | 3UTR | -4.3521813 | 1.35E-05 | 0.02616779 |
| 13 | 25580071 | 25580071 | 1 | 13_25580071 | ENSG00000132932 | ATP8A2 | 0 | INTRON | 4.3521615 | 1.35E-05 | 0.02616779 |
| 1 | 176573124 | 176573124 | 1 | 1_176573124 | ENSG00000116183 | PAPPA2 | 0 | INTRON | 4.35212363 | 1.35E-05 | 0.02616779 |
| 9 | 137031710 | 137031710 | 1 | 9_137031710 | ENSG00000279073 | AL807752.6 | 0 | 3UTR | 4.35210778 | 1.35E-05 | 0.02616779 |
| 13 | 98403702 | 98403702 | 1 | 13_98403702 | ENSG00000152767 | FARP1 | 0 | 3UTR | -4.3521005 | 1.35E-05 | 0.02616779 |
| 5 | 13575101 | 13575101 | 1 | 5_13575101 | ENSG00000248462 | NENFP3 | 21135 | Upstream | 4.35202095 | 1.35E-05 | 0.0261743 |
| 1 | 233897167 | 233897167 | 1 | 1_233897167 | ENSG00000287921 | AL713868.1 | 6936 | Downstream | -4.3519183 | 1.35E-05 | 0.02618357 |
| 7 | 152500314 | 152500314 | 1 | 7_152500314 | ENSG00000261455 | LINC01003 | 34765 | Downstream | 4.35164888 | 1.35E-05 | 0.02621211 |
| 2 | 139881955 | 139881955 | 1 | 2_139881955 | ENSG00000223554 | AC078851.1 | 56078 | Upstream | -4.3516296 | 1.35E-05 | 0.02621211 |
| 4 | 12554296 | 12554296 | 1 | 4_12554296 | ENSG00000249995 | ECM1P2 | 84789 | Upstream | 4.35154565 | 1.35E-05 | 0.02621916 |
| 5 | 133185794 | 133185794 | 1 | 5_133185794 | ENSG00000248245 | AC010307.2 | 0 | INTRON | 4.35149558 | 1.35E-05 | 0.02622104 |
| 3 | 27585656 | 27585656 | 1 | 3_27585656 | ENSG00000238912 | Y_RNA | 37798 | Upstream | 4.35147996 | 1.35E-05 | 0.02622104 |
| 20 | 44527301 | 44527301 | 1 | 20_44527301 | ENSG00000168734 | PKIG | 4483 | Upstream | 4.35140723 | 1.35E-05 | 0.02622386 |
| 2 | 182721949 | 182721949 | 1 | 2_182721949 | ENSG00000077232 | DNAJC10 | 0 | INTRON | -4.3513173 | 1.35E-05 | 0.02622386 |
| 2 | 185981732 | 185981732 | 1 | 2_185981732 | ENSG00000224019 | RPL21P32 | 24669 | Upstream | 4.35130608 | 1.35E-05 | 0.02622386 |
| 20 | 16513380 | 16513380 | 1 | 20_16513380 | ENSG00000089177 | KIF16B | 0 | INTRON | 4.35128271 | 1.35E-05 | 0.02622386 |
| 11 | 3514315 | 3514315 | 1 | 11_3514315 | ENSG00000255367 | AC127526.2 | 0 | INTRON | -4.3512482 | 1.35E-05 | 0.02622386 |
| 5 | 1198242 | 1198242 | 1 | 5_1198242 | ENSG00000174358 | SLC6A19 | 3352 | Upstream | 4.35124288 | 1.35E-05 | 0.02622386 |
| 7 | 131672286 | 131672286 | 1 | 7_131672286 | ENSG00000236238 | AC093106.1 | 6428 | Downstream | 4.35122658 | 1.35E-05 | 0.02622386 |
| 4 | 99248279 | 99248279 | 1 | 4_99248279 | ENSG00000246090 | AP002026.1 | 0 | INTRON | 4.35121986 | 1.35E-05 | 0.02622386 |
| 5 | 53947662 | 53947662 | 1 | 5_53947662 | ENSG00000185305 | ARL15 | 0 | INTRON | 4.35121679 | 1.35E-05 | 0.02622386 |
| 8 | 144468324 | 144468324 | 1 | 8_144468324 | ENSG00000167702 | KIFC2 | 0 | EXON | -4.351189 | 1.35E-05 | 0.02622386 |
| 1 | 16288018 | 16288018 | 1 | 1_16288018 | ENSG00000037637 | FBXO42 | 0 | INTRON | 4.35116716 | 1.35E-05 | 0.02622386 |
| 15 | 37146766 | 37146766 | 1 | 15_37146766 | ENSG00000274444 | AC078909.2 | 36782 | Downstream | -4.3511566 | 1.35E-05 | 0.02622386 |
| 1 | 197313855 | 197313855 | 1 | 1_197313855 | ENSG00000134376 | CRB1 | 0 | INTRON | -4.3511318 | 1.35E-05 | 0.02622386 |
| 10 | 34759256 | 34759256 | 1 | 10_34759256 | ENSG00000148498 | PARD3 | 0 | INTRON | -4.3510477 | 1.35E-05 | 0.02623093 |
| 14 | 105764961 | 105764961 | 1 | 14_105764961 | ENSG00000211897 | IGHG3 | 0 | 3UTR | -4.3510168 | 1.36E-05 | 0.02623165 |
| 3 | 68177252 | 68177252 | 1 | 3_68177252 | ENSG00000183662 | TAFA1 | 0 | INTRON | -4.3509113 | 1.36E-05 | 0.02623897 |
| 5 | 110107661 | 110107661 | 1 | 5_110107661 | ENSG00000186952 | TMEM232 | 181571 | Downstream | 4.35089581 | 1.36E-05 | 0.02623897 |
| 20 | 48581120 | 48581120 | 1 | 20_48581120 | ENSG00000124126 | PREX1 | 43131 | Downstream | 4.35088086 | 1.36E-05 | 0.02623897 |
| 14 | 73547148 | 73547148 | 1 | 14_73547148 | ENSG00000187105 | HEATR4 | 0 | INTRON | -4.3507805 | 1.36E-05 | 0.02624782 |
| 3 | 160138958 | 160138958 | 1 | 3_160138958 | ENSG00000244040 | IL12A-AS1 | 0 | INTRON | 4.35075703 | 1.36E-05 | 0.02624782 |
| 1 | 92756441 | 92756441 | 1 | 1_92756441 | ENSG00000223896 | CCNJP2 | 0 | EXON | -4.35072 | 1.36E-05 | 0.02624926 |
| 3 | 115418129 | 115418129 | 1 | 3_115418129 | ENSG00000242880 | AC026341.1 | 0 | INTRON | -4.3506418 | 1.36E-05 | 0.0262535 |
| 4 | 11687924 | 11687924 | 1 | 4_11687924 | ENSG00000249631 | AC005699.1 | 0 | INTRON | -4.350617 | 1.36E-05 | 0.0262535 |
| 3 | 195306424 | 195306424 | 1 | 3_195306424 | ENSG00000114331 | ACAP2 | 0 | INTRON | 4.35060992 | 1.36E-05 | 0.0262535 |
| 11 | 73189538 | 73189538 | 1 | 11_73189538 | ENSG00000256568 | AP002761.2 | 7814 | Downstream | 4.35056564 | 1.36E-05 | 0.02625582 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 17 | 33611328 | 33611328 | 1 | 17_33611328 | ENSG00000265125 | AC011824.2 | 0 | INTRON | -4.3505079 | 1.36E-05 | 0.02625849 |
| 2 | 158957916 | 158957916 | 1 | 2_158957916 | ENSG00000115183 | TANC1 | 10723 | Upstream | 4.35048968 | 1.36E-05 | 0.02625849 |
| X | 39693410 | 39693410 | 1 | X_39693410 | ENSG00000263730 | MIR3937 | 32089 | Downstream | 4.35046859 | 1.36E-05 | 0.02625849 |
| 3 | 100087099 | 100087099 | 1 | 3_100087099 | ENSG00000168386 | FILIP1L | 0 | INTRON | -4.3502464 | 1.36E-05 | 0.02627686 |
| 4 | 6377551 | 6377551 | 1 | 4_6377551 | ENSG00000074211 | PPP2R2C | 0 | INTRON | -4.350245 | 1.36E-05 | 0.02627686 |
| 2 | 2639834 | 2639834 | 1 | 2_2639834 | ENSG00000234929 | AC018685.2 | 0 | EXON | 4.3502405 | 1.36E-05 | 0.02627686 |
| X | 106217385 | 106217385 | 1 | X_106217385 | ENSG00000157502 | PWWP3B | 8429 | Downstream | 4.35013273 | 1.36E-05 | 0.02628663 |
| 1 | 245875010 | 245875010 | 1 | 1_245875010 | ENSG00000185420 | SMYD3 | 0 | INTRON | -4.3500994 | 1.36E-05 | 0.02628663 |
| 3 | 62792132 | 62792132 | 1 | 3_62792132 | ENSG00000163618 | CADPS | 0 | INTRON | -4.3500792 | 1.36E-05 | 0.02628663 |
| 14 | 67960016 | 67960016 | 1 | 14_67960016 | ENSG00000182185 | RAD51B | 0 | INTRON | 4.35005944 | 1.36E-05 | 0.02628663 |
| X | 15040422 | 15040422 | 1 | X_15040422 | ENSG00000235929 | TPT1P14 | 61959 | Upstream | 4.34998837 | 1.36E-05 | 0.02628683 |
| 17 | 62843239 | 62843239 | 1 | 17_62843239 | ENSG00000264907 | PRELID3BP3 | 1594 | Downstream | 4.34998025 | 1.36E-05 | 0.02628683 |
| 1 | 2548900 | 2548900 | 1 | 1_2548900 | ENSG00000238164 | TNFRSF14-AS1 | 1019 | Downstream | 4.34996261 | 1.36E-05 | 0.02628683 |
| 19 | 4030143 | 4030143 | 1 | 19_4030143 | ENSG00000105229 | PIAS4 | 0 | INTRON | 4.34995824 | 1.36E-05 | 0.02628683 |
| 11 | 102303447 | 102303447 | 1 | 11_102303447 | ENSG00000270868 | AP000942.3 | 2664 | Upstream | 4.34991474 | 1.36E-05 | 0.02628906 |
| 17 | 63183933 | 63183933 | 1 | 17_63183933 | ENSG00000170921 | TANC2 | 0 | INTRON | 4.34975693 | 1.36E-05 | 0.02630216 |
| 1 | 162066969 | 162066969 | 1 | 1_162066969 | ENSG00000198929 | NOS1AP | 2721 | Upstream | 4.34975571 | 1.36E-05 | 0.02630216 |
| 9 | 122748593 | 122748593 | 1 | 9_122748593 | ENSG00000171459 | OR1L6 | 0 | INTRON | 4.34965726 | 1.36E-05 | 0.02630733 |
| 16 | 66245690 | 66245690 | 1 | 16_66245690 | ENSG00000201999 | RNA5SP428 | 56118 | Upstream | 4.34964788 | 1.36E-05 | 0.02630733 |
| 20 | 52337029 | 52337029 | 1 | 20_52337029 | ENSG00000234948 | LINC01524 | 0 | INTRON | -4.3496099 | 1.36E-05 | 0.02630733 |
| 22 | 22932758 | 22932758 | 1 | 22_22932758 | ENSG00000211685 | IGLC7 | 9724 | Downstream | -4.3495956 | 1.36E-05 | 0.02630733 |
| 19 | 39303688 | 39303688 | 1 | 19_39303688 | ENSG00000128011 | LRFN1 | 2879 | Downstream | 4.34958831 | 1.36E-05 | 0.02630733 |
| 8 | 37564583 | 37564583 | 1 | 8_37564583 | ENSG00000254111 | AC124067.3 | 0 | EXON | 4.34940233 | 1.37E-05 | 0.02632666 |
| 8 | 69660093 | 69660093 | 1 | 8_69660093 | ENSG00000137573 | SULF1 | 0 | 3UTR | 4.34935025 | 1.37E-05 | 0.02632993 |
| 6 | 123424623 | 123424623 | 1 | 6_123424623 | ENSG00000186439 | TRDN | 0 | INTRON | 4.34931432 | 1.37E-05 | 0.02633126 |
| 17 | 66065880 | 66065880 | 1 | 17_66065880 | ENSG00000154240 | CEP112 | 0 | INTRON | 4.349166 | 1.37E-05 | 0.02633796 |
| 15 | 100317610 | 100317610 | 1 | 15_100317610 | ENSG00000140470 | ADAMTS17 | 0 | INTRON | 4.34914658 | 1.37E-05 | 0.02633796 |
| 8 | 105625860 | 105625860 | 1 | 8_105625860 | ENSG00000251003 | ZFPM2-AS1 | 0 | INTRON | 4.34914404 | 1.37E-05 | 0.02633796 |
| 5 | 25926626 | 25926626 | 1 | 5_25926626 | ENSG00000251593 | MSNP1 | 15392 | Downstream | 4.34913864 | 1.37E-05 | 0.02633796 |
| 7 | 82243648 | 82243648 | 1 | 7_82243648 | ENSG00000153956 | CACNA2D1 | 0 | INTRON | -4.3491326 | 1.37E-05 | 0.02633796 |
| 5 | 78683084 | 78683084 | 1 | 5_78683084 | ENSG00000145685 | LHFPL2 | 0 | INTRON | 4.34909712 | 1.37E-05 | 0.02633796 |
| 5 | 132421854 | 132421854 | 1 | 5_132421854 | ENSG00000197536 | C5orf56 | 0 | INTRON | 4.34908465 | 1.37E-05 | 0.02633796 |
| 7 | 72425409 | 72425409 | 1 | 7_72425409 | ENSG00000183166 | CALN1 | 0 | INTRON | -4.3489048 | 1.37E-05 | 0.02635644 |
| 9 | 123687247 | 123687247 | 1 | 9_123687247 | ENSG00000119522 | DENND1A | 0 | INTRON | 4.34888117 | 1.37E-05 | 0.02635644 |
| 3 | 106220229 | 106220229 | 1 | 3_106220229 | ENSG00000287421 | AC131237.1 | 0 | INTRON | -4.3488231 | 1.37E-05 | 0.02636043 |
| 22 | 37684588 | 37684588 | 1 | 22_37684588 | ENSG00000273899 | NOL12 | 0 | INTRON | -4.3487311 | 1.37E-05 | 0.02636554 |
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| 1 | 219706765 | 219706765 | 1 | 1_219706765 | ENSG00000196660 | SLC30A10 | 0 | INTRON | -4.3487062 | 1.37E-05 | 0.02636554 |
| 5 | 166468620 | 166468620 | 1 | 5_166468620 | ENSG00000229119 | AC026403.1 | 86021 | Downstream | -4.3485548 | 1.37E-05 | 0.02638076 |
| 7 | 97911318 | 97911318 | 1 | 7_97911318 | ENSG00000284707 | AC079781.5 | 0 | INTRON | 4.34849716 | 1.37E-05 | 0.0263847 |
| 1 | 1957450 | 1957450 | 1 | 1_1957450 | ENSG00000142609 | CFAP74 | 0 | INTRON | 4.34846886 | 1.37E-05 | 0.02638512 |
| 2 | 41767560 | 41767560 | 1 | 2_41767560 | ENSG00000287145 | AC009413.2 | 35949 | Downstream | -4.34838 | 1.37E-05 | 0.0263875 |
| 1 | 105927302 | 105927302 | 1 | 1_105927302 | ENSG00000233047 | LINC01677 | 317 | Downstream | -4.3483576 | 1.37E-05 | 0.0263875 |
| 4 | 96124401 | 96124401 | 1 | 4_96124401 | ENSG00000201744 | RNU6-34P | 27895 | Downstream | -4.3483496 | 1.37E-05 | 0.0263875 |
| 8 | 53916467 | 53916467 | 1 | 8_53916467 | ENSG00000147509 | RGS20 | 0 | INTRON | -4.3483195 | 1.37E-05 | 0.0263875 |
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| 15 | 54952610 | 54952610 | 1 | 15_54952610 | ENSG00000260937 | AC025272.1 | 104112 | Upstream | 4.34823003 | 1.37E-05 | 0.0263875 |
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| 3 | 72126397 | 72126397 | 1 | 3_72126397 | ENSG00000241163 | LINC00877 | 0 | INTRON | 4.3481614 | 1.37E-05 | 0.0263875 |
| 6 | 646708 | 646708 | 1 | 6_646708 | ENSG00000112685 | EXOC2 | 0 | INTRON | -4.3481532 | 1.37E-05 | 0.0263875 |
| 4 | 137458864 | 137458864 | 1 | 4_137458864 | ENSG00000213448 | RPS23P2 | 10363 | Downstream | 4.34814282 | 1.37E-05 | 0.0263875 |
| 3 | 99325931 | 99325931 | 1 | 3_99325931 | ENSG00000240572 | AC107297.1 | 445 | Downstream | -4.3481139 | 1.37E-05 | 0.0263875 |
| 1 | 119579180 | 119579180 | 1 | 1_119579180 | ENSG00000203855 | HSD3BP4 | 7113 | Downstream | 4.34806096 | 1.37E-05 | 0.0263875 |
| 16 | 82219769 | 82219769 | 1 | 16_82219769 | ENSG00000251888 | RN7SKP190 | 26979 | Upstream | -4.3480234 | 1.37E-05 | 0.0263875 |
| 5 | 134169869 | 134169869 | 1 | 5_134169869 | ENSG00000113558 | SKP1 | 0 | INTRON | 4.3480079 | 1.37E-05 | 0.0263875 |
| 17 | 52343442 | 52343442 | 1 | 17_52343442 | ENSG00000263317 | LINC01982 | 47072 | Upstream | 4.34795302 | 1.37E-05 | 0.0263875 |
| 4 | 155661324 | 155661324 | 1 | 4_155661324 | ENSG00000164116 | GUCY1A1 | 5386 | Upstream | 4.34794271 | 1.37E-05 | 0.0263875 |
| 21 | 21027018 | 21027018 | 1 | 21_21027018 | ENSG00000154654 | NCAM2 | 0 | INTRON | 4.34793845 | 1.37E-05 | 0.0263875 |
| 5 | 160268971 | 160268971 | 1 | 5_160268971 | ENSG00000135083 | CCNJL | 0 | INTRON | -4.3478779 | 1.37E-05 | 0.0263875 |
| 17 | 20355573 | 20355573 | 1 | 17_20355573 | ENSG00000154898 | CCDC144CP | 0 | INTRON | -4.3478586 | 1.37E-05 | 0.0263875 |
| 2 | 58784290 | 58784290 | 1 | 2_58784290 | ENSG00000233723 | LINC01122 | 0 | INTRON | -4.3478397 | 1.37E-05 | 0.0263875 |
| 13 | 57344759 | 57344759 | 1 | 13_57344759 | ENSG00000234421 | SLC25A5P4 | 28850 | Downstream | -4.3478232 | 1.37E-05 | 0.0263875 |
| 11 | 114050796 | 114050796 | 1 | 11_114050796 | ENSG00000109906 | ZBTB16 | 8914 | Upstream | -4.3477971 | 1.38E-05 | 0.0263875 |
| 1 | 116357926 | 116357926 | 1 | 1_116357926 | ENSG00000163399 | ATP1A1 | 14741 | Upstream | 4.34779499 | 1.38E-05 | 0.0263875 |
| 5 | 104475292 | 104475292 | 1 | 5_104475292 | ENSG00000251574 | AC099520.1 | 0 | INTRON | -4.347792 | 1.38E-05 | 0.0263875 |
| 8 | 12484475 | 12484475 | 1 | 8_12484475 | ENSG00000283674 | AC068587.4 | 0 | INTRON | -4.3477523 | 1.38E-05 | 0.0263875 |
| 16 | 17561263 | 17561263 | 1 | 16_17561263 | ENSG00000260945 | AC109495.1 | 20278 | Upstream | 4.34774778 | 1.38E-05 | 0.0263875 |
| 15 | 25027887 | 25027887 | 1 | 15_25027887 | ENSG00000257647 | AC124312.2 | 0 | EXON | 4.34773201 | 1.38E-05 | 0.0263875 |
| X | 141907767 | 141907767 | 1 | X_141907767 | ENSG00000155495 | MAGEC1 | 0 | EXON | -4.3477306 | 1.38E-05 | 0.0263875 |
| 17 | 43234948 | 43234948 | 1 | 17_43234948 | ENSG00000236383 | CCDC200 | 0 | INTRON | -4.3476237 | 1.38E-05 | 0.02639569 |
| 12 | 123216849 | 123216849 | 1 | 12_123216849 | ENSG00000051825 | MPHOSPH9 | 0 | INTRON | 4.34755405 | 1.38E-05 | 0.02639569 |
| 7 | 51349628 | 51349628 | 1 | 7_51349628 | ENSG00000227233 | CICP17 | 32655 | Upstream | 4.34755255 | 1.38E-05 | 0.02639569 |
| 2 | 106068176 | 106068176 | 1 | 2_106068176 | ENSG00000119147 | ECRG4 | 0 | INTRON | -4.3475489 | 1.38E-05 | 0.02639569 |
| 2 | 117662827 | 117662827 | 1 | 2_117662827 | ENSG00000238207 | AC009312.1 | 91311 | Downstream | 4.34749167 | 1.38E-05 | 0.02639569 |
| 8 | 80297324 | 80297324 | 1 | 8_80297324 | ENSG00000253238 | AC034114.2 | 0 | INTRON | -4.3474897 | 1.38E-05 | 0.02639569 |
| 3 | 45840616 | 45840616 | 1 | 3_45840616 | ENSG00000163818 | LZTFL1 | 0 | INTRON | -4.3474895 | 1.38E-05 | 0.02639569 |
| 2 | 177588504 | 177588504 | 1 | 2_177588504 | ENSG00000237655 | AC073834.1 | 14584 | Upstream | -4.3474172 | 1.38E-05 | 0.02639894 |
| 6 | 34278101 | 34278101 | 1 | 6_34278101 | ENSG00000225339 | AL354740.1 | 0 | EXON | -4.3473769 | 1.38E-05 | 0.02639894 |
| 3 | 195882069 | 195882069 | 1 | 3_195882069 | ENSG00000061938 | TNK2 | 0 | 3UTR | 4.34736656 | 1.38E-05 | 0.02639894 |
| 17 | 47185239 | 47185239 | 1 | 17_47185239 | ENSG00000004897 | CDC27 | 0 | INTRON | 4.34734405 | 1.38E-05 | 0.02639894 |
| 5 | 167628014 | 167628014 | 1 | 5_167628014 | ENSG00000145934 | TENM2 | 0 | INTRON | 4.34732106 | 1.38E-05 | 0.02639894 |
| 11 | 59125346 | 59125346 | 1 | 11_59125346 | ENSG00000189057 | FAM111B | 0 | EXON | -4.3473143 | 1.38E-05 | 0.02639894 |
| 6 | 25084051 | 25084051 | 1 | 6_25084051 | ENSG00000168405 | CMAHP | 0 | INTRON | 4.34720218 | 1.38E-05 | 0.02640946 |
| 22 | 11159343 | 11159343 | 1 | 22_11159343 | ENSG00000226444 | ACTR3BP6 | 33638 | Downstream | 4.34705679 | 1.38E-05 | 0.02642137 |
| 5 | 148681735 | 148681735 | 1 | 5_148681735 | ENSG00000164270 | HTR4 | 4500 | Upstream | -4.3470486 | 1.38E-05 | 0.02642137 |
| 9 | 8501352 | 8501352 | 1 | 9_8501352 | ENSG00000153707 | PTPRD | 0 | INTRON | -4.3470291 | 1.38E-05 | 0.02642137 |
| 10 | 48839861 | 48839861 | 1 | 10_48839861 | ENSG00000128815 | WDFY4 | 0 | INTRON | -4.3469581 | 1.38E-05 | 0.02642575 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
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| 6 | 16889880 | 16889880 | 1 | 6_16889880 | ENSG00000287347 | AL133405.2 | 11223 | Downstream | 4.34694335 | 1.38E-05 | 0.02642575 |
| 11 | 65242125 | 65242125 | 1 | 11_65242125 | ENSG00000197847 | SLC22A20P | 0 | EXON | -4.3467547 | 1.38E-05 | 0.02644547 |
| 8 | 126938470 | 126938470 | 1 | 8_126938470 | ENSG00000253438 | PCAT1 | 0 | INTRON | 4.34670925 | 1.38E-05 | 0.02644547 |
| 22 | 44383053 | 44383053 | 1 | 22_44383053 | ENSG00000220702 | Z85994.1 | 16769 | Downstream | 4.34669391 | 1.38E-05 | 0.02644547 |
| 13 | 48017556 | 48017556 | 1 | 13_48017556 | ENSG00000136143 | SUCLA2 | 0 | INTRON | -4.346681 | 1.38E-05 | 0.02644547 |
| 11 | 125587168 | 125587168 | 1 | 11_125587168 | ENSG00000149557 | FEZ1 | 0 | INTRON | 4.34661414 | 1.38E-05 | 0.02644744 |
| 4 | 84864293 | 84864293 | 1 | 4_84864293 | ENSG00000163625 | WDFY3 | 0 | INTRON | -4.3466099 | 1.38E-05 | 0.02644744 |
| 20 | 17623926 | 17623926 | 1 | 20_17623926 | ENSG00000125844 | RRBP1 | 0 | INTRON | 4.34659062 | 1.38E-05 | 0.02644744 |
| 14 | 66944725 | 66944725 | 1 | 14_66944725 | ENSG00000171723 | GPHN | 0 | INTRON | 4.34652377 | 1.38E-05 | 0.02645227 |
| 8 | 64665867 | 64665867 | 1 | 8_64665867 | ENSG00000172817 | CYP7B1 | 0 | INTRON | -4.3465012 | 1.38E-05 | 0.02645227 |
| 14 | 20214571 | 20214571 | 1 | 14_20214571 | ENSG00000258625 | OR11H5P | 4073 | Downstream | -4.3464336 | 1.38E-05 | 0.02645744 |
| 8 | 133252022 | 133252022 | 1 | 8_133252022 | ENSG00000104419 | NDRG1 | 0 | INTRON | 4.34639923 | 1.38E-05 | 0.02645814 |
| 15 | 26100552 | 26100552 | 1 | 15_26100552 | ENSG00000259150 | LINC00929 | 15173 | Upstream | 4.34635669 | 1.38E-05 | 0.02645814 |
| 6 | 94987289 | 94987289 | 1 | 6_94987289 | ENSG00000219627 | CYCSP17 | 516892 | Upstream | -4.3463539 | 1.38E-05 | 0.02645814 |
| 9 | 129480018 | 129480018 | 1 | 9_129480018 | ENSG00000204054 | LINC00963 | 0 | INTRON | -4.3463195 | 1.38E-05 | 0.02645881 |
| 1 | 208322601 | 208322601 | 1 | 1_208322601 | ENSG00000286198 | AL606753.2 | 51934 | Upstream | -4.3462991 | 1.38E-05 | 0.02645881 |
| 4 | 139294133 | 139294133 | 1 | 4_139294133 | ENSG00000109390 | NDUFC1 | 0 | INTRON | -4.346198 | 1.39E-05 | 0.02646803 |
| 2 | 17290965 | 17290965 | 1 | 2_17290965 | ENSG00000214843 | ZFYVE9P2 | 6070 | Downstream | -4.3461556 | 1.39E-05 | 0.02646832 |
| 7 | 90547005 | 90547005 | 1 | 7_90547005 | ENSG00000058091 | CDK14 | 0 | INTRON | 4.34614621 | 1.39E-05 | 0.02646832 |
| 8 | 4676508 | 4676508 | 1 | 8_4676508 | ENSG00000183117 | CSMD1 | 0 | INTRON | -4.346071 | 1.39E-05 | 0.02646876 |
| 19 | 39113575 | 39113575 | 1 | 19_39113575 | ENSG00000183760 | ACP7 | 2082 | Downstream | 4.34604222 | 1.39E-05 | 0.02646876 |
| 10 | 78761742 | 78761742 | 1 | 10_78761742 | ENSG00000228683 | AC016820.1 | 64720 | Upstream | -4.3460283 | 1.39E-05 | 0.02646876 |
| 12 | 106076557 | 106076557 | 1 | 12_106076557 | ENSG00000074590 | NUAK1 | 0 | INTRON | 4.34602236 | 1.39E-05 | 0.02646876 |
| 20 | 31551730 | 31551730 | 1 | 20_31551730 | ENSG00000101294 | HM13 | 0 | INTRON | 4.34601941 | 1.39E-05 | 0.02646876 |
| 8 | 80756171 | 80756171 | 1 | 8_80756171 | ENSG00000164684 | ZNF704 | 0 | INTRON | -4.3459402 | 1.39E-05 | 0.02647534 |
| 19 | 51358040 | 51358040 | 1 | 19_51358040 | ENSG00000269403 | AC008750.8 | 0 | INTRON | 4.34588605 | 1.39E-05 | 0.02647891 |
| 22 | 40273481 | 40273481 | 1 | 22_40273481 | ENSG00000100354 | TNRC6B | 0 | EXON | 4.34580587 | 1.39E-05 | 0.02648175 |
| 9 | 133468610 | 133468610 | 1 | 9_133468610 | ENSG00000160325 | CACFD1 | 0 | EXON | 4.3458037 | 1.39E-05 | 0.02648175 |
| 16 | 81681137 | 81681137 | 1 | 16_81681137 | ENSG00000153815 | CMIP | 0 | INTRON | 4.34578867 | 1.39E-05 | 0.02648175 |
| X | 13688354 | 13688354 | 1 | X_13688354 | ENSG00000123595 | RAB9A | 773 | Upstream | 4.34560564 | 1.39E-05 | 0.02650087 |
| 4 | 174361077 | 174361077 | 1 | 4_174361077 | ENSG00000249875 | AC116616.1 | 0 | INTRON | -4.3455527 | 1.39E-05 | 0.02650429 |
| 1 | 3830163 | 3830163 | 1 | 1_3830163 | ENSG00000116198 | CEP104 | 0 | INTRON | 4.34552793 | 1.39E-05 | 0.02650431 |
| 13 | 53532677 | 53532677 | 1 | 13_53532677 | ENSG00000287722 | AL356295.1 | 0 | INTRON | -4.3452853 | 1.39E-05 | 0.02652841 |
| 4 | 149614710 | 149614710 | 1 | 4_149614710 | ENSG00000234828 | IQCM | 0 | INTRON | -4.3452793 | 1.39E-05 | 0.02652841 |
| 1 | 167776107 | 167776107 | 1 | 1_167776107 | ENSG00000197965 | MPZL1 | 0 | 3UTR | 4.34525098 | 1.39E-05 | 0.02652885 |
| 4 | 159614805 | 159614805 | 1 | 4_159614805 | ENSG00000250488 | LINC02233 | 51027 | Downstream | -4.3450459 | 1.39E-05 | 0.02654857 |
| 13 | 77632443 | 77632443 | 1 | 13_77632443 | ENSG00000136155 | SCEL | 0 | INTRON | 4.34501804 | 1.39E-05 | 0.02654857 |
| 6 | 5808672 | 5808672 | 1 | 6_5808672 | ENSG00000145982 | FARS2 | 0 | INTRON | 4.3450141 | 1.39E-05 | 0.02654857 |
| 8 | 40668017 | 40668017 | 1 | 8_40668017 | ENSG00000165061 | ZMAT4 | 0 | INTRON | -4.3449754 | 1.39E-05 | 0.02655028 |
| 4 | 175514993 | 175514993 | 1 | 4_175514993 | ENSG00000251174 | TSEN2P1 | 18993 | Downstream | 4.34479885 | 1.39E-05 | 0.02656689 |
| 14 | 64066221 | 64066221 | 1 | 14_64066221 | ENSG00000054654 | SYNE2 | 0 | INTRON | 4.34477647 | 1.39E-05 | 0.02656689 |
| 1 | 1711998 | 1711998 | 1 | 1_1711998 | ENSG00000008128 | CDK11A | 0 | INTRON | 4.34476427 | 1.39E-05 | 0.02656689 |
| 22 | 11058321 | 11058321 | 1 | 22_11058321 | ENSG00000279973 | CU104787.1 | 8096 | Upstream | -4.3447157 | 1.39E-05 | 0.0265683 |
| 4 | 18945423 | 18945423 | 1 | 4_18945423 | ENSG00000286046 | AC093898.1 | 56761 | Downstream | -4.3447035 | 1.39E-05 | 0.0265683 |
| 2 | 52997071 | 52997071 | 1 | 2_52997071 | ENSG00000228033 | AC010967.1 | 35619 | Upstream | 4.34461095 | 1.40E-05 | 0.02657416 |
| 12 | 111983165 | 111983165 | 1 | 12_111983165 | ENSG00000198270 | TMEM116 | 0 | INTRON | 4.34460591 | 1.40E-05 | 0.02657416 |
| 4 | 19891756 | 19891756 | 1 | 4_19891756 | ENSG00000248515 | AC024230.1 | 0 | INTRON | -4.3445427 | 1.40E-05 | 0.02657883 |
| 1 | 198323951 | 198323951 | 1 | 1_198323951 | ENSG00000151414 | NEK7 | 1531 | Downstream | -4.3444973 | 1.40E-05 | 0.02658136 |
| 10 | 122866064 | 122866064 | 1 | 10_122866064 | ENSG00000286088 | AC073585.2 | 0 | INTRON | 4.3444305 | 1.40E-05 | 0.02658432 |
| 3 | 139235880 | 139235880 | 1 | 3_139235880 | ENSG00000175110 | MRPS22 | 0 | INTRON | 4.3444237 | 1.40E-05 | 0.02658432 |
| 6 | 4372860 | 4372860 | 1 | 6_4372860 | ENSG00000285424 | AL162718.1 | 0 | INTRON | 4.34433481 | 1.40E-05 | 0.02658991 |
| 10 | 18860566 | 18860566 | 1 | 10_18860566 | ENSG00000234813 | AL357520.1 | 79934 | Upstream | 4.34432849 | 1.40E-05 | 0.02658991 |
| 2 | 123403005 | 123403005 | 1 | 2_123403005 | ENSG00000287854 | AC073409.2 | 18480 | Upstream | -4.3442238 | 1.40E-05 | 0.02659496 |
| 14 | 81214518 | 81214518 | 1 | 14_81214518 | ENSG00000165417 | GTF2A1 | 0 | INTRON | -4.3442218 | 1.40E-05 | 0.02659496 |
| 21 | 28658838 | 28658838 | 1 | 21_28658838 | ENSG00000232855 | AF165147.1 | 0 | INTRON | -4.3441649 | 1.40E-05 | 0.02659496 |
| 22 | 36662314 | 36662314 | 1 | 22_36662314 | ENSG00000166862 | CACNG2 | 0 | INTRON | 4.34412449 | 1.40E-05 | 0.02659496 |
| 16 | 11321164 | 11321164 | 1 | 16_11321164 | ENSG00000175643 | RMI2 | 0 | INTRON | 4.34412429 | 1.40E-05 | 0.02659496 |
| 1 | 197387025 | 197387025 | 1 | 1_197387025 | ENSG00000134376 | CRB1 | 0 | INTRON | -4.3441236 | 1.40E-05 | 0.02659496 |
| X | 127305661 | 127305661 | 1 | X_127305661 | ENSG00000230538 | Z82209.1 | 84680 | Upstream | 4.34411495 | 1.40E-05 | 0.02659496 |
| 5 | 153852563 | 153852563 | 1 | 5_153852563 | ENSG00000251183 | LINC01861 | 34864 | Downstream | 4.34406337 | 1.40E-05 | 0.02659823 |
| 2 | 20131033 | 20131033 | 1 | 2_20131033 | ENSG00000234378 | AC098828.2 | 24204 | Upstream | 4.34403257 | 1.40E-05 | 0.02659869 |
| 9 | 7505972 | 7505972 | 1 | 9_7505972 | ENSG00000230207 | RPL4P5 | 27652 | Upstream | -4.3440106 | 1.40E-05 | 0.02659869 |
| 4 | 108680245 | 108680245 | 1 | 4_108680245 | ENSG00000286136 | AC107071.1 | 1371 | Downstream | -4.3439198 | 1.40E-05 | 0.02660671 |
| 8 | 81592407 | 81592407 | 1 | 8_81592407 | ENSG00000251521 | IMPA1P1 | 13161 | Downstream | 4.3437759 | 1.40E-05 | 0.02662118 |
| X | 63266018 | 63266018 | 1 | X_63266018 | ENSG00000235437 | LINC01278 | 0 | INTRON | 4.3436485 | 1.40E-05 | 0.02663089 |
| 5 | 119362936 | 119362936 | 1 | 5_119362936 | ENSG00000145779 | TNFAIP8 | 0 | INTRON | 4.34363258 | 1.40E-05 | 0.02663089 |
| 18 | 48418641 | 48418641 | 1 | 18_48418641 | ENSG00000184828 | ZBTB7C | 7889 | Upstream | 4.34362222 | 1.40E-05 | 0.02663089 |
| 12 | 69728995 | 69728995 | 1 | 12_69728995 | ENSG00000247131 | AC025263.1 | 0 | INTRON | -4.3435311 | 1.40E-05 | 0.0266384 |
| X | 95665438 | 95665438 | 1 | X_95665438 | ENSG00000235425 | RPS7P13 | 13691 | Downstream | 4.3435113 | 1.40E-05 | 0.0266384 |
| 3 | 126671438 | 126671438 | 1 | 3_126671438 | ENSG00000198284 | NUP210P1 | 0 | INTRON | -4.3433623 | 1.40E-05 | 0.02664834 |
| 9 | 69261966 | 69261966 | 1 | 9_69261966 | ENSG00000119139 | TJP2 | 0 | INTRON | -4.3433185 | 1.40E-05 | 0.02664834 |
| X | 56028553 | 56028553 | 1 | X_56028553 | ENSG00000227486 | AL050309.1 | 0 | INTRON | 4.34331471 | 1.40E-05 | 0.02664834 |
| 5 | 62653901 | 62653901 | 1 | 5_62653901 | ENSG00000086200 | IPO11 | 25319 | Downstream | 4.34329138 | 1.40E-05 | 0.02664834 |
| 1 | 78099563 | 78099563 | 1 | 1_78099563 | ENSG00000137960 | GIPC2 | 0 | INTRON | 4.34328372 | 1.40E-05 | 0.02664834 |
| 8 | 9397295 | 9397295 | 1 | 8_9397295 | ENSG00000254237 | AC021242.2 | 0 | INTRON | 4.34328234 | 1.40E-05 | 0.02664834 |
| 5 | 138365855 | 138365855 | 1 | 5_138365855 | ENSG00000120733 | KDM3B | 0 | INTRON | -4.343246 | 1.40E-05 | 0.02664906 |
| 7 | 24728689 | 24728689 | 1 | 7_24728689 | ENSG00000105928 | GSDME | 0 | INTRON | -4.3432274 | 1.40E-05 | 0.02664906 |
| 3 | 76055827 | 76055827 | 1 | 3_76055827 | ENSG00000185008 | ROBO2 | 0 | INTRON | 4.34315132 | 1.40E-05 | 0.02665074 |
| 5 | 157663006 | 157663006 | 1 | 5_157663006 | ENSG00000039600 | SOX30 | 0 | INTRON | 4.34314196 | 1.40E-05 | 0.02665074 |
| 1 | 206217682 | 206217682 | 1 | 1_206217682 | ENSG00000266028 | SRGAP2 | 0 | INTRON | -4.3431401 | 1.40E-05 | 0.02665074 |
| 8 | 83152056 | 83152056 | 1 | 8_83152056 | ENSG00000253423 | AC090132.1 | 48895 | Downstream | -4.3430972 | 1.40E-05 | 0.02665297 |
| 9 | 82068572 | 82068572 | 1 | 9_82068572 | ENSG00000228430 | AL162726.3 | 0 | INTRON | -4.3430366 | 1.41E-05 | 0.02665735 |
| 6 | 149725315 | 149725315 | 1 | 6_149725315 | ENSG00000120253 | NUP43 | 0 | 3UTR | -4.3429673 | 1.41E-05 | 0.0266628 |
| 13 | 94229121 | 94229121 | 1 | 13_94229121 | ENSG00000183098 | GPC6 | 0 | INTRON | 4.34288831 | 1.41E-05 | 0.02666872 |
| 1 | 247037477 | 247037477 | 1 | 1_247037477 | ENSG00000277462 | ZNF670 | 0 | EXON | 4.34286958 | 1.41E-05 | 0.02666872 |
| 8 | 22346273 | 22346273 | 1 | 8_22346273 | ENSG00000197181 | PIWIL2 | 0 | INTRON | -4.3427899 | 1.41E-05 | 0.02667463 |
| 6 | 79806974 | 79806974 | 1 | 6_79806974 | ENSG00000235357 | LINC01621 | 0 | INTRON | 4.34275869 | 1.41E-05 | 0.02667463 |
| 3 | 158835960 | 158835960 | 1 | 3_158835960 | ENSG00000232374 | GPR79 | 5132 | Downstream | 4.34274752 | 1.41E-05 | 0.02667463 |

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| 12 | 7700137 | 7700137 | 1 | 12_7700137 | ENSG00000184344 | GDF3 | 4362 | Upstream | 4.34254379 | 1.41E-05 | 0.02669344 |
| 15 | 23346876 | 23346876 | 1 | 15_23346876 | ENSG00000260399 | AC100756.1 | 5028 | Upstream | -4.3424283 | 1.41E-05 | 0.0267045 |
| 2 | 132931454 | 132931454 | 1 | 2_132931454 | ENSG00000233729 | NCKAP5-AS1 | 0 | EXON | 4.34231274 | 1.41E-05 | 0.02670465 |
| 2 | 112498686 | 112498686 | 1 | 2_112498686 | ENSG00000114999 | TTL | 0 | INTRON | 4.34230581 | 1.41E-05 | 0.02670465 |
| 16 | 69030928 | 69030928 | 1 | 16_69030928 | ENSG00000103047 | TANGO6 | 0 | INTRON | 4.3423034 | 1.41E-05 | 0.02670465 |
| 12 | 87970004 | 87970004 | 1 | 12_87970004 | ENSG00000165805 | C12orf50 | 10030 | Downstream | 4.34230023 | 1.41E-05 | 0.02670465 |
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| 7 | 19658365 | 19658365 | 1 | 7_19658365 | ENSG00000105849 | TWISTNB | 37095 | Downstream | 4.34228035 | 1.41E-05 | 0.02670465 |
| 10 | 19242296 | 19242296 | 1 | 10_19242296 | ENSG00000204740 | MALRD1 | 0 | INTRON | 4.34216111 | 1.41E-05 | 0.0267157 |
| 3 | 35829083 | 35829083 | 1 | 3_35829083 | ENSG00000172995 | ARPP21 | 34587 | Downstream | 4.34214059 | 1.41E-05 | 0.0267157 |
| 14 | 87423753 | 87423753 | 1 | 14_87423753 | ENSG00000258859 | LINC02296 | 0 | INTRON | 4.34201095 | 1.41E-05 | 0.02672777 |
| 9 | 70235390 | 70235390 | 1 | 9_70235390 | ENSG00000268364 | SMC5-AS1 | 0 | INTRON | 4.34199255 | 1.41E-05 | 0.02672777 |
| 1 | 3962964 | 3962964 | 1 | 1_3962964 | ENSG00000233304 | LINC01346 | 7702 | Downstream | 4.34192295 | 1.41E-05 | 0.02673326 |
| X | 153946736 | 153946736 | 1 | X_153946736 | ENSG00000172534 | HCFC1 | 820 | Downstream | -4.3418608 | 1.41E-05 | 0.02673785 |
| 20 | 12402441 | 12402441 | 1 | 20_12402441 | ENSG00000235698 | PA2G4P2 | 21186 | Downstream | -4.3418022 | 1.41E-05 | 0.02673957 |
| 12 | 113972636 | 113972636 | 1 | 12_113972636 | ENSG00000122965 | RBM19 | 6311 | Upstream | 4.34179784 | 1.41E-05 | 0.02673957 |
| 16 | 1100888 | 1100888 | 1 | 16_1100888 | ENSG00000260702 | AL031713.1 | 371 | Downstream | -4.3416749 | 1.41E-05 | 0.02675156 |
| 2 | 206715916 | 206715916 | 1 | 2_206715916 | ENSG00000232125 | DYTN | 0 | INTRON | 4.34155028 | 1.41E-05 | 0.02676377 |
| 5 | 7070758 | 7070758 | 1 | 5_7070758 | ENSG00000250974 | LINC02196 | 0 | INTRON | -4.3414608 | 1.42E-05 | 0.02676612 |
| 12 | 107604527 | 107604527 | 1 | 12_107604527 | ENSG00000151136 | BTBD11 | 0 | INTRON | 4.34144831 | 1.42E-05 | 0.02676612 |
| 17 | 7150610 | 7150610 | 1 | 17_7150610 | ENSG00000213876 | RPL7AP64 | 9018 | Downstream | -4.3414324 | 1.42E-05 | 0.02676612 |
| 2 | 159954080 | 159954080 | 1 | 2_159954080 | ENSG00000153246 | PLA2R1 | 0 | INTRON | 4.34141031 | 1.42E-05 | 0.02676612 |
| 10 | 113187630 | 113187630 | 1 | 10_113187630 | ENSG00000148737 | TCF7L2 | 19952 | Downstream | -4.3414089 | 1.42E-05 | 0.02676612 |
| 18 | 68440204 | 68440204 | 1 | 18_68440204 | ENSG00000287907 | AC005909.2 | 0 | INTRON | -4.3413637 | 1.42E-05 | 0.0267674 |
| 2 | 100544732 | 100544732 | 1 | 2_100544732 | ENSG00000115539 | PDCL3 | 18260 | Upstream | 4.34133506 | 1.42E-05 | 0.0267674 |
| 22 | 47351470 | 47351470 | 1 | 22_47351470 | ENSG00000224715 | Z82186.1 | 0 | INTRON | 4.34129756 | 1.42E-05 | 0.0267674 |
| 5 | 106860025 | 106860025 | 1 | 5_106860025 | ENSG00000251027 | LINC01950 | 0 | INTRON | 4.34125557 | 1.42E-05 | 0.0267674 |
| 6 | 66238290 | 66238290 | 1 | 6_66238290 | ENSG00000218890 | NUFIP1P1 | 143381 | Upstream | 4.34123711 | 1.42E-05 | 0.0267674 |
| 8 | 3365735 | 3365735 | 1 | 8_3365735 | ENSG00000183117 | CSMD1 | 0 | INTRON | -4.3412356 | 1.42E-05 | 0.0267674 |
| 14 | 93117633 | 93117633 | 1 | 14_93117633 | ENSG00000100605 | ITPK1 | 1313 | Upstream | 4.34120889 | 1.42E-05 | 0.0267674 |
| 15 | 41315150 | 41315150 | 1 | 15_41315150 | ENSG00000285920 | AC087721.2 | 0 | INTRON | -4.3412032 | 1.42E-05 | 0.0267674 |
| 5 | 141294526 | 141294526 | 1 | 5_141294526 | ENSG00000178913 | TAF7 | 0 | INTRON | -4.3411776 | 1.42E-05 | 0.02676755 |
| 3 | 41953805 | 41953805 | 1 | 3_41953805 | ENSG00000168038 | ULK4 | 0 | INTRON | -4.3411094 | 1.42E-05 | 0.0267721 |
| 13 | 33493470 | 33493470 | 1 | 13_33493470 | ENSG00000230490 | AL139383.1 | 0 | INTRON | -4.3410863 | 1.42E-05 | 0.0267721 |
| 4 | 142313280 | 142313280 | 1 | 4_142313280 | ENSG00000109452 | INPP4B | 0 | INTRON | 4.34106708 | 1.42E-05 | 0.0267721 |
| 1 | 26258665 | 26258665 | 1 | 1_26258665 | ENSG00000130695 | CEP85 | 0 | INTRON | -4.3409954 | 1.42E-05 | 0.02677734 |
| 6 | 41608372 | 41608372 | 1 | 6_41608372 | ENSG00000137166 | FOXP4 | 5988 | Downstream | -4.3409753 | 1.42E-05 | 0.02677734 |
| 4 | 88104236 | 88104236 | 1 | 4_88104236 | ENSG00000118777 | ABCG2 | 0 | INTRON | 4.34094466 | 1.42E-05 | 0.02677794 |
| 10 | 128787209 | 128787209 | 1 | 10_128787209 | ENSG00000224190 | LINC02667 | 125600 | Upstream | -4.340895 | 1.42E-05 | 0.02677794 |
| 5 | 154576067 | 154576067 | 1 | 5_154576067 | ENSG00000253146 | CIR1P1 | 15627 | Upstream | -4.3408384 | 1.42E-05 | 0.02677794 |
| 17 | 59878577 | 59878577 | 1 | 17_59878577 | ENSG00000108423 | TUBD1 | 0 | EXON | -4.3407691 | 1.42E-05 | 0.02677794 |
| 3 | 176253982 | 176253982 | 1 | 3_176253982 | ENSG00000238026 | AC117434.1 | 139445 | Upstream | -4.3407642 | 1.42E-05 | 0.02677794 |
| 6 | 162330044 | 162330044 | 1 | 6_162330044 | ENSG00000185345 | PRKN | 0 | INTRON | -4.3407612 | 1.42E-05 | 0.02677794 |
| 11 | 107334229 | 107334229 | 1 | 11_107334229 | ENSG00000152404 | CWF19L2 | 0 | INTRON | -4.3407142 | 1.42E-05 | 0.02677794 |
| 16 | 89790065 | 89790065 | 1 | 16_89790065 | ENSG00000187741 | FANCA | 0 | INTRON | 4.3407052 | 1.42E-05 | 0.02677794 |
| 5 | 33268660 | 33268660 | 1 | 5_33268660 | ENSG00000250697 | AC010343.3 | 0 | INTRON | -4.3407032 | 1.42E-05 | 0.02677794 |
| 10 | 11072517 | 11072517 | 1 | 10_11072517 | ENSG00000237986 | CELF2-AS2 | 0 | EXON | -4.3407025 | 1.42E-05 | 0.02677794 |
| X | 77622637 | 77622637 | 1 | X_77622637 | ENSG00000085224 | ATRX | 0 | INTRON | 4.34070249 | 1.42E-05 | 0.02677794 |
| 3 | 185732881 | 185732881 | 1 | 3_185732881 | ENSG00000073792 | IGF2BP2 | 0 | INTRON | -4.3406089 | 1.42E-05 | 0.02678638 |
| 9 | 93084966 | 93084966 | 1 | 9_93084966 | ENSG00000157303 | SUSD3 | 0 | 3UTR | -4.3405046 | 1.42E-05 | 0.02679613 |
| 10 | 86502934 | 86502934 | 1 | 10_86502934 | ENSG00000062650 | WAPL | 0 | INTRON | 4.3404543 | 1.42E-05 | 0.0267993 |
| 2 | 168859540 | 168859540 | 1 | 2_168859540 | ENSG00000163072 | NOSTRIN | 0 | EXON | 4.3403772 | 1.42E-05 | 0.02679952 |
| X | 103440854 | 103440854 | 1 | X_103440854 | ENSG00000281091 | AL117327.1 | 0 | INTRON | 4.34036912 | 1.42E-05 | 0.02679952 |
| 4 | 139347851 | 139347851 | 1 | 4_139347851 | ENSG00000164134 | NAA15 | 0 | INTRON | 4.34033745 | 1.42E-05 | 0.02679952 |
| 6 | 78636180 | 78636180 | 1 | 6_78636180 | ENSG00000230309 | AL121718.1 | 30144 | Upstream | 4.34032881 | 1.42E-05 | 0.02679952 |
| 19 | 6162439 | 6162439 | 1 | 19_6162439 | ENSG00000130377 | ACSBG2 | 0 | INTRON | -4.3403287 | 1.42E-05 | 0.02679952 |
| 22 | 39061308 | 39061308 | 1 | 22_39061308 | ENSG00000128394 | APOBEC3F | 5336 | Downstream | -4.3402948 | 1.42E-05 | 0.02679952 |
| 4 | 126924202 | 126924202 | 1 | 4_126924202 | ENSG00000199862 | Y_RNA | 103904 | Downstream | 4.34028212 | 1.42E-05 | 0.02679952 |
| 7 | 120344505 | 120344505 | 1 | 7_120344505 | ENSG00000184408 | KCND2 | 0 | INTRON | 4.34021729 | 1.42E-05 | 0.02680307 |
| 12 | 66641798 | 66641798 | 1 | 12_66641798 | ENSG00000155974 | GRIP1 | 0 | INTRON | 4.34018027 | 1.42E-05 | 0.02680307 |
| 11 | 134055534 | 134055534 | 1 | 11_134055534 | ENSG00000204241 | LINC02731 | 0 | INTRON | -4.3401647 | 1.42E-05 | 0.02680307 |
| 5 | 53908735 | 53908735 | 1 | 5_53908735 | ENSG00000185305 | ARL15 | 0 | INTRON | -4.3401558 | 1.42E-05 | 0.02680307 |
| 4 | 57306047 | 57306047 | 1 | 4_57306047 | ENSG00000243920 | RPS26P24 | 46951 | Downstream | -4.3400897 | 1.42E-05 | 0.02680817 |
| 13 | 45583657 | 45583657 | 1 | 13_45583657 | ENSG00000165837 | ERICH6B | 0 | INTRON | 4.33997752 | 1.42E-05 | 0.02681502 |
| 14 | 103394931 | 103394931 | 1 | 14_103394931 | ENSG00000075413 | MARK3 | 0 | INTRON | -4.3399712 | 1.43E-05 | 0.02681502 |
| 7 | 149355162 | 149355162 | 1 | 7_149355162 | ENSG00000215311 | NPM1P12 | 20305 | Downstream | 4.33996066 | 1.43E-05 | 0.02681502 |
| 2 | 148312441 | 148312441 | 1 | 2_148312441 | ENSG00000204406 | MBD5 | 0 | INTRON | 4.33984787 | 1.43E-05 | 0.0268256 |
| 9 | 31914211 | 31914211 | 1 | 9_31914211 | ENSG00000235148 | HMGB3P23 | 269051 | Upstream | 4.33982537 | 1.43E-05 | 0.0268256 |
| 10 | 102876980 | 102876980 | 1 | 10_102876980 | ENSG00000270316 | BORCS7-ASMT | 0 | 3UTR | 4.33971033 | 1.43E-05 | 0.02683446 |
| 5 | 160186975 | 160186975 | 1 | 5_160186975 | ENSG00000170231 | FABP6 | 391 | Upstream | 4.33970418 | 1.43E-05 | 0.02683446 |
| 12 | 53869273 | 53869273 | 1 | 12_53869273 | ENSG00000286069 | AC076968.2 | 0 | INTRON | 4.33951636 | 1.43E-05 | 0.02685178 |
| 12 | 101868436 | 101868436 | 1 | 12_101868436 | ENSG00000252863 | RNU6-1183P | 3305 | Downstream | -4.3394901 | 1.43E-05 | 0.02685178 |
| 1 | 191261847 | 191261847 | 1 | 1_191261847 | ENSG00000233882 | LINC01680 | 33380 | Upstream | -4.3394895 | 1.43E-05 | 0.02685178 |
| 19 | 1116900 | 1116900 | 1 | 19_1116900 | ENSG00000064932 | SBNO2 | 0 | EXON | -4.3394388 | 1.43E-05 | 0.02685501 |
| 17 | 18516582 | 18516582 | 1 | 17_18516582 | ENSG00000233327 | USP32P2 | 0 | EXON | -4.339356 | 1.43E-05 | 0.02685822 |
| 15 | 90960867 | 90960867 | 1 | 15_90960867 | ENSG00000166965 | RCCD1 | 0 | EXON | 4.33934266 | 1.43E-05 | 0.02685822 |
| 6 | 36569357 | 36569357 | 1 | 6_36569357 | ENSG00000112079 | STK38 | 21878 | Upstream | 4.33932288 | 1.43E-05 | 0.02685822 |
| 1 | 17886007 | 17886007 | 1 | 1_17886007 | ENSG00000117148 | ACTL8 | 58944 | Downstream | 4.33931542 | 1.43E-05 | 0.02685822 |
| 9 | 133811821 | 133811821 | 1 | 9_133811821 | ENSG00000160293 | VAV2 | 0 | INTRON | 4.33925301 | 1.43E-05 | 0.02686288 |
| 8 | 92478458 | 92478458 | 1 | 8_92478458 | ENSG00000253634 | AC091096.1 | 0 | INTRON | 4.33917987 | 1.43E-05 | 0.02686886 |
| 10 | 58316333 | 58316333 | 1 | 10_58316333 | ENSG00000261076 | AC016396.2 | 9280 | Downstream | 4.33911338 | 1.43E-05 | 0.02687402 |
| 5 | 50231650 | 50231650 | 1 | 5_50231650 | ENSG00000170571 | EMB | 164541 | Downstream | 4.33905724 | 1.43E-05 | 0.02687792 |
| 15 | 100607101 | 100607101 | 1 | 15_100607101 | ENSG00000183475 | ASB7 | 0 | INTRON | -4.33902 | 1.43E-05 | 0.02687947 |
| 12 | 131725259 | 131725259 | 1 | 12_131725259 | ENSG00000061936 | SFSWAP | 0 | INTRON | -4.338996 | 1.43E-05 | 0.02687947 |
| 7 | 134209159 | 134209159 | 1 | 7_134209159 | ENSG00000155530 | LRGUK | 0 | EXON | 4.33892317 | 1.43E-05 | 0.02688541 |
| 8 | 73150454 | 73150454 | 1 | 8_73150454 | ENSG00000164764 | SBSPON | 26366 | Upstream | 4.33885427 | 1.43E-05 | 0.02688817 |
| 12 | 20516150 | 20516150 | 1 | 12_20516150 | ENSG00000172572 | PDE3A | 0 | INTRON | -4.3388521 | 1.43E-05 | 0.02688817 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 20 | 58139986 | 58139986 | 1 | 20_58139986 | ENSG00000124237 | C20orf85 | 10915 | Upstream | -4.3387913 | 1.43E-05 | 0.02689245 |
| 5 | 127333034 | 127333034 | 1 | 5_127333034 | ENSG00000145794 | MEGF10 | 0 | INTRON | -4.3387686 | 1.43E-05 | 0.02689245 |
| 10 | 80974375 | 80974375 | 1 | 10_80974375 | ENSG00000227209 | WARS2P1 | 33174 | Upstream | 4.33874439 | 1.43E-05 | 0.02689245 |
| 1 | 21156041 | 21156041 | 1 | 1_21156041 | ENSG00000075151 | EIF4G3 | 0 | INTRON | -4.3386167 | 1.43E-05 | 0.02690511 |
| 1 | 224629545 | 224629545 | 1 | 1_224629545 | ENSG00000143786 | CNIH3 | 0 | INTRON | -4.3385451 | 1.43E-05 | 0.02691091 |
| 13 | 105565878 | 105565878 | 1 | 13_105565878 | ENSG00000232307 | DAOA-AS1 | 60197 | Upstream | -4.3384631 | 1.43E-05 | 0.02691798 |
| 2 | 171029880 | 171029880 | 1 | 2_171029880 | ENSG00000198586 | TLK1 | 0 | INTRON | 4.33839058 | 1.44E-05 | 0.02692151 |
| 1 | 120341541 | 120341541 | 1 | 1_120341541 | ENSG00000223804 | AC244669.1 | 0 | INTRON | -4.3383858 | 1.44E-05 | 0.02692151 |
| 2 | 14875894 | 14875894 | 1 | 2_14875894 | ENSG00000287291 | AC068286.2 | 0 | INTRON | -4.3382873 | 1.44E-05 | 0.02693061 |
| 3 | 175687480 | 175687480 | 1 | 3_175687480 | ENSG00000177694 | NAALADL2 | 0 | INTRON | -4.3381655 | 1.44E-05 | 0.02694256 |
| 1 | 47680757 | 47680757 | 1 | 1_47680757 | ENSG00000227947 | LINC01738 | 7705 | Upstream | 4.33809971 | 1.44E-05 | 0.02694674 |
| 7 | 2083020 | 2083020 | 1 | 7_2083020 | ENSG00000002822 | MAD1L1 | 0 | INTRON | 4.33808129 | 1.44E-05 | 0.02694674 |
| 8 | 144770830 | 144770830 | 1 | 8_144770830 | ENSG00000196378 | ZNF34 | 2283 | Downstream | -4.3380588 | 1.44E-05 | 0.02694674 |
| 2 | 80096450 | 80096450 | 1 | 2_80096450 | ENSG00000066032 | CTNNA2 | 0 | INTRON | 4.33797105 | 1.44E-05 | 0.02695453 |
| 19 | 19386770 | 19386770 | 1 | 19_19386770 | ENSG00000167491 | GATAD2A | 0 | INTRON | -4.3379305 | 1.44E-05 | 0.02695652 |
| 5 | 139820603 | 139820603 | 1 | 5_139820603 | ENSG00000146005 | PSD2 | 0 | INTRON | 4.33782578 | 1.44E-05 | 0.0269664 |
| 11 | 36447880 | 36447880 | 1 | 11_36447880 | ENSG00000135362 | PRR5L | 0 | INTRON | 4.33779007 | 1.44E-05 | 0.02696781 |
| 7 | 18534621 | 18534621 | 1 | 7_18534621 | ENSG00000048052 | HDAC9 | 0 | INTRON | -4.3377351 | 1.44E-05 | 0.02697159 |
| 3 | 110312823 | 110312823 | 1 | 3_110312823 | ENSG00000240895 | AC117430.1 | 214658 | Downstream | 4.33764115 | 1.44E-05 | 0.02698014 |
| 7 | 144753513 | 144753513 | 1 | 7_144753513 | ENSG00000196511 | TPK1 | 0 | INTRON | 4.33761248 | 1.44E-05 | 0.02698047 |
| 2 | 69293849 | 69293849 | 1 | 2_69293849 | ENSG00000198380 | GFPT1 | 25919 | Downstream | -4.3375513 | 1.44E-05 | 0.02698047 |
| 8 | 94590237 | 94590237 | 1 | 8_94590237 | ENSG00000254190 | AC023632.3 | 0 | EXON | 4.33754689 | 1.44E-05 | 0.02698047 |
| 2 | 78902427 | 78902427 | 1 | 2_78902427 | ENSG00000286260 | AC092604.1 | 0 | INTRON | -4.3375417 | 1.44E-05 | 0.02698047 |
| 2 | 217018854 | 217018854 | 1 | 2_217018854 | ENSG00000259855 | AC007749.1 | 22364 | Downstream | -4.337487 | 1.44E-05 | 0.02698421 |
| 10 | 6307670 | 6307670 | 1 | 10_6307670 | ENSG00000215244 | LINC02649 | 0 | INTRON | -4.337265 | 1.44E-05 | 0.0270085 |
| 7 | 51650891 | 51650891 | 1 | 7_51650891 | ENSG00000285741 | AC005999.2 | 0 | INTRON | -4.3371986 | 1.44E-05 | 0.02701368 |
| 3 | 99932673 | 99932673 | 1 | 3_99932673 | ENSG00000168386 | FILIP1L | 0 | INTRON | 4.3371393 | 1.44E-05 | 0.027018 |
| 14 | 21544356 | 21544356 | 1 | 14_21544356 | ENSG00000165821 | SALL2 | 7140 | Upstream | -4.3371043 | 1.44E-05 | 0.0270185 |
| 7 | 74650414 | 74650414 | 1 | 7_74650414 | ENSG00000263001 | GTF2I | 0 | EXON | 4.3370869 | 1.44E-05 | 0.0270185 |
| 11 | 127141535 | 127141535 | 1 | 11_127141535 | ENSG00000255087 | AP001993.1 | 0 | INTRON | 4.33702551 | 1.44E-05 | 0.02702307 |
| 18 | 38268664 | 38268664 | 1 | 18_38268664 | ENSG00000286716 | AC108452.1 | 276251 | Downstream | 4.33697133 | 1.44E-05 | 0.02702676 |
| 12 | 105781635 | 105781635 | 1 | 12_105781635 | ENSG00000257859 | CASC18 | 37573 | Downstream | -4.3368878 | 1.45E-05 | 0.0270324 |
| 3 | 29976615 | 29976615 | 1 | 3_29976615 | ENSG00000144642 | RBMS3 | 0 | INTRON | -4.3368771 | 1.45E-05 | 0.0270324 |
| 6 | 44339148 | 44339148 | 1 | 6_44339148 | ENSG00000272442 | AL353588.1 | 0 | INTRON | 4.33680103 | 1.45E-05 | 0.02703543 |
| 5 | 149328437 | 149328437 | 1 | 5_149328437 | ENSG00000157510 | AFAP1L1 | 0 | INTRON | 4.33678686 | 1.45E-05 | 0.02703543 |
| 9 | 124141924 | 124141924 | 1 | 9_124141924 | ENSG00000106689 | LHX2 | 108623 | Downstream | -4.3367654 | 1.45E-05 | 0.02703543 |
| 8 | 3596132 | 3596132 | 1 | 8_3596132 | ENSG00000183117 | CSMD1 | 0 | INTRON | 4.33675572 | 1.45E-05 | 0.02703543 |
| 21 | 34867388 | 34867388 | 1 | 21_34867388 | ENSG00000286153 | AP000331.1 | 0 | INTRON | 4.33671689 | 1.45E-05 | 0.02703625 |
| 16 | 15133672 | 15133672 | 1 | 16_15133672 | ENSG00000250251 | PKD1P6 | 0 | EXON | -4.3367007 | 1.45E-05 | 0.02703625 |
| 2 | 40218864 | 40218864 | 1 | 2_40218864 | ENSG00000227028 | SLC8A1-AS1 | 0 | INTRON | -4.3366745 | 1.45E-05 | 0.02703651 |
| 7 | 1717149 | 1717149 | 1 | 7_1717149 | ENSG00000225968 | ELFN1 | 0 | INTRON | 4.33660497 | 1.45E-05 | 0.02703947 |
| 12 | 42746618 | 42746618 | 1 | 12_42746618 | ENSG00000257114 | LINC02450 | 29498 | Downstream | 4.33659839 | 1.45E-05 | 0.02703947 |
| 18 | 70433188 | 70433188 | 1 | 18_70433188 | ENSG00000214255 | RPS2P6 | 2063 | Downstream | -4.336578 | 1.45E-05 | 0.02703947 |
| 15 | 86986212 | 86986212 | 1 | 15_86986212 | ENSG00000259620 | AC016987.1 | 0 | INTRON | -4.3365332 | 1.45E-05 | 0.02704201 |
| 3 | 193205993 | 193205993 | 1 | 3_193205993 | ENSG00000232130 | AC092966.1 | 29129 | Upstream | -4.3364688 | 1.45E-05 | 0.02704696 |
| 6 | 119005142 | 119005142 | 1 | 6_119005142 | ENSG00000111879 | FAM184A | 0 | INTRON | -4.3364237 | 1.45E-05 | 0.02704953 |
| 16 | 30002963 | 30002963 | 1 | 16_30002963 | ENSG00000169592 | INO80E | 0 | 3UTR | -4.3363556 | 1.45E-05 | 0.02705194 |
| 2 | 165712847 | 165712847 | 1 | 2_165712847 | ENSG00000178662 | CSRNP3 | 23440 | Downstream | 4.33631783 | 1.45E-05 | 0.02705194 |
| 9 | 126955951 | 126955951 | 1 | 9_126955951 | ENSG00000136828 | RALGPS1 | 0 | INTRON | 4.33629382 | 1.45E-05 | 0.02705194 |
| 19 | 3544860 | 3544860 | 1 | 19_3544860 | ENSG00000161091 | MFSD12 | 0 | EXON | 4.33629196 | 1.45E-05 | 0.02705194 |
| X | 69353459 | 69353459 | 1 | X_69353459 | ENSG00000231706 | CYCSP43 | 131883 | Downstream | 4.33628345 | 1.45E-05 | 0.02705194 |
| 11 | 19940343 | 19940343 | 1 | 11_19940343 | ENSG00000166833 | NAV2 | 0 | INTRON | 4.33625231 | 1.45E-05 | 0.02705281 |
| 3 | 183993210 | 183993210 | 1 | 3_183993210 | ENSG00000114770 | ABCC5 | 0 | INTRON | 4.33619183 | 1.45E-05 | 0.02705728 |
| 7 | 20196266 | 20196266 | 1 | 7_20196266 | ENSG00000183742 | MACC1 | 0 | INTRON | -4.3361289 | 1.45E-05 | 0.02706205 |
| 4 | 183295788 | 183295788 | 1 | 4_183295788 | ENSG00000151718 | WWC2 | 0 | INTRON | -4.3360817 | 1.45E-05 | 0.0270649 |
| 1 | 77604179 | 77604179 | 1 | 1_77604179 | ENSG00000036549 | AC118549.1 | 0 | INTRON | 4.33585082 | 1.45E-05 | 0.0270882 |
| 8 | 18102603 | 18102603 | 1 | 8_18102603 | ENSG00000286542 | AC124242.3 | 2193 | Upstream | -4.3358442 | 1.45E-05 | 0.0270882 |
| 3 | 99887139 | 99887139 | 1 | 3_99887139 | ENSG00000184220 | CMSS1 | 0 | INTRON | 4.33574641 | 1.45E-05 | 0.02709727 |
| 15 | 64289897 | 64289897 | 1 | 15_64289897 | ENSG00000169118 | CSNK1G1 | 0 | INTRON | 4.33560138 | 1.45E-05 | 0.02711217 |
| 1 | 56751158 | 56751158 | 1 | 1_56751158 | ENSG00000187889 | FYB2 | 0 | EXON | -4.3355509 | 1.45E-05 | 0.0271153 |
| 4 | 163873000 | 163873000 | 1 | 4_163873000 | ENSG00000145416 | 1-Mar | 0 | INTRON | -4.3355278 | 1.45E-05 | 0.0271153 |
| 2 | 216713559 | 216713559 | 1 | 2_216713559 | ENSG00000236886 | AC007563.2 | 0 | INTRON | 4.33540165 | 1.45E-05 | 0.0271269 |
| 4 | 32459011 | 32459011 | 1 | 4_32459011 | ENSG00000251329 | LINC02353 | 105791 | Downstream | -4.3353855 | 1.46E-05 | 0.0271269 |
| 18 | 54462148 | 54462148 | 1 | 18_54462148 | ENSG00000283613 | AC090897.2 | 37516 | Downstream | 4.33529113 | 1.46E-05 | 0.02713221 |
| 4 | 97917470 | 97917470 | 1 | 4_97917470 | ENSG00000163116 | STPG2 | 0 | INTRON | 4.33528283 | 1.46E-05 | 0.02713221 |
| 10 | 71640640 | 71640640 | 1 | 10_71640640 | ENSG00000107736 | CDH23 | 0 | INTRON | -4.3352139 | 1.46E-05 | 0.02713221 |
| 1 | 87363480 | 87363480 | 1 | 1_87363480 | ENSG00000227290 | LINC01364 | 0 | INTRON | -4.3351994 | 1.46E-05 | 0.02713221 |
| 14 | 102225298 | 102225298 | 1 | 14_102225298 | ENSG00000080823 | MOK | 0 | 3UTR | 4.33518816 | 1.46E-05 | 0.02713221 |
| 1 | 1608916 | 1608916 | 1 | 1_1608916 | ENSG00000272106 | AL691432.2 | 4841 | Downstream | 4.33517574 | 1.46E-05 | 0.02713221 |
| 19 | 51042784 | 51042784 | 1 | 19_51042784 | ENSG00000268390 | AC011473.1 | 1021 | Upstream | -4.3351496 | 1.46E-05 | 0.02713221 |
| 16 | 17312955 | 17312955 | 1 | 16_17312955 | ENSG00000103489 | XYLT1 | 0 | INTRON | -4.3351424 | 1.46E-05 | 0.02713221 |
| 1 | 67321047 | 67321047 | 1 | 1_67321047 | ENSG00000081985 | IL12RB2 | 0 | INTRON | 4.33512569 | 1.46E-05 | 0.02713221 |
| 8 | 114030050 | 114030050 | 1 | 8_114030050 | ENSG00000206719 | Y_RNA | 79052 | Downstream | -4.3350491 | 1.46E-05 | 0.02713869 |
| 16 | 6138389 | 6138389 | 1 | 16_6138389 | ENSG00000078328 | RBFOX1 | 0 | INTRON | -4.334986 | 1.46E-05 | 0.0271431 |
| 12 | 6958027 | 6958027 | 1 | 12_6958027 | ENSG00000111679 | PTPN6 | 0 | EXON | 4.33495613 | 1.46E-05 | 0.0271431 |
| 6 | 30392600 | 30392600 | 1 | 6_30392600 | ENSG00000226577 | MICC | 22114 | Upstream | -4.3349173 | 1.46E-05 | 0.0271431 |
| 6 | 159676595 | 159676595 | 1 | 6_159676595 | ENSG00000112096 | SOD2 | 0 | 3UTR | -4.334917 | 1.46E-05 | 0.0271431 |
| 22 | 16580353 | 16580353 | 1 | 22_16580353 | ENSG00000239435 | KCNMB3P1 | 0 | INTRON | 4.3347193 | 1.46E-05 | 0.02716392 |
| 5 | 6596029 | 6596029 | 1 | 5_6596029 | ENSG00000250056 | LINC01018 | 0 | INTRON | -4.3347002 | 1.46E-05 | 0.02716392 |
| 3 | 69808435 | 69808435 | 1 | 3_69808435 | ENSG00000187098 | MITF | 0 | INTRON | 4.33466538 | 1.46E-05 | 0.02716525 |
| 11 | 4303079 | 4303079 | 1 | 11_4303079 | ENSG00000283873 | SSU72P4 | 14996 | Upstream | -4.3346349 | 1.46E-05 | 0.02716605 |
| 5 | 78259033 | 78259033 | 1 | 5_78259033 | ENSG00000132842 | AP3B1 | 0 | INTRON | 4.3345894 | 1.46E-05 | 0.02716764 |
| 16 | 79804151 | 79804151 | 1 | 16_79804151 | ENSG00000260876 | LINC01229 | 0 | INTRON | -4.3345739 | 1.46E-05 | 0.02716764 |
| 1 | 102814900 | 102814900 | 1 | 1_102814900 | ENSG00000230864 | AC099567.1 | 0 | INTRON | -4.3345408 | 1.46E-05 | 0.027168 |
| 2 | 219506037 | 219506037 | 1 | 2_219506037 | ENSG00000144591 | GMPPA | 0 | 3UTR | 4.33450275 | 1.46E-05 | 0.027168 |
| 18 | 12961040 | 12961040 | 1 | 18_12961040 | ENSG00000085415 | SEH1L | 0 | INTRON | 4.33448275 | 1.46E-05 | 0.027168 |
| 17 | 3915758 | 3915758 | 1 | 17_3915758 | ENSG00000108405 | P2RX1 | 0 | 3UTR | 4.33447475 | 1.46E-05 | 0.027168 |
| 8 | 63266528 | 63266528 | 1 | 8_63266528 | ENSG00000241964 | RN7SL135P | 31617 | Upstream | 4.3343885 | 1.46E-05 | 0.02717569 |

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| 14 | 49918336 | 49918336 | 1 | 14_49918336 | ENSG00000274704 | Metazoa_SRP | 4576 | Upstream | -4.3342772 | 1.46E-05 | 0.02718046 |
| 2 | 178727129 | 178727129 | 1 | 2_178727129 | ENSG00000155657 | TTN | 0 | EXON | -4.3342411 | 1.46E-05 | 0.02718046 |
| 1 | 234559965 | 234559965 | 1 | 1_234559965 | ENSG00000287633 | AL161640.3 | 5127 | Downstream | 4.33422116 | 1.46E-05 | 0.02718046 |
| 14 | 56782426 | 56782426 | 1 | 14_56782426 | ENSG00000258703 | AL161757.3 | 16669 | Downstream | -4.3342089 | 1.46E-05 | 0.02718046 |
| 12 | 126492437 | 126492437 | 1 | 12_126492437 | ENSG00000255853 | AC006065.1 | 18472 | Downstream | 4.33419466 | 1.46E-05 | 0.02718046 |
| 4 | 75684133 | 75684133 | 1 | 4_75684133 | ENSG00000138757 | G3BP2 | 0 | INTRON | 4.33418425 | 1.46E-05 | 0.02718046 |
| 12 | 43748816 | 43748816 | 1 | 12_43748816 | ENSG00000129317 | PUS7L | 0 | INTRON | -4.3341807 | 1.46E-05 | 0.02718046 |
| 19 | 56118264 | 56118264 | 1 | 19_56118264 | ENSG00000142409 | ZNF787 | 0 | INTRON | 4.33415763 | 1.46E-05 | 0.02718046 |
| 17 | 58337764 | 58337764 | 1 | 17_58337764 | ENSG00000265148 | TSPOAP1-AS1 | 0 | INTRON | -4.3339961 | 1.46E-05 | 0.02719586 |
| 4 | 152094298 | 152094298 | 1 | 4_152094298 | ENSG00000245954 | LINC02273 | 0 | INTRON | -4.333985 | 1.46E-05 | 0.02719586 |
| 9 | 112470566 | 112470566 | 1 | 9_112470566 | ENSG00000119471 | HSDL2 | 0 | 3UTR | 4.33385191 | 1.47E-05 | 0.02720934 |
| 2 | 65785048 | 65785048 | 1 | 2_65785048 | ENSG00000204929 | AC007389.1 | 0 | INTRON | -4.3338208 | 1.47E-05 | 0.02721022 |
| 16 | 7864506 | 7864506 | 1 | 16_7864506 | ENSG00000260289 | AC093515.1 | 14292 | Downstream | -4.3337864 | 1.47E-05 | 0.0272115 |
| 11 | 43449776 | 43449776 | 1 | 11_43449776 | ENSG00000052841 | TTC17 | 0 | EXON | -4.3337207 | 1.47E-05 | 0.02721666 |
| 1 | 153573805 | 153573805 | 1 | 1_153573805 | ENSG00000196754 | S100A2 | 5915 | Upstream | 4.33366954 | 1.47E-05 | 0.02722002 |
| 15 | 64188394 | 64188394 | 1 | 15_64188394 | ENSG00000169118 | CSNK1G1 | 0 | 3UTR | -4.3336168 | 1.47E-05 | 0.02722357 |
| 6 | 158756447 | 158756447 | 1 | 6_158756447 | ENSG00000164674 | SYTL3 | 0 | INTRON | 4.33354574 | 1.47E-05 | 0.02722918 |
| 2 | 15683403 | 15683403 | 1 | 2_15683403 | ENSG00000224194 | AC008278.1 | 2919 | Upstream | 4.33352352 | 1.47E-05 | 0.02722918 |
| 3 | 44013845 | 44013845 | 1 | 3_44013845 | ENSG00000272121 | AC006058.3 | 14696 | Upstream | 4.33349572 | 1.47E-05 | 0.02722965 |
| 12 | 90099208 | 90099208 | 1 | 12_90099208 | ENSG00000258216 | AC009522.1 | 0 | INTRON | 4.33342502 | 1.47E-05 | 0.02723543 |
| 17 | 81826547 | 81826547 | 1 | 17_81826547 | ENSG00000225663 | MCRIP1 | 0 | 5UTR | 4.33338776 | 1.47E-05 | 0.02723707 |
| 1 | 42944698 | 42944698 | 1 | 1_42944698 | ENSG00000117394 | SLC2A1 | 0 | INTRON | 4.33334967 | 1.47E-05 | 0.02723882 |
| 1 | 2458396 | 2458396 | 1 | 1_2458396 | ENSG00000149527 | PLCH2 | 0 | INTRON | 4.33329416 | 1.47E-05 | 0.02724272 |
| 7 | 14641934 | 14641934 | 1 | 7_14641934 | ENSG00000136267 | DGKB | 0 | INTRON | -4.3332516 | 1.47E-05 | 0.02724345 |
| 22 | 29267166 | 29267166 | 1 | 22_29267166 | ENSG00000100263 | RHBDD3 | 0 | INTRON | 4.33320187 | 1.47E-05 | 0.02724345 |
| 10 | 22906344 | 22906344 | 1 | 10_22906344 | ENSG00000165309 | ARMC3 | 21679 | Upstream | -4.333196 | 1.47E-05 | 0.02724345 |
| 2 | 162177458 | 162177458 | 1 | 2_162177458 | ENSG00000078098 | FAP | 0 | INTRON | -4.3331924 | 1.47E-05 | 0.02724345 |
| 13 | 50224808 | 50224808 | 1 | 13_50224808 | ENSG00000176124 | DLEU1 | 0 | INTRON | 4.33312515 | 1.47E-05 | 0.0272488 |
| 4 | 39572003 | 39572003 | 1 | 4_39572003 | ENSG00000163683 | SMIM14 | 0 | INTRON | 4.33309416 | 1.47E-05 | 0.02724967 |
| 1 | 27970002 | 27970002 | 1 | 1_27970002 | ENSG00000158161 | EYA3 | 341 | Downstream | 4.33305463 | 1.47E-05 | 0.0272516 |
| 19 | 1957892 | 1957892 | 1 | 19_1957892 | ENSG00000133275 | CSNK1G2 | 0 | INTRON | -4.3330272 | 1.47E-05 | 0.02725203 |
| 6 | 26923069 | 26923069 | 1 | 6_26923069 | ENSG00000241549 | GUSBP2 | 0 | INTRON | -4.3329752 | 1.47E-05 | 0.02725218 |
| 10 | 80670022 | 80670022 | 1 | 10_80670022 | ENSG00000231082 | LINC02655 | 16290 | Downstream | 4.33297207 | 1.47E-05 | 0.02725218 |
| 3 | 46089781 | 46089781 | 1 | 3_46089781 | ENSG00000229515 | FLT1P1 | 52576 | Downstream | 4.33295265 | 1.47E-05 | 0.02725218 |
| 16 | 70069524 | 70069524 | 1 | 16_70069524 | ENSG00000196696 | AC009022.1 | 3576 | Upstream | 4.33293008 | 1.47E-05 | 0.02725218 |
| 15 | 49375243 | 49375243 | 1 | 15_49375243 | ENSG00000166262 | FAM227B | 0 | INTRON | -4.3328563 | 1.47E-05 | 0.02725836 |
| 19 | 29916763 | 29916763 | 1 | 19_29916763 | ENSG00000278895 | AC008507.3 | 0 | EXON | -4.3328193 | 1.47E-05 | 0.02725997 |
| 7 | 126044454 | 126044454 | 1 | 7_126044454 | ENSG00000197462 | AC003975.1 | 110622 | Downstream | 4.33276144 | 1.47E-05 | 0.0272634 |
| 17 | 54695454 | 54695454 | 1 | 17_54695454 | ENSG00000263199 | AC005951.1 | 7481 | Upstream | -4.3327437 | 1.47E-05 | 0.0272634 |
| X | 7475500 | 7475500 | 1 | X_7475500 | ENSG00000101846 | STS | 0 | INTRON | -4.3325981 | 1.47E-05 | 0.02727848 |
| 17 | 77412084 | 77412084 | 1 | 17_77412084 | ENSG00000184640 | SEPTIN9 | 0 | INTRON | 4.33251111 | 1.47E-05 | 0.02728365 |
| 5 | 133708238 | 133708238 | 1 | 5_133708238 | ENSG00000251243 | AC005178.1 | 12256 | Downstream | 4.33250849 | 1.47E-05 | 0.02728365 |
| 7 | 847494 | 847494 | 1 | 7_847494 | ENSG00000164828 | SUN1 | 0 | INTRON | -4.3322555 | 1.48E-05 | 0.02730731 |
| 20 | 30577209 | 30577209 | 1 | 20_30577209 | ENSG00000283443 | AC018688.1 | 25739 | Downstream | -4.3322456 | 1.48E-05 | 0.02730731 |
| 20 | 5013146 | 5013146 | 1 | 20_5013146 | ENSG00000234573 | AL121890.1 | 373 | Downstream | 4.33223468 | 1.48E-05 | 0.02730731 |
| 9 | 18668559 | 18668559 | 1 | 9_18668559 | ENSG00000178031 | ADAMTSL1 | 0 | INTRON | 4.33222196 | 1.48E-05 | 0.02730731 |
| 1 | 245540033 | 245540033 | 1 | 1_245540033 | ENSG00000162849 | KIF26B | 0 | INTRON | 4.33215685 | 1.48E-05 | 0.02731242 |
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| 5 | 108186553 | 108186553 | 1 | 5_108186553 | ENSG00000145743 | FBXL17 | 0 | INTRON | -4.332013 | 1.48E-05 | 0.02732088 |
| 22 | 20989872 | 20989872 | 1 | 22_20989872 | ENSG00000285314 | AC002470.2 | 0 | INTRON | 4.3320124 | 1.48E-05 | 0.02732088 |
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| 3 | 59735419 | 59735419 | 1 | 3_59735419 | ENSG00000243295 | AC126121.3 | 0 | INTRON | -4.3317393 | 1.48E-05 | 0.02734595 |
| 20 | 37751651 | 37751651 | 1 | 20_37751651 | ENSG00000132792 | CTNNBL1 | 0 | EXON | 4.33172601 | 1.48E-05 | 0.02734595 |
| 20 | 26116289 | 26116289 | 1 | 20_26116289 | ENSG00000240108 | NCOR1P1 | 2261 | Upstream | 4.33169853 | 1.48E-05 | 0.02734595 |
| 18 | 51602809 | 51602809 | 1 | 18_51602809 | ENSG00000227115 | LINC01630 | 0 | INTRON | 4.33168789 | 1.48E-05 | 0.02734595 |
| 1 | 165294920 | 165294920 | 1 | 1_165294920 | ENSG00000162761 | LMX1A | 0 | INTRON | 4.33167151 | 1.48E-05 | 0.02734595 |
| 15 | 66064620 | 66064620 | 1 | 15_66064620 | ENSG00000157890 | MEGF11 | 0 | INTRON | 4.33162136 | 1.48E-05 | 0.02734921 |
| 8 | 28780835 | 28780835 | 1 | 8_28780835 | ENSG00000104299 | INTS9 | 0 | 3UTR | -4.3315866 | 1.48E-05 | 0.02734932 |
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| 4 | 179921495 | 179921495 | 1 | 4_179921495 | ENSG00000287083 | AC108169.1 | 2277 | Downstream | -4.3315093 | 1.48E-05 | 0.02735076 |
| 14 | 87787635 | 87787635 | 1 | 14_87787635 | ENSG00000258807 | AL359237.1 | 0 | INTRON | -4.3314894 | 1.48E-05 | 0.02735076 |
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| 8 | 82091921 | 82091921 | 1 | 8_82091921 | ENSG00000254394 | AC060765.2 | 0 | INTRON | 4.33119498 | 1.48E-05 | 0.02738142 |
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| 6 | 82879680 | 82879680 | 1 | 6_82879680 | ENSG00000118420 | UBE3D | 12709 | Downstream | 4.33109576 | 1.48E-05 | 0.02738782 |
| 12 | 95751733 | 95751733 | 1 | 12_95751733 | ENSG00000074527 | NTN4 | 0 | INTRON | -4.3310614 | 1.48E-05 | 0.02738912 |
| 15 | 60435959 | 60435959 | 1 | 15_60435959 | ENSG00000128915 | ICE2 | 0 | INTRON | -4.3309999 | 1.48E-05 | 0.0273938 |
| 4 | 70496306 | 70496306 | 1 | 4_70496306 | ENSG00000171195 | MUC7 | 13309 | Downstream | -4.3309223 | 1.48E-05 | 0.02739981 |
| 21 | 33595902 | 33595902 | 1 | 21_33595902 | ENSG00000205758 | CRYZL1 | 0 | INTRON | 4.33090387 | 1.48E-05 | 0.02739981 |
| 6 | 153830406 | 153830406 | 1 | 6_153830406 | ENSG00000217085 | HMGB3P19 | 108026 | Downstream | 4.33086068 | 1.49E-05 | 0.02740004 |
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| 12 | 56246737 | 56246737 | 1 | 12_56246737 | ENSG00000139645 | ANKRD52 | 0 | INTRON | 4.33079038 | 1.49E-05 | 0.02740212 |
| 9 | 62503581 | 62503581 | 1 | 9_62503581 | ENSG00000232827 | LINC01189 | 0 | INTRON | -4.3307899 | 1.49E-05 | 0.02740212 |
| 20 | 53235358 | 53235358 | 1 | 20_53235358 | ENSG00000182463 | TSHZ2 | 0 | INTRON | -4.330738 | 1.49E-05 | 0.0274056 |
| 12 | 131623309 | 131623309 | 1 | 12_131623309 | ENSG00000256258 | AC117500.3 | 106 | Upstream | -4.3306557 | 1.49E-05 | 0.02741 |
| 7 | 82322857 | 82322857 | 1 | 7_82322857 | ENSG00000153956 | CACNA2D1 | 0 | INTRON | 4.33063962 | 1.49E-05 | 0.02741 |
| 3 | 191679578 | 191679578 | 1 | 3_191679578 | ENSG00000201860 | Y_RNA | 38341 | Downstream | 4.33060986 | 1.49E-05 | 0.02741 |
| 20 | 41070973 | 41070973 | 1 | 20_41070973 | ENSG00000198900 | TOP1 | 0 | INTRON | 4.3306044 | 1.49E-05 | 0.02741 |
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| 10 | 114732296 | 114732296 | 1 | 10_114732296 | ENSG00000099204 | ABLIM1 | 0 | INTRON | 4.3305249 | 1.49E-05 | 0.02741432 |
| 4 | 164872404 | 164872404 | 1 | 4_164872404 | ENSG00000248329 | APELA | 4773 | Upstream | -4.3304028 | 1.49E-05 | 0.02742126 |
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| 6 | 150871744 | 150871744 | 1 | 6_150871744 | ENSG00000120254 | MTHFD1L | 0 | INTRON | -4.3303847 | 1.49E-05 | 0.02742126 |
| 12 | 57375893 | 57375893 | 1 | 12_57375893 | ENSG00000179912 | R3HDM2 | 0 | INTRON | 4.3303312 | 1.49E-05 | 0.02742126 |
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| 16 | 10795606 | 10795606 | 1 | 16_10795606 | ENSG00000166676 | TVP23A | 0 | INTRON | -4.3302969 | 1.49E-05 | 0.02742126 |
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| 1 | 167783932 | 167783932 | 1 | 1_167783932 | ENSG00000197965 | MPZL1 | 0 | INTRON | 4.33009564 | 1.49E-05 | 0.02743383 |
| 5 | 120526517 | 120526517 | 1 | 5_120526517 | ENSG00000184838 | PRR16 | 0 | INTRON | 4.33008224 | 1.49E-05 | 0.02743383 |
| 4 | 136034150 | 136034150 | 1 | 4_136034150 | ENSG00000251492 | AC104136.1 | 29248 | Upstream | 4.33005122 | 1.49E-05 | 0.02743472 |
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| 3 | 183393807 | 183393807 | 1 | 3_183393807 | ENSG00000053524 | MCF2L2 | 0 | INTRON | 4.32988183 | 1.49E-05 | 0.0274499 |
| 7 | 15120337 | 15120337 | 1 | 7_15120337 | ENSG00000227489 | AC006458.1 | 51686 | Downstream | -4.32985 | 1.49E-05 | 0.0274509 |
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| 15 | 27841732 | 27841732 | 1 | 15_27841732 | ENSG00000104044 | OCA2 | 0 | INTRON | -4.3295938 | 1.49E-05 | 0.02746503 |
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| 13 | 42787977 | 42787977 | 1 | 13_42787977 | ENSG00000179813 | FAM216B | 0 | INTRON | -4.3295166 | 1.49E-05 | 0.02746622 |
| 15 | 71821251 | 71821251 | 1 | 15_71821251 | ENSG00000260037 | AC104938.1 | 0 | INTRON | 4.32950462 | 1.49E-05 | 0.02746622 |
| 5 | 176546840 | 176546840 | 1 | 5_176546840 | ENSG00000074276 | CDHR2 | 0 | INTRON | 4.3294891 | 1.49E-05 | 0.02746622 |
| 17 | 64403738 | 64403738 | 1 | 17_64403738 | ENSG00000261371 | PECAM1 | 0 | INTRON | -4.3294558 | 1.49E-05 | 0.02746741 |
| 13 | 91392073 | 91392073 | 1 | 13_91392073 | ENSG00000179399 | GPC5 | 6547 | Upstream | -4.3294183 | 1.50E-05 | 0.02746912 |
| 7 | 2515388 | 2515388 | 1 | 7_2515388 | ENSG00000106003 | LFNG | 0 | INTRON | -4.3293399 | 1.50E-05 | 0.02747474 |
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| 12 | 3592699 | 3592699 | 1 | 12_3592699 | ENSG00000111218 | PRMT8 | 0 | INTRON | 4.3292781 | 1.50E-05 | 0.02747474 |
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| 2 | 107258429 | 107258429 | 1 | 2_107258429 | ENSG00000229457 | LINC01789 | 0 | INTRON | 4.32909619 | 1.50E-05 | 0.02749151 |
| 3 | 87699344 | 87699344 | 1 | 3_87699344 | ENSG00000239572 | AC108749.1 | 0 | INTRON | 4.32905582 | 1.50E-05 | 0.02749359 |
| 1 | 54099340 | 54099340 | 1 | 1_54099340 | ENSG00000116205 | TCEANC2 | 0 | 3UTR | 4.32899484 | 1.50E-05 | 0.02749705 |
| 14 | 69427223 | 69427223 | 1 | 14_69427223 | ENSG00000029364 | SLC39A9 | 0 | INTRON | 4.32898052 | 1.50E-05 | 0.02749705 |
| 2 | 156484292 | 156484292 | 1 | 2_156484292 | ENSG00000115159 | GPD2 | 0 | INTRON | 4.32893615 | 1.50E-05 | 0.02749963 |
| 2 | 177051770 | 177051770 | 1 | 2_177051770 | ENSG00000236501 | AC074286.1 | 0 | INTRON | -4.3287152 | 1.50E-05 | 0.02752426 |
| 18 | 56517251 | 56517251 | 1 | 18_56517251 | ENSG00000091164 | TXNL1 | 79957 | Downstream | -4.3286248 | 1.50E-05 | 0.02753259 |
| 12 | 114478684 | 114478684 | 1 | 12_114478684 | ENSG00000222982 | RN7SKP216 | 26191 | Downstream | -4.328567 | 1.50E-05 | 0.02753366 |
| 2 | 51511245 | 51511245 | 1 | 2_51511245 | ENSG00000224344 | KNOP1P3 | 0 | EXON | 4.328528 | 1.50E-05 | 0.02753366 |
| 15 | 59766612 | 59766612 | 1 | 15_59766612 | ENSG00000234797 | RPS3AP6 | 1739 | Upstream | -4.328525 | 1.50E-05 | 0.02753366 |
| 5 | 166391539 | 166391539 | 1 | 5_166391539 | ENSG00000229119 | AC026403.1 | 8940 | Downstream | -4.3285212 | 1.50E-05 | 0.02753366 |
| 3 | 185267824 | 185267824 | 1 | 3_185267824 | ENSG00000113790 | EHHADH | 0 | INTRON | -4.3284948 | 1.50E-05 | 0.02753399 |
| 2 | 93553296 | 93553296 | 1 | 2_93553296 | ENSG00000286156 | AC026273.1 | 642509 | Downstream | -4.3284259 | 1.50E-05 | 0.02753893 |
| 2 | 188898417 | 188898417 | 1 | 2_188898417 | ENSG00000223523 | AC092598.1 | 58972 | Upstream | -4.3284079 | 1.50E-05 | 0.02753893 |
| X | 101779840 | 101779840 | 1 | X_101779840 | ENSG00000178146 | AL672207.1 | 0 | EXON | -4.3283007 | 1.50E-05 | 0.02754809 |
| 19 | 30310104 | 30310104 | 1 | 19_30310104 | ENSG00000198597 | ZNF536 | 0 | INTRON | 4.32828705 | 1.50E-05 | 0.02754809 |
| 4 | 175701393 | 175701393 | 1 | 4_175701393 | ENSG00000150625 | GPM6A | 0 | INTRON | 4.32814027 | 1.50E-05 | 0.02756078 |
| 5 | 180569575 | 180569575 | 1 | 5_180569575 | ENSG00000113300 | CNOT6 | 0 | INTRON | -4.3281382 | 1.50E-05 | 0.02756078 |
| 9 | 111741923 | 111741923 | 1 | 9_111741923 | ENSG00000165181 | SHOC1 | 0 | INTRON | 4.32796426 | 1.50E-05 | 0.0275741 |
| 18 | 32314651 | 32314651 | 1 | 18_32314651 | ENSG00000141441 | GAREM1 | 0 | INTRON | -4.3279528 | 1.51E-05 | 0.0275741 |
| 3 | 120033587 | 120033587 | 1 | 3_120033587 | ENSG00000082701 | GSK3B | 0 | INTRON | -4.3279412 | 1.51E-05 | 0.0275741 |
| 5 | 136401492 | 136401492 | 1 | 5_136401492 | ENSG00000279240 | AC063980.1 | 4450 | Upstream | -4.327934 | 1.51E-05 | 0.0275741 |
| 5 | 132668799 | 132668799 | 1 | 5_132668799 | ENSG00000223442 | TH2LCRR | 4527 | Upstream | 4.32791314 | 1.51E-05 | 0.0275741 |
| 6 | 162095124 | 162095124 | 1 | 6_162095124 | ENSG00000185345 | PRKN | 0 | INTRON | 4.3278621 | 1.51E-05 | 0.02757752 |
| 6 | 126490946 | 126490946 | 1 | 6_126490946 | ENSG00000286215 | AL356534.1 | 0 | INTRON | 4.32778009 | 1.51E-05 | 0.02758472 |
| 2 | 82756330 | 82756330 | 1 | 2_82756330 | ENSG00000226700 | MTND4P25 | 58653 | Upstream | -4.3277473 | 1.51E-05 | 0.02758472 |
| 6 | 13688724 | 13688724 | 1 | 6_13688724 | ENSG00000010017 | RANBP9 | 0 | INTRON | 4.32771417 | 1.51E-05 | 0.02758472 |
| 1 | 27113934 | 27113934 | 1 | 1_27113934 | ENSG00000090020 | SLC9A1 | 0 | EXON | 4.32770741 | 1.51E-05 | 0.02758472 |
| 10 | 100904978 | 100904978 | 1 | 10_100904978 | ENSG00000222072 | Y_RNA | 2195 | Downstream | 4.32767542 | 1.51E-05 | 0.02758472 |
| 17 | 11946124 | 11946124 | 1 | 17_11946124 | ENSG00000007174 | DNAH9 | 0 | INTRON | 4.32763219 | 1.51E-05 | 0.02758472 |
| 6 | 105946788 | 105946788 | 1 | 6_105946788 | ENSG00000200198 | RN7SKP211 | 42101 | Downstream | 4.32761547 | 1.51E-05 | 0.02758472 |
| 15 | 61783016 | 61783016 | 1 | 15_61783016 | ENSG00000259284 | LINC02349 | 51627 | Downstream | -4.3275753 | 1.51E-05 | 0.02758472 |
| 2 | 200742712 | 200742712 | 1 | 2_200742712 | ENSG00000284084 | AOX3P-AOX2P | 0 | INTRON | -4.3275372 | 1.51E-05 | 0.02758472 |
| 16 | 70739705 | 70739705 | 1 | 16_70739705 | ENSG00000103043 | VAC14 | 0 | INTRON | 4.32753587 | 1.51E-05 | 0.02758472 |
| 1 | 157274596 | 157274596 | 1 | 1_157274596 | ENSG00000271736 | LINC02772 | 0 | INTRON | 4.32752763 | 1.51E-05 | 0.02758472 |
| 2 | 33122821 | 33122821 | 1 | 2_33122821 | ENSG00000049323 | LTBP1 | 0 | INTRON | 4.32751793 | 1.51E-05 | 0.02758472 |
| 2 | 102828279 | 102828279 | 1 | 2_102828279 | ENSG00000170417 | TMEM182 | 0 | INTRON | 4.32749644 | 1.51E-05 | 0.02758472 |
| 6 | 36323627 | 36323627 | 1 | 6_36323627 | ENSG00000189325 | BNIP5 | 0 | INTRON | -4.3274424 | 1.51E-05 | 0.02758822 |
| 2 | 164086899 | 164086899 | 1 | 2_164086899 | ENSG00000237844 | AC016766.1 | 0 | INTRON | -4.3274188 | 1.51E-05 | 0.02758822 |
| 12 | 115582486 | 115582486 | 1 | 12_115582486 | ENSG00000257407 | AC009803.1 | 0 | INTRON | -4.3273867 | 1.51E-05 | 0.02758822 |
| 8 | 13312087 | 13312087 | 1 | 8_13312087 | ENSG00000164741 | DLC1 | 0 | INTRON | -4.3273707 | 1.51E-05 | 0.02758822 |
| 14 | 104772203 | 104772203 | 1 | 14_104772203 | ENSG00000142208 | AKT1 | 0 | EXON | 4.32735014 | 1.51E-05 | 0.02758822 |
| 14 | 102239725 | 102239725 | 1 | 14_102239725 | ENSG00000080823 | MOK | 0 | INTRON | -4.3273087 | 1.51E-05 | 0.02759044 |
| 17 | 7255291 | 7255291 | 1 | 17_7255291 | ENSG00000262302 | AC003688.1 | 0 | INTRON | 4.32723474 | 1.51E-05 | 0.02759674 |
| 9 | 69068853 | 69068853 | 1 | 9_69068853 | ENSG00000165060 | FXN | 0 | INTRON | -4.3272014 | 1.51E-05 | 0.02759695 |
| 11 | 9987725 | 9987725 | 1 | 11_9987725 | ENSG00000133812 | SBF2 | 0 | INTRON | 4.32718574 | 1.51E-05 | 0.02759695 |
| 2 | 218615949 | 218615949 | 1 | 2_218615949 | ENSG00000115556 | PLCD4 | 0 | EXON | 4.32715636 | 1.51E-05 | 0.02759767 |
| 17 | 47744148 | 47744148 | 1 | 17_47744148 | ENSG00000073861 | TBX21 | 0 | INTRON | 4.32711023 | 1.51E-05 | 0.02760048 |
| 2 | 32247375 | 32247375 | 1 | 2_32247375 | ENSG00000091106 | NLRC4 | 0 | INTRON | -4.3270784 | 1.51E-05 | 0.0276015 |
| 6 | 99194193 | 99194193 | 1 | 6_99194193 | ENSG00000232699 | BDH2P1 | 18714 | Downstream | 4.32699849 | 1.51E-05 | 0.02760855 |
| 18 | 12017576 | 12017576 | 1 | 18_12017576 | ENSG00000141401 | IMPA2 | 0 | INTRON | 4.32685035 | 1.51E-05 | 0.02762306 |
| 17 | 30613105 | 30613105 | 1 | 17_30613105 | ENSG00000214719 | AC005562.1 | 0 | INTRON | -4.3268354 | 1.51E-05 | 0.02762306 |
| 5 | 165983912 | 165983912 | 1 | 5_165983912 | ENSG00000254252 | RPL7P20 | 44654 | Downstream | -4.3265789 | 1.51E-05 | 0.02765227 |
| 20 | 58078021 | 58078021 | 1 | 20_58078021 | ENSG00000225708 | AL354984.2 | 5951 | Upstream | -4.3265231 | 1.51E-05 | 0.0276563 |
| 2 | 203587745 | 203587745 | 1 | 2_203587745 | ENSG00000233459 | AC125238.2 | 46831 | Downstream | -4.3264693 | 1.52E-05 | 0.02766009 |
| 8 | 132140203 | 132140203 | 1 | 8_132140203 | ENSG00000184156 | KCNQ3 | 0 | EXON | -4.3263849 | 1.52E-05 | 0.02766551 |
| 7 | 123323619 | 123323619 | 1 | 7_123323619 | ENSG00000223595 | LYPLA1P1 | 92878 | Upstream | 4.32637885 | 1.52E-05 | 0.02766551 |
| 12 | 5692820 | 5692820 | 1 | 12_5692820 | ENSG00000047617 | ANO2 | 0 | INTRON | 4.32630554 | 1.52E-05 | 0.02767174 |
| 22 | 42166329 | 42166329 | 1 | 22_42166329 | ENSG00000100207 | TCF20 | 0 | INTRON | 4.32624504 | 1.52E-05 | 0.02767413 |
| 1 | 62663015 | 62663015 | 1 | 1_62663015 | ENSG00000116641 | DOCK7 | 0 | INTRON | 4.32623467 | 1.52E-05 | 0.02767413 |
| 13 | 104013742 | 104013742 | 1 | 13_104013742 | ENSG00000287734 | AL136524.1 | 112187 | Upstream | -4.3262156 | 1.52E-05 | 0.02767413 |
| 1 | 111769558 | 111769558 | 1 | 1_111769558 | ENSG00000171385 | KCND3 | 1103 | Downstream | -4.3260336 | 1.52E-05 | 0.02769403 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | 181359286 | 181359286 | 1 | 4_181359286 | ENSG00000249460 | LINC02500 | 94141 | Upstream | -4.3259336 | 1.52E-05 | 0.0277008 |
| 14 | 95310841 | 95310841 | 1 | 14_95310841 | ENSG00000165959 | CLMN | 0 | INTRON | -4.3259107 | 1.52E-05 | 0.0277008 |
| 13 | 23641882 | 23641882 | 1 | 13_23641882 | ENSG00000127863 | TNFRSF19 | 0 | INTRON | -4.3258893 | 1.52E-05 | 0.0277008 |
| 10 | 5831309 | 5831309 | 1 | 10_5831309 | ENSG00000057608 | GDI2 | 0 | INTRON | 4.3258852 | 1.52E-05 | 0.0277008 |
| 17 | 76506513 | 76506513 | 1 | 17_76506513 | ENSG00000129667 | RHBDF2 | 4723 | Upstream | 4.32578729 | 1.52E-05 | 0.02771014 |
| 2 | 14079424 | 14079424 | 1 | 2_14079424 | ENSG00000230448 | LINC00276 | 0 | INTRON | -4.3257248 | 1.52E-05 | 0.02771504 |
| 9 | 92635194 | 92635194 | 1 | 9_92635194 | ENSG00000127080 | IPPK | 0 | EXON | 4.32565904 | 1.52E-05 | 0.02772033 |
| 13 | 100660575 | 100660575 | 1 | 13_100660575 | ENSG00000125247 | TMTC4 | 0 | INTRON | -4.3256179 | 1.52E-05 | 0.02772253 |
| 17 | 1507063 | 1507063 | 1 | 17_1507063 | ENSG00000132376 | INPP5K | 0 | 3UTR | 4.3255399 | 1.52E-05 | 0.02772938 |
| 1 | 64988098 | 64988098 | 1 | 1_64988098 | ENSG00000162434 | JAK1 | 0 | INTRON | 4.32531849 | 1.52E-05 | 0.02775427 |
| 13 | 85224316 | 85224316 | 1 | 13_85224316 | ENSG00000286906 | AL160154.1 | 76195 | Upstream | -4.3252389 | 1.52E-05 | 0.02775852 |
| 5 | 39655030 | 39655030 | 1 | 5_39655030 | ENSG00000250492 | INTS6P1 | 63953 | Downstream | -4.3252326 | 1.52E-05 | 0.02775852 |
| 3 | 193942483 | 193942483 | 1 | 3_193942483 | ENSG00000214146 | LINC02026 | 14888 | Downstream | -4.325214 | 1.52E-05 | 0.02775852 |
| 15 | 62463681 | 62463681 | 1 | 15_62463681 | ENSG00000171914 | TLN2 | 0 | INTRON | 4.3251802 | 1.52E-05 | 0.0277598 |
| 6 | 18124306 | 18124306 | 1 | 6_18124306 | ENSG00000187566 | NHLRC1 | 1629 | Upstream | 4.32511261 | 1.52E-05 | 0.02776373 |
| 17 | 50690337 | 50690337 | 1 | 17_50690337 | ENSG00000108846 | ABCC3 | 0 | INTRON | 4.32510177 | 1.52E-05 | 0.02776373 |
| 8 | 141898085 | 141898085 | 1 | 8_141898085 | ENSG00000254183 | AC104417.1 | 70005 | Downstream | 4.32507506 | 1.52E-05 | 0.02776413 |
| 15 | 37561861 | 37561861 | 1 | 15_37561861 | ENSG00000243122 | AC016304.1 | 70758 | Downstream | -4.3250319 | 1.53E-05 | 0.02776624 |
| 10 | 11044324 | 11044324 | 1 | 10_11044324 | ENSG00000048740 | CELF2 | 0 | INTRON | 4.32501114 | 1.53E-05 | 0.02776624 |
| 3 | 100336991 | 100336991 | 1 | 3_100336991 | ENSG00000114021 | NIT2 | 0 | INTRON | 4.32483376 | 1.53E-05 | 0.02778561 |
| 1 | 206992771 | 206992771 | 1 | 1_206992771 | ENSG00000162897 | FCAMR | 22146 | Upstream | 4.32480432 | 1.53E-05 | 0.02778635 |
| 16 | 30102656 | 30102656 | 1 | 16_30102656 | ENSG00000250616 | AC012645.1 | 0 | INTRON | 4.32476425 | 1.53E-05 | 0.02778725 |
| 4 | 158782688 | 158782688 | 1 | 4_158782688 | ENSG00000052795 | FNIP2 | 0 | INTRON | 4.32465593 | 1.53E-05 | 0.02778725 |
| 3 | 197682511 | 197682511 | 1 | 3_197682511 | ENSG00000145016 | RUBCN | 0 | EXON | -4.3246525 | 1.53E-05 | 0.02778725 |
| 8 | 24135412 | 24135412 | 1 | 8_24135412 | ENSG00000253891 | AC023202.1 | 33588 | Downstream | 4.32464948 | 1.53E-05 | 0.02778725 |
| 6 | 133876531 | 133876531 | 1 | 6_133876531 | ENSG00000227954 | TARID | 0 | INTRON | 4.32463045 | 1.53E-05 | 0.02778725 |
| 10 | 72757264 | 72757264 | 1 | 10_72757264 | ENSG00000156026 | MCU | 0 | INTRON | -4.3246237 | 1.53E-05 | 0.02778725 |
| 6 | 128939940 | 128939940 | 1 | 6_128939940 | ENSG00000196569 | LAMA2 | 0 | INTRON | -4.3246178 | 1.53E-05 | 0.02778725 |
| 3 | 11601525 | 11601525 | 1 | 3_11601525 | ENSG00000144560 | VGLL4 | 0 | INTRON | 4.32460499 | 1.53E-05 | 0.02778725 |
| 11 | 26015736 | 26015736 | 1 | 11_26015736 | ENSG00000255086 | AC024341.1 | 30250 | Upstream | 4.32458505 | 1.53E-05 | 0.02778725 |
| 4 | 94641166 | 94641166 | 1 | 4_94641166 | ENSG00000163110 | PDLIM5 | 0 | INTRON | 4.32456074 | 1.53E-05 | 0.02778735 |
| 5 | 165361415 | 165361415 | 1 | 5_165361415 | ENSG00000253693 | AC008415.1 | 0 | INTRON | -4.3245119 | 1.53E-05 | 0.02779054 |
| 5 | 177343055 | 177343055 | 1 | 5_177343055 | ENSG00000169223 | LMAN2 | 0 | INTRON | -4.3244471 | 1.53E-05 | 0.02779574 |
| 2 | 143564011 | 143564011 | 1 | 2_143564011 | ENSG00000228655 | AC079793.1 | 0 | EXON | -4.3244043 | 1.53E-05 | 0.02779801 |
| 1 | 43659371 | 43659371 | 1 | 1_43659371 | ENSG00000284989 | AL451062.3 | 0 | INTRON | 4.32438198 | 1.53E-05 | 0.02779801 |
| 9 | 104141897 | 104141897 | 1 | 9_104141897 | ENSG00000136824 | SMC2 | 478 | Downstream | -4.3242524 | 1.53E-05 | 0.0278079 |
| 5 | 139435410 | 139435410 | 1 | 5_139435410 | ENSG00000170464 | DNAJC18 | 0 | INTRON | 4.32424535 | 1.53E-05 | 0.0278079 |
| 4 | 21377204 | 21377204 | 1 | 4_21377204 | ENSG00000185774 | KCNIP4 | 0 | INTRON | -4.3242329 | 1.53E-05 | 0.0278079 |
| 18 | 77056126 | 77056126 | 1 | 18_77056126 | ENSG00000197971 | MBP | 0 | INTRON | 4.32416317 | 1.53E-05 | 0.02781373 |
| 4 | 135840476 | 135840476 | 1 | 4_135840476 | ENSG00000248330 | LINC00613 | 26506 | Downstream | 4.32405443 | 1.53E-05 | 0.02782416 |
| 2 | 160535617 | 160535617 | 1 | 2_160535617 | ENSG00000153250 | RBMS1 | 41810 | Upstream | -4.3240334 | 1.53E-05 | 0.02782416 |
| 3 | 45721311 | 45721311 | 1 | 3_45721311 | ENSG00000211456 | SACM1L | 0 | INTRON | 4.32399323 | 1.53E-05 | 0.02782424 |
| 20 | 38977156 | 38977156 | 1 | 20_38977156 | ENSG00000101452 | DHX35 | 0 | INTRON | 4.32394254 | 1.53E-05 | 0.02782424 |
| 14 | 88725586 | 88725586 | 1 | 14_88725586 | ENSG00000165521 | EML5 | 0 | INTRON | -4.3239424 | 1.53E-05 | 0.02782424 |
| 10 | 86998645 | 86998645 | 1 | 10_86998645 | ENSG00000271880 | AGAP11 | 0 | INTRON | 4.32393867 | 1.53E-05 | 0.02782424 |
| 4 | 172470998 | 172470998 | 1 | 4_172470998 | ENSG00000174473 | GALNTL6 | 0 | INTRON | -4.3238579 | 1.53E-05 | 0.0278309 |
| 14 | 100151063 | 100151063 | 1 | 14_100151063 | ENSG00000168350 | DEGS2 | 0 | INTRON | 4.32383887 | 1.53E-05 | 0.0278309 |
| 1 | 219791912 | 219791912 | 1 | 1_219791912 | ENSG00000196660 | SLC30A10 | 0 | EXON | -4.3238124 | 1.53E-05 | 0.02783126 |
| 9 | 1347182 | 1347182 | 1 | 9_1347182 | ENSG00000202383 | RNA5SP279 | 13229 | Downstream | 4.3237825 | 1.53E-05 | 0.02783208 |
| 17 | 44043958 | 44043958 | 1 | 17_44043958 | ENSG00000161654 | LSM12 | 0 | INTRON | -4.323689 | 1.53E-05 | 0.02784091 |
| 1 | 23081796 | 23081796 | 1 | 1_23081796 | ENSG00000004487 | KDM1A | 0 | EXON | 4.32363434 | 1.53E-05 | 0.02784237 |
| 16 | 23461995 | 23461995 | 1 | 16_23461995 | ENSG00000103365 | GGA2 | 1546 | Downstream | -4.3236075 | 1.53E-05 | 0.02784237 |
| 6 | 61802080 | 61802080 | 1 | 6_61802080 | ENSG00000112232 | KHDRBS2 | 0 | INTRON | 4.32356378 | 1.54E-05 | 0.02784237 |
| 12 | 83056 | 83056 | 1 | 12_83056 | ENSG00000120645 | IQSEC3 | 0 | INTRON | 4.32354092 | 1.54E-05 | 0.02784237 |
| 9 | 1114533 | 1114533 | 1 | 9_1114533 | ENSG00000224836 | AL356498.1 | 37273 | Downstream | -4.323512 | 1.54E-05 | 0.02784237 |
| 7 | 37589860 | 37589860 | 1 | 7_37589860 | ENSG00000178503 | NECAP1P1 | 3531 | Upstream | -4.323507 | 1.54E-05 | 0.02784237 |
| 4 | 8626968 | 8626968 | 1 | 4_8626968 | ENSG00000155269 | GPR78 | 7207 | Downstream | 4.32350656 | 1.54E-05 | 0.02784237 |
| 2 | 129189626 | 129189626 | 1 | 2_129189626 | ENSG00000204460 | LINC01854 | 52546 | Downstream | -4.3234538 | 1.54E-05 | 0.02784237 |
| 16 | 82347397 | 82347397 | 1 | 16_82347397 | ENSG00000259873 | AC009117.1 | 87430 | Upstream | -4.3234207 | 1.54E-05 | 0.02784237 |
| 11 | 45346398 | 45346398 | 1 | 11_45346398 | ENSG00000254427 | LINC02696 | 8972 | Upstream | 4.3233692 | 1.54E-05 | 0.02784237 |
| 14 | 77228433 | 77228433 | 1 | 14_77228433 | ENSG00000165548 | TMEM63C | 0 | INTRON | -4.3233635 | 1.54E-05 | 0.02784237 |
| 5 | 32922557 | 32922557 | 1 | 5_32922557 | ENSG00000250697 | AC010343.3 | 0 | INTRON | 4.32335162 | 1.54E-05 | 0.02784237 |
| 18 | 64425418 | 64425418 | 1 | 18_64425418 | ENSG00000267134 | LINC01924 | 1817 | Downstream | -4.3233063 | 1.54E-05 | 0.02784237 |
| 5 | 68463508 | 68463508 | 1 | 5_68463508 | ENSG00000248884 | AC010280.2 | 29027 | Upstream | 4.32330285 | 1.54E-05 | 0.02784237 |
| 12 | 13683309 | 13683309 | 1 | 12_13683309 | ENSG00000273079 | GRIN2B | 0 | INTRON | -4.3233021 | 1.54E-05 | 0.02784237 |
| 6 | 16115004 | 16115004 | 1 | 6_16115004 | ENSG00000217585 | AL021407.2 | 6411 | Downstream | -4.3232957 | 1.54E-05 | 0.02784237 |
| 14 | 81737661 | 81737661 | 1 | 14_81737661 | ENSG00000258718 | LINC02311 | 0 | INTRON | -4.3232457 | 1.54E-05 | 0.02784237 |
| 7 | 607106 | 607106 | 1 | 7_607106 | ENSG00000237181 | AC147651.4 | 0 | INTRON | 4.32324112 | 1.54E-05 | 0.02784237 |
| 6 | 38772279 | 38772279 | 1 | 6_38772279 | ENSG00000124721 | DNAH8 | 0 | INTRON | 4.32323112 | 1.54E-05 | 0.02784237 |
| 13 | 74559023 | 74559023 | 1 | 13_74559023 | ENSG00000236678 | LINC00347 | 0 | INTRON | 4.32319141 | 1.54E-05 | 0.02784407 |
| 6 | 25745538 | 25745538 | 1 | 6_25745538 | ENSG00000146039 | SLC17A4 | 9160 | Upstream | 4.32317029 | 1.54E-05 | 0.02784407 |
| 8 | 101907235 | 101907235 | 1 | 8_101907235 | ENSG00000104490 | NCALD | 0 | INTRON | -4.3231447 | 1.54E-05 | 0.02784407 |
| 5 | 62475149 | 62475149 | 1 | 5_62475149 | ENSG00000068796 | KIF2A | 0 | INTRON | 4.32312377 | 1.54E-05 | 0.02784407 |
| 3 | 74799781 | 74799781 | 1 | 3_74799781 | ENSG00000113805 | CNTN3 | 278641 | Upstream | -4.3230909 | 1.54E-05 | 0.02784526 |
| 17 | 67780085 | 67780085 | 1 | 17_67780085 | ENSG00000266858 | RPSAP67 | 2761 | Upstream | 4.32294994 | 1.54E-05 | 0.02785984 |
| 10 | 27947819 | 27947819 | 1 | 10_27947819 | ENSG00000169126 | ARMC4 | 0 | INTRON | 4.32292289 | 1.54E-05 | 0.02785984 |
| 16 | 47024941 | 47024941 | 1 | 16_47024941 | ENSG00000259821 | AC018845.1 | 0 | INTRON | -4.3229051 | 1.54E-05 | 0.02785984 |
| 21 | 44959341 | 44959341 | 1 | 21_44959341 | ENSG00000160256 | FAM207A | 0 | INTRON | 4.32287116 | 1.54E-05 | 0.02786117 |
| 10 | 121071270 | 121071270 | 1 | 10_121071270 | ENSG00000236762 | RPL19P16 | 61819 | Downstream | -4.3227705 | 1.54E-05 | 0.02787093 |
| 6 | 106298210 | 106298210 | 1 | 6_106298210 | ENSG00000057663 | ATG5 | 0 | INTRON | -4.3227106 | 1.54E-05 | 0.02787125 |
| 12 | 57507778 | 57507778 | 1 | 12_57507778 | ENSG00000166986 | MARS | 0 | INTRON | 4.32270869 | 1.54E-05 | 0.02787125 |
| 1 | 11729632 | 11729632 | 1 | 1_11729632 | ENSG00000162490 | DRAXIN | 3775 | Downstream | 4.32269011 | 1.54E-05 | 0.02787125 |
| 1 | 40089433 | 40089433 | 1 | 1_40089433 | ENSG00000131238 | PPT1 | 0 | 3UTR | -4.3226592 | 1.54E-05 | 0.02787125 |
| 22 | 36046514 | 36046514 | 1 | 22_36046514 | ENSG00000100320 | RBFOX2 | 17690 | Upstream | 4.3226507 | 1.54E-05 | 0.02787125 |
| 19 | 52109197 | 52109197 | 1 | 19_52109197 | ENSG00000270248 | AC011468.4 | 1120 | Downstream | 4.32257451 | 1.54E-05 | 0.02787332 |
| 16 | 80173825 | 80173825 | 1 | 16_80173825 | ENSG00000259867 | AC105411.1 | 0 | INTRON | -4.3225665 | 1.54E-05 | 0.02787332 |
| 1 | 53868273 | 53868273 | 1 | 1_53868273 | ENSG00000058799 | YIPF1 | 0 | INTRON | -4.3225641 | 1.54E-05 | 0.02787332 |
| 12 | 77424978 | 77424978 | 1 | 12_77424978 | ENSG00000067798 | NAV3 | 0 | INTRON | 4.32251491 | 1.54E-05 | 0.02787657 |

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| 21 | 23152526 | 23152526 | 1 | 21_23152526 | ENSG00000230972 | AP001116.1 | 21320 | Downstream | -4.3223548 | 1.54E-05 | 0.02789386 |
| 5 | 6911918 | 6911918 | 1 | 5_6911918 | ENSG00000250974 | LINC02196 | 0 | INTRON | -4.3222755 | 1.54E-05 | 0.02789997 |
| 1 | 157400874 | 157400874 | 1 | 1_157400874 | ENSG00000286151 | AL732406.1 | 52 | Upstream | -4.3222596 | 1.54E-05 | 0.02789997 |
| 7 | 29606782 | 29606782 | 1 | 7_29606782 | ENSG00000225264 | ZNRF2P2 | 0 | INTRON | 4.32217665 | 1.54E-05 | 0.0279075 |
| 1 | 106773830 | 106773830 | 1 | 1_106773830 | ENSG00000270976 | AL596327.1 | 6392 | Upstream | -4.3221509 | 1.55E-05 | 0.0279078 |
| 8 | 38119359 | 38119359 | 1 | 8_38119359 | ENSG00000129691 | ASH2L | 0 | 3UTR | 4.32203741 | 1.55E-05 | 0.0279144 |
| 18 | 27387309 | 27387309 | 1 | 18_27387309 | ENSG00000263611 | AC068408.1 | 0 | INTRON | 4.32203611 | 1.55E-05 | 0.0279144 |
| 18 | 44664148 | 44664148 | 1 | 18_44664148 | ENSG00000267414 | AC120049.1 | 12778 | Downstream | -4.3220141 | 1.55E-05 | 0.0279144 |
| 11 | 22210522 | 22210522 | 1 | 11_22210522 | ENSG00000171714 | ANO5 | 0 | INTRON | -4.3220051 | 1.55E-05 | 0.0279144 |
| 7 | 33790062 | 33790062 | 1 | 7_33790062 | ENSG00000122507 | BBS9 | 0 | INTRON | 4.32197577 | 1.55E-05 | 0.02791515 |
| 2 | 96810532 | 96810532 | 1 | 2_96810532 | ENSG00000158158 | CNNM4 | 0 | 3UTR | 4.32185569 | 1.55E-05 | 0.02792465 |
| 5 | 147197235 | 147197235 | 1 | 5_147197235 | ENSG00000250343 | STK32A-AS1 | 0 | INTRON | -4.3218539 | 1.55E-05 | 0.02792465 |
| 11 | 78243462 | 78243462 | 1 | 11_78243462 | ENSG00000033327 | GAB2 | 0 | INTRON | 4.32181783 | 1.55E-05 | 0.02792625 |
| 8 | 102905690 | 102905690 | 1 | 8_102905690 | ENSG00000253320 | AZIN1-AS1 | 0 | INTRON | 4.32174915 | 1.55E-05 | 0.02793044 |
| 11 | 111332638 | 111332638 | 1 | 11_111332638 | ENSG00000288097 | AP002448.1 | 8822 | Downstream | 4.32173801 | 1.55E-05 | 0.02793044 |
| 8 | 70467531 | 70467531 | 1 | 8_70467531 | ENSG00000253143 | AC022730.3 | 3580 | Downstream | -4.3216969 | 1.55E-05 | 0.02793268 |
| 9 | 134053555 | 134053555 | 1 | 9_134053555 | ENSG00000169925 | BRD3 | 0 | 5UTR | 4.32166809 | 1.55E-05 | 0.02793294 |
| 15 | 26948464 | 26948464 | 1 | 15_26948464 | ENSG00000186297 | GABRA5 | 0 | 3UTR | -4.3216481 | 1.55E-05 | 0.02793294 |
| 12 | 7483633 | 7483633 | 1 | 12_7483633 | ENSG00000177575 | CD163 | 0 | EXON | 4.3215773 | 1.55E-05 | 0.02793699 |
| 16 | 48410282 | 48410282 | 1 | 16_48410282 | ENSG00000196470 | SIAH1 | 0 | INTRON | -4.3215693 | 1.55E-05 | 0.02793699 |
| 2 | 24024240 | 24024240 | 1 | 2_24024240 | ENSG00000205639 | MFSD2B | 0 | EXON | 4.32153298 | 1.55E-05 | 0.02793863 |
| 1 | 39734828 | 39734828 | 1 | 1_39734828 | ENSG00000084072 | PPIE | 0 | INTRON | -4.3214935 | 1.55E-05 | 0.02794067 |
| 8 | 34655484 | 34655484 | 1 | 8_34655484 | ENSG00000254344 | LINC01288 | 128543 | Upstream | 4.32145073 | 1.55E-05 | 0.02794313 |
| 14 | 34948952 | 34948952 | 1 | 14_34948952 | ENSG00000258704 | SRP54-AS1 | 0 | INTRON | -4.3214065 | 1.55E-05 | 0.02794562 |
| 2 | 241434712 | 241434712 | 1 | 2_241434712 | ENSG00000006607 | FARP2 | 0 | INTRON | -4.3213494 | 1.55E-05 | 0.02794562 |
| 10 | 23936478 | 23936478 | 1 | 10_23936478 | ENSG00000120549 | KIAA1217 | 0 | INTRON | 4.32134198 | 1.55E-05 | 0.02794562 |
| 13 | 75074339 | 75074339 | 1 | 13_75074339 | ENSG00000206812 | RNU6-38P | 35247 | Upstream | 4.3213376 | 1.55E-05 | 0.02794562 |
| 10 | 27217038 | 27217038 | 1 | 10_27217038 | ENSG00000107897 | ACBD5 | 0 | INTRON | 4.32126007 | 1.55E-05 | 0.02795248 |
| 1 | 194698824 | 194698824 | 1 | 1_194698824 | ENSG00000228167 | AL353072.1 | 19970 | Upstream | -4.3212123 | 1.55E-05 | 0.02795557 |
| 14 | 100870907 | 100870907 | 1 | 14_100870907 | ENSG00000258399 | AL117190.1 | 0 | INTRON | -4.3211737 | 1.55E-05 | 0.02795751 |
| 1 | 81746991 | 81746991 | 1 | 1_81746991 | ENSG00000117114 | ADGRL2 | 0 | INTRON | -4.3211275 | 1.55E-05 | 0.0279604 |
| 17 | 59902638 | 59902638 | 1 | 17_59902638 | ENSG00000108443 | RPS6KB1 | 0 | INTRON | -4.321032 | 1.55E-05 | 0.02796954 |
| 3 | 7560006 | 7560006 | 1 | 3_7560006 | ENSG00000196277 | GRM7 | 0 | INTRON | -4.3209545 | 1.55E-05 | 0.02797641 |
| 2 | 49235537 | 49235537 | 1 | 2_49235537 | ENSG00000282890 | AC009975.1 | 0 | INTRON | -4.3208943 | 1.55E-05 | 0.02797775 |
| 20 | 61894817 | 61894817 | 1 | 20_61894817 | ENSG00000179242 | CDH4 | 0 | INTRON | 4.32085628 | 1.55E-05 | 0.02797775 |
| 22 | 29290369 | 29290369 | 1 | 22_29290369 | ENSG00000182944 | EWSR1 | 0 | EXON | -4.3208559 | 1.55E-05 | 0.02797775 |
| 14 | 75174964 | 75174964 | 1 | 14_75174964 | ENSG00000170348 | TMED10 | 0 | INTRON | -4.3208465 | 1.55E-05 | 0.02797775 |
| 1 | 49123099 | 49123099 | 1 | 1_49123099 | ENSG00000186094 | AGBL4 | 0 | INTRON | 4.32082039 | 1.55E-05 | 0.02797775 |
| 14 | 33837297 | 33837297 | 1 | 14_33837297 | ENSG00000151322 | NPAS3 | 33121 | Downstream | -4.320801 | 1.55E-05 | 0.02797775 |
| 11 | 64558230 | 64558230 | 1 | 11_64558230 | ENSG00000168065 | SLC22A11 | 0 | INTRON | 4.32077037 | 1.55E-05 | 0.02797775 |
| 7 | 71482212 | 71482212 | 1 | 7_71482212 | ENSG00000185274 | GALNT17 | 0 | INTRON | -4.3207572 | 1.55E-05 | 0.02797775 |
| 3 | 155238412 | 155238412 | 1 | 3_155238412 | ENSG00000241336 | LINC01487 | 2506 | Upstream | 4.32069064 | 1.56E-05 | 0.02798268 |
| 11 | 123580715 | 123580715 | 1 | 11_123580715 | ENSG00000023171 | GRAMD1B | 0 | INTRON | -4.3206686 | 1.56E-05 | 0.02798268 |
| 1 | 55566442 | 55566442 | 1 | 1_55566442 | ENSG00000234810 | AL603840.1 | 0 | INTRON | 4.32064836 | 1.56E-05 | 0.02798268 |
| 10 | 35160178 | 35160178 | 1 | 10_35160178 | ENSG00000095794 | CREM | 0 | INTRON | -4.3205727 | 1.56E-05 | 0.02798916 |
| 17 | 1560339 | 1560339 | 1 | 17_1560339 | ENSG00000174238 | PITPNA | 0 | INTRON | -4.3205507 | 1.56E-05 | 0.02798916 |
| 3 | 137466495 | 137466495 | 1 | 3_137466495 | ENSG00000201325 | RNA5SP142 | 51638 | Downstream | -4.3205085 | 1.56E-05 | 0.02799154 |
| X | 154659385 | 154659385 | 1 | X_154659385 | ENSG00000237619 | OR3B1P | 0 | EXON | -4.3203584 | 1.56E-05 | 0.02800656 |
| 5 | 935845 | 935845 | 1 | 5_935845 | ENSG00000248949 | AC122719.1 | 10469 | Upstream | 4.32034353 | 1.56E-05 | 0.02800656 |
| 1 | 16614962 | 16614962 | 1 | 1_16614962 | ENSG00000219481 | NBPF1 | 1400 | Upstream | 4.32031646 | 1.56E-05 | 0.02800704 |
| 7 | 27029810 | 27029810 | 1 | 7_27029810 | ENSG00000214869 | TPM3P4 | 4903 | Downstream | 4.32023584 | 1.56E-05 | 0.02801431 |
| 1 | 223903248 | 223903248 | 1 | 1_223903248 | ENSG00000188460 | ACTBP11 | 38397 | Upstream | 4.3201685 | 1.56E-05 | 0.028017 |
| 13 | 108558900 | 108558900 | 1 | 13_108558900 | ENSG00000041515 | MYO16 | 37251 | Upstream | -4.3201681 | 1.56E-05 | 0.028017 |
| 8 | 22972671 | 22972671 | 1 | 8_22972671 | ENSG00000134020 | PEBP4 | 0 | INTRON | 4.32004532 | 1.56E-05 | 0.0280292 |
| 1 | 109302090 | 109302090 | 1 | 1_109302090 | ENSG00000221986 | MYBPHL | 0 | INTRON | 4.32002538 | 1.56E-05 | 0.0280292 |
| 3 | 86845557 | 86845557 | 1 | 3_86845557 | ENSG00000277746 | AC108706.1 | 28521 | Downstream | -4.3200001 | 1.56E-05 | 0.02802945 |
| 1 | 196288590 | 196288590 | 1 | 1_196288590 | ENSG00000162687 | KCNT2 | 0 | INTRON | 4.31995843 | 1.56E-05 | 0.02803149 |
| 20 | 43400584 | 43400584 | 1 | 20_43400584 | ENSG00000201021 | RNU6-743P | 4888 | Upstream | 4.31991059 | 1.56E-05 | 0.02803149 |
| 1 | 53417265 | 53417265 | 1 | 1_53417265 | ENSG00000236253 | SLC25A3P1 | 0 | INTRON | -4.3198932 | 1.56E-05 | 0.02803149 |
| 13 | 19665464 | 19665464 | 1 | 13_19665464 | ENSG00000196199 | MPHOSPH8 | 0 | INTRON | 4.31989086 | 1.56E-05 | 0.02803149 |
| 1 | 202562675 | 202562675 | 1 | 1_202562675 | ENSG00000077157 | PPP1R12B | 0 | INTRON | 4.3198363 | 1.56E-05 | 0.02803458 |
| 16 | 2296055 | 2296055 | 1 | 16_2296055 | ENSG00000167972 | ABCA3 | 0 | INTRON | 4.31982004 | 1.56E-05 | 0.02803458 |
| 8 | 143891575 | 143891575 | 1 | 8_143891575 | ENSG00000288096 | AC109322.2 | 0 | INTRON | 4.31971045 | 1.56E-05 | 0.02804554 |
| 14 | 90600394 | 90600394 | 1 | 14_90600394 | ENSG00000165914 | TTC7B | 0 | INTRON | 4.31967817 | 1.56E-05 | 0.02804668 |
| X | 1389420 | 1389420 | 1 | X_1389420 | ENSG00000169100 | SLC25A6 | 0 | EXON | -4.3196187 | 1.56E-05 | 0.02804828 |
| 4 | 100062623 | 100062623 | 1 | 4_100062623 | ENSG00000245322 | AC097460.1 | 0 | INTRON | 4.3195942 | 1.56E-05 | 0.02804828 |
| 3 | 175985755 | 175985755 | 1 | 3_175985755 | ENSG00000230362 | ACTG1P23 | 7185 | Upstream | 4.31957845 | 1.56E-05 | 0.02804828 |
| 6 | 118328357 | 118328357 | 1 | 6_118328357 | ENSG00000196376 | SLC35F1 | 10681 | Downstream | 4.3195725 | 1.56E-05 | 0.02804828 |
| 1 | 8353290 | 8353290 | 1 | 1_8353290 | ENSG00000142599 | RERE | 0 | 3UTR | 4.31950052 | 1.56E-05 | 0.02805447 |
| 1 | 62503843 | 62503843 | 1 | 1_62503843 | ENSG00000116641 | DOCK7 | 0 | INTRON | 4.3194109 | 1.56E-05 | 0.02806291 |
| 8 | 84775052 | 84775052 | 1 | 8_84775052 | ENSG00000184672 | RALYL | 0 | INTRON | 4.31933631 | 1.56E-05 | 0.02806756 |
| 7 | 5543328 | 5543328 | 1 | 7_5543328 | ENSG00000075624 | ACTB | 0 | INTRON | 4.31930809 | 1.57E-05 | 0.02806756 |
| 12 | 13990779 | 13990779 | 1 | 12_13990779 | ENSG00000273079 | GRIN2B | 8822 | Upstream | -4.3193045 | 1.57E-05 | 0.02806756 |
| 7 | 74140724 | 74140724 | 1 | 7_74140724 | ENSG00000106683 | LIMK1 | 18199 | Downstream | 4.31927124 | 1.57E-05 | 0.02806822 |
| 11 | 60469166 | 60469166 | 1 | 11_60469166 | ENSG00000156738 | MS4A1 | 0 | 3UTR | -4.3192281 | 1.57E-05 | 0.02806822 |
| 6 | 170712537 | 170712537 | 1 | 6_170712537 | ENSG00000230423 | AL672310.1 | 0 | INTRON | 4.31921086 | 1.57E-05 | 0.02806822 |
| 9 | 14454017 | 14454017 | 1 | 9_14454017 | ENSG00000287708 | AL137017.1 | 0 | INTRON | -4.3192063 | 1.57E-05 | 0.02806822 |
| 1 | 18543856 | 18543856 | 1 | 1_18543856 | ENSG00000235282 | DYNLL1P3 | 30473 | Downstream | -4.3191486 | 1.57E-05 | 0.02807261 |
| 6 | 74421349 | 74421349 | 1 | 6_74421349 | ENSG00000223786 | AL357507.1 | 0 | INTRON | 4.31909252 | 1.57E-05 | 0.02807601 |
| 17 | 32637441 | 32637441 | 1 | 17_32637441 | ENSG00000176658 | MYO1D | 0 | INTRON | -4.3190753 | 1.57E-05 | 0.02807601 |
| 5 | 10276910 | 10276910 | 1 | 5_10276910 | ENSG00000164237 | CMBL | 0 | INTRON | -4.3190456 | 1.57E-05 | 0.02807684 |
| 9 | 112064057 | 112064057 | 1 | 9_112064057 | ENSG00000106868 | SUSD1 | 0 | INTRON | 4.31896973 | 1.57E-05 | 0.02808152 |
| 16 | 48148104 | 48148104 | 1 | 16_48148104 | ENSG00000140798 | ABCC12 | 0 | INTRON | -4.3189623 | 1.57E-05 | 0.02808152 |
| 18 | 50099897 | 50099897 | 1 | 18_50099897 | ENSG00000167306 | MYO5B | 0 | INTRON | 4.31889219 | 1.57E-05 | 0.0280859 |
| 18 | 12170379 | 12170379 | 1 | 18_12170379 | ENSG00000267116 | AP005264.2 | 21823 | Downstream | -4.3188814 | 1.57E-05 | 0.0280859 |
| 7 | 2172612 | 2172612 | 1 | 7_2172612 | ENSG00000002822 | MAD1L1 | 0 | INTRON | 4.31883342 | 1.57E-05 | 0.02808905 |
| 22 | 43166246 | 43166246 | 1 | 22_43166246 | ENSG00000100304 | TTLL12 | 375 | Downstream | 4.3187892 | 1.57E-05 | 0.02809172 |
| 6 | 33525370 | 33525370 | 1 | 6_33525370 | ENSG00000204188 | GGNBP1 | 14675 | Upstream | 4.31871408 | 1.57E-05 | 0.02809808 |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 17090683 | 17090683 | 1 | 2_17090683 | ENSG00000222842 | RN7SKP168 | 32157 | Downstream | -4.3186928 | 1.57E-05 | 0.02809808 |
| 1 | 86563758 | 86563758 | 1 | 1_86563758 | ENSG00000016602 | CLCA4 | 0 | EXON | -4.3186127 | 1.57E-05 | 0.0281041 |
| 13 | 59597411 | 59597411 | 1 | 13_59597411 | ENSG00000139734 | DIAPH3 | 68171 | Downstream | 4.31859909 | 1.57E-05 | 0.0281041 |
| 5 | 114296381 | 114296381 | 1 | 5_114296381 | ENSG00000080709 | KCNN2 | 0 | INTRON | -4.3184908 | 1.57E-05 | 0.02811493 |
| 6 | 17646246 | 17646246 | 1 | 6_17646246 | ENSG00000124789 | NUP153 | 0 | INTRON | -4.3184493 | 1.57E-05 | 0.02811701 |
| 17 | 44646787 | 44646787 | 1 | 17_44646787 | ENSG00000266979 | LINC01180 | 0 | INTRON | -4.3184281 | 1.57E-05 | 0.02811701 |
| 4 | 1549356 | 1549356 | 1 | 4_1549356 | ENSG00000272783 | AC147067.2 | 927 | Upstream | 4.31839545 | 1.57E-05 | 0.0281182 |
| 16 | 32485670 | 32485670 | 1 | 16_32485670 | ENSG00000261233 | ABCD1P3 | 7420 | Upstream | 4.31832362 | 1.57E-05 | 0.0281244 |
| 7 | 13119837 | 13119837 | 1 | 7_13119837 | ENSG00000229618 | AC011287.1 | 0 | INTRON | 4.31828731 | 1.57E-05 | 0.0281259 |
| 21 | 40772544 | 40772544 | 1 | 21_40772544 | ENSG00000171587 | DSCAM | 0 | INTRON | 4.31826545 | 1.57E-05 | 0.0281259 |
| 3 | 140674711 | 140674711 | 1 | 3_140674711 | ENSG00000155890 | TRIM42 | 3352 | Upstream | -4.3182199 | 1.57E-05 | 0.02812875 |
| 15 | 66913177 | 66913177 | 1 | 15_66913177 | ENSG00000259437 | AC093334.1 | 6633 | Upstream | -4.318153 | 1.57E-05 | 0.02813142 |
| 2 | 207956329 | 207956329 | 1 | 2_207956329 | ENSG00000178385 | PLEKHM3 | 0 | INTRON | 4.31815246 | 1.57E-05 | 0.02813142 |
| 5 | 160932882 | 160932882 | 1 | 5_160932882 | ENSG00000253417 | LINC02159 | 0 | EXON | 4.3180739 | 1.57E-05 | 0.02813848 |
| X | 2923799 | 2923799 | 1 | X_2923799 | ENSG00000006756 | ARSD | 0 | INTRON | -4.31799 | 1.57E-05 | 0.02814188 |
| 10 | 7728584 | 7728584 | 1 | 10_7728584 | ENSG00000151655 | ITIH2 | 0 | INTRON | -4.3179879 | 1.57E-05 | 0.02814188 |
| 1 | 215459375 | 215459375 | 1 | 1_215459375 | ENSG00000282265 | AL450990.1 | 64957 | Upstream | 4.31797763 | 1.57E-05 | 0.02814188 |
| 12 | 60596102 | 60596102 | 1 | 12_60596102 | ENSG00000257865 | AC090022.2 | 176809 | Downstream | -4.3179386 | 1.57E-05 | 0.02814391 |
| 19 | 54939729 | 54939729 | 1 | 19_54939729 | ENSG00000167634 | NLRP7 | 0 | EXON | -4.3178504 | 1.58E-05 | 0.02815219 |
| 14 | 95665671 | 95665671 | 1 | 14_95665671 | ENSG00000187621 | TCL6 | 0 | INTRON | 4.31778302 | 1.58E-05 | 0.02815783 |
| 4 | 141833115 | 141833115 | 1 | 4_141833115 | ENSG00000164136 | IL15 | 99128 | Downstream | 4.31768748 | 1.58E-05 | 0.02816706 |
| 20 | 28738165 | 28738165 | 1 | 20_28738165 | ENSG00000282826 | FRG1CP | 135322 | Upstream | -4.3176622 | 1.58E-05 | 0.02816733 |
| 1 | 26167111 | 26167111 | 1 | 1_26167111 | ENSG00000282872 | C1orf232 | 0 | INTRON | 4.31759486 | 1.58E-05 | 0.02817077 |
| 6 | 85628200 | 85628200 | 1 | 6_85628200 | ENSG00000135316 | SYNCRIP | 0 | INTRON | 4.31757877 | 1.58E-05 | 0.02817077 |
| 16 | 86392330 | 86392330 | 1 | 16_86392330 | ENSG00000268473 | AC092327.1 | 42499 | Downstream | -4.3175558 | 1.58E-05 | 0.02817077 |
| 1 | 21472853 | 21472853 | 1 | 1_21472853 | ENSG00000142794 | NBPF3 | 0 | 3UTR | 4.31752334 | 1.58E-05 | 0.02817077 |
| 17 | 82940275 | 82940275 | 1 | 17_82940275 | ENSG00000141556 | TBCD | 0 | INTRON | -4.3175193 | 1.58E-05 | 0.02817077 |
| 4 | 142897925 | 142897925 | 1 | 4_142897925 | ENSG00000250326 | AC104596.1 | 35269 | Downstream | 4.31744151 | 1.58E-05 | 0.02817519 |
| 2 | 34805523 | 34805523 | 1 | 2_34805523 | ENSG00000226994 | AC079352.1 | 0 | INTRON | -4.3174162 | 1.58E-05 | 0.02817519 |
| 13 | 81218531 | 81218531 | 1 | 13_81218531 | ENSG00000260094 | LINC00564 | 7333 | Downstream | -4.3174153 | 1.58E-05 | 0.02817519 |
| 7 | 86524587 | 86524587 | 1 | 7_86524587 | ENSG00000198822 | GRM3 | 119326 | Upstream | 4.3173721 | 1.58E-05 | 0.02817774 |
| 7 | 77779921 | 77779921 | 1 | 7_77779921 | ENSG00000187257 | RSBN1L | 0 | 3UTR | 4.31731441 | 1.58E-05 | 0.02817932 |
| 11 | 68345251 | 68345251 | 1 | 11_68345251 | ENSG00000162337 | LRP5 | 0 | INTRON | 4.3173134 | 1.58E-05 | 0.02817932 |
| 2 | 134143534 | 134143534 | 1 | 2_134143534 | ENSG00000152127 | MGAT5 | 0 | INTRON | -4.3172528 | 1.58E-05 | 0.02818411 |
| 18 | 7392397 | 7392397 | 1 | 18_7392397 | ENSG00000286126 | AP001095.1 | 63446 | Downstream | 4.31722096 | 1.58E-05 | 0.02818521 |
| 16 | 31985709 | 31985709 | 1 | 16_31985709 | ENSG00000260628 | AC142381.3 | 0 | INTRON | -4.3171311 | 1.58E-05 | 0.02819372 |
| 10 | 62324630 | 62324630 | 1 | 10_62324630 | ENSG00000288011 | AC024597.1 | 14922 | Downstream | -4.3170627 | 1.58E-05 | 0.02819951 |
| 1 | 224839246 | 224839246 | 1 | 1_224839246 | ENSG00000286719 | AL391811.1 | 0 | INTRON | -4.317033 | 1.58E-05 | 0.02819967 |
| 2 | 231015319 | 231015319 | 1 | 2_231015319 | ENSG00000173699 | SPATA3 | 0 | INTRON | -4.3170152 | 1.58E-05 | 0.02819967 |
| 12 | 12464486 | 12464486 | 1 | 12_12464486 | ENSG00000165714 | BORCS5 | 0 | INTRON | -4.3169762 | 1.58E-05 | 0.02820168 |
| 4 | 97250862 | 97250862 | 1 | 4_97250862 | ENSG00000163116 | STPG2 | 0 | INTRON | 4.31691836 | 1.58E-05 | 0.02820612 |
| 12 | 85258640 | 85258640 | 1 | 12_85258640 | ENSG00000133640 | LRRIQ1 | 0 | INTRON | -4.3168651 | 1.58E-05 | 0.02820913 |
| 14 | 28439334 | 28439334 | 1 | 14_28439334 | ENSG00000257869 | AL139023.1 | 20722 | Downstream | 4.3168485 | 1.58E-05 | 0.02820913 |
| 9 | 133996894 | 133996894 | 1 | 9_133996894 | ENSG00000160293 | VAV2 | 4290 | Upstream | 4.31680256 | 1.58E-05 | 0.02820974 |
| 3 | 120061920 | 120061920 | 1 | 3_120061920 | ENSG00000082701 | GSK3B | 0 | INTRON | 4.31679752 | 1.58E-05 | 0.02820974 |
| 7 | 3761446 | 3761446 | 1 | 7_3761446 | ENSG00000146555 | SDK1 | 0 | INTRON | -4.3167157 | 1.58E-05 | 0.02821723 |
| 1 | 25413355 | 25413355 | 1 | 1_25413355 | ENSG00000188672 | RHCE | 0 | INTRON | 4.3166654 | 1.58E-05 | 0.02822071 |
| 16 | 83133948 | 83133948 | 1 | 16_83133948 | ENSG00000140945 | CDH13 | 0 | INTRON | 4.31661146 | 1.58E-05 | 0.02822465 |
| 14 | 102173403 | 102173403 | 1 | 14_102173403 | ENSG00000140153 | WDR20 | 0 | INTRON | -4.316522 | 1.59E-05 | 0.02823274 |
| 2 | 73480524 | 73480524 | 1 | 2_73480524 | ENSG00000116127 | ALMS1 | 0 | INTRON | 4.31649074 | 1.59E-05 | 0.02823274 |
| 15 | 30001805 | 30001805 | 1 | 15_30001805 | ENSG00000259749 | NCAPGP2 | 3399 | Upstream | 4.3164788 | 1.59E-05 | 0.02823274 |
| 12 | 90532479 | 90532479 | 1 | 12_90532479 | ENSG00000286021 | LINC02822 | 43922 | Upstream | 4.31644713 | 1.59E-05 | 0.02823383 |
| 16 | 13520325 | 13520325 | 1 | 16_13520325 | ENSG00000262801 | U91319.1 | 0 | INTRON | -4.3163426 | 1.59E-05 | 0.02824424 |
| 13 | 86957238 | 86957238 | 1 | 13_86957238 | ENSG00000233528 | LINC00430 | 20130 | Downstream | -4.3162615 | 1.59E-05 | 0.02824742 |
| 22 | 43829649 | 43829649 | 1 | 22_43829649 | ENSG00000130540 | SULT4A1 | 0 | INTRON | 4.3162552 | 1.59E-05 | 0.02824742 |
| 15 | 33390153 | 33390153 | 1 | 15_33390153 | ENSG00000198838 | RYR3 | 0 | INTRON | 4.31623816 | 1.59E-05 | 0.02824742 |
| 17 | 16548579 | 16548579 | 1 | 17_16548579 | ENSG00000141040 | ZNF287 | 0 | 3UTR | 4.31622533 | 1.59E-05 | 0.02824742 |
| 13 | 79176838 | 79176838 | 1 | 13_79176838 | ENSG00000226670 | BCAS2P3 | 9953 | Downstream | 4.31618695 | 1.59E-05 | 0.02824938 |
| 3 | 16913184 | 16913184 | 1 | 3_16913184 | ENSG00000154822 | PLCL2 | 0 | INTRON | 4.31611858 | 1.59E-05 | 0.02825453 |
| 9 | 96060279 | 96060279 | 1 | 9_96060279 | ENSG00000182150 | ERCC6L2 | 0 | INTRON | 4.31610048 | 1.59E-05 | 0.02825453 |
| 1 | 88829224 | 88829224 | 1 | 1_88829224 | ENSG00000241975 | ELOCP19 | 0 | EXON | -4.3159904 | 1.59E-05 | 0.02826062 |
| 6 | 27329647 | 27329647 | 1 | 6_27329647 | ENSG00000220758 | VN1R10P | 3879 | Downstream | 4.31598555 | 1.59E-05 | 0.02826062 |
| 12 | 131656937 | 131656937 | 1 | 12_131656937 | ENSG00000256424 | LINC02414 | 0 | INTRON | 4.31595855 | 1.59E-05 | 0.02826062 |
| 4 | 184086362 | 184086362 | 1 | 4_184086362 | ENSG00000164303 | ENPP6 | 2343 | Downstream | -4.3159508 | 1.59E-05 | 0.02826062 |
| 10 | 72469784 | 72469784 | 1 | 10_72469784 | ENSG00000282915 | AC091769.2 | 0 | INTRON | 4.31593743 | 1.59E-05 | 0.02826062 |
| 3 | 32765095 | 32765095 | 1 | 3_32765095 | ENSG00000182973 | CNOT10 | 0 | EXON | -4.3159032 | 1.59E-05 | 0.02826205 |
| 10 | 58826790 | 58826790 | 1 | 10_58826790 | ENSG00000122870 | BICC1 | 0 | INTRON | -4.3158516 | 1.59E-05 | 0.02826527 |
| 15 | 63770682 | 63770682 | 1 | 15_63770682 | ENSG00000103657 | HERC1 | 0 | INTRON | 4.31582154 | 1.59E-05 | 0.02826527 |
| 15 | 41888116 | 41888116 | 1 | 15_41888116 | ENSG00000137877 | SPTBN5 | 0 | INTRON | 4.31580878 | 1.59E-05 | 0.02826527 |
| 1 | 64704906 | 64704906 | 1 | 1_64704906 | ENSG00000158966 | CACHD1 | 11848 | Downstream | 4.3157634 | 1.59E-05 | 0.02826807 |
| 16 | 6924062 | 6924062 | 1 | 16_6924062 | ENSG00000078328 | RBFOX1 | 0 | INTRON | 4.31574082 | 1.59E-05 | 0.02826807 |
| 5 | 55015112 | 55015112 | 1 | 5_55015112 | ENSG00000164283 | ESM1 | 0 | INTRON | 4.31569542 | 1.59E-05 | 0.0282683 |
| 16 | 16404577 | 16404577 | 1 | 16_16404577 | ENSG00000261181 | AC136619.1 | 5983 | Upstream | 4.31569287 | 1.59E-05 | 0.0282683 |
| 12 | 61442290 | 61442290 | 1 | 12_61442290 | ENSG00000258336 | DUX4L52 | 157776 | Downstream | 4.31559191 | 1.59E-05 | 0.02827827 |
| 8 | 88747039 | 88747039 | 1 | 8_88747039 | ENSG00000253553 | AC090578.1 | 0 | INTRON | 4.31542699 | 1.59E-05 | 0.02829501 |
| 11 | 124891203 | 124891203 | 1 | 11_124891203 | ENSG00000154133 | ROBO4 | 0 | INTRON | 4.31541506 | 1.59E-05 | 0.02829501 |
| 8 | 1667799 | 1667799 | 1 | 8_1667799 | ENSG00000198010 | DLGAP2 | 0 | INTRON | 4.31535348 | 1.59E-05 | 0.02829995 |
| 8 | 143865183 | 143865183 | 1 | 8_143865183 | ENSG00000261150 | EPPK1 | 0 | EXON | -4.3152968 | 1.59E-05 | 0.0283028 |
| 5 | 172268512 | 172268512 | 1 | 5_172268512 | ENSG00000168246 | UBTD2 | 0 | INTRON | 4.31528514 | 1.59E-05 | 0.0283028 |
| 7 | 92673251 | 92673251 | 1 | 7_92673251 | ENSG00000105810 | CDK6 | 0 | INTRON | -4.3152304 | 1.59E-05 | 0.02830686 |
| 16 | 89568861 | 89568861 | 1 | 16_89568861 | ENSG00000167526 | RPL13 | 2033 | Downstream | 4.31508044 | 1.60E-05 | 0.02832312 |
| 3 | 152935363 | 152935363 | 1 | 3_152935363 | ENSG00000169860 | P2RY1 | 93924 | Downstream | 4.31503007 | 1.60E-05 | 0.02832663 |
| X | 143718409 | 143718409 | 1 | X_143718409 | ENSG00000268988 | SPANXN2 | 0 | INTRON | -4.314958 | 1.60E-05 | 0.02833076 |
| X | 150223213 | 150223213 | 1 | X_150223213 | ENSG00000235703 | LINC00894 | 0 | EXON | 4.31495176 | 1.60E-05 | 0.02833076 |
| 13 | 103457978 | 103457978 | 1 | 13_103457978 | ENSG00000230474 | ATP6V1G1P7 | 13010 | Upstream | -4.3149169 | 1.60E-05 | 0.02833228 |
| 10 | 959066 | 959066 | 1 | 10_959066 | ENSG00000205740 | AL359878.1 | 12079 | Downstream | 4.3148831 | 1.60E-05 | 0.02833284 |
| 7 | 97929295 | 97929295 | 1 | 7_97929295 | ENSG00000284707 | AC079781.5 | 0 | INTRON | -4.3148557 | 1.60E-05 | 0.02833284 |
| 4 | 150722648 | 150722648 | 1 | 4_150722648 | ENSG00000198589 | LRBA | 0 | INTRON | 4.31483828 | 1.60E-05 | 0.02833284 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | 98737746 | 98737746 | 1 | 8_98737746 | ENSG00000104375 | STK3 | 0 | INTRON | 4.31481815 | 1.60E-05 | 0.02833284 |
| 8 | 86075067 | 86075067 | 1 | 8_86075067 | ENSG00000147613 | PSKH2 | 0 | INTRON | 4.31479735 | 1.60E-05 | 0.02833284 |
| 1 | 241297623 | 241297623 | 1 | 1_241297623 | ENSG00000182901 | RGS7 | 0 | INTRON | -4.3147262 | 1.60E-05 | 0.02833818 |
| 14 | 25542719 | 25542719 | 1 | 14_25542719 | ENSG00000257986 | LINC02306 | 104584 | Downstream | -4.3147096 | 1.60E-05 | 0.02833818 |
| 9 | 79660715 | 79660715 | 1 | 9_79660715 | ENSG00000106829 | TLE4 | 0 | INTRON | -4.314663 | 1.60E-05 | 0.02834121 |
| 2 | 209130652 | 209130652 | 1 | 2_209130652 | ENSG00000232799 | CRYGFP | 14588 | Upstream | 4.31454435 | 1.60E-05 | 0.02835059 |
| 1 | 243496925 | 243496925 | 1 | 1_243496925 | ENSG00000117020 | AKT3 | 0 | INTRON | 4.31454365 | 1.60E-05 | 0.02835059 |
| 12 | 132526216 | 132526216 | 1 | 12_132526216 | ENSG00000112787 | FBRSL1 | 0 | INTRON | 4.3145209 | 1.60E-05 | 0.02835059 |
| 8 | 51511346 | 51511346 | 1 | 8_51511346 | ENSG00000147485 | PXDNL | 0 | INTRON | 4.31440488 | 1.60E-05 | 0.02835815 |
| 9 | 87964759 | 87964759 | 1 | 9_87964759 | ENSG00000156345 | CDK20 | 1681 | Downstream | -4.3143998 | 1.60E-05 | 0.02835815 |
| 19 | 42149158 | 42149158 | 1 | 19_42149158 | ENSG00000028277 | POU2F2 | 0 | INTRON | 4.31439117 | 1.60E-05 | 0.02835815 |
| 15 | 70575086 | 70575086 | 1 | 15_70575086 | ENSG00000280639 | LINC02204 | 0 | INTRON | 4.31436479 | 1.60E-05 | 0.02835815 |
| 6 | 108278193 | 108278193 | 1 | 6_108278193 | ENSG00000230248 | Z98742.1 | 1647 | Downstream | 4.31432624 | 1.60E-05 | 0.02835815 |
| 7 | 131944233 | 131944233 | 1 | 7_131944233 | ENSG00000224865 | AC009518.1 | 0 | INTRON | -4.3143239 | 1.60E-05 | 0.02835815 |
| 18 | 71243829 | 71243829 | 1 | 18_71243829 | ENSG00000265484 | AC091691.2 | 6671 | Upstream | -4.3142995 | 1.60E-05 | 0.02835834 |
| 6 | 117563550 | 117563550 | 1 | 6_117563550 | ENSG00000164465 | DCBLD1 | 0 | INTRON | -4.3142654 | 1.60E-05 | 0.02835976 |
| 3 | 133504991 | 133504991 | 1 | 3_133504991 | ENSG00000214301 | AC022296.2 | 13486 | Downstream | 4.31417208 | 1.60E-05 | 0.02836597 |
| 2 | 59951086 | 59951086 | 1 | 2_59951086 | ENSG00000271955 | AC007100.1 | 0 | INTRON | -4.3141576 | 1.60E-05 | 0.02836597 |
| 18 | 44553968 | 44553968 | 1 | 18_44553968 | ENSG00000267337 | LINC01478 | 0 | INTRON | -4.3141481 | 1.60E-05 | 0.02836597 |
| 1 | 108765167 | 108765167 | 1 | 1_108765167 | ENSG00000116266 | STXBP3 | 0 | INTRON | -4.3140903 | 1.60E-05 | 0.02837043 |
| 1 | 205684282 | 205684282 | 1 | 1_205684282 | ENSG00000275213 | Metazoa_SRP | 0 | EXON | -4.3140425 | 1.60E-05 | 0.028371 |
| 18 | 78330408 | 78330408 | 1 | 18_78330408 | ENSG00000265644 | AC087399.1 | 150140 | Upstream | 4.31403985 | 1.60E-05 | 0.028371 |
| 9 | 108872542 | 108872542 | 1 | 9_108872542 | ENSG00000070061 | ELP1 | 0 | INTRON | 4.3140071 | 1.60E-05 | 0.02837226 |
| 8 | 93774043 | 93774043 | 1 | 8_93774043 | ENSG00000164953 | TMEM67 | 0 | INTRON | 4.31397184 | 1.60E-05 | 0.02837384 |
| 4 | 21961567 | 21961567 | 1 | 4_21961567 | ENSG00000250039 | AC096719.1 | 0 | INTRON | -4.3137999 | 1.60E-05 | 0.02839297 |
| 4 | 38219103 | 38219103 | 1 | 4_38219103 | ENSG00000287659 | AC098680.2 | 57074 | Downstream | 4.31373262 | 1.61E-05 | 0.02839698 |
| 14 | 34933534 | 34933534 | 1 | 14_34933534 | ENSG00000258704 | SRP54-AS1 | 0 | INTRON | -4.3137227 | 1.61E-05 | 0.02839698 |
| 18 | 60511124 | 60511124 | 1 | 18_60511124 | ENSG00000285681 | AC091576.1 | 0 | INTRON | 4.31358384 | 1.61E-05 | 0.02841188 |
| 17 | 65069945 | 65069945 | 1 | 17_65069945 | ENSG00000120063 | GNA13 | 13205 | Upstream | -4.3135369 | 1.61E-05 | 0.02841496 |
| 6 | 141908449 | 141908449 | 1 | 6_141908449 | ENSG00000135577 | NMBR | 149880 | Downstream | 4.31342861 | 1.61E-05 | 0.02842396 |
| 1 | 15580703 | 15580703 | 1 | 1_15580703 | ENSG00000116771 | AGMAT | 0 | INTRON | 4.31342099 | 1.61E-05 | 0.02842396 |
| 21 | 37990133 | 37990133 | 1 | 21_37990133 | ENSG00000184029 | DSCR4 | 0 | INTRON | 4.31338555 | 1.61E-05 | 0.02842557 |
| 1 | 54342774 | 54342774 | 1 | 1_54342774 | ENSG00000157216 | SSBP3 | 0 | INTRON | 4.31330775 | 1.61E-05 | 0.02843172 |
| 10 | 11091635 | 11091635 | 1 | 10_11091635 | ENSG00000048740 | CELF2 | 0 | INTRON | 4.31328951 | 1.61E-05 | 0.02843172 |
| 18 | 40318447 | 40318447 | 1 | 18_40318447 | ENSG00000286844 | AC068688.1 | 71080 | Downstream | -4.3132689 | 1.61E-05 | 0.02843172 |
| 3 | 37238885 | 37238885 | 1 | 3_37238885 | ENSG00000270194 | AC097359.2 | 2903 | Downstream | -4.3132249 | 1.61E-05 | 0.02843442 |
| 18 | 58498477 | 58498477 | 1 | 18_58498477 | ENSG00000198796 | ALPK2 | 0 | INTRON | 4.31316422 | 1.61E-05 | 0.02843585 |
| 16 | 64977730 | 64977730 | 1 | 16_64977730 | ENSG00000140937 | CDH11 | 0 | INTRON | 4.31314579 | 1.61E-05 | 0.02843585 |
| 7 | 71946006 | 71946006 | 1 | 7_71946006 | ENSG00000183166 | CALN1 | 0 | INTRON | -4.313145 | 1.61E-05 | 0.02843585 |
| 11 | 59503719 | 59503719 | 1 | 11_59503719 | ENSG00000176200 | OR4D11 | 0 | EXON | 4.31311474 | 1.61E-05 | 0.02843679 |
| 4 | 40353228 | 40353228 | 1 | 4_40353228 | ENSG00000174343 | CHRNA9 | 0 | INTRON | 4.31293094 | 1.61E-05 | 0.02845449 |
| 18 | 54059240 | 54059240 | 1 | 18_54059240 | ENSG00000264296 | AC090666.1 | 82892 | Upstream | 4.3129126 | 1.61E-05 | 0.02845449 |
| 20 | 25957116 | 25957116 | 1 | 20_25957116 | ENSG00000226203 | LINC01733 | 0 | INTRON | -4.3129065 | 1.61E-05 | 0.02845449 |
| 1 | 148455331 | 148455331 | 1 | 1_148455331 | ENSG00000274020 | LINC01138 | 0 | INTRON | -4.3128722 | 1.61E-05 | 0.02845449 |
| 1 | 11396481 | 11396481 | 1 | 1_11396481 | ENSG00000224338 | MTCYBP45 | 28775 | Downstream | 4.31286252 | 1.61E-05 | 0.02845449 |
| 14 | 79995344 | 79995344 | 1 | 14_79995344 | ENSG00000258416 | AF123462.1 | 21175 | Upstream | -4.3127394 | 1.61E-05 | 0.0284634 |
| 22 | 40696847 | 40696847 | 1 | 22_40696847 | ENSG00000128285 | MCHR1 | 14033 | Downstream | 4.31273322 | 1.61E-05 | 0.0284634 |
| 8 | 132876322 | 132876322 | 1 | 8_132876322 | ENSG00000042832 | TG | 0 | INTRON | 4.31272451 | 1.61E-05 | 0.0284634 |
| 11 | 45036608 | 45036608 | 1 | 11_45036608 | ENSG00000287984 | AC068858.1 | 0 | INTRON | 4.31269719 | 1.61E-05 | 0.02846397 |
| 1 | 181220932 | 181220932 | 1 | 1_181220932 | ENSG00000179452 | LINC01699 | 15455 | Upstream | 4.3126522 | 1.61E-05 | 0.02846681 |
| 14 | 29694457 | 29694457 | 1 | 14_29694457 | ENSG00000184304 | PRKD1 | 0 | INTRON | -4.3126125 | 1.61E-05 | 0.02846897 |
| 5 | 88323462 | 88323462 | 1 | 5_88323462 | ENSG00000247828 | TMEM161B-AS1 | 0 | EXON | -4.3124876 | 1.61E-05 | 0.02848211 |
| 18 | 37152450 | 37152450 | 1 | 18_37152450 | ENSG00000150477 | KIAA1328 | 0 | INTRON | 4.31240807 | 1.61E-05 | 0.02848773 |
| Y | 24208336 | 24208336 | 1 | Y_24208336 | ENSG00000239533 | GOLGA2P2Y | 1230 | Downstream | -4.3123982 | 1.61E-05 | 0.02848773 |
| 4 | 47922186 | 47922186 | 1 | 4_47922186 | ENSG00000163293 | NIPAL1 | 0 | INTRON | 4.31224324 | 1.62E-05 | 0.02850475 |
| 4 | 94796260 | 94796260 | 1 | 4_94796260 | ENSG00000138696 | BMPR1B | 0 | INTRON | -4.3122049 | 1.62E-05 | 0.02850523 |
| 2 | 123730482 | 123730482 | 1 | 2_123730482 | ENSG00000227738 | AC092646.1 | 31688 | Upstream | 4.31219364 | 1.62E-05 | 0.02850523 |
| 17 | 70028970 | 70028970 | 1 | 17_70028970 | ENSG00000230258 | AC005208.1 | 0 | INTRON | 4.3121569 | 1.62E-05 | 0.02850702 |
| 13 | 108450676 | 108450676 | 1 | 13_108450676 | ENSG00000283384 | AL138694.1 | 2360 | Downstream | -4.3120213 | 1.62E-05 | 0.02851907 |
| 10 | 12768647 | 12768647 | 1 | 10_12768647 | ENSG00000183049 | CAMK1D | 0 | INTRON | 4.31201763 | 1.62E-05 | 0.02851907 |
| 18 | 61380757 | 61380757 | 1 | 18_61380757 | ENSG00000101542 | CDH20 | 0 | INTRON | 4.31195486 | 1.62E-05 | 0.02852422 |
| 11 | 114969759 | 114969759 | 1 | 11_114969759 | ENSG00000252870 | AP003179.1 | 158458 | Downstream | 4.31178437 | 1.62E-05 | 0.02853776 |
| 10 | 28594665 | 28594665 | 1 | 10_28594665 | ENSG00000095787 | WAC | 0 | INTRON | 4.31177117 | 1.62E-05 | 0.02853776 |
| 2 | 23313145 | 23313145 | 1 | 2_23313145 | ENSG00000223530 | AC012506.1 | 17518 | Downstream | -4.3117697 | 1.62E-05 | 0.02853776 |
| 4 | 78956484 | 78956484 | 1 | 4_78956484 | ENSG00000249307 | LINC01088 | 0 | INTRON | 4.31175839 | 1.62E-05 | 0.02853776 |
| 7 | 29077029 | 29077029 | 1 | 7_29077029 | ENSG00000106066 | CPVL | 0 | INTRON | -4.3116822 | 1.62E-05 | 0.02853941 |
| 6 | 134706568 | 134706568 | 1 | 6_134706568 | ENSG00000236389 | AL121970.1 | 0 | EXON | 4.31166516 | 1.62E-05 | 0.02853941 |
| 1 | 182207271 | 182207271 | 1 | 1_182207271 | ENSG00000228918 | LINC01344 | 0 | INTRON | 4.31166175 | 1.62E-05 | 0.02853941 |
| 19 | 14243636 | 14243636 | 1 | 19_14243636 | ENSG00000267723 | AC011509.2 | 10552 | Downstream | 4.31161678 | 1.62E-05 | 0.02853941 |
| 13 | 96440174 | 96440174 | 1 | 13_96440174 | ENSG00000185352 | HS6ST3 | 0 | INTRON | 4.31159672 | 1.62E-05 | 0.02853941 |
| 7 | 42015644 | 42015644 | 1 | 7_42015644 | ENSG00000106571 | GLI3 | 0 | INTRON | -4.3115964 | 1.62E-05 | 0.02853941 |
| 8 | 98282841 | 98282841 | 1 | 8_98282841 | ENSG00000104361 | NIPAL2 | 0 | INTRON | 4.31154175 | 1.62E-05 | 0.02853941 |
| 3 | 93643122 | 93643122 | 1 | 3_93643122 | ENSG00000251727 | RNU6-488P | 200641 | Upstream | -4.3114974 | 1.62E-05 | 0.02853941 |
| 12 | 92007059 | 92007059 | 1 | 12_92007059 | ENSG00000257242 | LINC01619 | 0 | INTRON | -4.3114935 | 1.62E-05 | 0.02853941 |
| 8 | 126420681 | 126420681 | 1 | 8_126420681 | ENSG00000253427 | AC084116.2 | 53507 | Upstream | 4.31144596 | 1.62E-05 | 0.02853941 |
| 3 | 133492180 | 133492180 | 1 | 3_133492180 | ENSG00000214301 | AC022296.2 | 675 | Downstream | -4.3114395 | 1.62E-05 | 0.02853941 |
| 17 | 56374163 | 56374163 | 1 | 17_56374163 | ENSG00000153930 | ANKFN1 | 0 | INTRON | 4.31141603 | 1.62E-05 | 0.02853941 |
| 2 | 141951290 | 141951290 | 1 | 2_141951290 | ENSG00000168702 | LRP1B | 0 | INTRON | 4.31141209 | 1.62E-05 | 0.02853941 |
| 22 | 25667923 | 25667923 | 1 | 22_25667923 | ENSG00000100077 | GRK3 | 0 | INTRON | 4.31141113 | 1.62E-05 | 0.02853941 |
| 7 | 77005571 | 77005571 | 1 | 7_77005571 | ENSG00000242435 | UPK3BP1 | 0 | EXON | 4.31140247 | 1.62E-05 | 0.02853941 |
| 20 | 4712256 | 4712256 | 1 | 20_4712256 | ENSG00000171864 | PRND | 9652 | Upstream | -4.3111528 | 1.62E-05 | 0.0285687 |
| 22 | 37337292 | 37337292 | 1 | 22_37337292 | ENSG00000243902 | FP325335.1 | 2290 | Downstream | 4.31111761 | 1.62E-05 | 0.0285703 |
| 7 | 139455556 | 139455556 | 1 | 7_139455556 | ENSG00000188883 | KLRG2 | 0 | INTRON | 4.31108737 | 1.62E-05 | 0.02857105 |
| 3 | 119613849 | 119613849 | 1 | 3_119613849 | ENSG00000144837 | PLA1A | 0 | INTRON | -4.3110661 | 1.62E-05 | 0.02857105 |
| 12 | 89693828 | 89693828 | 1 | 12_89693828 | ENSG00000070961 | ATP2B1 | 0 | INTRON | -4.310979 | 1.63E-05 | 0.02857264 |
| 3 | 172472735 | 172472735 | 1 | 3_172472735 | ENSG00000121853 | GHSR | 24279 | Upstream | -4.3109786 | 1.63E-05 | 0.02857264 |
| 8 | 130326201 | 130326201 | 1 | 8_130326201 | ENSG00000153317 | ASAP1 | 0 | INTRON | 4.31096487 | 1.63E-05 | 0.02857264 |
| 14 | 49495501 | 49495501 | 1 | 14_49495501 | ENSG00000252424 | RNA5SP384 | 57131 | Upstream | 4.31096236 | 1.63E-05 | 0.02857264 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | 99205171 | 99205171 | 1 | 3_99205171 | ENSG00000241305 | ACTG1P13 | 10052 | Downstream | -4.3109237 | 1.63E-05 | 0.02857468 |
| 5 | 60593600 | 60593600 | 1 | 5_60593600 | ENSG00000035499 | DEPDC1B | 3311 | Downstream | -4.3108119 | 1.63E-05 | 0.02858328 |
| 15 | 79198702 | 79198702 | 1 | 15_79198702 | ENSG00000259234 | ANKRD34C-AS1 | 0 | INTRON | 4.31081157 | 1.63E-05 | 0.02858328 |
| 12 | 24378928 | 24378928 | 1 | 12_24378928 | ENSG00000134532 | SOX5 | 0 | INTRON | 4.31071576 | 1.63E-05 | 0.02859026 |
| 5 | 20383805 | 20383805 | 1 | 5_20383805 | ENSG00000145526 | CDH18 | 0 | INTRON | -4.3106933 | 1.63E-05 | 0.02859026 |
| 17 | 7150622 | 7150622 | 1 | 17_7150622 | ENSG00000213876 | RPL7AP64 | 9030 | Downstream | -4.3106891 | 1.63E-05 | 0.02859026 |
| 18 | 8200266 | 8200266 | 1 | 18_8200266 | ENSG00000173482 | PTPRM | 0 | INTRON | 4.31062186 | 1.63E-05 | 0.028596 |
| 17 | 16366893 | 16366893 | 1 | 17_16366893 | ENSG00000166582 | CENPV | 13237 | Upstream | -4.3104909 | 1.63E-05 | 0.02860999 |
| 3 | 174719560 | 174719560 | 1 | 3_174719560 | ENSG00000177694 | NAALADL2 | 0 | INTRON | 4.31046079 | 1.63E-05 | 0.02861093 |
| 16 | 68868558 | 68868558 | 1 | 16_68868558 | ENSG00000103047 | TANGO6 | 0 | INTRON | -4.3102726 | 1.63E-05 | 0.02861871 |
| 7 | 139446089 | 139446089 | 1 | 7_139446089 | ENSG00000252332 | RNU6-911P | 2650 | Upstream | -4.3102538 | 1.63E-05 | 0.02861871 |
| 4 | 22778976 | 22778976 | 1 | 4_22778976 | ENSG00000249948 | GBA3 | 0 | INTRON | 4.31021197 | 1.63E-05 | 0.02861871 |
| 5 | 52591169 | 52591169 | 1 | 5_52591169 | ENSG00000250827 | MFSD4BP1 | 10063 | Upstream | -4.3102014 | 1.63E-05 | 0.02861871 |
| 3 | 147724451 | 147724451 | 1 | 3_147724451 | ENSG00000239661 | AC092925.1 | 119671 | Downstream | 4.31017584 | 1.63E-05 | 0.02861871 |
| 1 | 162693813 | 162693813 | 1 | 1_162693813 | ENSG00000162733 | DDR2 | 0 | INTRON | -4.3101456 | 1.63E-05 | 0.02861871 |
| 13 | 20837251 | 20837251 | 1 | 13_20837251 | ENSG00000132953 | XPO4 | 0 | INTRON | 4.31012819 | 1.63E-05 | 0.02861871 |
| 21 | 24459153 | 24459153 | 1 | 21_24459153 | ENSG00000237484 | LINC01684 | 0 | INTRON | -4.3101226 | 1.63E-05 | 0.02861871 |
| X | 123777568 | 123777568 | 1 | X_123777568 | ENSG00000252178 | RNU7-69P | 5429 | Upstream | 4.31012139 | 1.63E-05 | 0.02861871 |
| 8 | 68321936 | 68321936 | 1 | 8_68321936 | ENSG00000248801 | C8orf34-AS1 | 0 | INTRON | 4.31009273 | 1.63E-05 | 0.02861871 |
| 3 | 23895147 | 23895147 | 1 | 3_23895147 | ENSG00000197885 | NKIRAS1 | 0 | INTRON | 4.31008876 | 1.63E-05 | 0.02861871 |
| 15 | 70526781 | 70526781 | 1 | 15_70526781 | ENSG00000259473 | LINC02205 | 20853 | Upstream | 4.31006857 | 1.63E-05 | 0.02861871 |
| 17 | 56820634 | 56820634 | 1 | 17_56820634 | ENSG00000214226 | C17orf67 | 0 | INTRON | -4.3100651 | 1.63E-05 | 0.02861871 |
| 22 | 47734787 | 47734787 | 1 | 22_47734787 | ENSG00000224271 | AL117329.1 | 0 | INTRON | -4.3100523 | 1.63E-05 | 0.02861871 |
| 11 | 48036845 | 48036845 | 1 | 11_48036845 | ENSG00000149177 | PTPRJ | 0 | INTRON | -4.3100244 | 1.63E-05 | 0.02861871 |
| 5 | 150747251 | 150747251 | 1 | 5_150747251 | ENSG00000132912 | DCTN4 | 0 | INTRON | 4.30999332 | 1.63E-05 | 0.02861871 |
| 7 | 104949694 | 104949694 | 1 | 7_104949694 | ENSG00000237513 | AC007384.1 | 0 | INTRON | 4.3099838 | 1.63E-05 | 0.02861871 |
| 15 | 75105959 | 75105959 | 1 | 15_75105959 | ENSG00000138621 | PPCDC | 0 | INTRON | 4.30997564 | 1.63E-05 | 0.02861871 |
| 4 | 108430959 | 108430959 | 1 | 4_108430959 | ENSG00000250485 | EXOC7P1 | 11196 | Upstream | 4.30996747 | 1.63E-05 | 0.02861871 |
| 5 | 120178871 | 120178871 | 1 | 5_120178871 | ENSG00000251293 | AC008574.1 | 66576 | Downstream | 4.30993203 | 1.63E-05 | 0.0286188 |
| 8 | 79645008 | 79645008 | 1 | 8_79645008 | ENSG00000104435 | STMN2 | 0 | INTRON | -4.30992 | 1.63E-05 | 0.0286188 |
| 9 | 131543166 | 131543166 | 1 | 9_131543166 | ENSG00000283526 | PRRT1B | 2347 | Upstream | 4.30989844 | 1.63E-05 | 0.0286188 |
| 6 | 169515105 | 169515105 | 1 | 6_169515105 | ENSG00000184465 | WDR27 | 0 | INTRON | -4.3097596 | 1.63E-05 | 0.02863203 |
| 13 | 73032174 | 73032174 | 1 | 13_73032174 | ENSG00000232041 | PSMD10P3 | 4226 | Upstream | -4.3097507 | 1.63E-05 | 0.02863203 |
| 22 | 42881966 | 42881966 | 1 | 22_42881966 | ENSG00000100266 | PACSIN2 | 0 | INTRON | -4.3096315 | 1.64E-05 | 0.02864452 |
| 20 | 60082603 | 60082603 | 1 | 20_60082603 | ENSG00000276093 | AL132822.1 | 756 | Downstream | 4.30951472 | 1.64E-05 | 0.02865669 |
| 5 | 165702626 | 165702626 | 1 | 5_165702626 | ENSG00000253693 | AC008415.1 | 0 | INTRON | -4.3094667 | 1.64E-05 | 0.02865997 |
| 3 | 134355156 | 134355156 | 1 | 3_134355156 | ENSG00000214289 | RPL39P5 | 0 | INTRON | 4.30943698 | 1.64E-05 | 0.02866087 |
| 17 | 81103071 | 81103071 | 1 | 17_81103071 | ENSG00000175866 | BAIAP2 | 0 | INTRON | -4.3093938 | 1.64E-05 | 0.02866352 |
| 22 | 44853447 | 44853447 | 1 | 22_44853447 | ENSG00000248405 | PRR5-ARHGAP8 | 0 | INTRON | 4.30931204 | 1.64E-05 | 0.02866974 |
| 11 | 114082961 | 114082961 | 1 | 11_114082961 | ENSG00000109906 | ZBTB16 | 0 | INTRON | 4.30929592 | 1.64E-05 | 0.02866974 |
| X | 124128817 | 124128817 | 1 | X_124128817 | ENSG00000101972 | STAG2 | 0 | INTRON | -4.3092775 | 1.64E-05 | 0.02866974 |
| 7 | 68677440 | 68677440 | 1 | 7_68677440 | ENSG00000228429 | AC004910.1 | 35856 | Downstream | 4.30922021 | 1.64E-05 | 0.02867422 |
| 22 | 37623403 | 37623403 | 1 | 22_37623403 | ENSG00000100083 | GGA1 | 0 | EXON | 4.30919248 | 1.64E-05 | 0.02867486 |
| 8 | 142332435 | 142332435 | 1 | 8_142332435 | ENSG00000171045 | TSNARE1 | 0 | INTRON | 4.30914707 | 1.64E-05 | 0.0286778 |
| 4 | 163869851 | 163869851 | 1 | 4_163869851 | ENSG00000145416 | 1-Mar | 0 | INTRON | -4.309094 | 1.64E-05 | 0.02868173 |
| 22 | 47564448 | 47564448 | 1 | 22_47564448 | ENSG00000205634 | LINC00898 | 47782 | Downstream | 4.30905416 | 1.64E-05 | 0.02868395 |
| 16 | 32224281 | 32224281 | 1 | 16_32224281 | ENSG00000260344 | AC133485.1 | 10778 | Upstream | -4.3090289 | 1.64E-05 | 0.02868428 |
| 5 | 13016967 | 13016967 | 1 | 5_13016967 | ENSG00000248457 | LINC02220 | 0 | INTRON | -4.3089934 | 1.64E-05 | 0.02868517 |
| 16 | 85779667 | 85779667 | 1 | 16_85779667 | ENSG00000131148 | EMC8 | 0 | 3UTR | -4.3089765 | 1.64E-05 | 0.02868517 |
| 13 | 31705648 | 31705648 | 1 | 13_31705648 | ENSG00000133105 | RXFP2 | 33877 | Upstream | 4.3088867 | 1.64E-05 | 0.02869387 |
| 2 | 20712065 | 20712065 | 1 | 2_20712065 | ENSG00000118961 | LDAH | 0 | INTRON | 4.30879389 | 1.64E-05 | 0.02869837 |
| 6 | 69133388 | 69133388 | 1 | 6_69133388 | ENSG00000135298 | ADGRB3 | 0 | INTRON | -4.3087704 | 1.64E-05 | 0.02869837 |
| 5 | 108477228 | 108477228 | 1 | 5_108477228 | ENSG00000286503 | AC008462.1 | 59212 | Downstream | 4.30876048 | 1.64E-05 | 0.02869837 |
| 10 | 23225172 | 23225172 | 1 | 10_23225172 | ENSG00000179133 | C10orf67 | 0 | INTRON | 4.30873997 | 1.64E-05 | 0.02869837 |
| 16 | 31620380 | 31620380 | 1 | 16_31620380 | ENSG00000260010 | ZNF720P1 | 16849 | Upstream | 4.30873841 | 1.64E-05 | 0.02869837 |
| 2 | 169219440 | 169219440 | 1 | 2_169219440 | ENSG00000081479 | LRP2 | 0 | INTRON | 4.30865399 | 1.64E-05 | 0.02870637 |
| 5 | 105852041 | 105852041 | 1 | 5_105852041 | ENSG00000201790 | RNA5SP189 | 70952 | Downstream | 4.30860423 | 1.64E-05 | 0.02870797 |
| 3 | 195782564 | 195782564 | 1 | 3_195782564 | ENSG00000145113 | MUC4 | 0 | EXON | 4.30859138 | 1.64E-05 | 0.02870797 |
| 21 | 10738302 | 10738302 | 1 | 21_10738302 | ENSG00000277282 | IGHV1OR21-1 | 88467 | Upstream | -4.3085734 | 1.64E-05 | 0.02870797 |
| 13 | 31243988 | 31243988 | 1 | 13_31243988 | ENSG00000187676 | B3GLCT | 0 | INTRON | -4.308523 | 1.64E-05 | 0.02870797 |
| 15 | 31831476 | 31831476 | 1 | 15_31831476 | ENSG00000169918 | OTUD7A | 0 | INTRON | -4.3085218 | 1.64E-05 | 0.02870797 |
| 10 | 77504420 | 77504420 | 1 | 10_77504420 | ENSG00000156113 | KCNMA1 | 0 | INTRON | 4.30845102 | 1.64E-05 | 0.02870797 |
| 16 | 1204540 | 1204540 | 1 | 16_1204540 | ENSG00000196557 | CACNA1H | 0 | INTRON | -4.3084348 | 1.64E-05 | 0.02870797 |
| 18 | 535141 | 535141 | 1 | 18_535141 | ENSG00000264265 | LINC01925 | 19847 | Upstream | -4.308434 | 1.64E-05 | 0.02870797 |
| 12 | 43466676 | 43466676 | 1 | 12_43466676 | ENSG00000173157 | ADAMTS20 | 0 | EXON | -4.3084207 | 1.64E-05 | 0.02870797 |
| 9 | 133112052 | 133112052 | 1 | 9_133112052 | ENSG00000285245 | AL162417.1 | 0 | EXON | 4.3084146 | 1.64E-05 | 0.02870797 |
| 21 | 36058860 | 36058860 | 1 | 21_36058860 | ENSG00000185917 | SETD4 | 0 | 5UTR | 4.30838712 | 1.64E-05 | 0.02870859 |
| 5 | 6275887 | 6275887 | 1 | 5_6275887 | ENSG00000250730 | HMGB3P3 | 13969 | Upstream | 4.30823111 | 1.65E-05 | 0.02872495 |
| 6 | 170285783 | 170285783 | 1 | 6_170285783 | ENSG00000198719 | DLL1 | 0 | INTRON | -4.3082157 | 1.65E-05 | 0.02872495 |
| 13 | 110375131 | 110375131 | 1 | 13_110375131 | ENSG00000134871 | COL4A2 | 0 | INTRON | 4.30815963 | 1.65E-05 | 0.02872814 |
| 4 | 180193469 | 180193469 | 1 | 4_180193469 | ENSG00000287775 | AC096747.1 | 76306 | Upstream | -4.3081268 | 1.65E-05 | 0.02872814 |
| 15 | 95024654 | 95024654 | 1 | 15_95024654 | ENSG00000277654 | AC087633.2 | 0 | INTRON | -4.3081147 | 1.65E-05 | 0.02872814 |
| 22 | 48983166 | 48983166 | 1 | 22_48983166 | ENSG00000286381 | AL078622.1 | 64317 | Downstream | -4.3081004 | 1.65E-05 | 0.02872814 |
| 17 | 32448004 | 32448004 | 1 | 17_32448004 | ENSG00000108671 | PSMD11 | 0 | INTRON | -4.3080594 | 1.65E-05 | 0.02873052 |
| 1 | 12476947 | 12476947 | 1 | 1_12476947 | ENSG00000048707 | VPS13D | 0 | INTRON | 4.30803181 | 1.65E-05 | 0.02873116 |
| 3 | 14512279 | 14512279 | 1 | 3_14512279 | ENSG00000144596 | GRIP2 | 0 | INTRON | 4.30789087 | 1.65E-05 | 0.02874652 |
| 21 | 13116950 | 13116950 | 1 | 21_13116950 | ENSG00000168122 | ZNF355P | 3160 | Upstream | -4.3078301 | 1.65E-05 | 0.02875147 |
| 2 | 65485702 | 65485702 | 1 | 2_65485702 | ENSG00000204929 | AC007389.1 | 0 | INTRON | -4.3077913 | 1.65E-05 | 0.02875356 |
| 5 | 102144487 | 102144487 | 1 | 5_102144487 | ENSG00000248261 | AC008948.1 | 0 | INTRON | -4.3076794 | 1.65E-05 | 0.02875788 |
| 3 | 99333043 | 99333043 | 1 | 3_99333043 | ENSG00000240572 | AC107297.1 | 6491 | Upstream | 4.30764648 | 1.65E-05 | 0.02875788 |
| 15 | 88589515 | 88589515 | 1 | 15_88589515 | ENSG00000249487 | LINC01586 | 0 | INTRON | -4.3076438 | 1.65E-05 | 0.02875788 |
| 1 | 90050136 | 90050136 | 1 | 1_90050136 | ENSG00000287015 | AL161797.1 | 3027 | Downstream | 4.30764259 | 1.65E-05 | 0.02875788 |
| 3 | 68599298 | 68599298 | 1 | 3_68599298 | ENSG00000244640 | AC096922.1 | 34407 | Downstream | -4.3076227 | 1.65E-05 | 0.02875788 |
| 14 | 43574562 | 43574562 | 1 | 14_43574562 | ENSG00000258387 | AL358913.1 | 17579 | Downstream | 4.30762209 | 1.65E-05 | 0.02875788 |
| 13 | 64886809 | 64886809 | 1 | 13_64886809 | ENSG00000214269 | LGMNP1 | 71287 | Downstream | -4.3075228 | 1.65E-05 | 0.02876633 |
| 14 | 98985702 | 98985702 | 1 | 14_98985702 | ENSG00000234648 | AL162151.2 | 12231 | Downstream | 4.30751176 | 1.65E-05 | 0.02876633 |
| 12 | 26165398 | 26165398 | 1 | 12_26165398 | ENSG00000123096 | SSPN | 0 | INTRON | 4.30748893 | 1.65E-05 | 0.02876635 |
| 14 | 72471873 | 72471873 | 1 | 14_72471873 | ENSG00000182732 | RGS6 | 0 | INTRON | 4.30739208 | 1.65E-05 | 0.028776 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 | 46752775 | 46752775 | 1 | 12_46752775 | ENSG00000257261 | AC008014.1 | 0 | INTRON | -4.3073509 | 1.65E-05 | 0.02877841 |
| 3 | 187284098 | 187284098 | 1 | 3_187284098 | ENSG00000127241 | MASP1 | 0 | INTRON | -4.3072719 | 1.65E-05 | 0.02878176 |
| 19 | 46934692 | 46934692 | 1 | 19_46934692 | ENSG00000160007 | ARHGAP35 | 0 | INTRON | 4.30726072 | 1.65E-05 | 0.02878176 |
| 2 | 108527994 | 108527994 | 1 | 2_108527994 | ENSG00000214184 | GCC2-AS1 | 0 | INTRON | -4.3072438 | 1.65E-05 | 0.02878176 |
| 3 | 73754851 | 73754851 | 1 | 3_73754851 | ENSG00000242741 | LINC02005 | 50902 | Upstream | 4.30723455 | 1.65E-05 | 0.02878176 |
| 1 | 202884801 | 202884801 | 1 | 1_202884801 | ENSG00000183155 | RABIF | 0 | INTRON | 4.30712801 | 1.65E-05 | 0.0287909 |
| 20 | 18539378 | 18539378 | 1 | 20_18539378 | ENSG00000101310 | SEC23B | 0 | INTRON | -4.3071066 | 1.65E-05 | 0.0287909 |
| X | 55522326 | 55522326 | 1 | X_55522326 | ENSG00000277516 | AL590410.1 | 1612 | Upstream | -4.3070769 | 1.65E-05 | 0.0287909 |
| 14 | 46965202 | 46965202 | 1 | 14_46965202 | ENSG00000139915 | MDGA2 | 0 | INTRON | -4.3070737 | 1.65E-05 | 0.0287909 |
| 4 | 110754545 | 110754545 | 1 | 4_110754545 | ENSG00000249519 | LINC01438 | 39857 | Upstream | -4.3070482 | 1.65E-05 | 0.02879129 |
| 6 | 138672744 | 138672744 | 1 | 6_138672744 | ENSG00000135540 | NHSL1 | 0 | INTRON | 4.30697342 | 1.66E-05 | 0.02879396 |
| 2 | 148948025 | 148948025 | 1 | 2_148948025 | ENSG00000168280 | KIF5C | 0 | INTRON | 4.30696294 | 1.66E-05 | 0.02879396 |
| 4 | 86414053 | 86414053 | 1 | 4_86414053 | ENSG00000109339 | MAPK10 | 0 | INTRON | -4.3069415 | 1.66E-05 | 0.02879396 |
| 4 | 163074545 | 163074545 | 1 | 4_163074545 | ENSG00000283468 | MIR4454 | 19028 | Downstream | 4.30693095 | 1.66E-05 | 0.02879396 |
| 17 | 1443001 | 1443001 | 1 | 17_1443001 | ENSG00000167193 | CRK | 0 | INTRON | 4.30691445 | 1.66E-05 | 0.02879396 |
| 13 | 113444562 | 113444562 | 1 | 13_113444562 | ENSG00000153531 | ADPRHL1 | 0 | 5UTR | 4.30686996 | 1.66E-05 | 0.02879681 |
| 2 | 103753210 | 103753210 | 1 | 2_103753210 | ENSG00000232597 | AC013727.1 | 102618 | Downstream | -4.306827 | 1.66E-05 | 0.02879815 |
| 16 | 13080012 | 13080012 | 1 | 16_13080012 | ENSG00000237515 | SHISA9 | 0 | INTRON | 4.30681447 | 1.66E-05 | 0.02879815 |
| 8 | 69193816 | 69193816 | 1 | 8_69193816 | ENSG00000253373 | AC021785.1 | 15627 | Upstream | -4.3067574 | 1.66E-05 | 0.02880077 |
| 2 | 195704617 | 195704617 | 1 | 2_195704617 | ENSG00000196950 | SLC39A10 | 0 | INTRON | 4.30673634 | 1.66E-05 | 0.02880077 |
| 10 | 35193043 | 35193043 | 1 | 10_35193043 | ENSG00000095794 | CREM | 0 | INTRON | -4.3067265 | 1.66E-05 | 0.02880077 |
| 4 | 21496538 | 21496538 | 1 | 4_21496538 | ENSG00000185774 | KCNIP4 | 0 | INTRON | -4.3066079 | 1.66E-05 | 0.02881326 |
| 2 | 10171153 | 10171153 | 1 | 2_10171153 | ENSG00000171848 | RRM2 | 0 | INTRON | 4.30654247 | 1.66E-05 | 0.02881884 |
| 13 | 43615342 | 43615342 | 1 | 13_43615342 | ENSG00000287842 | AL161714.1 | 0 | INTRON | -4.3064521 | 1.66E-05 | 0.02882766 |
| 1 | 199956747 | 199956747 | 1 | 1_199956747 | ENSG00000229747 | AL445687.2 | 47099 | Downstream | 4.30638568 | 1.66E-05 | 0.02883337 |
| 1 | 1883988 | 1883988 | 1 | 1_1883988 | ENSG00000078369 | GNB1 | 0 | INTRON | 4.30635138 | 1.66E-05 | 0.0288349 |
| 2 | 127162595 | 127162595 | 1 | 2_127162595 | ENSG00000237630 | NIFKP9 | 7415 | Upstream | 4.30632482 | 1.66E-05 | 0.02883542 |
| 8 | 34451097 | 34451097 | 1 | 8_34451097 | ENSG00000253108 | AC090993.1 | 104366 | Downstream | 4.3063009 | 1.66E-05 | 0.02883559 |
| 8 | 140407042 | 140407042 | 1 | 8_140407042 | ENSG00000167632 | TRAPPC9 | 0 | INTRON | 4.30624206 | 1.66E-05 | 0.02883806 |
| 21 | 21351858 | 21351858 | 1 | 21_21351858 | ENSG00000154654 | NCAM2 | 0 | INTRON | -4.3062224 | 1.66E-05 | 0.02883806 |
| 9 | 93849596 | 93849596 | 1 | 9_93849596 | ENSG00000231990 | AL442224.1 | 0 | INTRON | 4.30619349 | 1.66E-05 | 0.02883806 |
| 17 | 2695204 | 2695204 | 1 | 17_2695204 | ENSG00000132361 | CLUH | 0 | EXON | 4.30619156 | 1.66E-05 | 0.02883806 |
| X | 17896822 | 17896822 | 1 | X_17896822 | ENSG00000276467 | Z93929.2 | 888 | Downstream | -4.3060577 | 1.66E-05 | 0.02884495 |
| 1 | 28197257 | 28197257 | 1 | 1_28197257 | ENSG00000126698 | DNAJC8 | 2198 | Downstream | -4.3060572 | 1.66E-05 | 0.02884495 |
| 11 | 112530423 | 112530423 | 1 | 11_112530423 | ENSG00000254968 | LINC02763 | 0 | INTRON | 4.30604858 | 1.66E-05 | 0.02884495 |
| 15 | 78764664 | 78764664 | 1 | 15_78764664 | ENSG00000136378 | ADAMTS7 | 0 | EXON | 4.30604836 | 1.66E-05 | 0.02884495 |
| 11 | 112613812 | 112613812 | 1 | 11_112613812 | ENSG00000254968 | LINC02763 | 0 | INTRON | 4.30600464 | 1.66E-05 | 0.02884604 |
| 17 | 59825272 | 59825272 | 1 | 17_59825272 | ENSG00000062716 | VMP1 | 0 | INTRON | -4.3059949 | 1.66E-05 | 0.02884604 |
| 4 | 181455081 | 181455081 | 1 | 4_181455081 | ENSG00000225356 | AC093840.1 | 67584 | Upstream | -4.3059234 | 1.66E-05 | 0.02885241 |
| 18 | 78171126 | 78171126 | 1 | 18_78171126 | ENSG00000266213 | AC107892.1 | 30239 | Downstream | -4.3058652 | 1.66E-05 | 0.02885404 |
| 1 | 33365492 | 33365492 | 1 | 1_33365492 | ENSG00000134686 | PHC2 | 0 | INTRON | 4.30585863 | 1.66E-05 | 0.02885404 |
| 20 | 34662075 | 34662075 | 1 | 20_34662075 | ENSG00000101464 | PIGU | 0 | INTRON | 4.30582444 | 1.66E-05 | 0.02885404 |
| 12 | 25069800 | 25069800 | 1 | 12_25069800 | ENSG00000118308 | LRMP | 0 | INTRON | -4.3058206 | 1.66E-05 | 0.02885404 |
| 14 | 65150672 | 65150672 | 1 | 14_65150672 | ENSG00000222985 | RNU2-14P | 26130 | Upstream | 4.30577969 | 1.66E-05 | 0.02885549 |
| 5 | 62206642 | 62206642 | 1 | 5_62206642 | ENSG00000251983 | RN7SKP157 | 59696 | Downstream | 4.30576442 | 1.66E-05 | 0.02885549 |
| 18 | 45378633 | 45378633 | 1 | 18_45378633 | ENSG00000132874 | SLC14A2 | 0 | INTRON | 4.30571123 | 1.66E-05 | 0.02885948 |
| 19 | 199054 | 199054 | 1 | 19_199054 | ENSG00000282508 | LINC01002 | 0 | INTRON | -4.3056681 | 1.66E-05 | 0.02886116 |
| 2 | 240376705 | 240376705 | 1 | 2_240376705 | ENSG00000063660 | GPC1 | 58957 | Upstream | 4.3056533 | 1.66E-05 | 0.02886116 |
| 9 | 8771006 | 8771006 | 1 | 9_8771006 | ENSG00000153707 | PTPRD | 0 | INTRON | -4.3055866 | 1.67E-05 | 0.02886206 |
| 15 | 39205806 | 39205806 | 1 | 15_39205806 | ENSG00000259345 | AC013652.1 | 0 | INTRON | 4.30556739 | 1.67E-05 | 0.02886206 |
| 21 | 33832527 | 33832527 | 1 | 21_33832527 | ENSG00000205726 | ITSN1 | 0 | INTRON | 4.30555369 | 1.67E-05 | 0.02886206 |
| 11 | 110147835 | 110147835 | 1 | 11_110147835 | ENSG00000137710 | RDX | 0 | INTRON | -4.3055423 | 1.67E-05 | 0.02886206 |
| 16 | 24183081 | 24183081 | 1 | 16_24183081 | ENSG00000166501 | PRKCB | 0 | INTRON | -4.3055336 | 1.67E-05 | 0.02886206 |
| 21 | 18816857 | 18816857 | 1 | 21_18816857 | ENSG00000198618 | PPIAP22 | 40921 | Upstream | -4.3054355 | 1.67E-05 | 0.02887192 |
| 5 | 71165180 | 71165180 | 1 | 5_71165180 | ENSG00000253900 | CDH12P4 | 31893 | Downstream | -4.3053645 | 1.67E-05 | 0.02887824 |
| 4 | 157977197 | 157977197 | 1 | 4_157977197 | ENSG00000287226 | AC084740.1 | 0 | INTRON | 4.30530157 | 1.67E-05 | 0.02888089 |
| 17 | 402948 | 402948 | 1 | 17_402948 | ENSG00000241525 | AC141424.1 | 1519 | Downstream | 4.30524339 | 1.67E-05 | 0.02888089 |
| 6 | 34818100 | 34818100 | 1 | 6_34818100 | ENSG00000065060 | UHRF1BP1 | 0 | INTRON | 4.30522358 | 1.67E-05 | 0.02888089 |
| 22 | 45476911 | 45476911 | 1 | 22_45476911 | ENSG00000077942 | FBLN1 | 25326 | Upstream | 4.30521231 | 1.67E-05 | 0.02888089 |
| 7 | 121158362 | 121158362 | 1 | 7_121158362 | ENSG00000106034 | CPED1 | 0 | INTRON | 4.30520286 | 1.67E-05 | 0.02888089 |
| 8 | 42644212 | 42644212 | 1 | 8_42644212 | ENSG00000147432 | CHRNB3 | 53153 | Upstream | 4.30518753 | 1.67E-05 | 0.02888089 |
| 10 | 63138788 | 63138788 | 1 | 10_63138788 | ENSG00000148572 | NRBF2 | 0 | INTRON | 4.3051865 | 1.67E-05 | 0.02888089 |
| 18 | 3866320 | 3866320 | 1 | 18_3866320 | ENSG00000170579 | DLGAP1 | 0 | INTRON | 4.30512153 | 1.67E-05 | 0.02888643 |
| 12 | 94239096 | 94239096 | 1 | 12_94239096 | ENSG00000136040 | PLXNC1 | 0 | INTRON | -4.3050583 | 1.67E-05 | 0.02889175 |
| 2 | 80162895 | 80162895 | 1 | 2_80162895 | ENSG00000223427 | AC016716.1 | 0 | EXON | -4.3050337 | 1.67E-05 | 0.02889201 |
| 2 | 49810864 | 49810864 | 1 | 2_49810864 | ENSG00000234253 | RPL7P13 | 67758 | Upstream | -4.3049907 | 1.67E-05 | 0.02889233 |
| 1 | 226402458 | 226402458 | 1 | 1_226402458 | ENSG00000143799 | PARP1 | 0 | INTRON | 4.30497117 | 1.67E-05 | 0.02889233 |
| 14 | 48141988 | 48141988 | 1 | 14_48141988 | ENSG00000286595 | AL512358.1 | 52185 | Upstream | -4.3049638 | 1.67E-05 | 0.02889233 |
| 5 | 59367922 | 59367922 | 1 | 5_59367922 | ENSG00000113448 | PDE4D | 0 | INTRON | -4.3048693 | 1.67E-05 | 0.02890137 |
| 6 | 23924581 | 23924581 | 1 | 6_23924581 | ENSG00000220748 | AL032822.1 | 47297 | Upstream | 4.30484953 | 1.67E-05 | 0.02890137 |
| 12 | 94195254 | 94195254 | 1 | 12_94195254 | ENSG00000136040 | PLXNC1 | 0 | INTRON | 4.30477772 | 1.67E-05 | 0.02890336 |
| 12 | 7636085 | 7636085 | 1 | 12_7636085 | ENSG00000285142 | AC006927.5 | 1310 | Downstream | 4.3047499 | 1.67E-05 | 0.02890336 |
| 13 | 93119120 | 93119120 | 1 | 13_93119120 | ENSG00000288001 | AL354811.2 | 31502 | Upstream | -4.3047279 | 1.67E-05 | 0.02890336 |
| 3 | 119589578 | 119589578 | 1 | 3_119589578 | ENSG00000144843 | ADPRH | 0 | 3UTR | -4.3046706 | 1.67E-05 | 0.02890336 |
| 11 | 98097170 | 98097170 | 1 | 11_98097170 | ENSG00000255380 | AP001317.1 | 33068 | Downstream | -4.3046606 | 1.67E-05 | 0.02890336 |
| 13 | 45350352 | 45350352 | 1 | 13_45350352 | ENSG00000228886 | AL138963.1 | 0 | EXON | -4.3046592 | 1.67E-05 | 0.02890336 |
| 21 | 10574684 | 10574684 | 1 | 21_10574684 | ENSG00000274391 | TPTE | 0 | INTRON | -4.3046388 | 1.67E-05 | 0.02890336 |
| 5 | 55992966 | 55992966 | 1 | 5_55992966 | ENSG00000249236 | AC008892.1 | 0 | INTRON | 4.30463234 | 1.67E-05 | 0.02890336 |
| 9 | 72200142 | 72200142 | 1 | 9_72200142 | ENSG00000119125 | GDA | 0 | INTRON | -4.3045884 | 1.67E-05 | 0.02890336 |
| 7 | 135166890 | 135166890 | 1 | 7_135166890 | ENSG00000122783 | CYREN | 0 | INTRON | 4.30454804 | 1.67E-05 | 0.02890336 |
| 11 | 114647212 | 114647212 | 1 | 11_114647212 | ENSG00000204361 | NXPE2 | 31314 | Upstream | 4.30454305 | 1.67E-05 | 0.02890336 |
| 4 | 88198201 | 88198201 | 1 | 4_88198201 | ENSG00000118777 | ABCG2 | 0 | INTRON | 4.30454174 | 1.67E-05 | 0.02890336 |
| 13 | 104919272 | 104919272 | 1 | 13_104919272 | ENSG00000225823 | RPL7P45 | 104203 | Downstream | -4.3045305 | 1.67E-05 | 0.02890336 |
| 5 | 154994950 | 154994950 | 1 | 5_154994950 | ENSG00000253261 | AC008410.1 | 505 | Downstream | -4.3045194 | 1.67E-05 | 0.02890336 |
| 1 | 11763986 | 11763986 | 1 | 1_11763986 | ENSG00000215910 | C1orf167 | 0 | INTRON | 4.30448322 | 1.67E-05 | 0.02890515 |
| 20 | 18460525 | 18460525 | 1 | 20_18460525 | ENSG00000089091 | DZANK1 | 0 | INTRON | 4.3044358 | 1.67E-05 | 0.02890841 |
| 19 | 57252454 | 57252454 | 1 | 19_57252454 | ENSG00000204524 | ZNF805 | 0 | INTRON | 4.30432675 | 1.67E-05 | 0.02891622 |
| 1 | 70027053 | 70027053 | 1 | 1_70027053 | ENSG00000033122 | LRRC7 | 0 | INTRON | 4.30429873 | 1.68E-05 | 0.02891622 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | 82369797 | 82369797 | 1 | 8_82369797 | ENSG00000254394 | AC060765.2 | 0 | INTRON | 4.30429401 | 1.68E-05 | 0.02891622 |
| 16 | 34861445 | 34861445 | 1 | 16_34861445 | ENSG00000279165 | AC135776.4 | 80531 | Upstream | -4.3042807 | 1.68E-05 | 0.02891622 |
| 6 | 119286320 | 119286320 | 1 | 6_119286320 | ENSG00000111885 | MAN1A1 | 0 | INTRON | -4.3042637 | 1.68E-05 | 0.02891622 |
| 2 | 25780903 | 25780903 | 1 | 2_25780903 | ENSG00000143970 | ASXL2 | 0 | INTRON | -4.3042209 | 1.68E-05 | 0.02891887 |
| 8 | 103119333 | 103119333 | 1 | 8_103119333 | ENSG00000250929 | LINC01181 | 1698 | Upstream | 4.30416332 | 1.68E-05 | 0.02892346 |
| 5 | 68419273 | 68419273 | 1 | 5_68419273 | ENSG00000248884 | AC010280.2 | 11153 | Downstream | -4.3041317 | 1.68E-05 | 0.02892466 |
| 21 | 33525330 | 33525330 | 1 | 21_33525330 | ENSG00000159131 | GART | 0 | INTRON | 4.30406158 | 1.68E-05 | 0.02892933 |
| 1 | 151006703 | 151006703 | 1 | 1_151006703 | ENSG00000143409 | MINDY1 | 0 | 5UTR | -4.304051 | 1.68E-05 | 0.02892933 |
| 12 | 132438295 | 132438295 | 1 | 12_132438295 | ENSG00000274373 | AC148476.1 | 13087 | Upstream | -4.3039629 | 1.68E-05 | 0.02893792 |
| 10 | 119140519 | 119140519 | 1 | 10_119140519 | ENSG00000183605 | SFXN4 | 247 | Downstream | 4.30391003 | 1.68E-05 | 0.02894189 |
| 12 | 110162556 | 110162556 | 1 | 12_110162556 | ENSG00000122970 | IFT81 | 0 | INTRON | 4.30377956 | 1.68E-05 | 0.02895024 |
| 11 | 63560634 | 63560634 | 1 | 11_63560634 | ENSG00000133328 | PLAAT2 | 0 | INTRON | 4.30377894 | 1.68E-05 | 0.02895024 |
| Y | 20348780 | 20348780 | 1 | Y_20348780 | ENSG00000228764 | ZNF885P | 41270 | Upstream | -4.3037788 | 1.68E-05 | 0.02895024 |
| 1 | 183323128 | 183323128 | 1 | 1_183323128 | ENSG00000157064 | NMNAT2 | 0 | INTRON | 4.303722 | 1.68E-05 | 0.02895167 |
| 13 | 102240252 | 102240252 | 1 | 13_102240252 | ENSG00000102466 | FGF14 | 0 | INTRON | 4.30368111 | 1.68E-05 | 0.02895167 |
| 3 | 46530305 | 46530305 | 1 | 3_46530305 | ENSG00000163827 | LRRC2 | 0 | INTRON | -4.3036402 | 1.68E-05 | 0.02895167 |
| 3 | 192055349 | 192055349 | 1 | 3_192055349 | ENSG00000232353 | AC026320.1 | 18792 | Downstream | -4.3036154 | 1.68E-05 | 0.02895167 |
| 5 | 16421797 | 16421797 | 1 | 5_16421797 | ENSG00000248150 | LINC02150 | 0 | INTRON | -4.3035632 | 1.68E-05 | 0.02895167 |
| 2 | 195775968 | 195775968 | 1 | 2_195775968 | ENSG00000118997 | DNAH7 | 0 | EXON | 4.30356136 | 1.68E-05 | 0.02895167 |
| 3 | 130884236 | 130884236 | 1 | 3_130884236 | ENSG00000017260 | ATP2C1 | 0 | INTRON | 4.3035574 | 1.68E-05 | 0.02895167 |
| 13 | 79559464 | 79559464 | 1 | 13_79559464 | ENSG00000102471 | NDFIP2 | 3389 | Downstream | -4.3035551 | 1.68E-05 | 0.02895167 |
| 8 | 138694619 | 138694619 | 1 | 8_138694619 | ENSG00000169436 | COL22A1 | 0 | INTRON | -4.3035484 | 1.68E-05 | 0.02895167 |
| 7 | 113763743 | 113763743 | 1 | 7_113763743 | ENSG00000154415 | PPP1R3A | 113033 | Downstream | -4.3035154 | 1.68E-05 | 0.02895167 |
| 2 | 22901538 | 22901538 | 1 | 2_22901538 | ENSG00000222616 | RN7SKP27 | 39654 | Downstream | 4.30350334 | 1.68E-05 | 0.02895167 |
| 11 | 42515140 | 42515140 | 1 | 11_42515140 | ENSG00000255109 | LINC02740 | 261419 | Upstream | 4.30349879 | 1.68E-05 | 0.02895167 |
| 11 | 8916055 | 8916055 | 1 | 11_8916055 | ENSG00000166452 | AKIP1 | 0 | INTRON | 4.30345978 | 1.68E-05 | 0.02895384 |
| 2 | 175712293 | 175712293 | 1 | 2_175712293 | ENSG00000223976 | EXTL2P1 | 130593 | Upstream | 4.30339302 | 1.68E-05 | 0.02895716 |
| 13 | 21136456 | 21136456 | 1 | 13_21136456 | ENSG00000252128 | SNORD27 | 3429 | Downstream | 4.30337656 | 1.68E-05 | 0.02895716 |
| 19 | 40588647 | 40588647 | 1 | 19_40588647 | ENSG00000160410 | SHKBP1 | 0 | EXON | 4.30334228 | 1.68E-05 | 0.02895716 |
| 2 | 45964986 | 45964986 | 1 | 2_45964986 | ENSG00000171132 | PRKCE | 0 | INTRON | 4.30333855 | 1.68E-05 | 0.02895716 |
| 14 | 83527034 | 83527034 | 1 | 14_83527034 | ENSG00000238561 | RNU6ATAC28P | 223349 | Upstream | 4.30332238 | 1.68E-05 | 0.02895716 |
| 10 | 7779002 | 7779002 | 1 | 10_7779002 | ENSG00000151657 | KIN | 0 | EXON | 4.30322012 | 1.68E-05 | 0.02896761 |
| 9 | 77549954 | 77549954 | 1 | 9_77549954 | ENSG00000156049 | GNA14 | 0 | INTRON | -4.3031225 | 1.68E-05 | 0.02897144 |
| 1 | 14538653 | 14538653 | 1 | 1_14538653 | ENSG00000189337 | KAZN | 0 | INTRON | -4.3031052 | 1.68E-05 | 0.02897144 |
| 7 | 95327106 | 95327106 | 1 | 7_95327106 | ENSG00000005421 | PON1 | 2574 | Upstream | 4.30310078 | 1.68E-05 | 0.02897144 |
| 20 | 35910691 | 35910691 | 1 | 20_35910691 | ENSG00000025293 | PHF20 | 0 | INTRON | -4.3030857 | 1.68E-05 | 0.02897144 |
| 9 | 136629417 | 136629417 | 1 | 9_136629417 | ENSG00000279141 | AL590226.2 | 12236 | Upstream | 4.30307884 | 1.68E-05 | 0.02897144 |
| 8 | 34216676 | 34216676 | 1 | 8_34216676 | ENSG00000254302 | AC087855.2 | 9163 | Downstream | -4.3029343 | 1.69E-05 | 0.02898483 |
| 16 | 59131564 | 59131564 | 1 | 16_59131564 | ENSG00000245768 | AC106793.1 | 0 | INTRON | -4.3029068 | 1.69E-05 | 0.02898483 |
| 10 | 648958 | 648958 | 1 | 10_648958 | ENSG00000151240 | DIP2C | 0 | INTRON | 4.30287603 | 1.69E-05 | 0.02898483 |
| 1 | 54251590 | 54251590 | 1 | 1_54251590 | ENSG00000157216 | SSBP3 | 0 | INTRON | -4.3028677 | 1.69E-05 | 0.02898483 |
| 13 | 23938903 | 23938903 | 1 | 13_23938903 | ENSG00000196593 | ANKRD20A19P | 653 | Downstream | 4.3028424 | 1.69E-05 | 0.02898483 |
| 16 | 18539360 | 18539360 | 1 | 16_18539360 | ENSG00000185164 | NOMO2 | 0 | INTRON | -4.3028422 | 1.69E-05 | 0.02898483 |
| 12 | 28825425 | 28825425 | 1 | 12_28825425 | ENSG00000256513 | AC022081.1 | 0 | INTRON | 4.30277524 | 1.69E-05 | 0.02899067 |
| 12 | 104089308 | 104089308 | 1 | 12_104089308 | ENSG00000111727 | HCFC2 | 0 | INTRON | 4.30272517 | 1.69E-05 | 0.02899233 |
| 8 | 137599143 | 137599143 | 1 | 8_137599143 | ENSG00000285817 | AC105213.1 | 0 | INTRON | -4.3027179 | 1.69E-05 | 0.02899233 |
| 9 | 85867067 | 85867067 | 1 | 9_85867067 | ENSG00000165121 | AL353743.1 | 17525 | Downstream | -4.3026896 | 1.69E-05 | 0.02899254 |
| 3 | 34217307 | 34217307 | 1 | 3_34217307 | ENSG00000226320 | LINC01811 | 0 | INTRON | -4.3026715 | 1.69E-05 | 0.02899254 |
| 8 | 121835915 | 121835915 | 1 | 8_121835915 | ENSG00000248690 | HAS2-AS1 | 0 | INTRON | -4.3025821 | 1.69E-05 | 0.02899973 |
| 16 | 52764425 | 52764425 | 1 | 16_52764425 | ENSG00000261261 | AC026462.4 | 86678 | Downstream | -4.3025718 | 1.69E-05 | 0.02899973 |
| 9 | 111719773 | 111719773 | 1 | 9_111719773 | ENSG00000165181 | SHOC1 | 0 | INTRON | 4.30248804 | 1.69E-05 | 0.02900778 |
| 7 | 10121667 | 10121667 | 1 | 7_10121667 | ENSG00000287409 | AC004936.1 | 36173 | Upstream | 4.30243643 | 1.69E-05 | 0.02900952 |
| 20 | 38620215 | 38620215 | 1 | 20_38620215 | ENSG00000124143 | ARHGAP40 | 0 | INTRON | -4.30243 | 1.69E-05 | 0.02900952 |
| 8 | 40590488 | 40590488 | 1 | 8_40590488 | ENSG00000165061 | ZMAT4 | 0 | INTRON | 4.30237975 | 1.69E-05 | 0.02901318 |
| 2 | 42999945 | 42999945 | 1 | 2_42999945 | ENSG00000224739 | AC016735.1 | 1409 | Downstream | 4.30233236 | 1.69E-05 | 0.02901646 |
| 18 | 53023008 | 53023008 | 1 | 18_53023008 | ENSG00000187323 | DCC | 0 | INTRON | -4.302281 | 1.69E-05 | 0.02902026 |
| 3 | 99166552 | 99166552 | 1 | 3_99166552 | ENSG00000241305 | ACTG1P13 | 48671 | Downstream | 4.30203235 | 1.69E-05 | 0.02904992 |
| 6 | 163400282 | 163400282 | 1 | 6_163400282 | ENSG00000270419 | CAHM | 12782 | Downstream | -4.3019737 | 1.69E-05 | 0.02905468 |
| 7 | 90638923 | 90638923 | 1 | 7_90638923 | ENSG00000058091 | CDK14 | 0 | INTRON | 4.30191545 | 1.69E-05 | 0.02905939 |
| 6 | 158903002 | 158903002 | 1 | 6_158903002 | ENSG00000203711 | C6orf99 | 0 | INTRON | -4.3018642 | 1.69E-05 | 0.02906318 |
| 15 | 74923153 | 74923153 | 1 | 15_74923153 | ENSG00000178741 | COX5A | 0 | INTRON | 4.30180932 | 1.69E-05 | 0.02906745 |
| 19 | 47000441 | 47000441 | 1 | 19_47000441 | ENSG00000160007 | ARHGAP35 | 0 | EXON | 4.30169215 | 1.69E-05 | 0.0290799 |
| 11 | 40449540 | 40449540 | 1 | 11_40449540 | ENSG00000148948 | LRRC4C | 0 | INTRON | 4.30163541 | 1.70E-05 | 0.02908177 |
| 2 | 163321233 | 163321233 | 1 | 2_163321233 | ENSG00000200902 | RNU6-627P | 32137 | Downstream | -4.3016332 | 1.70E-05 | 0.02908177 |
| 4 | 112422481 | 112422481 | 1 | 4_112422481 | ENSG00000073331 | ALPK1 | 0 | INTRON | -4.301515 | 1.70E-05 | 0.02908886 |
| 2 | 120349941 | 120349941 | 1 | 2_120349941 | ENSG00000163083 | INHBB | 0 | 3UTR | 4.3015143 | 1.70E-05 | 0.02908886 |
| 5 | 123314644 | 123314644 | 1 | 5_123314644 | ENSG00000168944 | CEP120 | 30240 | Downstream | 4.30150845 | 1.70E-05 | 0.02908886 |
| 2 | 207859848 | 207859848 | 1 | 2_207859848 | ENSG00000178385 | PLEKHM3 | 0 | INTRON | 4.30148992 | 1.70E-05 | 0.02908886 |
| 2 | 178362642 | 178362642 | 1 | 2_178362642 | ENSG00000079156 | OSBPL6 | 0 | INTRON | -4.3014537 | 1.70E-05 | 0.0290896 |
| 3 | 143082853 | 143082853 | 1 | 3_143082853 | ENSG00000163714 | U2SURP | 22128 | Downstream | 4.30142032 | 1.70E-05 | 0.0290896 |
| 8 | 42722343 | 42722343 | 1 | 8_42722343 | ENSG00000147432 | CHRNB3 | 0 | INTRON | -4.3014173 | 1.70E-05 | 0.0290896 |
| 9 | 33095295 | 33095295 | 1 | 9_33095295 | ENSG00000086062 | B4GALT1 | 8786 | Downstream | 4.30137821 | 1.70E-05 | 0.0290918 |
| 9 | 73033851 | 73033851 | 1 | 9_73033851 | ENSG00000165092 | ALDH1A1 | 0 | INTRON | -4.3010819 | 1.70E-05 | 0.02912781 |
| 7 | 47694495 | 47694495 | 1 | 7_47694495 | ENSG00000221845 | C7orf65 | 32847 | Downstream | 4.30100934 | 1.70E-05 | 0.02913441 |
| 12 | 7496409 | 7496409 | 1 | 12_7496409 | ENSG00000177575 | CD163 | 0 | INTRON | 4.30097437 | 1.70E-05 | 0.02913608 |
| 16 | 73121716 | 73121716 | 1 | 16_73121716 | ENSG00000140836 | ZFHX3 | 0 | INTRON | -4.3009027 | 1.70E-05 | 0.02913664 |
| 8 | 79352653 | 79352653 | 1 | 8_79352653 | ENSG00000253659 | AC138646.1 | 37702 | Downstream | 4.30088753 | 1.70E-05 | 0.02913664 |
| 7 | 153560955 | 153560955 | 1 | 7_153560955 | ENSG00000233489 | PAXBP1P1 | 111080 | Downstream | -4.3008327 | 1.70E-05 | 0.02913664 |
| 5 | 37280406 | 37280406 | 1 | 5_37280406 | ENSG00000270558 | AC025449.1 | 6042 | Downstream | 4.30083113 | 1.70E-05 | 0.02913664 |
| 10 | 3439841 | 3439841 | 1 | 10_3439841 | ENSG00000233321 | LINC02669 | 0 | INTRON | 4.30083046 | 1.70E-05 | 0.02913664 |
| 14 | 51175168 | 51175168 | 1 | 14_51175168 | ENSG00000139921 | TMX1 | 64993 | Upstream | 4.3008026 | 1.70E-05 | 0.02913664 |
| X | 65003603 | 65003603 | 1 | X_65003603 | ENSG00000126970 | ZC4H2 | 0 | INTRON | 4.3007923 | 1.70E-05 | 0.02913664 |
| 5 | 95245390 | 95245390 | 1 | 5_95245390 | ENSG00000175471 | MCTP1 | 0 | INTRON | 4.30079163 | 1.70E-05 | 0.02913664 |
| 17 | 73389208 | 73389208 | 1 | 17_73389208 | ENSG00000069188 | SDK2 | 0 | INTRON | -4.3007481 | 1.70E-05 | 0.02913944 |
| 21 | 14704588 | 14704588 | 1 | 21_14704588 | ENSG00000232884 | AF127936.2 | 23807 | Downstream | -4.3007169 | 1.70E-05 | 0.02914061 |
| 19 | 46820894 | 46820894 | 1 | 19_46820894 | ENSG00000269014 | AC008622.1 | 6000 | Downstream | 4.30068465 | 1.70E-05 | 0.02914192 |
| 16 | 27184871 | 27184871 | 1 | 16_27184871 | ENSG00000261045 | LINC02129 | 8284 | Upstream | -4.3005874 | 1.70E-05 | 0.02914818 |
| 6 | 170693213 | 170693213 | 1 | 6_170693213 | ENSG00000230423 | AL672310.1 | 0 | INTRON | -4.3005463 | 1.70E-05 | 0.02914818 |

| chr | start | end | width | cpgID | nearestGeneID | nearestGeneName | distanceToNearestGene | relativeLocation | stat | pvalue | padj |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | 87445520 | 87445520 | 1 | 6_87445520 | ENSG00000213204 | AL049697.1 | 0 | INTRON | -4.3004694 | 1.70E-05 | 0.02914818 |
| 1 | 109761692 | 109761692 | 1 | 1_109761692 | ENSG00000241720 | AL158847.1 | 0 | INTRON | 4.300465 | 1.70E-05 | 0.02914818 |
| 10 | 4190648 | 4190648 | 1 | 10_4190648 | ENSG00000233117 | LINC00702 | 10492 | Downstream | -4.3004507 | 1.70E-05 | 0.02914818 |
| 16 | 5236884 | 5236884 | 1 | 16_5236884 | ENSG00000285567 | AC074051.5 | 1062 | Downstream | -4.3004492 | 1.70E-05 | 0.02914818 |
| 1 | 75155455 | 75155455 | 1 | 1_75155455 | ENSG00000162624 | LHX8 | 0 | INTRON | 4.3004408 | 1.70E-05 | 0.02914818 |
| 7 | 56154847 | 56154847 | 1 | 7_56154847 | ENSG00000230191 | AC006970.1 | 8297 | Upstream | -4.3004368 | 1.70E-05 | 0.02914818 |
| 12 | 23911907 | 23911907 | 1 | 12_23911907 | ENSG00000134532 | SOX5 | 0 | INTRON | 4.30042649 | 1.70E-05 | 0.02914818 |
| 13 | 111757502 | 111757502 | 1 | 13_111757502 | ENSG00000204398 | AL359649.1 | 84894 | Downstream | 4.30041425 | 1.70E-05 | 0.02914818 |
| 1 | 35422417 | 35422417 | 1 | 1_35422417 | ENSG00000146463 | ZMYM4 | 359 | Downstream | -4.3003746 | 1.71E-05 | 0.02914984 |
| 16 | 17981873 | 17981873 | 1 | 16_17981873 | ENSG00000259929 | AC010601.1 | 0 | INTRON | -4.3003571 | 1.71E-05 | 0.02914984 |
| 8 | 73868289 | 73868289 | 1 | 8_73868289 | ENSG00000258677 | AC022826.2 | 0 | INTRON | 4.3002672 | 1.71E-05 | 0.02915874 |
| 7 | 44584459 | 44584459 | 1 | 7_44584459 | ENSG00000287574 | AC004938.2 | 783 | Downstream | 4.30024094 | 1.71E-05 | 0.02915927 |
| 21 | 33949108 | 33949108 | 1 | 21_33949108 | ENSG00000237945 | LINC00649 | 0 | EXON | 4.3001824 | 1.71E-05 | 0.02916404 |
| 2 | 240738366 | 240738366 | 1 | 2_240738366 | ENSG00000130294 | KIF1A | 0 | INTRON | 4.3001015 | 1.71E-05 | 0.02916773 |
| 17 | 9185315 | 9185315 | 1 | 17_9185315 | ENSG00000065320 | NTN1 | 0 | INTRON | -4.3000895 | 1.71E-05 | 0.02916773 |
| 2 | 120085723 | 120085723 | 1 | 2_120085723 | ENSG00000115109 | EPB41L5 | 0 | INTRON | -4.3000876 | 1.71E-05 | 0.02916773 |
| 17 | 61478934 | 61478934 | 1 | 17_61478934 | ENSG00000121075 | TBX4 | 0 | INTRON | 4.30001613 | 1.71E-05 | 0.02917294 |
| 16 | 34702481 | 34702481 | 1 | 16_34702481 | ENSG00000279165 | AC135776.4 | 239495 | Upstream | -4.3000036 | 1.71E-05 | 0.02917294 |
| 1 | 96982852 | 96982852 | 1 | 1_96982852 | ENSG00000188641 | DPYD | 94890 | Downstream | 4.29997516 | 1.71E-05 | 0.02917375 |
| 14 | 30404742 | 30404742 | 1 | 14_30404742 | ENSG00000279032 | AL079305.1 | 31627 | Downstream | 4.29994349 | 1.71E-05 | 0.02917499 |
| 3 | 50171880 | 50171880 | 1 | 3_50171880 | ENSG00000001617 | SEMA3F | 0 | INTRON | 4.29982527 | 1.71E-05 | 0.02918763 |
| 17 | 3128038 | 3128038 | 1 | 17_3128038 | ENSG00000183024 | OR1G1 | 457 | Upstream | 4.29967273 | 1.71E-05 | 0.02920348 |
| 2 | 88649786 | 88649786 | 1 | 2_88649786 | ENSG00000234028 | EIF2AK3-DT | 17965 | Downstream | 4.29966042 | 1.71E-05 | 0.02920348 |
| 8 | 121645088 | 121645088 | 1 | 8_121645088 | ENSG00000248690 | HAS2-AS1 | 0 | EXON | -4.2996183 | 1.71E-05 | 0.02920611 |
| 16 | 9665692 | 9665692 | 1 | 16_9665692 | ENSG00000260362 | AC007218.1 | 1192 | Downstream | -4.2995677 | 1.71E-05 | 0.0292087 |
| 9 | 133543613 | 133543613 | 1 | 9_133543613 | ENSG00000197859 | ADAMTSL2 | 0 | INTRON | 4.29955418 | 1.71E-05 | 0.0292087 |
| 3 | 33564653 | 33564653 | 1 | 3_33564653 | ENSG00000163539 | CLASP2 | 0 | INTRON | 4.29945204 | 1.71E-05 | 0.02921856 |
| 4 | 48926973 | 48926973 | 1 | 4_48926973 | ENSG00000252913 | RNU6-158P | 5781 | Downstream | -4.2994349 | 1.71E-05 | 0.02921856 |
| 1 | 91277058 | 91277058 | 1 | 1_91277058 | ENSG00000162669 | HFM1 | 0 | EXON | 4.29937283 | 1.71E-05 | 0.0292217 |
| 1 | 12682056 | 12682056 | 1 | 1_12682056 | ENSG00000226166 | AC244670.1 | 10852 | Upstream | -4.2993542 | 1.71E-05 | 0.0292217 |
| 10 | 90502219 | 90502219 | 1 | 10_90502219 | ENSG00000236373 | LINC02653 | 0 | INTRON | 4.29934441 | 1.71E-05 | 0.0292217 |
| 5 | 7679244 | 7679244 | 1 | 5_7679244 | ENSG00000078295 | ADCY2 | 0 | INTRON | -4.2993172 | 1.71E-05 | 0.02922235 |
| 4 | 43993128 | 43993128 | 1 | 4_43993128 | ENSG00000250863 | AC114757.1 | 0 | INTRON | 4.299245 | 1.71E-05 | 0.02922895 |
| 3 | 65916936 | 65916936 | 1 | 3_65916936 | ENSG00000151276 | MAGI1 | 0 | INTRON | 4.29907528 | 1.72E-05 | 0.02924023 |
| 22 | 33419065 | 33419065 | 1 | 22_33419065 | ENSG00000133424 | LARGE1 | 0 | INTRON | 4.29906692 | 1.72E-05 | 0.02924023 |
| X | 54486405 | 54486405 | 1 | X_54486405 | ENSG00000102302 | FGD1 | 0 | INTRON | 4.29905695 | 1.72E-05 | 0.02924023 |
| 1 | 13434332 | 13434332 | 1 | 1_13434332 | ENSG00000204478 | PRAMEF20 | 13004 | Downstream | 4.29904169 | 1.72E-05 | 0.02924023 |
| 1 | 204615341 | 204615341 | 1 | 1_204615341 | ENSG00000240710 | AL512306.3 | 0 | INTRON | -4.2990371 | 1.72E-05 | 0.02924023 |
| 5 | 176115963 | 176115963 | 1 | 5_176115963 | ENSG00000285476 | AC139491.7 | 0 | 3UTR | 4.29902617 | 1.72E-05 | 0.02924023 |
| 4 | 45175910 | 45175910 | 1 | 4_45175910 | ENSG00000248744 | AC108467.1 | 124258 | Downstream | -4.2989704 | 1.72E-05 | 0.02924466 |
| 5 | 171466019 | 171466019 | 1 | 5_171466019 | ENSG00000156427 | FGF18 | 8393 | Downstream | 4.29891774 | 1.72E-05 | 0.02924868 |
| 5 | 24294039 | 24294039 | 1 | 5_24294039 | ENSG00000286134 | AC114930.1 | 22176 | Upstream | -4.2988231 | 1.72E-05 | 0.02925824 |
| 1 | 143227398 | 143227398 | 1 | 1_143227398 | ENSG00000276118 | AC242852.1 | 115781 | Upstream | -4.2987788 | 1.72E-05 | 0.02926115 |
| 22 | 21934833 | 21934833 | 1 | 22_21934833 | ENSG00000100034 | PPM1F | 0 | EXON | -4.2986824 | 1.72E-05 | 0.02927096 |
| 22 | 30125470 | 30125470 | 1 | 22_30125470 | ENSG00000176635 | HORMAD2 | 0 | INTRON | 4.2986096 | 1.72E-05 | 0.02927764 |
| 10 | 8866551 | 8866551 | 1 | 10_8866551 | ENSG00000234752 | LINC02676 | 31437 | Upstream | 4.29857084 | 1.72E-05 | 0.02927818 |
| 10 | 131674294 | 131674294 | 1 | 10_131674294 | ENSG00000189275 | LINC01164 | 98103 | Downstream | 4.29856108 | 1.72E-05 | 0.02927818 |
| 6 | 58260358 | 58260358 | 1 | 6_58260358 | ENSG00000225096 | AL445250.1 | 0 | INTRON | -4.2984703 | 1.72E-05 | 0.0292853 |
| 13 | 112871704 | 112871704 | 1 | 13_112871704 | ENSG00000068650 | ATP11A | 0 | INTRON | 4.29846284 | 1.72E-05 | 0.0292853 |
| 4 | 9341686 | 9341686 | 1 | 4_9341686 | ENSG00000288075 | AC108519.1 | 0 | INTRON | 4.29835312 | 1.72E-05 | 0.02929455 |
| 2 | 201140035 | 201140035 | 1 | 2_201140035 | ENSG00000003402 | CFLAR | 0 | INTRON | 4.29834848 | 1.72E-05 | 0.02929455 |
| 2 | 151910219 | 151910219 | 1 | 2_151910219 | ENSG00000182389 | CACNB4 | 0 | INTRON | 4.29826038 | 1.72E-05 | 0.02930326 |
| 18 | 71544168 | 71544168 | 1 | 18_71544168 | ENSG00000260676 | LINC01541 | 0 | INTRON | 4.2981891 | 1.72E-05 | 0.02930736 |
| 6 | 142868271 | 142868271 | 1 | 6_142868271 | ENSG00000010818 | HIVEP2 | 0 | INTRON | -4.298185 | 1.72E-05 | 0.02930736 |
| 1 | 17521353 | 17521353 | 1 | 1_17521353 | ENSG00000074964 | ARHGEF10L | 18344 | Upstream | 4.29811459 | 1.72E-05 | 0.02931374 |
| 1 | 111536611 | 111536611 | 1 | 1_111536611 | ENSG00000121933 | TMIGD3 | 0 | INTRON | 4.29806947 | 1.72E-05 | 0.02931467 |

**Supplemental Table 2**. Top 10,000 differentially methylated CpG sites between cannabis users and controls after abstinence. WGBS data representing the top 10K CPG sites that showed differential methylation between cannabis users and controls following an 11-week abstinence period.

| Category | Term | Count | % | PValue | Genes | List Total | Pop Hits | Pop Total | Fold Enrichment | Bonferroni | Benjamini | FDR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **KEGG_PATHWAY** | **hsa04724:Glutamatergic synapse** | **29** | **0.008383756** | **3.12E-05** | **GRIA2, SLC1A1, GRIK3, SLC1A2, ITPR1, ITPR2, CACNA1C, GRIK2, ADCY7, ADCY6, GRM3, PPP3CA, GRIN2A, GRM5, PPP3CC, GRM4, GRM7, GRM8, DLGAP1, SLC17A8, GRIA4, PLA2G4A, PRKCA, GNG12, PLCB4, GRIN3A, GNAQ, PLCB1, SHANK2** | **761** | **114** | **6879** | **2.29950204** | **0.008540552** | **0.008577098** | **7.8286E-05** |
| KEGG_PATHWAY | hsa04080:Neuroactive ligand-receptor interaction | 53 | 0.015322037 | 7.10E-05 | GABRB3, NPFFR2, GABRB2, CHRM3, GABRB1, OXTR, THRB, GRIK3, HTR2C, GRIK2, ADRA1B, ADRA1A, RXFP2, GHR, GRM3, GRM5, GRM4, GRM7, GRM8, LEPR, GRID2, AVPR1B, GRID1, GLP2R, TACR1, OPRM1, GABRG3, MTNR1A, CCKBR, PARD3, OPRD1, GRIA2, PTGER2, CHRNA7, CHRNA9, P2RY8, HRH1, GRIN2A, GLRA3, HRH2, CNR1, CHRNE, CHRNA10, DRD1, DRD2, GPR156, GRIA4, GABRA2, GABRA1, NMBR, GRIN3A, P2RX3, LEP | 761 | 277 | 6879 | 1.729564462 | 0.019348564 | 0.009689881 | 8.8442E-05 |
| KEGG_PATHWAY | hsa04020:Calcium signaling pathway | 38 | 0.010985612 | 1.06E-04 | RYR1, CHRM3, OXTR, PDE1C, PDE1A, CHRNA7, ITPR1, HTR2C, ITPR2, CACNA1C, ADRA1B, ADRA1A, ADCY7, CACNA1H, SLC8A1, MYLK4, CACNA1I, PPP3CA, GNA14, HRH1, GNA15, GRIN2A, GRM5, PPP3CC, HRH2, ERBB4, DRD1, AVPR1B, PHKA1, PRKCA, TACR1, PHKA2, PLCB4, P2RX3, CCKBR, GNAQ, VDAC1, PLCB1 | 761 | 179 | 6879 | 1.918983402 | 0.028652678 | 0.009689881 | 8.8442E-05 |
| KEGG_PATHWAY | hsa04015:Rap1 signaling pathway | 41 | 0.011852897 | 3.53E-04 | DOCK4, PIK3R1, EFNA5, SIPA1L2, THBS1, ADCY7, ADCY6, FGF4, IGF1R, CRKL, FGF5, PARD6B, GRIN2A, SIPA1L1, CDH1, CNR1, PDGFD, AKT3, PDGFC, DRD2, MAP2K6, MAGI1, MAGI3, INSR, MAGI2, PRKCA, BRAF, IGF1, VEGFA, FGF14, PLCB4, GNAQ, PARD3, PRKD1, PLCB1, RAF1, RAPGEF5, FGF12, FGFR2, RAPGEF3, SKAP1 | 761 | 210 | 6879 | 1.764839497 | 0.092547968 | 0.024274356 | 0.00022156 |
| KEGG_PATHWAY | hsa04723:Retrograde endocannabinoid signaling | 24 | 0.006938281 | 5.11E-04 | GABRB3, GABRA2, GABRB2, GRIA2, GABRA1, GABRB1, KCNJ6, ITPR1, ITPR2, PRKCA, CACNA1C, GNG12, GABRG3, ADCY7, ADCY6, MAPK10, GRM5, MAPK8, PLCB4, CNR1, GNAQ, SLC17A8, PLCB1, GRIA4 | 761 | 101 | 6879 | 2.147981421 | 0.131139139 | 0.025945477 | 0.00023681 |
| KEGG_PATHWAY | hsa04730:Long-term depression | 17 | 0.004914616 | 5.82E-04 | RYR1, GRIA2, GRID2, ITPR1, PLA2G4A, ITPR2, BRAF, PRKCA, IGF1, IGF1R, GNA13, PLCB4, PPP2R1A, GNAQ, PLCB1, RAF1, PRKG1 | 761 | 60 | 6879 | 2.561169514 | 0.148041305 | 0.025945477 | 0.00023681 |
| KEGG_PATHWAY | hsa04514:Cell adhesion molecules (CAMs) | 30 | 0.008672851 | 7.08E-04 | CD86, CNTNAP2, NLGN1, NRXN1, NRXN3, PTPRF, CDH4, CDH2, CDH1, NCAM2, LRRC4C, TIGIT, JAM2, JAM3, CD276, NLGN4X, CADM1, NEGR1, SELP, CLDN10, CLDN3, CD28, PECAM1, CNTN1, CNTN2, ITGA6, CLDN17, NECTIN3, CD22, NECTIN1 | 761 | 142 | 6879 | 1.909737003 | 0.176993872 | 0.025945477 | 0.00023681 |
| KEGG_PATHWAY | hsa04971:Gastric acid secretion | 19 | 0.005492806 | 7.55E-04 | CHRM3, ITPR1, KCNJ15, ITPR2, PRKCA, ADCY7, ADCY6, MYLK4, ATP4B, PLCB4, CCKBR, HRH2, SST, GNAQ, SLC26A7, PLCB1, EZR, KCNJ1, CFTR | 761 | 73 | 6879 | 2.352726225 | 0.187502295 | 0.025945477 | 0.00023681 |
| KEGG_PATHWAY | hsa04510:Focal adhesion | 39 | 0.011274707 | 9.34E-04 | SHC4, SHC2, SHC3, LAMA2, ROCK1, LAMA1, LAMA3, PXN, RASGRF1, PIK3R1, THBS1, ARHGAP35, IGF1R, CRKL, MYLK4, COMP, PPP1CC, MAPK8, RELN, PDGFD, AKT3, PDGFC, FLNB, FYN, ACTN1, PRKCA, BRAF, IGF1, VEGFA, MAPK10, COL4A2, COL5A1, COL4A1, COL5A2, BCL2, COL4A5, ITGA6, RAF1, DOCK1 | 761 | 206 | 6879 | 1.711346848 | 0.22663301 | 0.028542392 | 0.00026051 |
| KEGG_PATHWAY | hsa04728:Dopaminergic synapse | 27 | 0.007805566 | 0.001424513 | GRIA2, ATF2, ITPR1, ITPR2, CACNA1C, COMT, ARNTL, PPP3CA, PPP1CC, GRIN2A, MAPK8, PPP3CC, PPP2R1A, AKT3, DRD1, DRD2, GRIA4, KCNJ6, PPP2R3B, PRKCA, GNG12, MAPK10, PLCB4, GNAQ, PPP2R2D, PLCB1, CREB5 | 761 | 128 | 6879 | 1.906753039 | 0.32430956 | 0.039174095 | 0.00035755 |
| KEGG_PATHWAY | hsa04720:Long-term potentiation | 17 | 0.004914616 | 0.001767895 | GRIA2, ITPR1, ITPR2, BRAF, PRKCA, CACNA1C, PPP3CA, PPP1CC, GRM5, GRIN2A, PLCB4, PPP3CC, RPS6KA2, GNAQ, PLCB1, RAF1, RAPGEF3 | 761 | 66 | 6879 | 2.328335922 | 0.385287998 | 0.042299196 | 0.00038608 |
| KEGG_PATHWAY | hsa04270:Vascular smooth muscle contraction | 25 | 0.007227376 | 0.0018618 | ROCK1, ITPR1, ITPR2, CACNA1C, ADRA1B, ADRA1A, ADCY7, ADCY6, MYLK4, GNA13, PPP1CC, KCNMB2, PRKG1, PRKCH, AVPR1B, PLA2G4A, PRKCA, BRAF, PLCB4, GNAQ, KCNMA1, PRKCQ, PLCB1, RAF1, RAMP1 | 761 | 117 | 6879 | 1.931500387 | 0.400987061 | 0.042299196 | 0.00038608 |
| KEGG_PATHWAY | hsa04750:Inflammatory mediator regulation of TRP channels | 22 | 0.006360091 | 0.001999598 | PRKCH, PTGER2, ITPR1, PLA2G4A, ITPR2, HTR2C, PRKCA, PIK3R1, IGF1, ADCY7, ADCY6, MAPK10, PPP1CC, HRH1, MAPK8, PLCB4, GNAQ, PRKCQ, TRPM8, PLCB1, ASIC2, MAP2K6 | 761 | 98 | 6879 | 2.029257958 | 0.423304027 | 0.042299196 | 0.00038608 |
| KEGG_PATHWAY | hsa04012:ErbB signaling pathway | 20 | 0.005781901 | 0.002557981 | SHC4, SHC2, SHC3, GAB1, BRAF, CBLB, PRKCA, NRG1, PIK3R1, AREG, CRKL, MAPK10, MAPK8, NRG3, ERBB4, AKT3, NCK2, ABL1, RAF1, NCK1 | 761 | 87 | 6879 | 2.078028003 | 0.505568182 | 0.050246056 | 0.00045861 |
| KEGG_PATHWAY | hsa05033:Nicotine addiction | 12 | 0.003469141 | 0.003165205 | GABRB3, GABRA2, GABRB2, GABRA1, GRIA2, GABRB1, GRIN2A, GRIN3A, CHRNA7, SLC17A8, GABRG3, GRIA4 | 761 | 40 | 6879 | 2.711826544 | 0.581806845 | 0.05802876 | 0.00052964 |
| KEGG_PATHWAY | hsa04022:cGMP-PKG signaling pathway | 30 | 0.008672851 | 0.003894709 | OPRD1, ATF2, ROCK1, ITPR1, ITPR2, GATA4, CACNA1C, ADRA1B, ADRA1A, ADCY7, SLC8A1, ADCY6, MYLK4, GNA13, PPP3CA, PPP1CC, PPP3CC, KCNMB2, AKT3, PRKG1, TRPC6, INSR, PLCB4, GNAQ, KCNMA1, GTF2IRD1, VDAC1, PLCB1, RAF1, CREB5 | 761 | 158 | 6879 | 1.716345914 | 0.65806554 | 0.063262535 | 0.00057741 |
| KEGG_PATHWAY | hsa04520:Adherens junction | 17 | 0.004914616 | 0.003910775 | SMAD2, TCF7L2, TCF7L1, CSNK2A1, ACTN1, INSR, PTPRF, IGF1R, CDH1, PARD3, FYN, CTNNA3, CTNNA2, MAP3K7, NECTIN3, SSX2IP, NECTIN1 | 761 | 71 | 6879 | 2.164368603 | 0.65957878 | 0.063262535 | 0.00057741 |
| KEGG_PATHWAY | hsa05032:Morphine addiction | 20 | 0.005781901 | 0.004349936 | GABRB3, GABRA2, GABRB2, GABRA1, GABRB1, KCNJ6, PDE1C, PDE1A, PDE4D, PRKCA, OPRM1, GNG12, GABRG3, ADCY7, ADCY6, PDE11A, PDE10A, GRK4, PDE4B, DRD1 | 761 | 91 | 6879 | 1.986686113 | 0.698456719 | 0.066389559 | 0.00060596 |
| KEGG_PATHWAY | hsa04810:Regulation of actin cytoskeleton | 37 | 0.010696517 | 0.004586915 | CYFIP2, CHRM3, ROCK1, PXN, PIK3R1, FGD1, ARHGAP35, FGF4, CRKL, MYLK4, FGF5, GNA13, PPP1CC, SCIN, PDGFD, PDGFC, PIP5K1A, PIP4K2A, ACTN1, RDX, LIMK1, RRAS2, MSN, BRAF, SSH2, GNG12, ENAH, DIAPH2, FGF14, DIAPH3, ITGA6, RAF1, EZR, ARHGEF7, DOCK1, FGF12, FGFR2 | 761 | 210 | 6879 | 1.592660034 | 0.717564046 | 0.066389559 | 0.00060596 |
| KEGG_PATHWAY | hsa04071:Sphingolipid signaling pathway | 24 | 0.006938281 | 0.005595946 | OPRD1, CERS6, ROCK1, PPP2R3B, PRKCA, PIK3R1, SGMS2, GAB2, SGPP2, MAPK10, GNA13, MAPK8, PLCB4, SPTLC1, PPP2R1A, GNAQ, PPP2R2D, AKT3, BCL2, FYN, DEGS2, PLCB1, RAF1, CTSD | 761 | 120 | 6879 | 1.807884363 | 0.786305298 | 0.076944251 | 0.00070229 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| KEGG_PATHWAY | hsa04014:Ras signaling pathway | 38 | 0.010985612 | 0.008744803 | SHC4, SHC2, RAB5B, SHC3, RASGRF1, PIK3R1, EFNA5, RASAL3, FGF4, IGF1R, FGF5, GRIN2A, MAPK8, PDGFD, AKT3, PDGFC, ABL1, KSR1, INSR, GAB1, PLA2G4A, RRAS2, PRKCA, PTPN11, IGF1, GAB2, GNG12, VEGFA, MAPK10, FGF14, RASA2, NF1, RAF1, RGL1, RAPGEF5, FGF12, FGFR2, EXOC2 | 761 | 226 | 6879 | 1.519902783 | 0.910668171 | 0.11451528 | 0.00104521 |
| KEGG_PATHWAY | hsa05220:Chronic myeloid leukemia | 16 | 0.004625521 | 0.010863498 | SHC4, SHC2, TGFB1, SHC3, BRAF, CBLB, PTPN11, PIK3R1, GAB2, CRKL, RUNX1, BCR, CDK6, AKT3, ABL1, RAF1 | 761 | 72 | 6879 | 2.008760403 | 0.950402142 | 0.133647424 | 0.00121984 |
| KEGG_PATHWAY | hsa04360:Axon guidance | 24 | 0.006938281 | 0.011177785 | ROBO2, SEMA5A, EPHA7, SEMA6A, ROCK1, SEMA3C, DCC, SEMA3A, SEMA6D, LIMK1, UNC5D, EFNA5, NTN1, ROBO1, PPP3CA, ABLIM1, PPP3CC, DPYSL5, NCK2, ABL1, FYN, LRRC4C, EPHB1, NCK1 | 761 | 127 | 6879 | 1.708237193 | 0.954552592 | 0.133647424 | 0.00121984 |
| KEGG_PATHWAY | hsa04144:Endocytosis | 39 | 0.011274707 | 0.014391474 | RAB5B, ZFYVE9, SH3KBP1, AGAP1, CBLB, ASAP1, ASAP2, IGF1R, SNX3, CYTH3, PARD6B, CYTH4, GRK4, PSD4, PIP5K1A, RAB11FIP3, RAB11FIP4, SH3GL2, SNX6, ARFGEF1, SMAD2, ARFGEF2, RAB4A, SMURF2, IQSEC1, SMURF1, ARAP2, EPS15L1, IGF2R, ARFGAP2, DAB2, ZFYVE16, CAPZA3, HGS, PARD3, CHMP4B, STAMBP, FGFR2, SPG21 | 761 | 241 | 6879 | 1.462810999 | 0.981433747 | 0.158145527 | 0.00144344 |
| KEGG_PATHWAY | hsa04152:AMPK signaling pathway | 23 | 0.006649186 | 0.014840428 | PRKAA1, CAB39, INSR, PPP2R3B, PIK3R1, IGF1, ADRA1A, IGF1R, RPTOR, TBC1D1, PPP2R1A, LEP, PPP2R2D, AKT3, LEPR, CD36, MAP3K7, PPARGC1A, FBP1, PFKM, CFTR, PFKP, CREB5 | 761 | 123 | 6879 | 1.690298388 | 0.983620152 | 0.158145527 | 0.00144344 |
| **KEGG_PATHWAY** | **hsa04713:Circadian entrainment** | **19** | **0.005492806** | **0.014951941** | **RYR1, GRIA2, KCNJ6, ITPR1, PRKCA, CACNA1C, GNG12, ADCY7, ADCY6, CACNA1H, ADCY10, CACNA1I, GRIN2A, MTNR1A, PLCB4, GNAQ, PLCB1, PRKG1, GRIA4** | **761** | **95** | **6879** | **1.807884363** | **0.984122197** | **0.158145527** | **0.00144344** |
| KEGG_PATHWAY | hsa05210:Colorectal cancer | 14 | 0.004047331 | 0.016214931 | SMAD2, TCF7L2, TCF7L1, TGFB1, DCC, BRAF, PIK3R1, MAPK10, MAPK8, MSH2, AKT3, BCL2, CYCS, RAF1 | 761 | 62 | 6879 | 2.041159764 | 0.988842616 | 0.165152076 | 0.00150739 |
| KEGG_PATHWAY | hsa04726:Serotonergic synapse | 21 | 0.006070996 | 0.018174267 | GABRB3, GABRB2, TPH2, GABRB1, KCNJ6, ITPR1, PLA2G4A, ITPR2, HTR2C, BRAF, PRKCA, CACNA1C, GNG12, CYP2C18, PLCB4, ALOX5, GNAQ, KCNN2, PLCB1, RAF1, RAPGEF3 | 761 | 111 | 6879 | 1.710160884 | 0.993551438 | 0.178497266 | 0.00162919 |
| KEGG_PATHWAY | hsa03018:RNA degradation | 16 | 0.004625521 | 0.019741297 | ZCCHC7, PNPT1, DIS3, PARN, CNOT10, TOB1, EDC3, CNOT4, CNOT6, PAN3, CNOT2, PABPC3, PABPC1, CNOT8, PFKM, PFKP | 761 | 77 | 6879 | 1.878321416 | 0.99584382 | 0.187201952 | 0.00170864 |
| KEGG_PATHWAY | hsa05218:Melanoma | 15 | 0.004336426 | 0.021590404 | BRAF, MITF, PIK3R1, IGF1, FGF4, IGF1R, FGF5, FGF14, CDK6, CDH1, PDGFD, PDGFC, AKT3, RAF1, FGF12 | 761 | 71 | 6879 | 1.909737003 | 0.997527174 | 0.197912035 | 0.0018064 |
| KEGG_PATHWAY | hsa03022:Basal transcription factors | 11 | 0.003180046 | 0.022507758 | TAF6L, CDK7, CCNH, ERCC2, TAF4B, TBPL1, GTF2IRD1, TAF4, MNAT1, TAF3, GTF2E2 | 761 | 45 | 6879 | 2.209636443 | 0.99808943 | 0.199665591 | 0.0018224 |
| **KEGG_PATHWAY** | **hsa04390:Hippo signaling pathway** | **26** | **0.007516471** | **0.024586004** | **BMPR2, AREG, GLI2, PPP1CC, PARD6B, PPP2R1A, CDH1, TP53BP2, CTNNA3, CTNNA2, TEAD1, TEAD3, SMAD2, WWTR1, TCF7L2, TCF7L1, TGFB1, FBXW11, SCRIB, WTIP, BMP6, DLG2, PARD3, PPP2R2D, NF2, BMPR1B** | **761** | **151** | **6879** | **1.556456736** | **0.99893593** | **0.211285972** | **0.00192846** |
| **KEGG_PATHWAY** | **hsa04010:MAPK signaling pathway** | **39** | **0.011274707** | **0.029222242** | **ATF2, RASGRF1, CACNA1C, CACNA1H, FGF4, CRKL, FGF5, CACNA1I, PPP3CA, MAPK8, PPP3CC, RPS6KA2, AKT3, FLNB, MAP3K7, MAP4K3, MAP2K6, MAP3K3, TGFB1, JUND, BDNF, CACNA2D1, CACNA2D3, PLA2G4A, RRAS2, PRKCA, BRAF, GNG12, MAPK10, CACNB4, FGF14, TAOK3, RASA2, NF1, RAF1, MAP3K13, FGF12, FGFR2, MAP3K12** | **761** | **253** | **6879** | **1.393428659** | **0.999712955** | **0.243518682** | **0.00222266** |
| KEGG_PATHWAY | hsa04925:Aldosterone synthesis and secretion | 16 | 0.004625521 | 0.030141557 | ATF2, CAMK1D, ITPR1, ITPR2, PRKCA, CACNA1C, ADCY7, ADCY6, CACNA1H, CACNA1I, PLCB4, GNAQ, PRKD1, PLCB1, CAMK1G, CREB5 | 761 | 81 | 6879 | 1.785564803 | 0.999778794 | 0.243792009 | 0.00222516 |
| KEGG_PATHWAY | hsa04921:Oxytocin signaling pathway | 25 | 0.007227376 | 0.039031386 | RYR1, OXTR, PRKAA1, ROCK1, ITPR1, ITPR2, CACNA1C, ADCY7, ADCY6, MYLK4, PPP3CA, PPP1CC, PPP3CC, KCNJ6, CAMK1D, CACNA2D1, CACNA2D3, PLA2G4A, PRKCA, CACNB4, PLCB4, GNAQ, PLCB1, RAF1, CAMK1G | 761 | 150 | 6879 | 1.506570302 | 0.99998242 | 0.306675172 | 0.00279911 |
| KEGG_PATHWAY | hsa04350:TGF-beta signaling pathway | 16 | 0.004625521 | 0.040246707 | SMAD2, TGFB1, BMPR2, ROCK1, SMURF2, SMURF1, ZFYVE9, THBS1, BMP6, SMAD7, ZFYVE16, RBL1, SP1, PPP2R1A, BMPR1B, E2F5 | 761 | 84 | 6879 | 1.721794631 | 0.999987587 | 0.307440123 | 0.00280609 |
| KEGG_PATHWAY | hsa04915:Estrogen signaling pathway | 18 | 0.005203711 | 0.042264942 | SHC4, ATF2, KCNJ6, SHC2, SHC3, ITPR1, ITPR2, PIK3R1, OPRM1, ADCY7, ADCY6, PLCB4, SP1, GNAQ, AKT3, PLCB1, RAF1, CREB5 | 761 | 99 | 6879 | 1.643531239 | 0.999993042 | 0.311082802 | 0.00283934 |
| KEGG_PATHWAY | hsa05014:Amyotrophic lateral sclerosis (ALS) | 11 | 0.003180046 | 0.043954276 | PPP3CA, GRIA2, GRIN2A, PPP3CC, APAF1, ALS2, DERL1, BCL2, SLC1A2, CYCS, MAP2K6 | 761 | 50 | 6879 | 1.988672799 | 0.999995718 | 0.311082802 | 0.00283934 |
| KEGG_PATHWAY | hsa04024:cAMP signaling pathway | 31 | 0.008961946 | 0.044117197 | GRIA2, OXTR, ROCK1, PTGER2, CACNA1C, PIK3R1, ADCY7, ADCY6, PPP1CC, GRIN2A, MAPK8, AKT3, PDE4B, DRD1, DRD2, GRIA4, ABCC4, BDNF, PDE4D, PTCH1, RRAS2, BRAF, MAPK10, ADCY10, GRIN3A, CNGB3, RAF1, PPARA, RAPGEF3, CFTR, CREB5 | 761 | 198 | 6879 | 1.415263011 | 0.999995914 | 0.311082802 | 0.00283934 |
| KEGG_PATHWAY | hsa04924:Renin secretion | 13 | 0.003758236 | 0.04527754 | PDE1C, PTGER2, PDE1A, ITPR1, ITPR2, CACNA1C, ADCY6, PPP3CA, PLCB4, PPP3CC, GNAQ, KCNMA1, PLCB1 | 761 | 64 | 6879 | 1.836132556 | 0.999997074 | 0.31128309 | 0.00284117 |
| KEGG_PATHWAY | hsa04670:Leukocyte transendothelial migration | 20 | 0.005781901 | 0.046733605 | ITK, ROCK1, NCF1, ACTN1, PXN, MSN, PRKCA, PTPN11, PIK3R1, ARHGAP35, CLDN10, CLDN3, PECAM1, CLDN17, CTNNA3, CTNNA2, EZR, RAPGEF3, JAM2, JAM3 | 761 | 115 | 6879 | 1.572073359 | 0.999998077 | 0.31345711 | 0.00286101 |
| KEGG_PATHWAY | hsa04910:Insulin signaling pathway | 23 | 0.006649186 | 0.048328727 | SHC4, PRKAA1, SHC2, SHC3, INSR, BRAF, PPP1R3A, CBLB, PHKA1, PIK3R1, PHKA2, PTPRF, CRKL, MAPK10, RPTOR, HK3, PPP1CC, MAPK8, AKT3, RAF1, PPARGC1A, FBP1, RHOQ | 761 | 138 | 6879 | 1.506570302 | 0.999998787 | 0.315477769 | 0.00287945 |
| KEGG_PATHWAY | hsa05231:Choline metabolism in cancer | 18 | 0.005203711 | 0.049781987 | DGKG, SLC22A3, PCYT1A, SLC44A1, CHKA, SLC44A2, SLC22A2, PLA2G4A, PRKCA, PIK3R1, MAPK10, MAPK8, SP1, PDGFD, PDGFC, AKT3, PIP5K1A, RAF1 | 761 | 101 | 6879 | 1.610986066 | 0.999999203 | 0.315477769 | 0.00287945 |
| KEGG_PATHWAY | hsa04140:Regulation of autophagy | 7 | 0.002023665 | 0.050476443 | PRKAA1, ATG16L1, ATG10, ATG4C, ULK2, ATG14, ATG7 | 761 | 25 | 6879 | 2.531038108 | 0.999999348 | 0.315477769 | 0.00287945 |
| KEGG_PATHWAY | hsa04540:Gap junction | 16 | 0.004625521 | 0.057201586 | ITPR1, ITPR2, HTR2C, PRKCA, ADCY7, ADCY6, GRM5, PLCB4, PDGFD, GNAQ, PDGFC, DRD1, PLCB1, RAF1, DRD2, PRKG1 | 761 | 88 | 6879 | 1.643531239 | 0.999999908 | 0.349565249 | 0.00319058 |
| KEGG_PATHWAY | hsa04725:Cholinergic synapse | 19 | 0.005492806 | 0.060472697 | CHRM3, KCNJ6, CHRNA7, ITPR1, ITPR2, PRKCA, CACNA1C, PIK3R1, GNG12, ADCY7, ADCY6, PLCB4, GNAQ, AKT3, BCL2, FYN, KCNQ5, PLCB1, CREB5 | 761 | 111 | 6879 | 1.547288419 | 0.999999965 | 0.357465218 | 0.00326268 |
| KEGG_PATHWAY | hsa05412:Arrhythmogenic right ventricular cardiomyopathy (ARVC) | 13 | 0.003758236 | 0.061094055 | DSP, TCF7L2, TCF7L1, CACNA2D1, CACNA2D3, CACNA1C, CACNB4, CDH2, ITGA6, DMD, CTNNA3, CTNNA2, SGCG | 761 | 67 | 6879 | 1.753917665 | 0.99999997 | 0.357465218 | 0.00326268 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **KEGG_PATHWAY** | **hsa05200:Pathways in cancer** | **54** | **0.015611132** | **0.067770319** | **CBLB, IGF1R, GLI2, FGF4, CRKL, FGF5, CDH1, AKT3, DCC, MITF, PRKCA, RUNX1, BCR, PLCB4, COL4A2, MSH2, COL4A1, RARA, COL4A5, ITGA6, RAF1, PLCB1, LAMA2, ROCK1, LAMA1, EPAS1, PTGER2, LAMA3, PIK3R1, ADCY7, ADCY6, GNA13, MAPK8, ABL1, CTNNA3, CTNNA2, SMAD2, TCF7L2, ARNT2, TCF7L1, TGFB1, PTCH1, BRAF, IGF1, GNG12, VEGFA, MAPK10, FGF14, CDK6, GNAQ, BCL2, CYCS, FGF12, FGFR2** | **761** | **393** | **6879** | **1.242057959** | **0.999999996** | **0.388267454** | **0.00354382** |
| KEGG_PATHWAY | hsa05146:Amoebiasis | 18 | 0.005203711 | 0.07257853 | RAB5B, TGFB1, LAMA2, LAMA1, ACTN1, LAMA3, PRKCA, PIK3R1, GNA14, GNA15, PLCB4, COL4A2, COL5A1, COL4A1, GNAQ, COL5A2, COL4A5, PLCB1 | 761 | 106 | 6879 | 1.534996157 | 0.999999999 | 0.407328486 | 0.0037178 |
| **KEGG_PATHWAY** | **hsa04611:Platelet activation** | **21** | **0.006070996** | **0.077866135** | **ROCK1, ITPR1, PLA2G4A, ITPR2, PIK3R1, ADCY7, ADCY6, ARHGAP35, MYLK4, GNA13, PPP1CC, GP9, PLCB4, COL5A1, GNAQ, TBXAS1, COL5A2, AKT3, FYN, PLCB1, PRKG1** | **761** | **130** | **6879** | **1.460214293** | **1** | **0.42280544** | **0.00385906** |
| KEGG_PATHWAY | hsa04261:Adrenergic signaling in cardiomyocytes | 22 | 0.006360091 | 0.079092872 | ATF2, CACNA2D1, CACNA2D3, PPP2R3B, PRKCA, CACNA1C, ADRA1B, ADCY7, ADRA1A, ADCY6, PPP1CC, CACNB4, PLCB4, PPP2R1A, GNAQ, PPP2R2D, AKT3, BCL2, SCN7A, PLCB1, RAPGEF3, CREB5 | 761 | 138 | 6879 | 1.441067246 | 1 | 0.42280544 | 0.00385906 |
| KEGG_PATHWAY | hsa04911:Insulin secretion | 15 | 0.004336426 | 0.081486139 | ATF2, CHRM3, ABCC8, PRKCA, CACNA1C, ADCY7, ADCY6, PLCB4, PCLO, GNAQ, KCNMA1, KCNMB2, KCNN2, PLCB1, CREB5 | 761 | 85 | 6879 | 1.595192085 | 1 | 0.42280544 | 0.00385906 |
| KEGG_PATHWAY | hsa04727:GABAergic synapse | 15 | 0.004336426 | 0.081486139 | GABRB3, GABRA2, GABRB2, GABRA1, GABRB1, KCNJ6, PLCL1, PRKCA, CACNA1C, GNG12, GABRG3, ADCY7, GPHN, ADCY6, TRAK2 | 761 | 85 | 6879 | 1.595192085 | 1 | 0.42280544 | 0.00385906 |
| KEGG_PATHWAY | hsa05100:Bacterial invasion of epithelial cells | 14 | 0.004047331 | 0.084446378 | SHC4, SHC2, SHC3, ARHGEF26, PXN, GAB1, CBLB, PIK3R1, CRKL, CDH1, ELMO1, CTNNA3, CTNNA2, DOCK1 | 761 | 78 | 6879 | 1.622460325 | 1 | 0.430050998 | 0.00392519 |
| KEGG_PATHWAY | hsa04512:ECM-receptor interaction | 15 | 0.004336426 | 0.094744606 | LAMA2, LAMA1, LAMA3, THBS1, COMP, GP9, SV2C, RELN, COL4A2, COL5A1, COL4A1, COL5A2, COL4A5, ITGA6, CD36 | 761 | 87 | 6879 | 1.558521002 | 1 | 0.473723032 | 0.0043238 |

**Supplemental Table 3.** KEGG pathway comparison. KEGG pathway comparison between WGBS and RRBS methodologies. Pathways in bold are in common between WGBS and RRBS.

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Organismal Injury and Abnormalities | Head and neck tumor | 7.73E-20 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD16B,ABLIM1,ACBD5,ACBD6,ACSBG1,ACVRL1,ADAT1,ADCY5,ADGRL3,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,ALG6,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,AQP3,ARHGAP31,ARHGAP45,ARHGAP8/PRR5ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,ATP5PF,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BFSP2,BICD2,BRINP1,BTBD9,C1orf105,C1R,C6orf118,CAMTA1,CARD10,CBLB,CBLN4,CCDC190,CCDC33,CCDC61,CCKBR,CCSER1,CDH13,CDH15,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CRH,CRYAA/CRYAA2,CSF3,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CX3CL1,CXXC4,CYB561,CYP51A1,DAB2IP,DAPK1,DBX2,DEGS2,DISC1,DISP3,DLST,DMRT2,DNAH7,DNAH8,DPH6,DPP10,E2F7,E2F8,EBF1,ECD,EIF4EBP2,ENO1,ENPEP,EPHA2,EPS15L1,ERO1A,ETNK1,EXD1,F8,FAM117A,FAM120A,FAM167B,FAM83D,FGF18,FMN1,FNDC7,FUCA2,FYN,GAB1,GALNT13,GALNT17,GATA4,GDNF,GFRAL,GINS2,GNS,GPSM3,GRHL2,GRIK5,HAS2,HEG1,HEXIM2,HIF1A,HNF4G,HNRNPR,HPF1,HTR3B,IBTK,ICE1,IFT46,IGSF21,IGSF9B,IL10RA,IL20RA,INMT,IQCF6,IQGAP1,IRX6,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNJ9,KCNK5,KCTD15,KDM2B,KIF13A,KIF26A,KITLG,KLC1,KLF1,KLF13,let-7,LMX1A,LRCH1,LRRC31,LRRN3,LSAMP,LTB4R2,LYSMD4,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MBD2,MC4R,MCOLN1,MDFIC,MEDAG,MEPE,MGAT4B,MIDN,MITF,MOCS2,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC13,MUC20,MYO3B,MYOD1,NADSYN1,NCKAP5,NELL1,NHLRC3,NKX2-3,NKX2-5,NOL4,NRG2,NSMCE2,NTM,NTPCR,OCSTAMP,ODF3B,OPN4,OR13F1,ORC3,OTOF,OXR1,PABPC4,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PELI2,PERP,PEX26,PGBD5,PHLPP1,PHYHD1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PLSCR5,PNPLA5,POU2AF1,PPIC,PRIMA1,PRKCQ,PROS1,PRPF31,PSAP,PSMG1,PTPRC,PTPRZ1,RAB3C,RAD21L1,RAPGEF2,RASSF8,RBM20,RBMS3,RCC2,REC114,REEP3,RGS20,RHOBTB1,RIMBP2,RIT2,RNF144B,RNF168,RNF213,RNF6,RORA,RPH3AL,RPL3,RPLP1,SAP30L,SCEL,SCML4,SEMA3E,SGCD,SH3TC2,SI,SLC12A2,SLC13A1,SLC13A2,SLC22A5,SLC24A3,SLC25A29,SLC35A3,SLC37A4,SLC38A8,SLC6A15,SLC6A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STMND1,STPG2,STX6,STXBP5L,SYCP3,SYNPO2,SYPL1,SYT17,SYT2,TAP1,TAS2R1,TCEAL3,TCF7L2,TENM3,TEPP,TERF2,TFAP2B,TFEC,TGFB2,TGFBR3,TIMP2,TM9SF2,TMBIM6,TMEM132B,TMPO,TNFSF13B,TNR,TOMM20,TPTE2,TRDN,TRPC7,TRPS1,TSGA13,TSPAN17,TSPAN7,TTC28,TUBB6,TYRP1,USP46,VAT1L,VPS13A,VWA3A,VWA3B,WDR73,WNT3A,WNT8B,XCL1,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF519,ZNF580,ZNF583 | 356 |
| Cancer,Organismal Injury and Abnormalities | Head and neck cancer | 7.74E-20 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD16B,ABLIM1,ACBD5,ACBD6,ACSBG1,ACVRL1,ADAT1,ADCY5,ADGRL3,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,ALG6,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,AQP3,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,ATP5PF,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BFSP2,BICD2,BRINP1,BTBD9,C1R,C6orf118,CAMTA1,CARD10,CBLB,CBLN4,CCDC33,CCDC61,CCKBR,CCSER1,CDH13,CDH15,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CRH,CRYAA/CRYAA2,CSF3,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CX3CL1,CXXC4,CYB561,CYP51A1,DAB2IP,DAPK1,DBX2,DEGS2,DISC1,DISP3,DLST,DMRT2,DNAH7,DNAH8,DPH6,DPP10,E2F7,E2F8,EBF1,ECD,EIF4EBP2,ENO1,ENPEP,EPHA2,EPS15L1,ERO1A,ETNK1,EXD1,F8,FAM117A,FAM120A,FAM167B,FAM83D,FGF18,FMN1,FNDC7,FUCA2,GAB1,GALNT13,GALNT17,GATA4,GDNF,GFRAL,GINS2,GNS,GPSM3,GRHL2,GRIK5,HAS2,HEG1,HIF1A,HNF4G,HNRNPR,HPF1,HTR3B,IBTK,ICE1,IFT46,IGSF21,IGSF9B,IL10RA,IL20RA,INMT,IQCF6,IQGAP1,IRX6,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNJ9,KCNK5,KCTD15,KDM2B,KIF13A,KIF26A,KITLG,KLC1,KLF1,KLF13,let-7,LMX1A,LRCH1,LRRC31,LRRN3,LSAMP,LTB4R2,LYSMD4,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MBD2,MCOLN1,MDFIC,MEDAG,MEPE,MGAT4B,MIDN,MITF,MOCS2,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC13,MUC20,MYO3B,MYOD1,NADSYN1,NCKAP5,NELL1,NHLRC3,NKX2-3,NKX2-5,NOL4,NRG2,NSMCE2,NTPCR,OCSTAMP,ODF3B,OPN4,ORC3,OTOF,OXR1,PABPC4,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PELI2,PERP,PEX26,PGBD5,PHLPP1,PHYHD1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PLSCR5,PNPLA5,POU2AF1,PPIC,PRIMA1,PRKCQ,PROS1,PRPF31,PSAP,PSMG1,PTPRC,PTPRZ1,RAB3C,RAD21L1,RAPGEF2,RASSF8,RBM20,RBMS3,RCC2,REEP3,RGS20,RIMBP2,RIT2,RNF144B,RNF168,RNF213,RNF6,RORA,RPH3AL,RPL3,RPLP1,SAP30L,SCEL,SCML4,SEMA3E,SGCD,SH3TC2,SI,SLC12A2,SLC13A1,SLC13A2,SLC22A5,SLC24A3,SLC25A29,SLC35A3,SLC37A4,SLC38A8,SLC6A15,SLC6A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STX6,STXBP5L,SYCP3,SYNPO2,SYT17,SYT2,TAP1,TAS2R1,TCF7L2,TENM3,TEPP,TERF2,TFAP2B,TFEC,TGFB2,TGFBR3,TIMP2,TM9SF2,TMBIM6,TMEM132B,TMPO,TNFSF13B,TNR,TOMM20,TPTE2,TRDN,TRPC7,TRPS1,TSGA13,TSPAN17,TSPAN7,TTC28,TUBB6,TYRP1,USP46,VAT1L,VPS13A,VWA3A,VWA3B,WDR73,WNT3A,WNT8B,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF519,ZNF580 | 342 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Organismal Injury and Abnormalities | Head and neck carcinoma | 3.34E-19 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD16B,ABLIM1,ACBD5,ACBD6,ACSBG1,ACVRL1,ADAT1,ADCY5,ADGRL3,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,ALG6,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,ATP5PF,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BFSP2,BICD2,BRINP1,BTBD9,C6orf118,CAMTA1,CARD10,CBLB,CBLN4,CCDC33,CCDC61,CCKBR,CCSER1,CDH13,CDH15,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CRH,CRYAA/CRYAA2,CSF3,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CX3CL1,CXXC4,CYB561,CYP51A1,DAB2IP,DAPK1,DBX2,DEGS2,DISC1,DISP3,DLST,DMRT2,DNAH7,DNAH8,DPH6,DPP10,E2F7,E2F8,EBF1,ECD,EIF4EBP2,ENO1,ENPEP,EPHA2,EPS15L1,ERO1A,ETNK1,EXD1,F8,FAM117A,FAM120A,FAM167B,FAM83D,FGF18,FMN1,FNDC7,FUCA2,GAB1,GALNT13,GALNT17,GATA4,GDNF,GFRAL,GINS2,GNS,GPSM3,GRHL2,GRIK5,HAS2,HEG1,HIF1A,HNF4G,HNRNPR,HPF1,HTR3B,IBTK,ICE1,IFT46,IGSF21,IGSF9B,IL10RA,IL20RA,INMT,IQCF6,IQGAP1,IRX6,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNJ9,KCTD15,KDM2B,KIF13A,KIF26A,KITLG,KLC1,KLF1,KLF13,let-7,LMX1A,LRCH1,LRRC31,LRRN3,LSAMP,LTB4R2,LYSMD4,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MBD2,MCOLN1,MDFIC,MEDAG,MEPE,MGAT4B,MIDN,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC13,MUC20,MYO3B,MYOD1,NADSYN1,NCKAP5,NELL1,NHLRC3,NKX2-3,NKX2-5,NOL4,NRG2,NSMCE2,NTPCR,OCSTAMP,ODF3B,OPN4,ORC3,OTOF,OXR1,PABPC4,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PELI2,PERP,PEX26,PGBD5,PHLPP1,PHYHD1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PLSCR5,PNPLA5,POU2AF1,PPIC,PRIMA1,PRKCQ,PROS1,PRPF31,PSAP,PSMG1,PTPRC,PTPRZ1,RAD21L1,RAPGEF2,RASSF8,RBM20,RBMS3,RCC2,REEP3,RGS20,RIMBP2,RIT2,RNF144B,RNF213,RNF6,RORA,RPH3AL,RPL3,RPLP1,SAP30L,SCEL,SCML4,SEMA3E,SGCD,SH3TC2,SI,SLC12A2,SLC13A1,SLC13A2,SLC22A5,SLC24A3,SLC25A29,SLC35A3,SLC37A4,SLC38A8,SLC6A15,SLC6A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STX6,STXBP5L,SYCP3,SYNPO2,SYT17,SYT2,TAP1,TCF7L2,TENM3,TEPP,TERF2,TFAP2B,TFEC,TGFB2,TGFBR3,TIMP2,TM9SF2,TMBIM6,TMEM132B,TMPO,TNFSF13B,TNR,TOMM20,TPTE2,TRDN,TRPC7,TRPS1,TSGA13,TSPAN7,TTC28,TUBB6,TYRP1,USP46,VAT1L,VPS13A,VWA3A,VWA3B,WDR73,WNT3A,WNT8B,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF519,ZNF580 | 333 |
| Cancer,Organismal Injury and Abnormalities | Abdominal carcinoma | 3.64E-19 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD16B,ABHD6,ABLIM1,ACBD5,ACBD6,ACSBG1,ACVRL1,ADAT1,ADCY5,ADGRL3,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,ALG6,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,ATP5PF,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BFSP2,BICD2,BRINP1,BTBD9,C1orf105,C1R,C4orf36,C6orf118,CA10,CAMTA1,CARD10,CBLB,CBLN4,CCDC190,CCDC33,CCDC61,CCKBR,CCSER1,CDH13,CDH15,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CRH,CRYAA/CRYAA2,CSF3,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CX3CL1,CXXC4,CYB561,CYP51A1,DAB2IP,DAPK1,DBX2,DEGS2,DISC1,DISP3,DLST,DMRT2,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,ECD,ENO1,ENPEP,EPHA2,EPS15L1,ERO1A,ETNK1,EXD1,F8,FAM117A,FAM120A,FAM167B,FAM180A,FAM83D,FGF18,FMN1,FNDC7,FUCA2,FYN,GAB1,GALNT13,GALNT17,GATA4,GDNF,GFRAL,GINS2,GJB5,GLO1,GNS,GRHL2,GRIK5,HAS2,HEG1,HEXIM2,HIF1A,HINT1,HMGN3,HNF4G,HNRNPR,HTR3B,IBTK,ICE1,IFT46,IGSF21,IGSF9B,IL10RA,IL20RA,INMT,IQCF6,IQGAP1,IRX6,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNJ9,KCNK5,KCTD15,KDM2B,KIF13A,KIF26A,KITLG,KLC1,KLF1,KLF13,let-7,LMX1A,LRCH1,LRRC31,LRRN3,LSAMP,LTB4R2,LY86,LYSMD4,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MBD2,MC4R,MCOLN1,MDFIC,MEDAG,MEPE,METTL11B,MGAT4B,MIDN,mir-129,MITF,MOCS2,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC13,MUC20,MYO3B,MYOD1,NADSYN1,NCKAP5,NELL1,NHLRC3,NKX2-3,NKX2-5,NOL4,NRG2,NTM,NTPCR,OCSTAMP,OR13F1,ORC3,OTOF,OXR1,PABPC4,PACSIN1,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PELI2,PEX26,PGBD5,PHLPP1,PHYHD1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PLSCR5,PNPLA5,POU2AF1,PPIC,PRIMA1,PRKCQ,PROS1,PRPF31,PRSS54,PSAP,PSMG1,PTPRC,PTPRZ1,RAB3C,RAD21L1,RAPGEF2,RASSF8,RBM20,RCC2,REC114,REEP3,RGS20,RHOBTB1,RIMBP2,RIT2,RNF144B,RNF168,RNF213,RNF6,RORA,RPH3AL,RPL3,SCEL,SCML4,SEMA3E,SGCD,SH3TC2,SI,SLC12A2,SLC12A8,SLC13A1,SLC13A2,SLC22A5,SLC24A3,SLC25A29,SLC35A3,SLC37A4,SLC38A8,SLC6A15,SLC6A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STX6,STXBP5L,STXBP6,SYCP3,SYNPO2,SYT17,SYT2,SYT4,SYT6,TAP1,TAS2R1,TCEAL3,TCF7L2,TENM3,TERF2,TFAP2B,TFEC,TGFB2,TGFBR3,TIMP2,TM9SF2,TMBIM6,TMCC3,TMEM132B,TMEM98,TMPO,TNFSF13B,TNR,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TSGA13,TSPAN17,TSPAN7,TTC28,TUBB6,TYRP1,USP46,VAT1L,VPS13A,VRK1,VWA3A,VWA3B,WDR73,WNT3A,WNT8B,XCL1,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF519,ZNF580,ZNF583 | 362 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Organismal Injury and Abnormalities | Nonhematologic malignant neoplasm | 6.93E-18 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD16B,ABHD6,ABLIM1,ACBD5,ACBD6,ACSBG1,ACTL6A,ACVRL1,ADAT1,ADCY5,ADGRL3,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,ALG6,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,AQP3,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,ATP5PF,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BFSP2,BICD2,BRINP1,BTBD9,C1orf105,C1R,C4orf36,C6orf118,CA10,CAMTA1,CARD10,CBLB,CBLN4,CCDC190,CCDC33,CCDC61,CCKBR,CCSER1,CDH13,CDH15,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CRH,CRYAA/CRYAA2,CSF3,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CX3CL1,CXXC4,CYB561,CYP51A1,DAB2IP,DAPK1,DBX2,DEGS2,DISC1,DISP3,DLST,DMRT2,DNAH7,DNAH8,DPH6,DPP10,E2F7,E2F8,EBF1,ECD,EIF4EBP2,ENO1,ENPEP,EPHA2,EPS15L1,ERO1A,ETNK1,EXD1,F8,FAM117A,FAM120A,FAM167B,FAM180A,FAM83D,FGF18,FMN1,FNDC7,FUCA2,FYN,GAB1,GALNT13,GALNT17,GATA4,GDNF,GFRAL,GINS2,GJB5,GLO1,GNS,GPSM3,GRHL2,GRIK5,HAS2,HEG1,HEXIM2,HIF1A,HINT1,HMGN3,HNF4G,HNRNPR,HPF1,HTR3B,IBTK,ICE1,IFT46,IGSF21,IGSF9B,IL10RA,IL20RA,INMT,IQCF6,IQGAP1,IRX6,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNJ9,KCNK5,KCTD15,KDM2B,KIF13A,KIF26A,KITLG,KLC1,KLF1,KLF13,let-7,LMX1A,LRCH1,LRRC31,LRRN3,LSAMP,LTB4R2,LY86,LYSMD4,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MBD2,MC4R,MCOLN1,MDFIC,MEDAG,MEPE,METTL11B,MGAT4B,MIDN,mir-129,MITF,MOCS2,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC13,MUC20,MYO3B,MYOD1,NADSYN1,NCKAP5,NELL1,NHLRC3,NKX2-3,NKX2-5,NOL4,NRG2,NSMCE2,NTM,NTPCR,OCSTAMP,ODF3B,OPN4,OR13F1,OR6S1,ORC3,OTOF,OXR1,PABPC4,PACSIN1,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PELI2,PERP,PEX26,PGBD5,PHLPP1,PHYHD1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PLSCR5,PNPLA5,POU2AF1,PPIC,PRIMA1,PRKCQ,PROS1,PRPF31,PRSS54,PSAP,PSMG1,PTPRC,PTPRZ1,RAB3B,RAB3C,RAD21L1,RAPGEF2,RASSF8,RBM20,RBMS3,RCC2,REC114,REEP3,RGS20,RHOBTB1,RIMBP2,RIT2,RNF144B,RNF168,RNF213,RNF6,RORA,RPH3AL,RPL3,RPLP1,SAP30L,SCEL,SCML4,SEMA3E,SGCD,SH3TC2,SI,SLC12A2,SLC12A8,SLC13A1,SLC13A2,SLC22A5,SLC24A3,SLC25A29,SLC35A3,SLC37A4,SLC38A8,SLC6A15,SLC6A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STMND1,STPG2,STX6,STXBP5L,STXBP6,SYCP3,SYNPO2,SYPL1,SYT17,SYT2,SYT4,SYT6,TAP1,TAS2R1,TCEAL3,TCF7L2,TENM3,TEPP,TERF2,TFAP2B,TFEC,TGFB2,TGFBR3,TIMP2,TM9SF2,TMBIM6,TMCC3,TMEM132B,TMEM98,TMPO,TNFSF13B,TNR,TOMM20,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TSGA13,TSPAN17,TSPAN7,TTC28,TUBB6,TYRP1,USP46,VAT1L,VPS13A,VRK1,VWA3A,VWA3B,WDR73,WNT3A,WNT8B,XCL1,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF519,ZNF580,ZNF583 | 381 |
| Cancer,Endocrine System Disorders,Organismal Injury and Abnormalities | Thyroid carcinoma | 1.21E-17 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD16B,ABLIM1,ACBD5,ACBD6,ACSBG1,ACVRL1,ADAT1,ADCY5,ADGRL3,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,ALG6,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BFSP2,BICD2,BRINP1,BTBD9,CAMTA1,CARD10,CBLB,CBLN4,CCDC33,CCDC61,CCKBR,CCSER1,CDH13,CDH15,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CRH,CRYAA/CRYAA2,CSF3,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CX3CL1,CXXC4,CYB561,CYP51A1,DAB2IP,DAPK1,DBX2,DEGS2,DISC1,DISP3,DLST,DMRT2,DNAH7,DNAH8,DPH6,DPP10,E2F7,E2F8,EBF1,ECD,ENO1,ENPEP,EPHA2,EPS15L1,ERO1A,ETNK1,EXD1,F8,FAM117A,FAM120A,FAM167B,FAM83D,FMN1,FNDC7,FUCA2,GAB1,GALNT17,GDNF,GFRAL,GINS2,GNS,GPSM3,GRHL2,GRIK5,HEG1,HIF1A,HNF4G,HNRNPR,HPF1,HTR3B,IBTK,ICE1,IFT46,IGSF21,IGSF9B,IL10RA,IL20RA,INMT,IQCF6,IQGAP1,IRX6,ITPKB,JAK2,JUP,KBTBD12,KCNH3,KCNJ9,KCTD15,KDM2B,KIF13A,KIF26A,KITLG,KLC1,KLF1,KLF13,LMX1A,LRCH1,LRRC31,LSAMP,LTB4R2,LYSMD4,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MBD2,MCOLN1,MDFIC,MEDAG,MGAT4B,MIDN,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC13,MUC20,MYO3B,MYOD1,NADSYN1,NCKAP5,NELL1,NHLRC3,NKX2-3,NKX2-5,NOL4,NRG2,NSMCE2,NTPCR,OCSTAMP,ODF3B,OPN4,ORC3,OTOF,OXR1,PABPC4,PAK5,PAPOLA,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PELI2,PERP,PEX26,PGBD5,PHLPP1,PHYHD1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PLSCR5,PNPLA5,POU2AF1,PPIC,PRIMA1,PRKCQ,PROS1,PRPF31,PSAP,PSMG1,PTPRC,PTPRZ1,RAD21L1,RAPGEF2,RASSF8,RBM20,RBMS3,RCC2,REEP3,RGS20,RIMBP2,RIT2,RNF144B,RNF213,RNF6,RORA,RPH3AL,RPL3,RPLP1,SAP30L,SCEL,SEMA3E,SGCD,SH3TC2,SI,SLC12A2,SLC13A1,SLC13A2,SLC22A5,SLC24A3,SLC25A29,SLC35A3,SLC37A4,SLC38A8,SLC6A15,SLC6A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STX6,STXBP5L,SYCP3,SYNPO2,SYT17,SYT2,TAP1,TCF7L2,TENM3,TEPP,TERF2,TFAP2B,TFEC,TGFB2,TGFBR3,TIMP2,TM9SF2,TMBIM6,TMEM132B,TMPO,TNFSF13B,TNR,TOMM20,TPTE2,TRDN,TRPS1,TSGA13,TSPAN7,TTC28,TUBB6,TYRP1,USP46,VAT1L,VPS13A,VWA3A,VWA3B,WNT3A,WNT8B,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF519,ZNF580 | 318 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Endocrine System Disorders,Organismal Injury and Abnormalities | Thyroid gland tumor | 1.26E-17 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD16B,ABLIM1,ACBD5,ACBD6,ACSBG1,ACVRL1,ADAT1,ADCY5,ADGRL3,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,ALG6,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BFSP2,BICD2,BRINP1,BTBD9,CAMTA1,CARD10,CBLB,CBLN4,CCDC33,CCDC61,CCKBR,CCSER1,CDH13,CDH15,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CRH,CRYAA/CRYAA2,CSF3,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CX3CL1,CXXC4,CYB561,CYP51A1,DAB2IP,DAPK1,DBX2,DEGS2,DISC1,DISP3,DLST,DMRT2,DNAH7,DNAH8,DPH6,DPP10,E2F7,E2F8,EBF1,ECD,ENO1,ENPEP,EPHA2,EPS15L1,ERO1A,ETNK1,EXD1,F8,FAM117A,FAM120A,FAM167B,FAM83D,FMN1,FNDC7,FUCA2,GAB1,GALNT17,GDNF,GFRAL,GINS2,GNS,GPSM3,GRHL2,GRIK5,HEG1,HIF1A,HNF4G,HNRNPR,HPF1,HTR3B,IBTK,ICE1,IFT46,IGSF21,IGSF9B,IL10RA,IL20RA,INMT,IQCF6,IQGAP1,IRX6,ITPKB,JAK2,JUP,KBTBD12,KCNH3,KCNJ9,KCTD15,KDM2B,KIF13A,KIF26A,KITLG,KLC1,KLF1,KLF13,LMX1A,LRCH1,LRRC31,LSAMP,LTB4R2,LYSMD4,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MBD2,MCOLN1,MDFIC,MEDAG,MGAT4B,MIDN,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC13,MUC20,MYO3B,MYOD1,NADSYN1,NCKAP5,NELL1,NHLRC3,NKX2-3,NKX2-5,NOL4,NRG2,NSMCE2,NTPCR,OCSTAMP,ODF3B,OPN4,ORC3,OTOF,OXR1,PABPC4,PAK5,PAPOLA,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PELI2,PERP,PEX26,PGBD5,PHLPP1,PHYHD1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PLSCR5,PNPLA5,POU2AF1,PPIC,PRIMA1,PRKCQ,PROS1,PRPF31,PSAP,PSMG1,PTPRC,PTPRZ1,RAD21L1,RAPGEF2,RASSF8,RBM20,RBMS3,RCC2,REEP3,RGS20,RIMBP2,RIT2,RNF144B,RNF213,RNF6,RORA,RPH3AL,RPL3,RPLP1,SAP30L,SCEL,SEMA3E,SGCD,SH3TC2,SI,SLC12A2,SLC13A1,SLC13A2,SLC22A5,SLC24A3,SLC25A29,SLC35A3,SLC37A4,SLC38A8,SLC6A15,SLC6A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STX6,STXBP5L,SYCP3,SYNPO2,SYT17,SYT2,TAP1,TCEAL3,TCF7L2,TENM3,TEPP,TERF2,TFAP2B,TFEC,TGFB2,TGFBR3,TIMP2,TM9SF2,TMBIM6,TMEM132B,TMPO,TNFSF13B,TNR,TOMM20,TPTE2,TRDN,TRPS1,TSGA13,TSPAN7,TTC28,TUBB6,TYRP1,USP46,VAT1L,VPS13A,VWA3A,VWA3B,WNT3A,WNT8B,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF519,ZNF580 | 319 |
| Cancer,Endocrine System Disorders,Organismal Injury and Abnormalities | Nonpituitary endocrine tumor | 1.44E-17 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD16B,ABLIM1,ACBD5,ACBD6,ACSBG1,ACVRL1,ADAT1,ADCY5,ADGRL3,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,ALG6,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BFSP2,BICD2,BRINP1,BTBD9,CAMTA1,CARD10,CBLB,CBLN4,CCDC33,CCDC61,CCKBR,CCSER1,CDH13,CDH15,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CRH,CRYAA/CRYAA2,CSF3,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CX3CL1,CXXC4,CYB561,CYP51A1,DAB2IP,DAPK1,DBX2,DEGS2,DISC1,DISP3,DLST,DMRT2,DNAH7,DNAH8,DPH6,DPP10,E2F7,E2F8,EBF1,ECD,ENO1,ENPEP,EPHA2,EPS15L1,ERO1A,ETNK1,EXD1,F8,FAM117A,FAM120A,FAM167B,FAM83D,FMN1,FNDC7,FUCA2,GAB1,GALNT17,GDNF,GFRAL,GINS2,GNS,GPSM3,GRHL2,GRIK5,HEG1,HIF1A,HNF4G,HNRNPR,HPF1,HTR3B,IBTK,ICE1,IFT46,IGSF21,IGSF9B,IL10RA,IL20RA,INMT,IQCF6,IQGAP1,IRX6,ITPKB,JAK2,JUP,KBTBD12,KCNH3,KCNJ9,KCNK5,KCTD15,KDM2B,KIF13A,KIF26A,KITLG,KLC1,KLF1,KLF13,LMX1A,LRCH1,LRRC31,LSAMP,LTB4R2,LYSMD4,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MBD2,MCOLN1,MDFIC,MEDAG,MGAT4B,MIDN,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC13,MUC20,MYO3B,MYOD1,NADSYN1,NCKAP5,NELL1,NHLRC3,NKX2-3,NKX2-5,NOL4,NRG2,NSMCE2,NTPCR,OCSTAMP,ODF3B,OPN4,ORC3,OTOF,OXR1,PABPC4,PAK5,PAPOLA,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PELI2,PERP,PEX26,PGBD5,PHLPP1,PHYHD1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PLSCR5,PNPLA5,POU2AF1,PPIC,PRIMA1,PRKCQ,PROS1,PRPF31,PSAP,PSMG1,PTPRC,PTPRZ1,RAD21L1,RAPGEF2,RASSF8,RBM20,RBMS3,RCC2,REEP3,RGS20,RIMBP2,RIT2,RNF144B,RNF213,RNF6,RORA,RPH3AL,RPL3,RPLP1,SAP30L,SCEL,SEMA3E,SGCD,SH3TC2,SI,SLC12A2,SLC12A8,SLC13A1,SLC13A2,SLC22A5,SLC24A3,SLC25A29,SLC35A3,SLC37A4,SLC38A8,SLC6A15,SLC6A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STX6,STXBP5L,SYCP3,SYNPO2,SYT17,SYT2,TAP1,TCEAL3,TCF7L2,TENM3,TEPP,TERF2,TFAP2B,TFEC,TGFB2,TGFBR3,TIMP2,TM9SF2,TMBIM6,TMEM132B,TMPO,TNFSF13B,TNR,TOMM20,TPTE2,TRDN,TRPS1,TSGA13,TSPAN7,TTC28,TUBB6,TYRP1,USP46,VAT1L,VPS13A,VWA3A,VWA3B,WNT3A,WNT8B,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF519,ZNF580 | 321 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Organismal Injury and Abnormalities | Adenocarcinoma | 1.91E-17 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD16B,ABHD6,ABLIM1,ACBD5,ACBD6,ACSBG1,ACVRL1,ADAT1,ADCY5,ADGRL3,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,ALG6,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,ATP5PF,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BFSP2,BICD2,BRINP1,BTBD9,C1orf105,C1R,C4orf36,C6orf118,CA10,CAMTA1,CARD10,CBLB,CBLN4,CCDC190,CCDC33,CCKBR,CCSER1,CDH13,CDH15,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CRH,CRYAA/CRYAA2,CSF3,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CX3CL1,CXXC4,CYP51A1,DAB2IP,DAPK1,DBX2,DEGS2,DISC1,DISP3,DLST,DMRT2,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,ECD,ENO1,ENPEP,EPHA2,EPS15L1,ERO1A,ETNK1,EXD1,F8,FAM117A,FAM120A,FAM167B,FAM180A,FAM83D,FGF18,FMN1,FNDC7,FUCA2,FYN,GAB1,GALNT13,GALNT17,GATA4,GDNF,GFRAL,GJB5,GNS,GRHL2,GRIK5,HAS2,HEG1,HEXIM2,HIF1A,HINT1,HMGN3,HNF4G,HNRNPR,HTR3B,IBTK,ICE1,IFT46,IGSF21,IGSF9B,IL10RA,IL20RA,INMT,IQCF6,IQGAP1,IRX6,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNJ9,KCNK5,KCTD15,KDM2B,KIF13A,KIF26A,KITLG,KLC1,KLF1,let-7,LMX1A,LRCH1,LRRC31,LRRN3,LSAMP,LTB4R2,LY86,LYSMD4,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MBD2,MC4R,MCOLN1,MEDAG,MEPE,MGAT4B,MIDN,mir-129,MITF,MOCS2,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC13,MUC20,MYO3B,MYOD1,NADSYN1,NCKAP5,NELL1,NHLRC3,NKX2-3,NKX2-5,NOL4,NRG2,NTM,NTPCR,OCSTAMP,OPN4,OR13F1,ORC3,OTOF,OXR1,PABPC4,PACSIN1,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PELI2,PGBD5,PHLPP1,PHYHD1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PLSCR5,PNPLA5,POU2AF1,PPIC,PRIMA1,PRKCQ,PROS1,PRPF31,PRSS54,PSMG1,PTPRC,PTPRZ1,RAB3C,RAD21L1,RAPGEF2,RASSF8,RBM20,RCC2,REC114,REEP3,RGS20,RIMBP2,RIT2,RNF144B,RNF168,RNF213,RNF6,RORA,RPH3AL,RPL3,SCEL,SCML4,SEMA3E,SGCD,SH3TC2,SI,SLC12A2,SLC12A8,SLC13A1,SLC13A2,SLC22A5,SLC24A3,SLC25A29,SLC35A3,SLC37A4,SLC38A8,SLC6A15,SLC6A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STX6,STXBP5L,STXBP6,SYCP3,SYNPO2,SYT17,SYT2,SYT4,SYT6,TAP1,TAS2R1,TCEAL3,TCF7L2,TENM3,TERF2,TFAP2B,TFEC,TGFB2,TGFBR3,TIMP2,TM9SF2,TMBIM6,TMCC3,TMEM132B,TMPO,TNFSF13B,TNR,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TSPAN17,TSPAN7,TTC28,TUBB6,TYRP1,USP46,VAT1L,VPS13A,VRK1,VWA3A,VWA3B,WDR73,WNT3A,WNT8B,XCL1,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF519,ZNF580,ZNF583 | 351 |
| Cancer,Organismal Injury and Abnormalities | Cancer of secretory structure | 1.92E-17 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD16B,ABLIM1,ACBD5,ACBD6,ACSBG1,ACVRL1,ADAT1,ADCY5,ADGRL3,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,ALG6,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,ATP5PF,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BFSP2,BICD2,BRINP1,BTBD9,C1R,C6orf118,CA10,CAMTA1,CARD10,CBLB,CBLN4,CCDC33,CCDC61,CCKBR,CCSER1,CDH13,CDH15,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CRH,CRYAA/CRYAA2,CSF3,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CX3CL1,CXXC4,CYB561,CYP51A1,DAB2IP,DAPK1,DBX2,DEGS2,DISC1,DISP3,DLST,DMRT2,DNAH7,DNAH8,DPH6,DPP10,E2F7,E2F8,EBF1,ECD,ENO1,ENPEP,EPHA2,EPS15L1,ERO1A,ETNK1,EXD1,F8,FAM117A,FAM120A,FAM167B,FAM180A,FAM83D,FMN1,FNDC7,FUCA2,FYN,GAB1,GALNT17,GATA4,GDNF,GFRAL,GINS2,GNS,GPSM3,GRHL2,GRIK5,HEG1,HEXIM2,HIF1A,HNF4G,HNRNPR,HPF1,HTR3B,IBTK,ICE1,IFT46,IGSF21,IGSF9B,IL10RA,IL20RA,INMT,IQCF6,IQGAP1,IRX6,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNJ9,KCNK5,KCTD15,KDM2B,KIF13A,KIF26A,KITLG,KLC1,KLF1,KLF13,let-7,LMX1A,LRCH1,LRRC31,LSAMP,LTB4R2,LYSMD4,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MBD2,MC4R,MCOLN1,MDFIC,MEDAG,MGAT4B,MIDN,MITF,MOCS2,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC13,MUC20,MYO3B,MYOD1,NADSYN1,NCKAP5,NELL1,NHLRC3,NKX2-3,NKX2-5,NOL4,NRG2,NSMCE2,NTM,NTPCR,OCSTAMP,ODF3B,OPN4,ORC3,OTOF,OXR1,PABPC4,PAK5,PAPOLA,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PELI2,PERP,PEX26,PGBD5,PHLPP1,PHYHD1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PLSCR5,PNPLA5,POU2AF1,PPIC,PRIMA1,PRKCQ,PROS1,PRPF31,PSAP,PSMG1,PTPRC,PTPRZ1,RAD21L1,RAPGEF2,RASSF8,RBM20,RBMS3,RCC2,REEP3,RGS20,RIMBP2,RIT2,RNF144B,RNF213,RNF6,RORA,RPH3AL,RPL3,RPLP1,SAP30L,SCEL,SCML4,SEMA3E,SGCD,SH3TC2,SI,SLC12A2,SLC12A8,SLC13A1,SLC13A2,SLC22A5,SLC24A3,SLC25A29,SLC35A3,SLC37A4,SLC38A8,SLC6A15,SLC6A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STX6,STXBP5L,SYCP3,SYNPO2,SYT17,SYT2,SYT4,TAP1,TCF7L2,TENM3,TEPP,TERF2,TFAP2B,TFEC,TGFB2,TGFBR3,TIMP2,TM9SF2,TMBIM6,TMEM132B,TMPO,TNFSF13B,TNR,TOMM20,TPTE2,TRAM1L1,TRDN,TRPC7,TRPS1,TSGA13,TSPAN7,TTC28,TUBB6,TYRP1,USP46,VAT1L,VPS13A,VWA3A,VWA3B,WNT3A,WNT8B,XCL1,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF519,ZNF580 | 339 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Organismal Injury and Abnormalities | Abdominal adenocarcinoma | 3.72E-17 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD16B,ABHD6,ABLIM1,ACBD5,ACBD6,ACSBG1,ACVRL1,ADAT1,ADCY5,ADGRL3,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,ALG6,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,ATP5PF,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BFSP2,BICD2,BRINP1,BTBD9,C1orf105,C1R,C4orf36,C6orf118,CA10,CAMTA1,CARD10,CBLB,CBLN4,CCDC190,CCDC33,CCKBR,CCSER1,CDH13,CDH15,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CRH,CRYAA/CRYAA2,CSF3,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CX3CL1,CXXC4,CYP51A1,DAB2IP,DAPK1,DBX2,DEGS2,DISC1,DISP3,DLST,DMRT2,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,ECD,ENPEP,EPHA2,EPS15L1,ERO1A,ETNK1,EXD1,F8,FAM117A,FAM120A,FAM167B,FAM180A,FAM83D,FGF18,FMN1,FNDC7,FUCA2,FYN,GAB1,GALNT13,GALNT17,GATA4,GDNF,GFRAL,GJB5,GNS,GRHL2,GRIK5,HAS2,HEG1,HEXIM2,HIF1A,HMGN3,HNF4G,HNRNPR,HTR3B,IBTK,ICE1,IFT46,IGSF21,IGSF9B,IL10RA,IL20RA,INMT,IQGAP1,IRX6,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNJ9,KCNK5,KCTD15,KDM2B,KIF13A,KIF26A,KITLG,KLC1,KLF1,let-7,LMX1A,LRCH1,LRRC31,LRRN3,LSAMP,LTB4R2,LY86,LYSMD4,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MBD2,MC4R,MCOLN1,MEDAG,MEPE,MGAT4B,MIDN,mir-129,MITF,MOCS2,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC13,MUC20,MYO3B,MYOD1,NADSYN1,NCKAP5,NELL1,NHLRC3,NKX2-3,NKX2-5,NOL4,NRG2,NTM,NTPCR,OCSTAMP,ORC3,OTOF,OXR1,PABPC4,PACSIN1,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PELI2,PGBD5,PHLPP1,PHYHD1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PLSCR5,PNPLA5,POU2AF1,PPIC,PRIMA1,PRKCQ,PROS1,PRPF31,PRSS54,PSMG1,PTPRC,PTPRZ1,RAB3C,RAD21L1,RAPGEF2,RASSF8,RBM20,RCC2,REC114,REEP3,RGS20,RIMBP2,RIT2,RNF144B,RNF168,RNF213,RNF6,RORA,RPH3AL,RPL3,SCEL,SCML4,SEMA3E,SGCD,SH3TC2,SI,SLC12A2,SLC12A8,SLC13A1,SLC13A2,SLC22A5,SLC24A3,SLC25A29,SLC35A3,SLC37A4,SLC38A8,SLC6A15,SLC6A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STX6,STXBP5L,STXBP6,SYCP3,SYNPO2,SYT17,SYT2,SYT4,SYT6,TAP1,TAS2R1,TCEAL3,TCF7L2,TENM3,TERF2,TFAP2B,TFEC,TGFB2,TGFBR3,TIMP2,TM9SF2,TMBIM6,TMCC3,TMEM132B,TMPO,TNFSF13B,TNR,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TSPAN17,TSPAN7,TTC28,TUBB6,TYRP1,USP46,VAT1L,VPS13A,VRK1,VWA3A,VWA3B,WDR73,WNT3A,WNT8B,XCL1,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF519,ZNF580,ZNF583 | 346 |
| Cancer,Organismal Injury and Abnormalities | Development of malignant tumor | 5.76E-17 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD6,ABLIM1,ACBD5,ACBD6,ACSBG1,ACVRL1,ADCY5,ADGRL3,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,ATP5PF,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BICD2,BRINP1,BTBD9,C1orf105,C1R,C6orf118,CAMTA1,CARD10,CBLB,CBLN4,CCDC33,CCDC61,CCKBR,CCSER1,CDH13,CDH15,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CRH,CRYAA/CRYAA2,CSF3,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CX3CL1,CXXC4,CYP51A1,DAB2IP,DAPK1,DEGS2,DISC1,DISP3,DLST,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,ECD,ENO1,ENPEP,EPHA2,EXD1,F8,FAM120A,FAM167B,FAM83D,FGF18,FNDC7,FUCA2,FYN,GAB1,GALNT13,GALNT17,GDNF,GFRAL,GINS2,GJB5,GRHL2,GRIK5,HAS2,HEG1,HIF1A,HINT1,HMGN3,HNF4G,HNRNPR,HTR3B,IBTK,ICE1,IGSF21,IGSF9B,IL10RA,INMT,IQGAP1,IRX6,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNJ9,KCNK5,KCTD15,KDM2B,KIF13A,KIF26A,KITLG,KLC1,let-7,LMX1A,LRCH1,LRRC31,LRRN3,LSAMP,LTB4R2,LY86,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MC4R,MCOLN1,MEDAG,MEPE,METTL11B,MGAT4B,MIDN,mir-129,MITF,MOCS2,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC20,MYO3B,MYOD1,NADSYN1,NCKAP5,NELL1,NKX2-5,NOL4,NRG2,NTM,NTPCR,OCSTAMP,OR13F1,ORC3,OTOF,PABPC4,PACSIN1,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PELI2,PGBD5,PHLPP1,PHYHD1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PLSCR5,PNPLA5,POU2AF1,PRIMA1,PRKCQ,PROS1,PRPF31,PRSS54,PSMG1,PTPRC,PTPRZ1,RAB3C,RAD21L1,RAPGEF2,RASSF8,RBM20,RCC2,REC114,RGS20,RHOBTB1,RIMBP2,RIT2,RNF144B,RNF168,RNF213,RNF6,RORA,RPH3AL,SCEL,SCML4,SEMA3E,SH3TC2,SI,SLC12A2,SLC12A8,SLC13A1,SLC13A2,SLC22A5,SLC24A3,SLC25A29,SLC35A3,SLC37A4,SLC6A15,SLC6A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STXBP5L,STXBP6,SYCP3,SYNPO2,SYT4,SYT6,TAP1,TAS2R1,TCEAL3,TCF7L2,TENM3,TERF2,TFAP2B,TFEC,TGFB2,TGFBR3,TIMP2,TM9SF2,TMEM132B,TMPO,TNR,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TSGA13,TSPAN17,TSPAN7,TTC28,TUBB6,TYRP1,VAT1L,VPS13A,VRK1,VWA3A,VWA3B,WDR73,WNT3A,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF519,ZNF580,ZNF583 | 313 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Organismal Injury and Abnormalities | Carcinoma | 6.96E-17 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD16B,ABHD6,ABLIM1,ACBD5,ACBD6,ACSBG1,ACVRL1,ADAT1,ADCY5,ADGRL3,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,ALG6,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,ATP5PF,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BFSP2,BICD2,BRINP1,BTBD9,C1orf105,C1R,C4orf36,C6orf118,CA10,CAMTA1,CARD10,CBLB,CBLN4,CCDC190,CCDC33,CCDC61,CCKBR,CCSER1,CDH13,CDH15,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CRH,CRYAA/CRYAA2,CSF3,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CX3CL1,CXXC4,CYB561,CYP51A1,DAB2IP,DAPK1,DBX2,DEGS2,DISC1,DISP3,DLST,DMRT2,DNAH7,DNAH8,DPH6,DPP10,E2F7,E2F8,EBF1,ECD,EIF4EBP2,ENO1,ENPEP,EPHA2,EPS15L1,ERO1A,ETNK1,EXD1,F8,FAM117A,FAM120A,FAM167B,FAM180A,FAM83D,FGF18,FMN1,FNDC7,FUCA2,FYN,GAB1,GALNT13,GALNT17,GATA4,GDNF,GFRAL,GINS2,GJB5,GLO1,GNS,GPSM3,GRHL2,GRIK5,HAS2,HEG1,HEXIM2,HIF1A,HINT1,HMGN3,HNF4G,HNRNPR,HPF1,HTR3B,IBTK,ICE1,IFT46,IGSF21,IGSF9B,IL10RA,IL20RA,INMT,IQCF6,IQGAP1,IRX6,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNJ9,KCNK5,KCTD15,KDM2B,KIF13A,KIF26A,KITLG,KLC1,KLF1,KLF13,let-7,LMX1A,LRCH1,LRRC31,LRRN3,LSAMP,LTB4R2,LY86,LYSMD4,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MBD2,MC4R,MCOLN1,MDFIC,MEDAG,MEPE,METTL11B,MGAT4B,MIDN,mir-129,MITF,MOCS2,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC13,MUC20,MYO3B,MYOD1,NADSYN1,NCKAP5,NELL1,NHLRC3,NKX2-3,NKX2-5,NOL4,NRG2,NSMCE2,NTM,NTPCR,OCSTAMP,ODF3B,OPN4,OR13F1,OR6S1,ORC3,OTOF,OXR1,PABPC4,PACSIN1,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PELI2,PERP,PEX26,PGBD5,PHLPP1,PHYHD1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PLSCR5,PNPLA5,POU2AF1,PPIC,PRIMA1,PRKCQ,PROS1,PRPF31,PRSS54,PSAP,PSMG1,PTPRC,PTPRZ1,RAB3C,RAD21L1,RAPGEF2,RASSF8,RBM20,RBMS3,RCC2,REC114,REEP3,RGS20,RHOBTB1,RIMBP2,RIT2,RNF144B,RNF168,RNF213,RNF6,RORA,RPH3AL,RPL3,RPLP1,SAP30L,SCEL,SCML4,SEMA3E,SGCD,SH3TC2,SI,SLC12A2,SLC12A8,SLC13A1,SLC13A2,SLC22A5,SLC24A3,SLC25A29,SLC35A3,SLC37A4,SLC38A8,SLC6A15,SLC6A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STX6,STXBP5L,STXBP6,SYCP3,SYNPO2,SYT17,SYT2,SYT4,SYT6,TAP1,TAS2R1,TCEAL3,TCF7L2,TENM3,TEPP,TERF2,TFAP2B,TFEC,TGFB2,TGFBR3,TIMP2,TM9SF2,TMBIM6,TMCC3,TMEM132B,TMEM98,TMPO,TNFSF13B,TNR,TOMM20,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TSGA13,TSPAN17,TSPAN7,TTC28,TUBB6,TYRP1,USP46,VAT1L,VPS13A,VRK1,VWA3A,VWA3B,WDR73,WNT3A,WNT8B,XCL1,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF519,ZNF580,ZNF583 | 376 |
| Cancer,Organismal Injury and Abnormalities | Non-melanoma solid tumor | 7.21E-17 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD16B,ABHD6,ABLIM1,ACBD5,ACBD6,ACSBG1,ACVRL1,ADAT1,ADCY5,ADGRL3,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,ALG6,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,AQP3,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,ATP5PF,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BFSP2,BICD2,BRINP1,BTBD9,C1orf105,C1R,C4orf36,C6orf118,CA10,CAMTA1,CARD10,CBLB,CBLN4,CCDC190,CCDC33,CCDC61,CCKBR,CCSER1,CDH13,CDH15,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CRH,CRYAA/CRYAA2,CSF3,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CX3CL1,CXXC4,CYB561,CYP51A1,DAB2IP,DAPK1,DBX2,DEGS2,DISC1,DISP3,DLST,DMRT2,DNAH7,DNAH8,DPH6,DPP10,E2F7,E2F8,EBF1,ECD,EIF4EBP2,ENO1,ENPEP,EPHA2,EPS15L1,ERO1A,ETNK1,EXD1,F8,FAM117A,FAM120A,FAM167B,FAM180A,FAM83D,FGF18,FMN1,FNDC7,FUCA2,FYN,GAB1,GALNT13,GALNT17,GATA4,GDNF,GFRAL,GINS2,GJB5,GLO1,GNS,GPSM3,GRHL2,GRIK5,HAS2,HEG1,HEXIM2,HIF1A,HINT1,HMGN3,HNF4G,HNRNPR,HPF1,HTR3B,IBTK,ICE1,IFT46,IGSF21,IGSF9B,IL10RA,IL20RA,INMT,IQCF6,IQGAP1,IRX6,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNJ9,KCNK5,KCTD15,KDM2B,KIF13A,KIF26A,KITLG,KLC1,KLF1,KLF13,let-7,LMX1A,LRCH1,LRRC31,LRRN3,LSAMP,LTB4R2,LY86,LYSMD4,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MBD2,MC4R,MCOLN1,MDFIC,MEDAG,MEPE,METTL11B,MGAT4B,MIDN,mir-129,MITF,MOCS2,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC13,MUC20,MYO3B,MYOD1,NADSYN1,NCKAP5,NELL1,NHLRC3,NKX2-3,NKX2-5,NOL4,NRG2,NSMCE2,NTM,NTPCR,OCSTAMP,ODF3B,OPN4,OR13F1,OR6S1,ORC3,OTOF,OXR1,PABPC4,PACSIN1,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PELI2,PERP,PEX26,PGBD5,PHLPP1,PHYHD1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PLSCR5,PNPLA5,POU2AF1,PPIC,PRIMA1,PRKCQ,PROS1,PRPF31,PRSS54,PSAP,PSMG1,PTPRC,PTPRZ1,RAB3C,RAD21L1,RAPGEF2,RASSF8,RBM20,RBMS3,RCC2,REC114,REEP3,RGS20,RHOBTB1,RIMBP2,RIT2,RNF144B,RNF168,RNF213,RNF6,RORA,RPH3AL,RPL3,RPLP1,SAP30L,SCEL,SCML4,SEMA3E,SGCD,SH3TC2,SI,SLC12A2,SLC12A8,SLC13A1,SLC13A2,SLC22A5,SLC24A3,SLC25A29,SLC35A3,SLC37A4,SLC38A8,SLC6A15,SLC6A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STMND1,STPG2,STX6,STXBP5L,STXBP6,SYCP3,SYNPO2,SYPL1,SYT17,SYT2,SYT4,SYT6,TAP1,TAS2R1,TCEAL3,TCF7L2,TENM3,TEPP,TERF2,TFAP2B,TFEC,TGFB2,TGFBR3,TIMP2,TM9SF2,TMBIM6,TMCC3,TMEM132B,TMEM98,TMPO,TNFSF13B,TNR,TOMM20,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TSGA13,TSPAN17,TSPAN7,TTC28,TUBB6,TYRP1,USP46,VAT1L,VPS13A,VRK1,VWA3A,VWA3B,WDR73,WNT3A,WNT8B,XCL1,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF519,ZNF580,ZNF583 | 379 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Organismal Injury and Abnormalities | Frequency of tumor | 7.77E-17 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD6,ABLIM1,ACBD5,ACBD6,ACSBG1,ACVRL1,ADCY5,ADGRL3,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,ALG6,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,ATP5PF,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BICD2,BRINP1,BTBD9,C1orf105,C1R,C6orf118,CAMTA1,CARD10,CBLB,CBLN4,CCDC33,CCDC61,CCKBR,CCSER1,CDH13,CDH15,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CRH,CRYAA/CRYAA2,CSF3,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CX3CL1,CXXC4,CYP51A1,DAB2IP,DAPK1,DEGS2,DISC1,DISP3,DLST,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,ECD,ENO1,ENPEP,EPHA2,EXD1,F8,FAM120A,FAM167B,FAM83D,FGF18,FNDC7,FUCA2,FYN,GAB1,GALNT13,GALNT17,GDNF,GFRAL,GINS2,GJB5,GRHL2,GRIK5,HAS2,HEG1,HIF1A,HINT1,HMGN3,HNF4G,HNRNPR,HTR3B,IBTK,ICE1,IGSF21,IGSF9B,IL10RA,INMT,IQGAP1,IRX6,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNJ9,KCNK5,KCTD15,KDM2B,KIF13A,KIF26A,KITLG,KLC1,let-7,LMX1A,LRCH1,LRRC31,LRRN3,LSAMP,LTB4R2,LY86,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MC4R,MCOLN1,MEDAG,MEPE,METTL11B,MGAT4B,MIDN,mir-129,MITF,MOCS2,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC20,MYO3B,MYOD1,NADSYN1,NCKAP5,NELL1,NKX2-5,NOL4,NRG2,NTM,NTPCR,OCSTAMP,OR13F1,ORC3,OTOF,PABPC4,PACSIN1,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PELI2,PERP,PGBD5,PHLPP1,PHYHD1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PLSCR5,PNPLA5,POU2AF1,PRIMA1,PRKCQ,PROS1,PRPF31,PRSS54,PSMG1,PTPRC,PTPRZ1,RAB3C,RAD21L1,RAPGEF2,RASSF8,RBM20,RCC2,REC114,RGS20,RHOBTB1,RIMBP2,RIT2,RNF144B,RNF168,RNF213,RNF6,RORA,RPH3AL,SCEL,SCML4,SEMA3E,SH3TC2,SI,SLC12A2,SLC12A8,SLC13A1,SLC13A2,SLC22A5,SLC24A3,SLC25A29,SLC35A3,SLC37A4,SLC6A15,SLC6A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STXBP5L,STXBP6,SYCP3,SYNPO2,SYT4,SYT6,TAP1,TAS2R1,TCEAL3,TCF7L2,TENM3,TERF2,TFAP2B,TFEC,TGFB2,TGFBR3,TIMP2,TM9SF2,TMEM132B,TMPO,TNR,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TSGA13,TSPAN17,TSPAN7,TTC28,TUBB6,TYRP1,VAT1L,VPS13A,VRK1,VWA3A,VWA3B,WDR73,WNT3A,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF519,ZNF580,ZNF583 | 315 |
| Cancer,Organismal Injury and Abnormalities | Abdominal cancer | 8.91E-17 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD16B,ABHD6,ABLIM1,ACBD5,ACBD6,ACSBG1,ACVRL1,ADAT1,ADCY5,ADGRL3,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,ALG6,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,AQP3,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,ATP5PF,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BFSP2,BICD2,BRINP1,BTBD9,C1orf105,C1R,C4orf36,C6orf118,CA10,CAMTA1,CARD10,CBLB,CBLN4,CCDC190,CCDC33,CCDC61,CCKBR,CCSER1,CDH13,CDH15,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CRH,CRYAA/CRYAA2,CSF3,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CX3CL1,CXXC4,CYB561,CYP51A1,DAB2IP,DAPK1,DBX2,DEGS2,DISC1,DISP3,DLST,DMRT2,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,ECD,ENO1,ENPEP,EPHA2,EPS15L1,ERO1A,ETNK1,EXD1,F8,FAM117A,FAM120A,FAM167B,FAM180A,FAM83D,FGF18,FMN1,FNDC7,FUCA2,FYN,GAB1,GALNT13,GALNT17,GATA4,GDNF,GFRAL,GINS2,GJB5,GLO1,GNS,GRHL2,GRIK5,HAS2,HEG1,HEXIM2,HIF1A,HINT1,HMGN3,HNF4G,HNRNPR,HTR3B,IBTK,ICE1,IFT46,IGSF21,IGSF9B,IL10RA,IL20RA,INMT,IQCF6,IQGAP1,IRX6,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNJ9,KCNK5,KCTD15,KDM2B,KIF13A,KIF26A,KITLG,KLC1,KLF1,KLF13,let-7,LMX1A,LRCH1,LRRC31,LRRN3,LSAMP,LTB4R2,LY86,LYSMD4,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MBD2,MC4R,MCOLN1,MDFIC,MEDAG,MEPE,METTL11B,MGAT4B,MIDN,mir-129,MITF,MOCS2,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC13,MUC20,MYO3B,MYOD1,NADSYN1,NCKAP5,NELL1,NHLRC3,NKX2-3,NKX2-5,NOL4,NRG2,NSMCE2,NTM,NTPCR,OCSTAMP,OR13F1,ORC3,OTOF,OXR1,PABPC4,PACSIN1,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PELI2,PEX26,PGBD5,PHLPP1,PHYHD1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PLSCR5,PNPLA5,POU2AF1,PPIC,PRIMA1,PRKCQ,PROS1,PRPF31,PRSS54,PSAP,PSMG1,PTPRC,PTPRZ1,RAB3C,RAD21L1,RAPGEF2,RASSF8,RBM20,RCC2,REC114,REEP3,RGS20,RHOBTB1,RIMBP2,RIT2,RNF144B,RNF168,RNF213,RNF6,RORA,RPH3AL,RPL3,SCEL,SCML4,SEMA3E,SGCD,SH3TC2,SI,SLC12A2,SLC12A8,SLC13A1,SLC13A2,SLC22A5,SLC24A3,SLC25A29,SLC35A3,SLC37A4,SLC38A8,SLC6A15,SLC6A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STX6,STXBP5L,STXBP6,SYCP3,SYNPO2,SYT17,SYT2,SYT4,SYT6,TAP1,TAS2R1,TCEAL3,TCF7L2,TENM3,TERF2,TFAP2B,TFEC,TGFB2,TGFBR3,TIMP2,TM9SF2,TMBIM6,TMCC3,TMEM132B,TMEM98,TMPO,TNFSF13B,TNR,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TSGA13,TSPAN17,TSPAN7,TTC28,TUBB6,TYRP1,USP46,VAT1L,VPS13A,VRK1,VWA3A,VWA3B,WDR73,WNT3A,WNT8B,XCL1,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF519,ZNF580,ZNF583 | 364 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Endocrine System Disorders,Organismal Injury and Abnormalities | Endocrine gland tumor | 1.38E-16 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD16B,ABLIM1,ACBD5,ACBD6,ACSBG1,ACVRL1,ADAT1,ADCY5,ADGRL3,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,ALG6,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BFSP2,BICD2,BRINP1,BTBD9,C1orf105,C6orf118,CAMTA1,CARD10,CBLB,CBLN4,CCDC33,CCDC61,CCKBR,CCSER1,CDH13,CDH15,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CRH,CRYAA/CRYAA2,CSF3,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CX3CL1,CXXC4,CYB561,CYP51A1,DAB2IP,DAPK1,DBX2,DEGS2,DISC1,DISP3,DLST,DMRT2,DNAH7,DNAH8,DPH6,DPP10,E2F7,E2F8,EBF1,ECD,ENO1,ENPEP,EPHA2,EPS15L1,ERO1A,ETNK1,EXD1,F8,FAM117A,FAM120A,FAM167B,FAM83D,FMN1,FNDC7,FUCA2,GAB1,GALNT13,GALNT17,GDNF,GFRAL,GINS2,GNS,GPSM3,GRHL2,GRIK5,HEG1,HIF1A,HNF4G,HNRNPR,HPF1,HTR3B,IBTK,ICE1,IFT46,IGSF21,IGSF9B,IL10RA,IL20RA,INMT,IQCF6,IQGAP1,IRX6,ITPKB,JAK2,JUP,KBTBD12,KCNH3,KCNJ9,KCNK5,KCTD15,KDM2B,KIF13A,KIF26A,KITLG,KLC1,KLF1,KLF13,let-7,LMX1A,LRCH1,LRRC31,LSAMP,LTB4R2,LYSMD4,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MBD2,MCOLN1,MDFIC,MEDAG,MGAT4B,MIDN,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC13,MUC20,MYO3B,MYOD1,NADSYN1,NCKAP5,NELL1,NHLRC3,NKX2-3,NKX2-5,NOL4,NRG2,NSMCE2,NTPCR,OCSTAMP,ODF3B,OPN4,ORC3,OTOF,OXR1,PABPC4,PAK5,PAPOLA,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PELI2,PERP,PEX26,PGBD5,PHLPP1,PHYHD1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PLSCR5,PNPLA5,POU2AF1,PPIC,PRIMA1,PRKCQ,PROS1,PRPF31,PSAP,PSMG1,PTPRC,PTPRZ1,RAD21L1,RAPGEF2,RASSF8,RBM20,RBMS3,RCC2,REEP3,RGS20,RIMBP2,RIT2,RNF144B,RNF213,RNF6,RORA,RPH3AL,RPL3,RPLP1,SAP30L,SCEL,SEMA3E,SGCD,SH3TC2,SI,SLC12A2,SLC12A8,SLC13A1,SLC13A2,SLC22A5,SLC24A3,SLC25A29,SLC35A3,SLC37A4,SLC38A8,SLC6A15,SLC6A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STX6,STXBP5L,SYCP3,SYNPO2,SYT17,SYT2,SYT6,TAP1,TAS2R1,TCEAL3,TCF7L2,TENM3,TEPP,TERF2,TFAP2B,TFEC,TGFB2,TGFBR3,TIMP2,TM9SF2,TMBIM6,TMEM132B,TMPO,TNFSF13B,TNR,TOMM20,TPTE2,TRDN,TRPS1,TSGA13,TSPAN7,TTC28,TUBB6,TYRP1,USP46,VAT1L,VPS13A,VWA3A,VWA3B,WNT3A,WNT8B,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF519,ZNF580 | 327 |
| Cancer,Organismal Injury and Abnormalities | Development of carcinoma | 1.72E-16 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD6,ABLIM1,ACBD5,ACBD6,ACSBG1,ACVRL1,ADCY5,ADGRL3,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,ATP5PF,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BICD2,BRINP1,BTBD9,C1orf105,C1R,C6orf118,CAMTA1,CARD10,CBLB,CBLN4,CCDC33,CCDC61,CCKBR,CCSER1,CDH13,CDH15,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CRH,CRYAA/CRYAA2,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CX3CL1,CXXC4,CYP51A1,DAB2IP,DAPK1,DEGS2,DISC1,DISP3,DLST,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,ECD,ENO1,ENPEP,EPHA2,EXD1,F8,FAM120A,FAM167B,FAM83D,FGF18,FNDC7,FUCA2,FYN,GAB1,GALNT13,GALNT17,GDNF,GFRAL,GINS2,GJB5,GRHL2,GRIK5,HAS2,HEG1,HIF1A,HINT1,HMGN3,HNF4G,HNRNPR,HTR3B,IBTK,ICE1,IGSF21,IGSF9B,IL10RA,INMT,IQGAP1,IRX6,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNJ9,KCNK5,KCTD15,KDM2B,KIF13A,KIF26A,KITLG,KLC1,let-7,LMX1A,LRCH1,LRRC31,LRRN3,LSAMP,LY86,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MC4R,MCOLN1,MEDAG,MEPE,METTL11B,MGAT4B,MIDN,mir-129,MITF,MOCS2,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC20,MYO3B,MYOD1,NADSYN1,NCKAP5,NELL1,NKX2-5,NOL4,NRG2,NTM,NTPCR,OCSTAMP,OR13F1,ORC3,OTOF,PABPC4,PACSIN1,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PELI2,PGBD5,PHLPP1,PHYHD1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PLSCR5,PNPLA5,POU2AF1,PRIMA1,PRKCQ,PROS1,PRPF31,PRSS54,PSMG1,PTPRC,PTPRZ1,RAB3C,RAD21L1,RAPGEF2,RASSF8,RBM20,RCC2,REC114,RGS20,RHOBTB1,RIMBP2,RIT2,RNF144B,RNF168,RNF213,RNF6,RORA,RPH3AL,SCEL,SCML4,SEMA3E,SH3TC2,SI,SLC12A2,SLC12A8,SLC13A1,SLC13A2,SLC22A5,SLC24A3,SLC25A29,SLC35A3,SLC37A4,SLC6A15,SLC6A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STXBP5L,STXBP6,SYCP3,SYNPO2,SYT4,SYT6,TAP1,TAS2R1,TCEAL3,TCF7L2,TENM3,TERF2,TFAP2B,TFEC,TGFBR3,TIMP2,TM9SF2,TMEM132B,TMPO,TNR,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TSGA13,TSPAN17,TSPAN7,TTC28,TUBB6,TYRP1,VAT1L,VPS13A,VRK1,VWA3A,VWA3B,WDR73,WNT3A,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF519,ZNF580,ZNF583 | 310 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Organismal Injury and Abnormalities | Tumorigenesis of epithelial neoplasm | 1.74E-16 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD6,ABLIM1,ACBD5,ACBD6,ACSBG1,ACVRL1,ADCY5,ADGRL3,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,ALG6,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,ATP5PF,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BICD2,BRINP1,BTBD9,C1orf105,C1R,C6orf118,CAMTA1,CARD10,CBLB,CBLN4,CCDC33,CCDC61,CCKBR,CCSER1,CDH13,CDH15,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CRH,CRYAA/CRYAA2,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CX3CL1,CXXC4,CYP51A1,DAB2IP,DAPK1,DEGS2,DISC1,DISP3,DLST,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,ECD,ENO1,ENPEP,EPHA2,EXD1,F8,FAM120A,FAM167B,FAM83D,FGF18,FNDC7,FUCA2,FYN,GAB1,GALNT13,GALNT17,GDNF,GFRAL,GINS2,GJB5,GRHL2,GRIK5,HAS2,HEG1,HIF1A,HINT1,HMGN3,HNF4G,HNRNPR,HTR3B,IBTK,ICE1,IGSF21,IGSF9B,IL10RA,INMT,IQGAP1,IRX6,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNJ9,KCNK5,KCTD15,KDM2B,KIF13A,KIF26A,KITLG,KLC1,let-7,LMX1A,LRCH1,LRRC31,LRRN3,LSAMP,LY86,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MC4R,MCOLN1,MEDAG,MEPE,METTL11B,MGAT4B,MIDN,mir-129,MITF,MOCS2,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC20,MYO3B,MYOD1,NADSYN1,NCKAP5,NELL1,NKX2-5,NOL4,NRG2,NTM,NTPCR,OCSTAMP,OR13F1,ORC3,OTOF,PABPC4,PACSIN1,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PELI2,PERP,PGBD5,PHLPP1,PHYHD1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PLSCR5,PNPLA5,POU2AF1,PRIMA1,PRKCQ,PROS1,PRPF31,PRSS54,PSMG1,PTPRC,PTPRZ1,RAB3C,RAD21L1,RAPGEF2,RASSF8,RBM20,RCC2,REC114,RGS20,RHOBTB1,RIMBP2,RIT2,RNF144B,RNF168,RNF213,RNF6,RORA,RPH3AL,SCEL,SCML4,SEMA3E,SH3TC2,SI,SLC12A2,SLC12A8,SLC13A1,SLC13A2,SLC22A5,SLC24A3,SLC25A29,SLC35A3,SLC37A4,SLC6A15,SLC6A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STXBP5L,STXBP6,SYCP3,SYNPO2,SYT4,SYT6,TAP1,TAS2R1,TCEAL3,TCF7L2,TENM3,TERF2,TFAP2B,TFEC,TGFBR3,TIMP2,TM9SF2,TMEM132B,TMPO,TNR,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TSGA13,TSPAN17,TSPAN7,TTC28,TUBB6,TYRP1,VAT1L,VPS13A,VRK1,VWA3A,VWA3B,WDR73,WNT3A,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF519,ZNF580,ZNF583 | 312 |
| Cancer,Organismal Injury and Abnormalities | Malignant solid organ tumor | 2.54E-16 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD6,ACBD5,ACSBG1,ACVRL1,ADCY5,ADGRL3,AFAP1L2,AGBL1,AGO2,AMZ1,ANKRD22,ANKS1B,AQP3,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BFSP2,BICD2,BRINP1,BTBD9,C1orf105,C1R,C6orf118,CA10,CAMTA1,CARD10,CBLB,CBLN4,CCDC33,CCKBR,CCSER1,CDH13,CDH15,CDH19,CDH22,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CRH,CRYAA/CRYAA2,CSMD3,CSNK1G2,CTNND2,CX3CL1,CXXC4,CYB561,DAPK1,DBX2,DEGS2,DISC1,DISP3,DLST,DMRT2,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,EIF4EBP2,ENPEP,EPHA2,EPS15L1,ERO1A,ETNK1,EXD1,F8,FAM117A,FAM120A,FAM83D,FMN1,FNDC7,FYN,GAB1,GALNT13,GALNT17,GATA4,GFRAL,GJB5,GLO1,GRHL2,GRIK5,HAS2,HEG1,HIF1A,HNF4G,HTR3B,IBTK,ICE1,IGSF21,IGSF9B,IL10RA,IL20RA,INMT,IQGAP1,IRX6,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNJ9,KCNK5,KDM2B,KIF13A,KIF26A,KITLG,KLC1,LMX1A,LRCH1,LRRC31,LRRN3,LY86,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MC4R,MCOLN1,MEDAG,MEPE,METTL11B,MGAT4B,MITF,MROH2B,MSH5,MTSS1,MUC13,MUC20,MYO3B,MYOD1,NADSYN1,NCKAP5,NELL1,NKX2-5,NOL4,NRG2,NTM,NTPCR,OCSTAMP,OPN4,OR13F1,OR6S1,ORC3,OTOF,OXR1,PABPC4,PACSIN1,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PELI2,PEX26,PGBD5,PHLPP1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PNPLA5,POU2AF1,PRIMA1,PRKCQ,PROS1,PRPF31,PRSS54,PSAP,PTPRC,PTPRZ1,RAB3B,RAB3C,RAD21L1,RAPGEF2,RASSF8,RBM20,RBMS3,REEP3,RGS20,RHOBTB1,RIMBP2,RIT2,RNF144B,RNF213,RORA,RPH3AL,RPL3,SCEL,SCML4,SEMA3E,SGCD,SH3TC2,SI,SLC12A2,SLC12A8,SLC13A1,SLC13A2,SLC24A3,SLC38A8,SLC6A15,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SMC1B,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STMND1,STPG2,STXBP5L,SYNPO2,SYPL1,SYT17,SYT2,SYT4,TAP1,TAS2R1,TCEAL3,TCF7L2,TENM3,TEPP,TERF2,TFAP2B,TFEC,TMCC3,TMEM132B,TMEM98,TMPO,TNFSF13B,TNR,TPTE2,TRAM1L1,TRDN,TRPC7,TRPS1,TSGA13,TSPAN17,TTC28,TYRP1,VAT1L,VPS13A,VRK1,VWA3A,VWA3B,WDR73,WNT3A,XCL1,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF583 | 292 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Endocrine System Disorders,Organismal Injury and Abnormalities | Endocrine carcinoma | 3.74E-16 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD16B,ABLIM1,ACBD5,ACBD6,ACSBG1,ACVRL1,ADAT1,ADCY5,ADGRL3,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,ALG6,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BFSP2,BICD2,BRINP1,BTBD9,C1orf105,C6orf118,CAMTA1,CARD10,CBLB,CBLN4,CCDC33,CCDC61,CCKBR,CCSER1,CDH13,CDH15,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CRH,CRYAA/CRYAA2,CSF3,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CX3CL1,CXXC4,CYB561,CYP51A1,DAB2IP,DAPK1,DBX2,DEGS2,DISC1,DISP3,DLST,DMRT2,DNAH7,DNAH8,DPH6,DPP10,E2F7,E2F8,EBF1,ECD,ENO1,ENPEP,EPHA2,EPS15L1,ERO1A,ETNK1,EXD1,F8,FAM117A,FAM120A,FAM167B,FAM83D,FMN1,FNDC7,FUCA2,GAB1,GALNT13,GALNT17,GDNF,GFRAL,GINS2,GNS,GPSM3,GRHL2,GRIK5,HEG1,HIF1A,HNF4G,HNRNPR,HPF1,HTR3B,IBTK,ICE1,IFT46,IGSF21,IGSF9B,IL10RA,IL20RA,INMT,IQCF6,IQGAP1,IRX6,ITPKB,JAK2,JUP,KBTBD12,KCNH3,KCNJ9,KCTD15,KDM2B,KIF13A,KIF26A,KITLG,KLC1,KLF1,KLF13,LMX1A,LRCH1,LRRC31,LSAMP,LTB4R2,LYSMD4,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MBD2,MCOLN1,MDFIC,MEDAG,MGAT4B,MIDN,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC13,MUC20,MYO3B,MYOD1,NADSYN1,NCKAP5,NELL1,NHLRC3,NKX2-3,NKX2-5,NOL4,NRG2,NSMCE2,NTPCR,OCSTAMP,ODF3B,OPN4,ORC3,OTOF,OXR1,PABPC4,PAK5,PAPOLA,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PELI2,PERP,PEX26,PGBD5,PHLPP1,PHYHD1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PLSCR5,PNPLA5,POU2AF1,PPIC,PRIMA1,PRKCQ,PROS1,PRPF31,PSAP,PSMG1,PTPRC,PTPRZ1,RAD21L1,RAPGEF2,RASSF8,RBM20,RBMS3,RCC2,REEP3,RGS20,RIMBP2,RIT2,RNF144B,RNF213,RNF6,RORA,RPH3AL,RPL3,RPLP1,SAP30L,SCEL,SEMA3E,SGCD,SH3TC2,SI,SLC12A2,SLC13A1,SLC13A2,SLC22A5,SLC24A3,SLC25A29,SLC35A3,SLC37A4,SLC38A8,SLC6A15,SLC6A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STX6,STXBP5L,SYCP3,SYNPO2,SYT17,SYT2,SYT6,TAP1,TAS2R1,TCF7L2,TENM3,TEPP,TERF2,TFAP2B,TFEC,TGFB2,TGFBR3,TIMP2,TM9SF2,TMBIM6,TMEM132B,TMPO,TNFSF13B,TNR,TOMM20,TPTE2,TRDN,TRPS1,TSGA13,TSPAN7,TTC28,TUBB6,TYRP1,USP46,VAT1L,VPS13A,VWA3A,VWA3B,WNT3A,WNT8B,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF519,ZNF580 | 323 |
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Gastrointestinal carcinoma | 4.6E-16 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD16B,ABLIM1,ACBD5,ACBD6,ACSBG1,ACVRL1,ADCY5,ADGRL3,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,ALG6,AMD1,AMZ1,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,ATP5PF,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BFSP2,BICD2,BRINP1,BTBD9,C1orf105,C1R,C4orf36,C6orf118,CA10,CAMTA1,CARD10,CBLB,CCDC190,CCDC33,CCKBR,CCSER1,CDH13,CDH15,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CRH,CRYAA/CRYAA2,CSF3,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CXXC4,CYP51A1,DAB2IP,DAPK1,DBX2,DEGS2,DISC1,DISP3,DLST,DMRT2,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,ECD,EIF4EBP2,ENPEP,EPHA2,EPS15L1,ERO1A,ETNK1,F8,FAM120A,FAM167B,FAM83D,FGF18,FMN1,FUCA2,FYN,GAB1,GALNT13,GALNT17,GATA4,GDNF,GFRAL,GINS2,GNS,GRHL2,GRIK5,HAS2,HEG1,HIF1A,HINT1,HMGN3,HNF4G,HNRNPR,HTR3B,IBTK,ICE1,IFT46,IGSF21,IGSF9B,IL10RA,IL20RA,INMT,IQCF6,IQGAP1,IRX6,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNJ9,KCNK5,KCTD15,KDM2B,KIF13A,KIF26A,KITLG,KLC1,let-7,LMX1A,LRCH1,LRRC31,LRRN3,LSAMP,LTB4R2,LYSMD4,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MBD2,MC4R,MCOLN1,MEDAG,MEPE,METTL11B,MGAT4B,MIDN,MITF,MOCS2,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC13,MUC20,MYO3B,MYOD1,NADSYN1,NCKAP5,NELL1,NHLRC3,NKX2-3,NKX2-5,NOL4,NRG2,NTM,NTPCR,OCSTAMP,OPN4,ORC3,OTOF,OXR1,PABPC4,PACSIN1,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PELI2,PGBD5,PHLPP1,PHYHD1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLSCR5,PNPLA5,POU2AF1,PPIC,PRIMA1,PRKCQ,PROS1,PRPF31,PTPRC,PTPRZ1,RAB3C,RAD21L1,RAPGEF2,RASSF8,RBM20,RCC2,REC114,REEP3,RGS20,RHOBTB1,RIMBP2,RIT2,RNF144B,RNF168,RNF213,RNF6,RORA,RPH3AL,RPL3,SCEL,SCML4,SEMA3E,SH3TC2,SI,SLC12A2,SLC13A1,SLC13A2,SLC24A3,SLC25A29,SLC35A3,SLC37A4,SLC38A8,SLC6A15,SLC6A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STX6,STXBP5L,SYCP3,SYNPO2,SYT17,SYT2,SYT4,SYT6,TAP1,TAS2R1,TCF7L2,TENM3,TERF2,TFAP2B,TFEC,TGFB2,TGFBR3,TM9SF2,TMBIM6,TMCC3,TMEM132B,TMPO,TNR,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TSGA13,TSPAN17,TSPAN7,TTC28,TUBB6,TYRP1,VAT1L,VPS13A,VRK1,VWA3A,VWA3B,WDR73,WNT3A,XYLT1,ZDHHC14,ZNF276,ZNF519,ZNF580,ZNF583 | 325 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Organismal Injury and Abnormalities | Abdominal neoplasm | 5.17E-16 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD16B,ABHD6,ABLIM1,ACBD5,ACBD6,ACSBG1,ACVRL1,ADAT1,ADCY5,ADGRL3,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,ALG6,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,AQP3,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,ATP5PF,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BFSP2,BICD2,BRINP1,BTBD9,C1orf105,C1R,C4orf36,C6orf118,CA10,CAMTA1,CARD10,CBLB,CBLN4,CCDC190,CCDC33,CCDC61,CCKBR,CCSER1,CDH13,CDH15,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CRH,CRYAA/CRYAA2,CSF3,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CX3CL1,CXXC4,CYB561,CYP51A1,DAB2IP,DAPK1,DBX2,DEGS2,DISC1,DISP3,DLST,DMRT2,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,ECD,ENO1,ENPEP,EPHA2,EPS15L1,ERO1A,ETNK1,EXD1,F8,FAM117A,FAM120A,FAM167B,FAM180A,FAM83D,FGF18,FMN1,FNDC7,FUCA2,FYN,GAB1,GALNT13,GALNT17,GATA4,GDNF,GFRAL,GINS2,GJB5,GLO1,GNS,GRHL2,GRIK5,HAS2,HEG1,HEXIM2,HIF1A,HINT1,HMGN3,HNF4G,HNRNPR,HTR3B,IBTK,ICE1,IFT46,IGSF21,IGSF9B,IL10RA,IL20RA,INMT,IQCF6,IQGAP1,IRX6,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNJ9,KCNK5,KCTD15,KDM2B,KIF13A,KIF26A,KITLG,KLC1,KLF1,KLF13,let-7,LMX1A,LRCH1,LRRC31,LRRN3,LSAMP,LTB4R2,LY86,LYSMD4,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MBD2,MC4R,MCOLN1,MDFIC,MEDAG,MEPE,METTL11B,MGAT4B,MIDN,mir-129,MITF,MOCS2,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC13,MUC20,MYO3B,MYOD1,NADSYN1,NCKAP5,NELL1,NHLRC3,NKX2-3,NKX2-5,NOL4,NRG2,NSMCE2,NTM,NTPCR,OCSTAMP,OR13F1,ORC3,OTOF,OXR1,PABPC4,PACSIN1,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PELI2,PEX26,PGBD5,PHLPP1,PHYHD1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PLSCR5,PNPLA5,POU2AF1,PPIC,PRIMA1,PRKCQ,PROS1,PRPF31,PRSS54,PSAP,PSMG1,PTPRC,PTPRZ1,RAB3C,RAD21L1,RAPGEF2,RASSF8,RBM20,RCC2,REC114,REEP3,RGS20,RHOBTB1,RIMBP2,RIT2,RNF144B,RNF168,RNF213,RNF6,RORA,RPH3AL,RPL3,SCEL,SCML4,SEMA3E,SGCD,SH3TC2,SI,SLC12A2,SLC12A8,SLC13A1,SLC13A2,SLC22A5,SLC24A3,SLC25A29,SLC35A3,SLC37A4,SLC38A8,SLC6A15,SLC6A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STX6,STXBP5L,STXBP6,SYCP3,SYNPO2,SYT17,SYT2,SYT4,SYT6,TAP1,TAS2R1,TCEAL3,TCF7L2,TENM3,TERF2,TFAP2B,TFEC,TGFB2,TGFBR3,TIMP2,TM9SF2,TMBIM6,TMCC3,TMEM132B,TMEM98,TMPO,TNFSF13B,TNR,TOMM20,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TSGA13,TSPAN17,TSPAN7,TTC28,TUBB6,TYRP1,USP46,VAT1L,VPS13A,VRK1,VWA3A,VWA3B,WDR73,WNT3A,WNT8B,XCL1,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF519,ZNF580,ZNF583 | 365 |
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Digestive system cancer | 7.7E-16 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD16B,ABLIM1,ACBD5,ACBD6,ACSBG1,ACVRL1,ADAT1,ADCY5,ADGRL3,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,ALG6,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,AQP3,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,ATP5PF,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BFSP2,BICD2,BRINP1,BTBD9,C1orf105,C1R,C4orf36,C6orf118,CA10,CAMTA1,CARD10,CBLB,CCDC190,CCDC33,CCKBR,CCSER1,CDH13,CDH15,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CRH,CRYAA/CRYAA2,CSF3,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CXXC4,CYB561,CYP51A1,DAB2IP,DAPK1,DBX2,DEGS2,DISC1,DISP3,DLST,DMRT2,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,ECD,EIF4EBP2,ENO1,ENPEP,EPHA2,EPS15L1,ERO1A,ETNK1,F8,FAM117A,FAM120A,FAM167B,FAM83D,FGF18,FMN1,FUCA2,FYN,GAB1,GALNT13,GALNT17,GATA4,GDNF,GFRAL,GINS2,GJB5,GNS,GRHL2,GRIK5,HAS2,HEG1,HIF1A,HINT1,HMGN3,HNF4G,HNRNPR,HTR3B,IBTK,ICE1,IFT46,IGSF21,IGSF9B,IL10RA,IL20RA,INMT,IQCF6,IQGAP1,IRX6,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNJ9,KCNK5,KCTD15,KDM2B,KIF13A,KIF26A,KITLG,KLC1,KLF1,KLF13,let-7,LMX1A,LRCH1,LRRC31,LRRN3,LSAMP,LTB4R2,LYSMD4,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MBD2,MC4R,MCOLN1,MDFIC,MEDAG,MEPE,METTL11B,MGAT4B,MIDN,mir-129,MITF,MOCS2,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC13,MUC20,MYO3B,MYOD1,NADSYN1,NCKAP5,NELL1,NHLRC3,NKX2-3,NKX2-5,NOL4,NRG2,NSMCE2,NTM,NTPCR,OCSTAMP,OPN4,OR13F1,ORC3,OTOF,OXR1,PABPC4,PACSIN1,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PELI2,PEX26,PGBD5,PHLPP1,PHYHD1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PLSCR5,PNPLA5,POU2AF1,PPIC,PRIMA1,PRKCQ,PROS1,PRPF31,PSAP,PTPRC,PTPRZ1,RAB3C,RAD21L1,RAPGEF2,RASSF8,RBM20,RCC2,REC114,REEP3,RGS20,RHOBTB1,RIMBP2,RIT2,RNF144B,RNF168,RNF213,RNF6,RORA,RPH3AL,RPL3,SCEL,SCML4,SEMA3E,SH3TC2,SI,SLC12A2,SLC12A8,SLC13A1,SLC13A2,SLC24A3,SLC25A29,SLC35A3,SLC37A4,SLC38A8,SLC6A15,SLC6A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STX6,STXBP5L,STXBP6,SYCP3,SYNPO2,SYT17,SYT2,SYT4,SYT6,TAP1,TAS2R1,TCEAL3,TCF7L2,TENM3,TERF2,TFAP2B,TFEC,TGFB2,TGFBR3,TIMP2,TM9SF2,TMBIM6,TMCC3,TMEM132B,TMEM98,TMPO,TNR,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TSGA13,TSPAN17,TSPAN7,TTC28,TUBB6,TYRP1,USP46,VAT1L,VPS13A,VRK1,VWA3A,VWA3B,WDR73,WNT3A,XCL1,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF519,ZNF580,ZNF583 | 349 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Organismal Injury and Abnormalities | Malignant solid tumor | 8.26E-16 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD16B,ABHD6,ABLIM1,ACBD5,ACBD6,ACSBG1,ACTL6A,ACVRL1,ADAT1,ADCY5,ADGRL3,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,ALG6,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,AQP3,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,ATP5PF,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BFSP2,BICD2,BRINP1,BTBD9,C1orf105,C1R,C4orf36,C6orf118,CA10,CAMTA1,CARD10,CBLB,CBLN4,CCDC190,CCDC33,CCDC61,CCKBR,CCSER1,CDH13,CDH15,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CRH,CRYAA/CRYAA2,CSF3,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CX3CL1,CXXC4,CYB561,CYP51A1,DAB2IP,DAPK1,DBX2,DEGS2,DISC1,DISP3,DLST,DMRT2,DNAH7,DNAH8,DPH6,DPP10,E2F7,E2F8,EBF1,ECD,EIF1,EIF4EBP2,ENO1,ENPEP,EPHA2,EPS15L1,ERO1A,ETNK1,EXD1,F8,FAM117A,FAM120A,FAM167B,FAM180A,FAM83D,FGF18,FMN1,FNDC7,FUCA2,FYN,GAB1,GALNT13,GALNT17,GATA4,GDNF,GFRAL,GINS2,GJB5,GLO1,GNS,GPSM3,GRHL2,GRIK5,HAS2,HEG1,HEXIM2,HIF1A,HINT1,HMGN3,HNF4G,HNRNPR,HPF1,HTR3B,IBTK,ICE1,IFT46,IGSF21,IGSF9B,IL10RA,IL20RA,INMT,IQCF6,IQGAP1,IRX6,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNJ9,KCNK5,KCTD15,KDM2B,KIF13A,KIF26A,KITLG,KLC1,KLF1,KLF13,let-7,LMX1A,LRCH1,LRRC31,LRRN3,LSAMP,LTB4R2,LY86,LYSMD4,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MBD2,MC4R,MCOLN1,MDFIC,MEDAG,MEPE,METTL11B,MGAT4B,MIDN,mir-129,MITF,MOCS2,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC13,MUC20,MYO3B,MYOD1,NADSYN1,NCKAP5,NELL1,NHLRC3,NKX2-3,NKX2-5,NOL4,NRG2,NSMCE2,NTM,NTPCR,OCSTAMP,ODF3B,OPN4,OR13F1,OR6S1,ORC3,OTOF,OXR1,PABPC4,PACSIN1,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PELI2,PERP,PEX26,PGBD5,PHLPP1,PHYHD1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PLSCR5,PNPLA5,POU2AF1,PPIC,PRIMA1,PRKCQ,PROS1,PRPF31,PRSS54,PSAP,PSMG1,PTPRC,PTPRZ1,RAB3B,RAB3C,RAD21L1,RAPGEF2,RASSF8,RBM20,RBMS3,RCC2,REC114,REEP3,RGS20,RHOBTB1,RIMBP2,RIT2,RNF144B,RNF168,RNF213,RNF6,RORA,RPH3AL,RPL3,RPLP1,SAP30L,SCEL,SCML4,SEMA3E,SGCD,SH3TC2,SI,SLC12A2,SLC12A8,SLC13A1,SLC13A2,SLC22A5,SLC24A3,SLC25A29,SLC35A3,SLC37A4,SLC38A8,SLC6A15,SLC6A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STMND1,STPG2,STX6,STXBP5L,STXBP6,SYCP3,SYNPO2,SYPL1,SYT17,SYT2,SYT4,SYT6,TAP1,TAS2R1,TCEAL3,TCF7L2,TENM3,TEPP,TERF2,TFAP2B,TFEC,TGFB2,TGFBR3,TIMP2,TM9SF2,TMBIM6,TMCC3,TMEM132B,TMEM98,TMPO,TNFSF13B,TNR,TOMM20,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TSGA13,TSPAN17,TSPAN7,TTC28,TUBB6,TYRP1,USP46,VAT1L,VPS13A,VRK1,VWA3A,VWA3B,WDR73,WNT3A,WNT8B,XCL1,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF519,ZNF580,ZNF583 | 382 |
| Dermatological Diseases and Conditions,Organismal Injury and Abnormalities | Skin lesion | 9.44E-16 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD6,ACBD5,ACSBG1,ACVRL1,ADCY5,ADGRL3,AFAP1L2,AGBL1,AGO2,AMZ1,ANKRD22,ANKS1B,AQP3,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BFSP2,BICD2,BRINP1,BTBD9,C1orf105,C1R,C6orf118,CA10,CAMTA1,CARD10,CBLB,CBLN4,CCDC33,CCKBR,CCSER1,CDH13,CDH15,CDH19,CDH22,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CRH,CRYAA/CRYAA2,CSMD3,CSNK1G2,CTNND2,CX3CL1,CXXC4,CYB561,DAPK1,DBX2,DEGS2,DISC1,DISP3,DLST,DMRT2,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,EIF4EBP2,ENPEP,EPHA2,EPS15L1,ERO1A,ETNK1,EXD1,F8,FAM117A,FAM120A,FAM83D,FMN1,FNDC7,FYN,GAB1,GALNT13,GALNT17,GATA4,GFRAL,GJB5,GLO1,GRHL2,GRIK5,HAS2,HEG1,HIF1A,HNF4G,HTR3B,IBTK,ICE1,IGSF21,IGSF9B,IL10RA,IL20RA,INMT,IQGAP1,IRX6,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNJ9,KCNK5,KDM2B,KIF13A,KIF26A,KITLG,KLC1,LMX1A,LRCH1,LRRC31,LRRN3,LY86,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MC4R,MCOLN1,MEDAG,MEPE,METTL11B,MGAT4B,MITF,MROH2B,MSH5,MTSS1,MUC13,MUC20,MYO3B,NADSYN1,NCKAP5,NELL1,NKX2-5,NOL4,NRG2,NTM,NTPCR,OCSTAMP,OPN4,OR13F1,OR6S1,ORC3,OTOF,OXR1,PABPC4,PACSIN1,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PELI2,PERP,PEX26,PGBD5,PHLPP1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PNPLA5,POU2AF1,PRIMA1,PRKCQ,PROS1,PRPF31,PRSS54,PSAP,PTPRC,PTPRZ1,RAB3B,RAB3C,RAD21L1,RAPGEF2,RASSF8,RBM20,RBMS3,RGS20,RHOBTB1,RIMBP2,RIT2,RNF144B,RNF213,RORA,RPH3AL,RPL3,SCEL,SCML4,SEMA3E,SGCD,SH3TC2,SI,SLC12A2,SLC12A8,SLC13A1,SLC13A2,SLC24A3,SLC38A8,SLC6A15,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SMC1B,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STMND1,STPG2,STXBP5L,SYNPO2,SYPL1,SYT17,SYT2,SYT4,TAP1,TAS2R1,TCEAL3,TCF7L2,TENM3,TEPP,TERF2,TFAP2B,TFEC,TMCC3,TMEM132B,TMEM98,TMPO,TNFSF13B,TNR,TPTE2,TRAM1L1,TRDN,TRPC7,TRPS1,TSGA13,TSPAN17,TTC28,TYRP1,VAT1L,VPS13A,VWA3A,VWA3B,WDR73,WNT3A,XCL1,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF583 | 290 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Dermatological Diseases and Conditions,Organismal Injury and Abnormalities | Skin tumor | 9.63E-16 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD6,ACBD5,ACSBG1,ACVRL1,ADCY5,ADGRL3,AFAP1L2,AGBL1,AGO2,AMZ1,ANKRD22,ANKS1B,AQP3,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BFSP2,BICD2,BRINP1,BTBD9,C1orf105,C1R,C6orf118,CA10,CAMTA1,CARD10,CBLB,CBLN4,CCDC33,CCKBR,CCSER1,CDH13,CDH15,CDH19,CDH22,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CRH,CRYAA/CRYAA2,CSMD3,CSNK1G2,CTNND2,CX3CL1,CXXC4,CYB561,DAPK1,DBX2,DEGS2,DISC1,DISP3,DLST,DMRT2,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,EIF4EBP2,ENPEP,EPHA2,EPS15L1,ERO1A,ETNK1,EXD1,F8,FAM117A,FAM120A,FAM83D,FMN1,FNDC7,FYN,GAB1,GALNT13,GALNT17,GATA4,GFRAL,GJB5,GLO1,GRHL2,GRIK5,HAS2,HEG1,HIF1A,HNF4G,HTR3B,IBTK,ICE1,IGSF21,IGSF9B,IL10RA,IL20RA,INMT,IQGAP1,IRX6,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNJ9,KCNK5,KDM2B,KIF13A,KIF26A,KITLG,KLC1,LMX1A,LRCH1,LRRC31,LRRN3,LY86,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MC4R,MCOLN1,MEDAG,MEPE,METTL11B,MGAT4B,MITF,MROH2B,MSH5,MTSS1,MUC13,MUC20,MYO3B,NADSYN1,NCKAP5,NELL1,NKX2-5,NOL4,NRG2,NTM,NTPCR,OCSTAMP,OPN4,OR13F1,OR6S1,ORC3,OTOF,OXR1,PABPC4,PACSIN1,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PELI2,PERP,PEX26,PGBD5,PHLPP1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PNPLA5,POU2AF1,PRIMA1,PRKCQ,PROS1,PRPF31,PRSS54,PSAP,PTPRC,PTPRZ1,RAB3B,RAB3C,RAD21L1,RAPGEF2,RASSF8,RBM20,RBMS3,RGS20,RHOBTB1,RIMBP2,RIT2,RNF144B,RNF213,RORA,RPH3AL,RPL3,SCEL,SCML4,SEMA3E,SGCD,SH3TC2,SI,SLC12A2,SLC12A8,SLC13A1,SLC13A2,SLC24A3,SLC38A8,SLC6A15,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SMC1B,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STMND1,STPG2,STXBP5L,SYNPO2,SYPL1,SYT17,SYT2,SYT4,TAP1,TAS2R1,TCEAL3,TCF7L2,TENM3,TEPP,TERF2,TFEC,TMCC3,TMEM132B,TMEM98,TMPO,TNFSF13B,TNR,TPTE2,TRAM1L1,TRDN,TRPC7,TRPS1,TSGA13,TSPAN17,TTC28,TYRP1,VAT1L,VPS13A,VWA3A,VWA3B,WDR73,WNT3A,XCL1,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF583 | 289 |
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Development of digestive organ tumor | 1.01E-15 | AAK1,ABCC1,ABCC3,ABLIM1,ACBD5,ACBD6,ACVRL1,ADCY5,ADGRL3,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,AMD1,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF6,ARID1B,ARMC3,ARPP21,ATP5PF,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BICD2,BRINP1,BTBD9,C1orf105,C1R,C6orf118,CAMTA1,CARD10,CBLB,CCKBR,CCSER1,CDH13,CDH15,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CRH,CRYAA/CRYAA2,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CXXC4,CYP51A1,DAB2IP,DAPK1,DEGS2,DISC1,DISP3,DLST,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,ECD,ENPEP,EPHA2,F8,FAM120A,FAM167B,FAM83D,FGF18,FUCA2,FYN,GAB1,GALNT13,GALNT17,GDNF,GFRAL,GINS2,GRHL2,GRIK5,HAS2,HEG1,HIF1A,HINT1,HMGN3,HNRNPR,HTR3B,ICE1,IGSF21,IGSF9B,INMT,IQGAP1,IRX6,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNK5,KCTD15,KDM2B,KIF13A,KIF26A,KITLG,KLC1,let-7,LMX1A,LRCH1,LRRC31,LRRN3,LSAMP,MAF,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MC4R,MEDAG,METTL11B,MIDN,MITF,MOCS2,MR1,MROH2B,MSH5,MTSS1,MUC20,MYO3B,MYOD1,NADSYN1,NCKAP5,NELL1,NKX2-5,NOL4,NRG2,NTM,NTPCR,ORC3,OTOF,PABPC4,PACSIN1,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PELI2,PGBD5,PHLPP1,PHYHD1,PI16,PIK3R4,PKD1L2,PLCE1,PNPLA5,POU2AF1,PRIMA1,PROS1,PTPRC,PTPRZ1,RAB3C,RAPGEF2,RBM20,RCC2,REC114,RGS20,RHOBTB1,RIMBP2,RIT2,RNF213,RNF6,RORA,RPH3AL,SCEL,SEMA3E,SH3TC2,SI,SLC12A2,SLC13A1,SLC13A2,SLC24A3,SLC25A29,SLC35A3,SLC37A4,SLC6A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,ST6GALNAC2,STAG3,STARD8,STAT1,STXBP5L,SYCP3,SYNPO2,SYT4,SYT6,TCF7L2,TENM3,TERF2,TFAP2B,TFEC,TGFBR3,TM9SF2,TMEM132B,TMPO,TNR,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TSGA13,TSPAN17,TSPAN7,TTC28,TYRP1,VAT1L,VPS13A,VRK1,VWA3A,VWA3B,WNT3A,ZDHHC14,ZNF276,ZNF580,ZNF583 | 252 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Gastrointestinal tumor | 1.02E-15 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD16B,ABLIM1,ACBD5,ACBD6,ACSBG1,ACVRL1,ADCY5,ADGRL3,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,ALG6,AMD1,AMZ1,ANKRD22,ANKS1B,AQP3,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,ATP5PF,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BFSP2,BICD2,BRINP1,BTBD9,C1orf105,C1R,C4orf36,C6orf118,CA10,CAMTA1,CARD10,CBLB,CCDC190,CCDC33,CCKBR,CCSER1,CDH13,CDH15,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CRH,CRYAA/CRYAA2,CSF3,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CXXC4,CYP51A1,DAB2IP,DAPK1,DBX2,DEGS2,DISC1,DISP3,DLST,DMRT2,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,ECD,EIF4EBP2,ENO1,ENPEP,EPHA2,EPS15L1,ERO1A,ETNK1,F8,FAM120A,FAM167B,FAM83D,FGF18,FMN1,FUCA2,FYN,GAB1,GALNT13,GALNT17,GATA4,GDNF,GFRAL,GINS2,GNS,GRHL2,GRIK5,HAS2,HEG1,HIF1A,HINT1,HMGN3,HNF4G,HNRNPR,HTR3B,IBTK,ICE1,IFT46,IGSF21,IGSF9B,IL10RA,IL20RA,INMT,IQCF6,IQGAP1,IRX6,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNJ9,KCNK5,KCTD15,KDM2B,KIF13A,KIF26A,KITLG,KLC1,let-7,LMX1A,LRCH1,LRRC31,LRRN3,LSAMP,LTB4R2,LYSMD4,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MBD2,MC4R,MCOLN1,MEDAG,MEPE,METTL11B,MGAT4B,MIDN,mir-129,MITF,MOCS2,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC13,MUC20,MYO3B,MYOD1,NADSYN1,NCKAP5,NELL1,NHLRC3,NKX2-3,NKX2-5,NOL4,NRG2,NTM,NTPCR,OCSTAMP,OPN4,ORC3,OTOF,OXR1,PABPC4,PACSIN1,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PELI2,PGBD5,PHLPP1,PHYHD1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLSCR5,PNPLA5,POU2AF1,PPIC,PRIMA1,PRKCQ,PROS1,PRPF31,PTPRC,PTPRZ1,RAB3C,RAD21L1,RAPGEF2,RASSF8,RBM20,RCC2,REC114,REEP3,RGS20,RHOBTB1,RIMBP2,RIT2,RNF144B,RNF168,RNF213,RNF6,RORA,RPH3AL,RPL3,SCEL,SCML4,SEMA3E,SH3TC2,SI,SLC12A2,SLC12A8,SLC13A1,SLC13A2,SLC22A5,SLC24A3,SLC25A29,SLC35A3,SLC37A4,SLC38A8,SLC6A15,SLC6A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STX6,STXBP5L,STXBP6,SYCP3,SYNPO2,SYT17,SYT2,SYT4,SYT6,TAP1,TAS2R1,TCF7L2,TENM3,TERF2,TFAP2B,TFEC,TGFB2,TGFBR3,TIMP2,TM9SF2,TMBIM6,TMCC3,TMEM132B,TMPO,TNR,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TSGA13,TSPAN17,TSPAN7,TTC28,TUBB6,TYRP1,VAT1L,VPS13A,VRK1,VWA3A,VWA3B,WDR73,WNT3A,XCL1,XYLT1,ZDHHC14,ZNF276,ZNF519,ZNF580,ZNF583 | 333 |
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Gastrointestinal tract cancer | 1.24E-15 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD16B,ABLIM1,ACBD5,ACBD6,ACSBG1,ACVRL1,ADCY5,ADGRL3,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,ALG6,AMD1,AMZ1,ANKRD22,ANKS1B,AQP3,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,ATP5PF,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BFSP2,BICD2,BRINP1,BTBD9,C1orf105,C1R,C4orf36,C6orf118,CA10,CAMTA1,CARD10,CBLB,CCDC190,CCDC33,CCKBR,CCSER1,CDH13,CDH15,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CRH,CRYAA/CRYAA2,CSF3,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CXXC4,CYP51A1,DAB2IP,DAPK1,DBX2,DEGS2,DISC1,DISP3,DLST,DMRT2,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,ECD,EIF4EBP2,ENO1,ENPEP,EPHA2,EPS15L1,ERO1A,ETNK1,F8,FAM120A,FAM167B,FAM83D,FGF18,FMN1,FUCA2,FYN,GAB1,GALNT13,GALNT17,GATA4,GDNF,GFRAL,GINS2,GNS,GRHL2,GRIK5,HAS2,HEG1,HIF1A,HINT1,HMGN3,HNF4G,HNRNPR,HTR3B,IBTK,ICE1,IFT46,IGSF21,IGSF9B,IL10RA,IL20RA,INMT,IQCF6,IQGAP1,IRX6,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNJ9,KCNK5,KCTD15,KDM2B,KIF13A,KIF26A,KITLG,KLC1,let-7,LMX1A,LRCH1,LRRC31,LRRN3,LSAMP,LTB4R2,LYSMD4,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MBD2,MC4R,MCOLN1,MEDAG,MEPE,METTL11B,MGAT4B,MIDN,mir-129,MITF,MOCS2,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC13,MUC20,MYO3B,MYOD1,NADSYN1,NCKAP5,NELL1,NHLRC3,NKX2-3,NKX2-5,NOL4,NRG2,NTM,NTPCR,OCSTAMP,OPN4,ORC3,OTOF,OXR1,PABPC4,PACSIN1,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PELI2,PGBD5,PHLPP1,PHYHD1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLSCR5,PNPLA5,POU2AF1,PPIC,PRIMA1,PRKCQ,PROS1,PRPF31,PTPRC,PTPRZ1,RAB3C,RAD21L1,RAPGEF2,RASSF8,RBM20,RCC2,REC114,REEP3,RGS20,RHOBTB1,RIMBP2,RIT2,RNF144B,RNF168,RNF213,RNF6,RORA,RPH3AL,RPL3,SCEL,SCML4,SEMA3E,SH3TC2,SI,SLC12A2,SLC12A8,SLC13A1,SLC13A2,SLC24A3,SLC25A29,SLC35A3,SLC37A4,SLC38A8,SLC6A15,SLC6A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STX6,STXBP5L,STXBP6,SYCP3,SYNPO2,SYT17,SYT2,SYT4,SYT6,TAP1,TAS2R1,TCF7L2,TENM3,TERF2,TFAP2B,TFEC,TGFB2,TGFBR3,TIMP2,TM9SF2,TMBIM6,TMCC3,TMEM132B,TMPO,TNR,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TSGA13,TSPAN17,TSPAN7,TTC28,TUBB6,TYRP1,VAT1L,VPS13A,VRK1,VWA3A,VWA3B,WDR73,WNT3A,XCL1,XYLT1,ZDHHC14,ZNF276,ZNF519,ZNF580,ZNF583 | 332 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Dermatological Diseases and Conditions,Organismal Injury and Abnormalities | Skin cancer | 1.33E-15 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD6,ACBD5,ACSBG1,ACVRL1,ADCY5,ADGRL3,AFAP1L2,AGBL1,AGO2,AMZ1,ANKRD22,ANKS1B,AQP3,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BFSP2,BICD2,BRINP1,BTBD9,C1orf105,C1R,C6orf118,CA10,CAMTA1,CARD10,CBLB,CBLN4,CCDC33,CCKBR,CCSER1,CDH13,CDH15,CDH19,CDH22,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CRH,CRYAA/CRYAA2,CSMD3,CSNK1G2,CTNND2,CX3CL1,CXXC4,CYB561,DAPK1,DBX2,DEGS2,DISC1,DISP3,DLST,DMRT2,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,EIF4EBP2,ENPEP,EPHA2,EPS15L1,ERO1A,ETNK1,EXD1,F8,FAM117A,FAM120A,FAM83D,FMN1,FNDC7,FYN,GAB1,GALNT13,GALNT17,GATA4,GFRAL,GJB5,GLO1,GRHL2,GRIK5,HAS2,HEG1,HIF1A,HNF4G,HTR3B,IBTK,ICE1,IGSF21,IGSF9B,IL10RA,IL20RA,INMT,IQGAP1,IRX6,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNJ9,KCNK5,KDM2B,KIF13A,KIF26A,KITLG,KLC1,LMX1A,LRCH1,LRRC31,LRRN3,LY86,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MC4R,MCOLN1,MEDAG,MEPE,METTL11B,MGAT4B,MITF,MROH2B,MSH5,MTSS1,MUC13,MUC20,MYO3B,NADSYN1,NCKAP5,NELL1,NKX2-5,NOL4,NRG2,NTM,NTPCR,OCSTAMP,OPN4,OR13F1,OR6S1,ORC3,OTOF,OXR1,PABPC4,PACSIN1,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PELI2,PEX26,PGBD5,PHLPP1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PNPLA5,POU2AF1,PRIMA1,PRKCQ,PROS1,PRPF31,PRSS54,PSAP,PTPRC,PTPRZ1,RAB3B,RAB3C,RAD21L1,RAPGEF2,RASSF8,RBM20,RBMS3,RGS20,RHOBTB1,RIMBP2,RIT2,RNF144B,RNF213,RORA,RPH3AL,RPL3,SCEL,SCML4,SEMA3E,SGCD,SH3TC2,SI,SLC12A2,SLC12A8,SLC13A1,SLC13A2,SLC24A3,SLC38A8,SLC6A15,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SMC1B,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STMND1,STPG2,STXBP5L,SYNPO2,SYPL1,SYT17,SYT2,SYT4,TAP1,TAS2R1,TCEAL3,TCF7L2,TENM3,TEPP,TERF2,TFEC,TMCC3,TMEM132B,TMEM98,TMPO,TNFSF13B,TNR,TPTE2,TRAM1L1,TRDN,TRPC7,TRPS1,TSGA13,TSPAN17,TTC28,TYRP1,VAT1L,VPS13A,VWA3A,VWA3B,WDR73,WNT3A,XCL1,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF583 | 288 |
| Cancer,Organismal Injury and Abnormalities | Extracranial solid tumor | 1.4E-15 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD16B,ABHD6,ABLIM1,ACBD5,ACBD6,ACSBG1,ACVRL1,ADAT1,ADCY5,ADGRL3,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,ALG6,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,AQP3,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,ATP5PF,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BFSP2,BICD2,BRINP1,BTBD9,C1orf105,C1R,C4orf36,C6orf118,CA10,CAMTA1,CARD10,CBLB,CBLN4,CCDC190,CCDC33,CCDC61,CCKBR,CCSER1,CDH13,CDH15,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CRH,CRYAA/CRYAA2,CSF3,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CX3CL1,CXXC4,CYB561,CYP51A1,DAB2IP,DAPK1,DBX2,DEGS2,DISC1,DISP3,DLST,DMRT2,DNAH7,DNAH8,DPH6,DPP10,E2F7,E2F8,EBF1,ECD,EIF1,EIF4EBP2,ENO1,ENPEP,EPHA2,EPS15L1,ERO1A,ETNK1,EXD1,F8,FAM117A,FAM120A,FAM167B,FAM180A,FAM83D,FGF18,FMN1,FNDC7,FUCA2,FYN,GAB1,GALNT13,GALNT17,GATA4,GDNF,GFRAL,GINS2,GJB5,GLO1,GNS,GPSM3,GRHL2,GRIK5,HAS2,HEG1,HEXIM2,HIF1A,HINT1,HMGN3,HNF4G,HNRNPR,HPF1,HTR3B,IBTK,ICE1,IFT46,IGSF21,IGSF9B,IL10RA,IL20RA,INMT,IQCF6,IQGAP1,IRX6,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNJ9,KCNK5,KCTD15,KDM2B,KIF13A,KIF26A,KITLG,KLC1,KLF1,KLF13,let-7,LMX1A,LRCH1,LRRC31,LRRN3,LSAMP,LTB4R2,LY86,LYSMD4,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MBD2,MC4R,MCOLN1,MDFIC,MEDAG,MEPE,METTL11B,MGAT4B,MIDN,mir-129,MITF,MOCS2,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC13,MUC20,MYO3B,MYOD1,NADSYN1,NCKAP5,NELL1,NHLRC3,NKX2-3,NKX2-5,NOL4,NRG2,NSMCE2,NTM,NTPCR,OCSTAMP,ODF3B,OPN4,OR13F1,OR6S1,ORC3,OTOF,OXR1,PABPC4,PACSIN1,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PELI2,PERP,PEX26,PGBD5,PHLPP1,PHYHD1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PLSCR5,PNPLA5,POU2AF1,PPIC,PRIMA1,PRKCQ,PROS1,PRPF31,PRSS54,PSAP,PSMG1,PTPRC,PTPRZ1,RAB3B,RAB3C,RAD21L1,RAPGEF2,RASSF8,RBM20,RBMS3,RCC2,REC114,REEP3,RGS20,RHOBTB1,RIMBP2,RIT2,RNF144B,RNF168,RNF213,RNF6,RORA,RPH3AL,RPL3,RPLP1,SAP30L,SCEL,SCML4,SEMA3E,SGCD,SH3TC2,SI,SLC12A2,SLC12A8,SLC13A1,SLC13A2,SLC22A5,SLC24A3,SLC25A29,SLC35A3,SLC37A4,SLC38A8,SLC6A15,SLC6A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STMND1,STPG2,STX6,STXBP5L,STXBP6,SYCP3,SYNPO2,SYPL1,SYT17,SYT2,SYT4,SYT6,TAP1,TAS2R1,TCEAL3,TCF7L2,TENM3,TEPP,TERF2,TFAP2B,TFEC,TGFB2,TGFBR3,TIMP2,TM9SF2,TMBIM6,TMCC3,TMEM132B,TMEM98,TMPO,TNFSF13B,TNR,TOMM20,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TSGA13,TSPAN17,TSPAN7,TTC28,TUBB6,TYRP1,USP46,VAT1L,VPS13A,VRK1,VWA3A,VWA3B,WDR73,WNT3A,WNT8B,XCL1,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF519,ZNF580,ZNF583 | 381 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Digestive organ tumor | 1.49E-15 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD16B,ABLIM1,ACBD5,ACBD6,ACSBG1,ACVRL1,ADAT1,ADCY5,ADGRL3,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,ALG6,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,AQP3,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,ATP5PF,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BFSP2,BICD2,BRINP1,BTBD9,C1orf105,C1R,C4orf36,C6orf118,CA10,CAMTA1,CARD10,CBLB,CCDC190,CCDC33,CCKBR,CCSER1,CDH13,CDH15,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CRH,CRYAA/CRYAA2,CSF3,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CX3CL1,CXXC4,CYB561,CYP51A1,DAB2IP,DAPK1,DBX2,DEGS2,DISC1,DISP3,DLST,DMRT2,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,ECD,EIF4EBP2,ENO1,ENPEP,EPHA2,EPS15L1,ERO1A,ETNK1,F8,FAM117A,FAM120A,FAM167B,FAM83D,FGF18,FMN1,FUCA2,FYN,GAB1,GALNT13,GALNT17,GATA4,GDNF,GFRAL,GINS2,GJB5,GNS,GRHL2,GRIK5,HAS2,HEG1,HIF1A,HINT1,HMGN3,HNF4G,HNRNPR,HTR3B,IBTK,ICE1,IFT46,IGSF21,IGSF9B,IL10RA,IL20RA,INMT,IQCF6,IQGAP1,IRX6,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNJ9,KCNK5,KCTD15,KDM2B,KIF13A,KIF26A,KITLG,KLC1,KLF1,KLF13,let-7,LMX1A,LRCH1,LRRC31,LRRN3,LSAMP,LTB4R2,LYSMD4,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MBD2,MC4R,MCOLN1,MDFIC,MEDAG,MEPE,METTL11B,MGAT4B,MIDN,mir-129,MITF,MOCS2,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC13,MUC20,MYO3B,MYOD1,NADSYN1,NCKAP5,NELL1,NHLRC3,NKX2-3,NKX2-5,NOL4,NRG2,NSMCE2,NTM,NTPCR,OCSTAMP,OPN4,OR13F1,ORC3,OTOF,OXR1,PABPC4,PACSIN1,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PELI2,PEX26,PGBD5,PHLPP1,PHYHD1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PLSCR5,PNPLA5,POU2AF1,PPIC,PRIMA1,PRKCQ,PROS1,PRPF31,PSAP,PTPRC,PTPRZ1,RAB3C,RAD21L1,RAPGEF2,RASSF8,RBM20,RCC2,REC114,REEP3,RGS20,RHOBTB1,RIMBP2,RIT2,RNF144B,RNF168,RNF213,RNF6,RORA,RPH3AL,RPL3,SCEL,SCML4,SEMA3E,SH3TC2,SI,SLC12A2,SLC12A8,SLC13A1,SLC13A2,SLC22A5,SLC24A3,SLC25A29,SLC35A3,SLC37A4,SLC38A8,SLC6A15,SLC6A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STX6,STXBP5L,STXBP6,SYCP3,SYNPO2,SYT17,SYT2,SYT4,SYT6,TAP1,TAS2R1,TCEAL3,TCF7L2,TENM3,TERF2,TFAP2B,TFEC,TGFB2,TGFBR3,TIMP2,TM9SF2,TMBIM6,TMCC3,TMEM132B,TMEM98,TMPO,TNR,TOMM20,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TSGA13,TSPAN17,TSPAN7,TTC28,TUBB6,TYRP1,USP46,VAT1L,VPS13A,VRK1,VWA3A,VWA3B,WDR73,WNT3A,XCL1,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF519,ZNF580,ZNF583 | 352 |
| Cancer,Organismal Injury and Abnormalities | Intraabdominal organ tumor | 2.58E-15 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD16B,ABHD6,ABLIM1,ACBD5,ACBD6,ACSBG1,ACVRL1,ADAT1,ADCY5,ADGRL3,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,ALG6,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,AQP3,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,ATP5PF,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BFSP2,BICD2,BRINP1,BTBD9,C1orf105,C1R,C4orf36,C6orf118,CA10,CAMTA1,CARD10,CBLB,CBLN4,CCDC190,CCDC33,CCDC61,CCKBR,CCSER1,CDH13,CDH15,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CRH,CRYAA/CRYAA2,CSF3,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CX3CL1,CXXC4,CYB561,CYP51A1,DAB2IP,DAPK1,DBX2,DEGS2,DISC1,DISP3,DLST,DMRT2,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,ECD,ENO1,ENPEP,EPHA2,EPS15L1,ERO1A,ETNK1,EXD1,F8,FAM117A,FAM120A,FAM167B,FAM83D,FGF18,FMN1,FNDC7,FUCA2,FYN,GAB1,GALNT13,GALNT17,GATA4,GDNF,GFRAL,GINS2,GJB5,GLO1,GNS,GRHL2,GRIK5,HAS2,HEG1,HIF1A,HINT1,HMGN3,HNF4G,HNRNPR,HTR3B,IBTK,ICE1,IFT46,IGSF21,IGSF9B,IL10RA,IL20RA,INMT,IQCF6,IQGAP1,IRX6,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNJ9,KCNK5,KCTD15,KDM2B,KIF13A,KIF26A,KITLG,KLC1,KLF1,KLF13,let-7,LMX1A,LRCH1,LRRC31,LRRN3,LSAMP,LTB4R2,LY86,LYSMD4,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MBD2,MC4R,MCOLN1,MDFIC,MEDAG,MEPE,METTL11B,MGAT4B,MIDN,mir-129,MITF,MOCS2,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC13,MUC20,MYO3B,MYOD1,NADSYN1,NCKAP5,NELL1,NHLRC3,NKX2-3,NKX2-5,NOL4,NRG2,NSMCE2,NTM,NTPCR,OCSTAMP,OR13F1,ORC3,OTOF,OXR1,PABPC4,PACSIN1,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PELI2,PEX26,PGBD5,PHLPP1,PHYHD1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PLSCR5,PNPLA5,POU2AF1,PPIC,PRIMA1,PRKCQ,PROS1,PRPF31,PRSS54,PSAP,PSMG1,PTPRC,PTPRZ1,RAB3C,RAD21L1,RAPGEF2,RASSF8,RBM20,RCC2,REC114,REEP3,RGS20,RHOBTB1,RIMBP2,RIT2,RNF144B,RNF168,RNF213,RNF6,RORA,RPH3AL,RPL3,SCEL,SCML4,SEMA3E,SH3TC2,SI,SLC12A2,SLC12A8,SLC13A1,SLC13A2,SLC22A5,SLC24A3,SLC25A29,SLC35A3,SLC37A4,SLC38A8,SLC6A15,SLC6A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STX6,STXBP5L,STXBP6,SYCP3,SYNPO2,SYT17,SYT2,SYT4,SYT6,TAP1,TAS2R1,TCEAL3,TCF7L2,TENM3,TERF2,TFAP2B,TFEC,TGFB2,TGFBR3,TIMP2,TM9SF2,TMBIM6,TMCC3,TMEM132B,TMEM98,TMPO,TNR,TOMM20,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TSGA13,TSPAN17,TSPAN7,TTC28,TUBB6,TYRP1,USP46,VAT1L,VPS13A,VRK1,VWA3A,VWA3B,WDR73,WNT3A,XCL1,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF519,ZNF580,ZNF583 | 360 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Dermatological Diseases and Conditions,Organismal Injury and Abnormalities | Cutaneous melanoma | 3.7E-15 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD6,ACBD5,ACSBG1,ACVRL1,ADCY5,ADGRL3,AFAP1L2,AGBL1,AGO2,AMZ1,ANKRD22,ANKS1B,AQP3,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BFSP2,BICD2,BRINP1,BTBD9,C1orf105,C1R,C6orf118,CA10,CAMTA1,CARD10,CBLB,CBLN4,CCDC33,CCKBR,CCSER1,CDH13,CDH15,CDH22,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CRH,CRYAA/CRYAA2,CSMD3,CSNK1G2,CTNND2,CX3CL1,CXXC4,CYB561,DAPK1,DBX2,DEGS2,DISC1,DISP3,DLST,DMRT2,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,EIF4EBP2,ENPEP,EPHA2,EPS15L1,ERO1A,ETNK1,EXD1,F8,FAM117A,FAM120A,FAM83D,FMN1,FNDC7,FYN,GAB1,GALNT13,GALNT17,GATA4,GFRAL,GJB5,GLO1,GRHL2,GRIK5,HAS2,HEG1,HIF1A,HNF4G,HTR3B,IBTK,ICE1,IGSF21,IGSF9B,IL10RA,IL20RA,INMT,IQGAP1,IRX6,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNJ9,KCNK5,KDM2B,KIF13A,KIF26A,KITLG,KLC1,LMX1A,LRCH1,LRRC31,LRRN3,LY86,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MCOLN1,MEDAG,MEPE,METTL11B,MGAT4B,MITF,MROH2B,MSH5,MTSS1,MUC13,MUC20,MYO3B,NADSYN1,NCKAP5,NELL1,NOL4,NRG2,NTM,NTPCR,OCSTAMP,OPN4,OR13F1,OR6S1,ORC3,OTOF,PABPC4,PACSIN1,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PELI2,PEX26,PGBD5,PHLPP1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PNPLA5,POU2AF1,PRIMA1,PRKCQ,PROS1,PRPF31,PRSS54,PSAP,PTPRC,PTPRZ1,RAB3B,RAB3C,RAD21L1,RAPGEF2,RASSF8,RBM20,RBMS3,RGS20,RIMBP2,RIT2,RNF144B,RNF213,RORA,RPH3AL,RPL3,SCEL,SCML4,SEMA3E,SGCD,SH3TC2,SI,SLC12A2,SLC12A8,SLC13A1,SLC13A2,SLC24A3,SLC38A8,SLC6A15,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SMC1B,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STMND1,STPG2,STXBP5L,SYNPO2,SYPL1,SYT17,SYT2,SYT4,TAP1,TAS2R1,TCEAL3,TCF7L2,TENM3,TEPP,TFEC,TMCC3,TMEM132B,TMEM98,TMPO,TNFSF13B,TNR,TPTE2,TRAM1L1,TRDN,TRPC7,TRPS1,TSGA13,TSPAN17,TTC28,TYRP1,VAT1L,VPS13A,VWA3A,VWA3B,WDR73,WNT3A,XCL1,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF583 | 281 |
| Cancer,Organismal Injury and Abnormalities | Incidence of tumor | 4.9E-15 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD6,ABLIM1,ACBD5,ACBD6,ACSBG1,ACVRL1,ADCY5,ADGRL3,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,ALG6,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,ATP5PF,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BICD2,BRINP1,BTBD9,C1orf105,C1R,C6orf118,CAMTA1,CARD10,CBLB,CBLN4,CCDC33,CCDC61,CCKBR,CCSER1,CDH13,CDH15,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CRH,CRYAA/CRYAA2,CSF3,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CX3CL1,CXXC4,CYP51A1,DAB2IP,DAPK1,DEGS2,DISC1,DISP3,DLST,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,ECD,ENO1,ENPEP,EPHA2,EXD1,F8,FAM120A,FAM167B,FAM83D,FGF18,FNDC7,FUCA2,FYN,GAB1,GALNT13,GALNT17,GDNF,GFRAL,GINS2,GJB5,GRHL2,GRIK5,HAS2,HEG1,HIF1A,HINT1,HMGN3,HNF4G,HNRNPR,HTR3B,IBTK,ICE1,IGSF21,IGSF9B,IL10RA,INMT,IQGAP1,IRX6,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNJ9,KCNK5,KCTD15,KDM2B,KIF13A,KIF26A,KITLG,KLC1,let-7,LMX1A,LRCH1,LRRC31,LRRN3,LSAMP,LTB4R2,LY86,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MC4R,MCOLN1,MEDAG,MEPE,METTL11B,MGAT4B,MIDN,mir-129,MITF,MOCS2,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC20,MYO3B,MYOD1,NADSYN1,NCKAP5,NELL1,NKX2-5,NOL4,NRG2,NTM,NTPCR,OCSTAMP,OR13F1,ORC3,OTOF,PABPC4,PACSIN1,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PELI2,PERP,PGBD5,PHLPP1,PHYHD1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PLSCR5,PNPLA5,POU2AF1,PRIMA1,PRKCQ,PROS1,PRPF31,PRSS54,PSMG1,PTPRC,PTPRZ1,RAB3C,RAD21L1,RAPGEF2,RASSF8,RBM20,RCC2,REC114,RGS20,RHOBTB1,RIMBP2,RIT2,RNF144B,RNF168,RNF213,RNF6,RORA,RPH3AL,SCEL,SCML4,SEMA3E,SH3TC2,SI,SLC12A2,SLC12A8,SLC13A1,SLC13A2,SLC22A5,SLC24A3,SLC25A29,SLC35A3,SLC37A4,SLC6A15,SLC6A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STXBP5L,STXBP6,SYCP3,SYNPO2,SYT4,SYT6,TAP1,TAS2R1,TCEAL3,TCF7L2,TENM3,TERF2,TFAP2B,TFEC,TGFB2,TGFBR3,TIMP2,TM9SF2,TMEM132B,TMPO,TNR,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TSGA13,TSPAN17,TSPAN7,TTC28,TUBB6,TYRP1,VAT1L,VPS13A,VRK1,VWA3A,VWA3B,WDR73,WNT3A,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF519,ZNF580,ZNF583 | 315 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Gastrointestinal adenocarcinoma | 6.45E-15 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD16B,ABLIM1,ACBD5,ACBD6,ACSBG1,ACVRL1,ADCY5,ADGRL3,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,ALG6,AMD1,AMZ1,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,ATP5PF,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BFSP2,BICD2,BRINP1,BTBD9,C1orf105,C1R,C4orf36,C6orf118,CA10,CAMTA1,CARD10,CBLB,CCDC190,CCDC33,CCKBR,CCSER1,CDH13,CDH15,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CRH,CRYAA/CRYAA2,CSF3,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CXXC4,CYP51A1,DAB2IP,DAPK1,DBX2,DEGS2,DISC1,DISP3,DLST,DMRT2,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,ECD,ENPEP,EPHA2,EPS15L1,ERO1A,ETNK1,F8,FAM120A,FAM167B,FAM83D,FGF18,FMN1,FUCA2,FYN,GAB1,GALNT13,GALNT17,GDNF,GFRAL,GNS,GRIK5,HAS2,HEG1,HIF1A,HMGN3,HNF4G,HNRNPR,HTR3B,IBTK,ICE1,IFT46,IGSF21,IGSF9B,IL10RA,IL20RA,INMT,IQCF6,IQGAP1,IRX6,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNJ9,KCNK5,KCTD15,KDM2B,KIF13A,KIF26A,KITLG,KLC1,let-7,LMX1A,LRCH1,LRRC31,LRRN3,LSAMP,LTB4R2,LYSMD4,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MBD2,MC4R,MEDAG,MEPE,MGAT4B,MIDN,MITF,MOCS2,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC13,MUC20,MYO3B,MYOD1,NADSYN1,NCKAP5,NELL1,NHLRC3,NKX2-3,NKX2-5,NOL4,NRG2,NTM,NTPCR,OCSTAMP,OPN4,ORC3,OTOF,OXR1,PABPC4,PACSIN1,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PELI2,PGBD5,PHLPP1,PHYHD1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLSCR5,PNPLA5,POU2AF1,PPIC,PRIMA1,PRKCQ,PROS1,PRPF31,PTPRC,PTPRZ1,RAB3C,RAD21L1,RAPGEF2,RASSF8,RBM20,RCC2,REC114,REEP3,RGS20,RIMBP2,RIT2,RNF144B,RNF168,RNF213,RNF6,RORA,RPH3AL,RPL3,SCEL,SCML4,SEMA3E,SH3TC2,SI,SLC12A2,SLC13A1,SLC13A2,SLC24A3,SLC25A29,SLC35A3,SLC37A4,SLC38A8,SLC6A15,SLC6A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STX6,STXBP5L,SYCP3,SYNPO2,SYT17,SYT2,SYT4,SYT6,TAP1,TAS2R1,TCF7L2,TENM3,TERF2,TFAP2B,TFEC,TGFB2,TGFBR3,TM9SF2,TMBIM6,TMCC3,TMEM132B,TMPO,TNR,TPTE2,TRAM1L1,TRDN,TRPC7,TRPS1,TSPAN17,TSPAN7,TTC28,TUBB6,TYRP1,VAT1L,VPS13A,VWA3A,VWA3B,XYLT1,ZDHHC14,ZNF276,ZNF519,ZNF580,ZNF583 | 312 |
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Large intestine carcinoma | 7.65E-15 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD16B,ABLIM1,ACBD5,ACBD6,ACSBG1,ACVRL1,ADCY5,ADGRL3,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,ALG6,AMD1,AMZ1,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,ATP5PF,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BFSP2,BICD2,BRINP1,BTBD9,C1orf105,C1R,C4orf36,C6orf118,CAMTA1,CARD10,CBLB,CCDC190,CCDC33,CCKBR,CCSER1,CDH13,CDH15,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CRH,CRYAA/CRYAA2,CSF3,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CXXC4,CYP51A1,DAB2IP,DAPK1,DBX2,DEGS2,DISP3,DLST,DMRT2,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,ECD,ENPEP,EPHA2,EPS15L1,ERO1A,ETNK1,F8,FAM120A,FAM167B,FAM83D,FGF18,FMN1,FUCA2,FYN,GAB1,GALNT13,GALNT17,GDNF,GFRAL,GINS2,GNS,GRIK5,HAS2,HEG1,HIF1A,HMGN3,HNF4G,HNRNPR,HTR3B,IBTK,ICE1,IFT46,IGSF21,IGSF9B,IL10RA,IL20RA,INMT,IQGAP1,IRX6,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNJ9,KCNK5,KCTD15,KDM2B,KIF13A,KIF26A,KITLG,KLC1,let-7,LRCH1,LRRC31,LRRN3,LSAMP,LTB4R2,LYSMD4,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MBD2,MEDAG,MEPE,MGAT4B,MIDN,MITF,MOCS2,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC13,MUC20,MYO3B,MYOD1,NADSYN1,NCKAP5,NELL1,NHLRC3,NKX2-3,NKX2-5,NOL4,NRG2,NTM,NTPCR,OCSTAMP,ORC3,OTOF,OXR1,PABPC4,PACSIN1,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PELI2,PGBD5,PHLPP1,PHYHD1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLSCR5,PNPLA5,POU2AF1,PPIC,PRIMA1,PRKCQ,PROS1,PRPF31,PTPRC,PTPRZ1,RAB3C,RAD21L1,RAPGEF2,RASSF8,RBM20,RCC2,REC114,REEP3,RGS20,RIMBP2,RIT2,RNF144B,RNF168,RNF213,RNF6,RORA,RPH3AL,RPL3,SCEL,SCML4,SEMA3E,SH3TC2,SI,SLC12A2,SLC13A1,SLC13A2,SLC24A3,SLC25A29,SLC37A4,SLC38A8,SLC6A15,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STX6,STXBP5L,SYCP3,SYNPO2,SYT17,SYT2,SYT4,SYT6,TAP1,TAS2R1,TCF7L2,TENM3,TERF2,TFAP2B,TFEC,TGFB2,TGFBR3,TM9SF2,TMBIM6,TMCC3,TMEM132B,TMPO,TNR,TPTE2,TRAM1L1,TRDN,TRPC7,TRPS1,TSPAN17,TSPAN7,TTC28,TUBB6,TYRP1,VAT1L,VPS13A,VRK1,VWA3A,VWA3B,XYLT1,ZDHHC14,ZNF276,ZNF519,ZNF580,ZNF583 | 306 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Large intestine adenocarcinoma | 1.11E-14 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD16B,ABLIM1,ACBD5,ACBD6,ACSBG1,ACVRL1,ADCY5,ADGRL3,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,ALG6,AMD1,AMZ1,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,ATP5PF,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BFSP2,BICD2,BRINP1,BTBD9,C1orf105,C1R,C4orf36,C6orf118,CAMTA1,CARD10,CBLB,CCDC190,CCDC33,CCKBR,CCSER1,CDH13,CDH15,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CRH,CRYAA/CRYAA2,CSF3,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CXXC4,CYP51A1,DAB2IP,DAPK1,DBX2,DEGS2,DISP3,DLST,DMRT2,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,ECD,ENPEP,EPHA2,EPS15L1,ERO1A,ETNK1,F8,FAM120A,FAM167B,FAM83D,FGF18,FMN1,FUCA2,FYN,GAB1,GALNT13,GALNT17,GDNF,GFRAL,GNS,GRIK5,HAS2,HEG1,HIF1A,HMGN3,HNF4G,HNRNPR,HTR3B,IBTK,ICE1,IFT46,IGSF21,IGSF9B,IL10RA,IL20RA,INMT,IQGAP1,IRX6,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNJ9,KCNK5,KCTD15,KDM2B,KIF13A,KIF26A,KITLG,KLC1,let-7,LRCH1,LRRC31,LRRN3,LSAMP,LTB4R2,LYSMD4,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MBD2,MEDAG,MEPE,MGAT4B,MIDN,MITF,MOCS2,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC13,MUC20,MYO3B,MYOD1,NADSYN1,NCKAP5,NELL1,NHLRC3,NKX2-3,NKX2-5,NOL4,NRG2,NTM,NTPCR,OCSTAMP,ORC3,OTOF,OXR1,PABPC4,PACSIN1,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PELI2,PGBD5,PHLPP1,PHYHD1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLSCR5,PNPLA5,POU2AF1,PPIC,PRIMA1,PRKCQ,PROS1,PRPF31,PTPRC,PTPRZ1,RAB3C,RAD21L1,RAPGEF2,RASSF8,RBM20,RCC2,REC114,REEP3,RGS20,RIMBP2,RIT2,RNF144B,RNF168,RNF213,RNF6,RORA,RPH3AL,RPL3,SCEL,SCML4,SEMA3E,SH3TC2,SI,SLC12A2,SLC13A1,SLC13A2,SLC24A3,SLC25A29,SLC37A4,SLC38A8,SLC6A15,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STX6,STXBP5L,SYCP3,SYNPO2,SYT17,SYT2,SYT4,SYT6,TAP1,TAS2R1,TCF7L2,TENM3,TERF2,TFAP2B,TFEC,TGFB2,TGFBR3,TM9SF2,TMBIM6,TMCC3,TMEM132B,TMPO,TNR,TPTE2,TRAM1L1,TRDN,TRPC7,TRPS1,TSPAN17,TSPAN7,TTC28,TUBB6,TYRP1,VAT1L,VPS13A,VWA3A,VWA3B,XYLT1,ZDHHC14,ZNF276,ZNF519,ZNF580,ZNF583 | 304 |
| Cancer,Organismal Injury and Abnormalities | Melanoma | 2.36E-14 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD6,ACBD5,ACSBG1,ACTL6A,ACVRL1,ADAT1,ADCY5,ADGRL3,AFAP1L2,AGBL1,AGO2,AMZ1,ANKRD22,ANKS1B,AQP3,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BFSP2,BICD2,BRINP1,BTBD9,C1orf105,C1R,C6orf118,CA10,CAMTA1,CARD10,CBLB,CBLN4,CCDC190,CCDC33,CCKBR,CCSER1,CDH13,CDH15,CDH19,CDH22,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CRH,CRYAA/CRYAA2,CSMD3,CSNK1G2,CTNND2,CX3CL1,CXXC4,CYB561,CYP51A1,DAPK1,DBX2,DEGS2,DISC1,DISP3,DLST,DMRT2,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,EIF4EBP2,ENPEP,EPHA2,EPS15L1,ERO1A,ETNK1,EXD1,F8,FAM117A,FAM120A,FAM83D,FMN1,FNDC7,FYN,GAB1,GALNT13,GALNT17,GATA4,GFRAL,GJB5,GLO1,GRHL2,GRIK5,HAS2,HEG1,HIF1A,HNF4G,HTR3B,IBTK,ICE1,IGSF21,IGSF9B,IL10RA,IL20RA,INMT,IQGAP1,IRX6,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNJ9,KCNK5,KDM2B,KIF13A,KIF26A,KITLG,KLC1,let-7,LMX1A,LRCH1,LRRC31,LRRN3,LY86,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MBD2,MCOLN1,MEDAG,MEPE,METTL11B,MGAT4B,MITF,MROH2B,MRPL23,MSH5,MTSS1,MUC13,MUC20,MYO3B,NADSYN1,NCKAP5,NELL1,NOL4,NRG2,NTM,NTPCR,OCSTAMP,OPN4,OR13F1,OR6S1,ORC3,OTOF,PABPC4,PACSIN1,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PELI2,PEX26,PGBD5,PHLPP1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PNPLA5,POU2AF1,PRIMA1,PRKCQ,PROS1,PRPF31,PRSS54,PSAP,PTPRC,PTPRZ1,RAB3B,RAB3C,RAD21L1,RAPGEF2,RASSF8,RBM20,RBMS3,RGS20,RIMBP2,RIT2,RNF144B,RNF168,RNF213,RNF6,RORA,RPH3AL,RPL3,SCEL,SCML4,SEMA3E,SGCD,SH3TC2,SI,SLC12A2,SLC12A8,SLC13A1,SLC13A2,SLC24A3,SLC38A8,SLC6A15,SLC6A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SMC1B,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STMND1,STPG2,STXBP5L,SYNPO2,SYPL1,SYT17,SYT2,SYT4,TAP1,TAS2R1,TCEAL3,TCF7L2,TENM3,TEPP,TFEC,TGFB2,TGFBR3,TIMP2,TMCC3,TMEM132B,TMEM98,TMPO,TNFSF13B,TNR,TPTE2,TRAM1L1,TRDN,TRPC7,TRPS1,TSGA13,TSPAN17,TTC28,TYRP1,USP46,VAT1L,VPS13A,VWA3A,VWA3B,WDR73,WNT3A,XCL1,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF519,ZNF583 | 298 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Organismal Injury and Abnormalities | Genitourinary adenocarcinoma | 2.54E-14 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD6,ABLIM1,ACSBG1,ACVRL1,ADAT1,ADGRL3,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,B3GLCT,BANK1,BCL11A,BCL11B,BICD2,BRINP1,BTBD9,C1orf105,C6orf118,CAMTA1,CARD10,CBLB,CBLN4,CCDC33,CCKBR,CCSER1,CDH13,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CSMD3,CTNND2,CX3CL1,CXXC4,CYP51A1,DAB2IP,DAPK1,DISC1,DISP3,DLST,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,ENPEP,EPHA2,EXD1,F8,FAM117A,FAM180A,FAM83D,FGF18,FMN1,FNDC7,FUCA2,FYN,GAB1,GALNT13,GALNT17,GFRAL,GJB5,GNS,GRHL2,GRIK5,HAS2,HEG1,HEXIM2,HIF1A,HNF4G,HNRNPR,IBTK,ICE1,IGSF21,IGSF9B,IL10RA,IQGAP1,ITPKB,JAK2,KCNH3,KCNJ9,KCNK5,KDM2B,KIF13A,KIF26A,KLC1,let-7,LMX1A,LRRC31,LRRN3,LSAMP,LY86,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MC4R,MCOLN1,MEPE,MGAT4B,mir-129,MITF,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC20,MYO3B,MYOD1,NCKAP5,NOL4,NTM,NTPCR,OCSTAMP,ORC3,OTOF,PABPC4,PAK5,PAPOLA,PARD3,PARP4,PAX2,PCDH17,PCSK2,PDE7B,PGBD5,PHLPP1,PHYHD1,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PLSCR5,PRKCQ,PROS1,PRPF31,PRSS54,PSMG1,PTPRC,PTPRZ1,RAD21L1,RAPGEF2,RASSF8,RBM20,RCC2,RGS20,RIMBP2,RIT2,RNF144B,RNF168,RNF213,RNF6,RORA,RPH3AL,SCML4,SEMA3E,SGCD,SH3TC2,SI,SLC12A2,SLC12A8,SLC13A2,SLC22A5,SLC24A3,SLC37A4,SLC6A15,SLC6A4,SLC8A1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STX6,STXBP5L,STXBP6,SYNPO2,SYT17,SYT2,SYT4,SYT6,TAP1,TCF7L2,TENM3,TFAP2B,TGFB2,TGFBR3,TIMP2,TM9SF2,TMEM132B,TNFSF13B,TNR,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TTC28,TUBB6,TYRP1,USP46,VAT1L,VPS13A,VRK1,VWA3B,WDR73,WNT3A,WNT8B,XCL1,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF519,ZNF583 | 259 |
| Cancer,Organismal Injury and Abnormalities,Reproductive System Disease | Genital tumor | 3.38E-14 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD6,ABLIM1,ACSBG1,ACVRL1,ADAT1,ADGRL3,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,B3GLCT,BANK1,BCL11A,BCL11B,BICD2,BRINP1,BTBD9,C1R,C6orf118,CAMTA1,CARD10,CBLB,CBLN4,CCDC33,CCDC61,CCKBR,CDH13,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CSF3,CSMD3,CTNND2,CX3CL1,CYP51A1,DAB2IP,DAPK1,DEGS2,DISC1,DISP3,DLST,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,ENO1,ENPEP,EPHA2,ERO1A,EXD1,F8,FAM117A,FAM180A,FAM83D,FGF18,FMN1,FNDC7,FUCA2,FYN,GAB1,GALNT13,GALNT17,GATA4,GDNF,GFRAL,GJB5,GNS,GRHL2,GRIK5,HAS2,HEG1,HEXIM2,HIF1A,HNF4G,HNRNPR,IBTK,ICE1,IGSF21,IGSF9B,INMT,IQGAP1,ITPKB,JAK2,JUP,KCNH3,KCNJ9,KCNK5,KDM2B,KIF13A,KIF26A,KITLG,KLC1,let-7,LMX1A,LRRC31,LRRN3,LSAMP,LTB4R2,LY86,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MC4R,MCOLN1,MEPE,MGAT4B,mir-129,MITF,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC20,MYO3B,MYOD1,NCKAP5,NELL1,NKX2-3,NKX2-5,NOL4,NRG2,NTM,NTPCR,OCSTAMP,ORC3,OTOF,PABPC4,PAK5,PAPOLA,PARD3,PARP4,PAX2,PCDH17,PCSK2,PDE7B,PGBD5,PHLPP1,PHYHD1,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PLSCR5,PRKCQ,PROS1,PRPF31,PRSS54,PSAP,PSMG1,PTPRC,PTPRZ1,RAD21L1,RAPGEF2,RASSF8,RBM20,RCC2,RGS20,RIMBP2,RIT2,RNF144B,RNF213,RNF6,RORA,SCML4,SEMA3E,SGCD,SH3TC2,SI,SLC12A2,SLC12A8,SLC13A2,SLC22A5,SLC24A3,SLC37A4,SLC6A15,SLC6A4,SLC8A1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STX6,STXBP5L,STXBP6,SYCP3,SYNPO2,SYT17,SYT2,SYT4,TAP1,TCF7L2,TENM3,TFAP2B,TGFBR3,TIMP2,TM9SF2,TMEM132B,TNFSF13B,TNR,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TTC28,TYRP1,USP46,VAT1L,VPS13A,VRK1,VWA3B,WDR73,WNT3A,WNT8B,XCL1,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF583 | 267 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Organismal Injury and Abnormalities,Reproductive System Disease | Genital tract cancer | 5.18E-14 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD6,ABLIM1,ACSBG1,ACVRL1,ADAT1,ADGRL3,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,B3GLCT,BANK1,BCL11A,BCL11B,BICD2,BRINP1,BTBD9,C1R,C6orf118,CAMTA1,CARD10,CBLB,CBLN4,CCDC33,CCDC61,CCKBR,CDH13,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CSF3,CSMD3,CTNND2,CX3CL1,CYP51A1,DAB2IP,DAPK1,DEGS2,DISC1,DISP3,DLST,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,ENO1,ENPEP,EPHA2,ERO1A,EXD1,F8,FAM117A,FAM180A,FAM83D,FGF18,FMN1,FNDC7,FUCA2,FYN,GAB1,GALNT13,GALNT17,GDNF,GFRAL,GJB5,GNS,GRHL2,GRIK5,HAS2,HEG1,HEXIM2,HIF1A,HNF4G,HNRNPR,IBTK,ICE1,IGSF21,IGSF9B,INMT,IQGAP1,ITPKB,JAK2,JUP,KCNH3,KCNJ9,KCNK5,KDM2B,KIF13A,KIF26A,KLC1,let-7,LMX1A,LRRC31,LRRN3,LSAMP,LTB4R2,LY86,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MC4R,MCOLN1,MEPE,MGAT4B,mir-129,MITF,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC20,MYO3B,MYOD1,NCKAP5,NELL1,NKX2-3,NKX2-5,NOL4,NTM,NTPCR,OCSTAMP,ORC3,OTOF,PABPC4,PAK5,PAPOLA,PARD3,PARP4,PAX2,PCDH17,PCSK2,PDE7B,PGBD5,PHLPP1,PHYHD1,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PLSCR5,PRKCQ,PROS1,PRPF31,PRSS54,PSAP,PSMG1,PTPRC,PTPRZ1,RAD21L1,RAPGEF2,RASSF8,RBM20,RCC2,RGS20,RIMBP2,RIT2,RNF144B,RNF213,RNF6,RORA,SCML4,SEMA3E,SGCD,SH3TC2,SI,SLC12A2,SLC12A8,SLC13A2,SLC22A5,SLC24A3,SLC37A4,SLC6A15,SLC6A4,SLC8A1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STX6,STXBP5L,STXBP6,SYCP3,SYNPO2,SYT17,SYT2,SYT4,TAP1,TCF7L2,TENM3,TFAP2B,TGFBR3,TIMP2,TM9SF2,TMEM132B,TNFSF13B,TNR,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TTC28,TYRP1,USP46,VAT1L,VPS13A,VRK1,VWA3B,WDR73,WNT3A,WNT8B,XCL1,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF583 | 264 |
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Large intestine neoplasm | 6E-14 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD16B,ABLIM1,ACBD5,ACBD6,ACSBG1,ACVRL1,ADCY5,ADGRL3,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,ALG6,AMD1,AMZ1,ANKRD22,ANKS1B,AQP3,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,ATP5PF,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BFSP2,BICD2,BRINP1,BTBD9,C1orf105,C1R,C4orf36,C6orf118,CAMTA1,CARD10,CBLB,CCDC190,CCDC33,CCKBR,CCSER1,CDH13,CDH15,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CRH,CRYAA/CRYAA2,CSF3,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CXXC4,CYP51A1,DAB2IP,DAPK1,DBX2,DEGS2,DISP3,DLST,DMRT2,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,ECD,ENO1,ENPEP,EPHA2,EPS15L1,ERO1A,ETNK1,F8,FAM120A,FAM167B,FAM83D,FGF18,FMN1,FUCA2,FYN,GAB1,GALNT13,GALNT17,GDNF,GFRAL,GINS2,GNS,GRIK5,HAS2,HEG1,HIF1A,HMGN3,HNF4G,HNRNPR,HTR3B,IBTK,ICE1,IFT46,IGSF21,IGSF9B,IL10RA,IL20RA,INMT,IQGAP1,IRX6,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNJ9,KCNK5,KCTD15,KDM2B,KIF13A,KIF26A,KITLG,KLC1,let-7,LRCH1,LRRC31,LRRN3,LSAMP,LTB4R2,LYSMD4,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MBD2,MEDAG,MEPE,MGAT4B,MIDN,mir-129,MITF,MOCS2,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC13,MUC20,MYO3B,MYOD1,NADSYN1,NCKAP5,NELL1,NHLRC3,NKX2-3,NKX2-5,NOL4,NRG2,NTM,NTPCR,OCSTAMP,ORC3,OTOF,OXR1,PABPC4,PACSIN1,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PELI2,PGBD5,PHLPP1,PHYHD1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLSCR5,PNPLA5,POU2AF1,PPIC,PRIMA1,PRKCQ,PROS1,PRPF31,PTPRC,PTPRZ1,RAB3C,RAD21L1,RAPGEF2,RASSF8,RBM20,RCC2,REC114,REEP3,RGS20,RIMBP2,RIT2,RNF144B,RNF168,RNF213,RNF6,RORA,RPH3AL,RPL3,SCEL,SCML4,SEMA3E,SH3TC2,SI,SLC12A2,SLC12A8,SLC13A1,SLC13A2,SLC22A5,SLC24A3,SLC25A29,SLC37A4,SLC38A8,SLC6A15,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STX6,STXBP5L,STXBP6,SYCP3,SYNPO2,SYT17,SYT2,SYT4,SYT6,TAP1,TAS2R1,TCF7L2,TENM3,TERF2,TFAP2B,TFEC,TGFB2,TGFBR3,TIMP2,TM9SF2,TMBIM6,TMCC3,TMEM132B,TMPO,TNR,TPTE2,TRAM1L1,TRDN,TRPC7,TRPS1,TSPAN17,TSPAN7,TTC28,TUBB6,TYRP1,VAT1L,VPS13A,VRK1,VWA3A,VWA3B,XCL1,XYLT1,ZDHHC14,ZNF276,ZNF519,ZNF580,ZNF583 | 314 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Malignant neoplasm of large intestine | 7.15E-14 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD16B,ABLIM1,ACBD5,ACBD6,ACSBG1,ACVRL1,ADCY5,ADGRL3,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,ALG6,AMD1,AMZ1,ANKRD22,ANKS1B,AQP3,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,ATP5PF,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BFSP2,BICD2,BRINP1,BTBD9,C1orf105,C1R,C4orf36,C6orf118,CAMTA1,CARD10,CBLB,CCDC190,CCDC33,CCKBR,CCSER1,CDH13,CDH15,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CRH,CRYAA/CRYAA2,CSF3,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CXXC4,CYP51A1,DAB2IP,DAPK1,DBX2,DEGS2,DISP3,DLST,DMRT2,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,ECD,ENO1,ENPEP,EPHA2,EPS15L1,ERO1A,ETNK1,F8,FAM120A,FAM167B,FAM83D,FGF18,FMN1,FUCA2,FYN,GAB1,GALNT13,GALNT17,GDNF,GFRAL,GINS2,GNS,GRIK5,HAS2,HEG1,HIF1A,HMGN3,HNF4G,HNRNPR,HTR3B,IBTK,ICE1,IFT46,IGSF21,IGSF9B,IL10RA,IL20RA,INMT,IQGAP1,IRX6,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNJ9,KCNK5,KCTD15,KDM2B,KIF13A,KIF26A,KITLG,KLC1,let-7,LRCH1,LRRC31,LRRN3,LSAMP,LTB4R2,LYSMD4,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MBD2,MEDAG,MEPE,MGAT4B,MIDN,mir-129,MITF,MOCS2,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC13,MUC20,MYO3B,MYOD1,NADSYN1,NCKAP5,NELL1,NHLRC3,NKX2-3,NKX2-5,NOL4,NRG2,NTM,NTPCR,OCSTAMP,ORC3,OTOF,OXR1,PABPC4,PACSIN1,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PELI2,PGBD5,PHLPP1,PHYHD1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLSCR5,PNPLA5,POU2AF1,PPIC,PRIMA1,PRKCQ,PROS1,PRPF31,PTPRC,PTPRZ1,RAB3C,RAD21L1,RAPGEF2,RASSF8,RBM20,RCC2,REC114,REEP3,RGS20,RIMBP2,RIT2,RNF144B,RNF168,RNF213,RNF6,RORA,RPH3AL,RPL3,SCEL,SCML4,SEMA3E,SH3TC2,SI,SLC12A2,SLC12A8,SLC13A1,SLC13A2,SLC24A3,SLC25A29,SLC37A4,SLC38A8,SLC6A15,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STX6,STXBP5L,STXBP6,SYCP3,SYNPO2,SYT17,SYT2,SYT4,SYT6,TAP1,TAS2R1,TCF7L2,TENM3,TERF2,TFAP2B,TFEC,TGFB2,TGFBR3,TIMP2,TM9SF2,TMBIM6,TMCC3,TMEM132B,TMPO,TNR,TPTE2,TRAM1L1,TRDN,TRPC7,TRPS1,TSPAN17,TSPAN7,TTC28,TUBB6,TYRP1,VAT1L,VPS13A,VRK1,VWA3A,VWA3B,XCL1,XYLT1,ZDHHC14,ZNF276,ZNF519,ZNF580,ZNF583 | 313 |
| Cancer,Organismal Injury and Abnormalities | Formation of solid tumor | 1.64E-13 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD16B,ABHD6,ABLIM1,ACBD5,ACBD6,ACSBG1,ACVRL1,ADCY5,ADGRL3,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,ALG6,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,AQP3,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,ATP5PF,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BICD2,BRINP1,BTBD9,C1orf105,C1R,C6orf118,CAMTA1,CARD10,CBLB,CBLN4,CCDC190,CCDC33,CCDC61,CCKBR,CCSER1,CDH13,CDH15,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CRH,CRYAA/CRYAA2,CSF3,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CX3CL1,CXXC4,CYP51A1,DAB2IP,DAPK1,DEGS2,DISC1,DISP3,DLST,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,ECD,ENO1,ENPEP,EPHA2,EXD1,F8,FAM120A,FAM167B,FAM83D,FGF18,FMN1,FNDC7,FUCA2,FYN,GAB1,GALNT13,GALNT17,GATA4,GDNF,GFRAL,GINS2,GJB5,GRHL2,GRIK5,HAS2,HEG1,HEXIM2,HIF1A,HINT1,HMGN3,HNF4G,HNRNPR,HTR3B,IBTK,ICE1,IFT46,IGSF21,IGSF9B,IL10RA,INMT,IQGAP1,IRX6,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNJ9,KCNK5,KCTD15,KDM2B,KIF13A,KIF26A,KITLG,KLC1,KLF1,KLF13,let-7,LMX1A,LRCH1,LRRC31,LRRN3,LSAMP,LTB4R2,LY86,LYSMD4,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MBD2,MC4R,MCOLN1,MEDAG,MEPE,METTL11B,MGAT4B,MIDN,mir-129,MITF,MOCS2,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC13,MUC20,MYO3B,MYOD1,NADSYN1,NCKAP5,NELL1,NHLRC3,NKX2-5,NOL4,NRG2,NTM,NTPCR,OCSTAMP,ODF3B,OR13F1,ORC3,OTOF,OXR1,PABPC4,PACSIN1,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PELI2,PERP,PGBD5,PHLPP1,PHYHD1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PLSCR5,PNPLA5,POU2AF1,PRIMA1,PRKCQ,PROS1,PRPF31,PRSS54,PSAP,PSMG1,PTPRC,PTPRZ1,RAB3C,RAD21L1,RAPGEF2,RASSF8,RBM20,RCC2,REC114,REEP3,RGS20,RHOBTB1,RIMBP2,RIT2,RNF144B,RNF168,RNF213,RNF6,RORA,RPH3AL,SCEL,SCML4,SEMA3E,SH3TC2,SI,SLC12A2,SLC12A8,SLC13A1,SLC13A2,SLC22A5,SLC24A3,SLC25A29,SLC35A3,SLC37A4,SLC38A8,SLC6A15,SLC6A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STMND1,STPG2,STX6,STXBP5L,STXBP6,SYCP3,SYNPO2,SYPL1,SYT4,SYT6,TAP1,TAS2R1,TCEAL3,TCF7L2,TENM3,TERF2,TFAP2B,TFEC,TGFB2,TGFBR3,TIMP2,TM9SF2,TMEM132B,TMPO,TNFSF13B,TNR,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TSGA13,TSPAN17,TSPAN7,TTC28,TUBB6,TYRP1,VAT1L,VPS13A,VRK1,VWA3A,VWA3B,WDR73,WNT3A,XCL1,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF519,ZNF580,ZNF583 | 338 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Gastro-esophageal carcinoma | 3.15E-13 | AAK1,ABCC1,ACBD5,ADCY5,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,AMD1,ANKS1B,ARHGEF6,ARID1B,ARMC3,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BRINP1,C1R,C6orf118,CA10,CAMTA1,CARD10,CBLB,CCKBR,CCSER1,CDH15,CDH22,CEP350,CHD5,CHD6,CIITA,CMIP,CSMD3,CSNK1G3,CTNND2,CXXC4,CYP51A1,DAB2IP,DAPK1,DISC1,DISP3,DNAH7,DNAH8,DPP10,E2F7,E2F8,ECD,ENPEP,EPHA2,F8,FAM120A,FAM83D,GALNT17,GRHL2,GRIK5,HAS2,HIF1A,HINT1,IBTK,IGSF21,IGSF9B,INMT,IQCF6,IQGAP1,IRX6,ITPKB,JAK2,JCAD,KCNH3,KDM2B,KIF13A,KIF26A,let-7,LMX1A,LRCH1,LRRN3,LSAMP,MAGI2,MAN2B1,MAP2K1,MC4R,MEDAG,METTL11B,MIDN,MROH2B,MTSS1,MYOD1,NADSYN1,NCKAP5,NELL1,NRG2,OPN4,ORC3,OTOF,PAK5,PAPOLA,PARD3,PARP4,PAX2,PCDH17,PCSK2,PELI2,PHLPP1,PHYHD1,PI16,PIK3R4,PKD1L2,PLCE1,PNPLA5,PROS1,PTPRC,PTPRZ1,RAPGEF2,RBM20,RGS20,RHOBTB1,RIMBP2,RIT2,RNF213,RNF6,RORA,SCEL,SEMA3E,SH3TC2,SI,SLC12A2,SLC13A2,SLC24A3,SLC35A3,SLC6A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SPEG,STAG3,STARD8,STXBP5L,SYCP3,SYNPO2,SYT4,SYT6,TCF7L2,TENM3,TFAP2B,TFEC,TGFBR3,TM9SF2,TMEM132B,TMPO,TNR,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TSGA13,TYRP1,VPS13A,VWA3A,WNT3A,ZDHHC14,ZNF276,ZNF583 | 169 |
| Cancer,Organismal Injury and Abnormalities | Pelvic adenocarcinoma | 4.46E-13 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD6,ABLIM1,ACSBG1,ACVRL1,ADAT1,ADGRL3,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,B3GLCT,BANK1,BCL11A,BCL11B,BICD2,BRINP1,BTBD9,C6orf118,CAMTA1,CARD10,CBLB,CBLN4,CCDC33,CCKBR,CDH13,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CSMD3,CTNND2,CX3CL1,CYP51A1,DAB2IP,DAPK1,DISC1,DISP3,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,ENPEP,EPHA2,EXD1,F8,FAM117A,FAM180A,FAM83D,FGF18,FMN1,FNDC7,FUCA2,GAB1,GALNT13,GALNT17,GFRAL,GJB5,GNS,GRHL2,GRIK5,HAS2,HEG1,HEXIM2,HNF4G,HNRNPR,IBTK,ICE1,IGSF21,IGSF9B,IQGAP1,ITPKB,JAK2,KCNH3,KCNJ9,KCNK5,KDM2B,KIF13A,KIF26A,KLC1,LMX1A,LRRC31,LRRN3,LSAMP,LY86,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MC4R,MCOLN1,MEPE,MGAT4B,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC20,MYO3B,MYOD1,NCKAP5,NOL4,NTM,NTPCR,OCSTAMP,ORC3,OTOF,PABPC4,PAK5,PAPOLA,PARD3,PARP4,PCDH17,PCSK2,PDE7B,PGBD5,PHLPP1,PHYHD1,PIK3AP1,PIK3R4,PLCE1,PLPPR1,PLSCR5,PRKCQ,PROS1,PRPF31,PRSS54,PSMG1,PTPRC,PTPRZ1,RAD21L1,RAPGEF2,RASSF8,RBM20,RGS20,RIMBP2,RIT2,RNF144B,RNF213,RNF6,RORA,SCML4,SEMA3E,SGCD,SH3TC2,SI,SLC12A2,SLC12A8,SLC13A2,SLC22A5,SLC24A3,SLC37A4,SLC6A15,SLC6A4,SLC8A1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STX6,STXBP5L,STXBP6,SYNPO2,SYT17,SYT2,SYT4,TAP1,TCF7L2,TENM3,TFAP2B,TGFBR3,TIMP2,TM9SF2,TMEM132B,TNFSF13B,TNR,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TTC28,TYRP1,USP46,VAT1L,VPS13A,VRK1,VWA3B,WDR73,WNT3A,WNT8B,XCL1,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF583 | 240 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Upper gastrointestinal carcinoma | 4.72E-13 | AAK1,ABCC1,ACBD5,ADCY5,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,AMD1,ANKS1B,ARHGEF6,ARID1B,ARMC3,ATP5PF,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BRINP1,BTBD9,C1R,C6orf118,CA10,CAMTA1,CARD10,CBLB,CCKBR,CCSER1,CDH13,CDH15,CDH22,CEP350,CHD5,CHD6,CIITA,CMIP,CSMD3,CSNK1G3,CTNND2,CXXC4,CYP51A1,DAB2IP,DAPK1,DISC1,DISP3,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,ECD,EIF4EBP2,ENPEP,EPHA2,F8,FAM120A,FAM83D,GALNT17,GATA4,GRHL2,GRIK5,HAS2,HEG1,HIF1A,HINT1,HNRNPR,IBTK,IGSF21,IGSF9B,INMT,IQCF6,IQGAP1,IRX6,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCTD15,KDM2B,KIF13A,KIF26A,let-7,LMX1A,LRCH1,LRRN3,LSAMP,MAGI2,MAN2B1,MAP2K1,MAP7,MC4R,MCOLN1,MEDAG,MEPE,METTL11B,MIDN,MROH2B,MTSS1,MYO3B,MYOD1,NADSYN1,NCKAP5,NELL1,NKX2-5,NRG2,OPN4,ORC3,OTOF,PAK5,PAPOLA,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PELI2,PHLPP1,PHYHD1,PI16,PIK3R4,PKD1L2,PLCE1,PNPLA5,PROS1,PTPRC,PTPRZ1,RAPGEF2,RBM20,RGS20,RHOBTB1,RIMBP2,RIT2,RNF213,RNF6,RORA,SCEL,SCML4,SEMA3E,SH3TC2,SI,SLC12A2,SLC13A2,SLC24A3,SLC35A3,SLC6A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SPEG,STAG3,STARD8,STAT1,STXBP5L,SYCP3,SYNPO2,SYT4,SYT6,TCF7L2,TENM3,TFAP2B,TFEC,TGFBR3,TM9SF2,TMEM132B,TMPO,TNR,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TSGA13,TTC28,TYRP1,VAT1L,VPS13A,VWA3A,WDR73,WNT3A,ZDHHC14,ZNF276,ZNF583 | 191 |
| Cancer,Organismal Injury and Abnormalities | Pelvic cancer | 4.75E-13 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD6,ABLIM1,ACBD5,ACSBG1,ACVRL1,ADAT1,ADGRL3,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BICD2,BRINP1,BTBD9,C1R,C6orf118,CAMTA1,CARD10,CBLB,CBLN4,CCDC33,CCDC61,CCKBR,CDH13,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CSF3,CSMD3,CTNND2,CX3CL1,CYP51A1,DAB2IP,DAPK1,DEGS2,DISC1,DISP3,DLST,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,ECD,ENO1,ENPEP,EPHA2,EPS15L1,ERO1A,EXD1,F8,FAM117A,FAM180A,FAM83D,FGF18,FMN1,FNDC7,FUCA2,FYN,GAB1,GALNT13,GALNT17,GFRAL,GJB5,GLO1,GNS,GRHL2,GRIK5,HAS2,HEG1,HEXIM2,HIF1A,HNF4G,HNRNPR,IBTK,ICE1,IGSF21,IGSF9B,IL20RA,INMT,IQGAP1,ITPKB,JAK2,JCAD,JUP,KCNH3,KCNJ9,KCNK5,KDM2B,KIF13A,KIF26A,KLC1,let-7,LMX1A,LRCH1,LRRC31,LRRN3,LSAMP,LY86,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MC4R,MCOLN1,MEPE,MGAT4B,mir-129,MITF,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC13,MUC20,MYO3B,MYOD1,NCKAP5,NELL1,NKX2-3,NKX2-5,NOL4,NTM,NTPCR,OCSTAMP,ORC3,OTOF,PABPC4,PAK5,PAPOLA,PARD3,PARP4,PAX2,PCDH17,PCSK2,PDE7B,PGBD5,PHLPP1,PHYHD1,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PLSCR5,PRKCQ,PROS1,PRPF31,PRSS54,PSAP,PSMG1,PTPRC,PTPRZ1,RAD21L1,RAPGEF2,RASSF8,RBM20,RCC2,RGS20,RIMBP2,RIT2,RNF144B,RNF213,RNF6,RORA,SCML4,SEMA3E,SGCD,SH3TC2,SI,SLC12A2,SLC12A8,SLC13A2,SLC22A5,SLC24A3,SLC37A4,SLC6A15,SLC6A4,SLC8A1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STX6,STXBP5L,STXBP6,SYCP3,SYNPO2,SYT17,SYT2,SYT4,TAP1,TCF7L2,TENM3,TFAP2B,TGFBR3,TIMP2,TM9SF2,TMEM132B,TNFSF13B,TNR,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TTC28,TYRP1,USP46,VAT1L,VPS13A,VRK1,VWA3B,WDR73,WNT3A,WNT8B,XCL1,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF583 | 271 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Non-colon gastrointestinal cancer | 6.75E-13 | AAK1,ABCC1,ACBD5,ADCY5,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,AMD1,ANKS1B,ARHGEF6,ARID1B,ARMC3,ARPP21,ATP5PF,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BRINP1,BTBD9,C1R,C6orf118,CA10,CAMTA1,CARD10,CBLB,CCKBR,CCSER1,CDH13,CDH15,CDH22,CEP350,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CSMD3,CSNK1G3,CTNND2,CXXC4,CYP51A1,DAB2IP,DAPK1,DISC1,DISP3,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,ECD,EIF4EBP2,ENPEP,EPHA2,F8,FAM120A,FAM83D,GALNT17,GATA4,GRHL2,GRIK5,HAS2,HEG1,HIF1A,HINT1,HNRNPR,IBTK,ICE1,IGSF21,IGSF9B,INMT,IQCF6,IQGAP1,IRX6,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNK5,KCTD15,KDM2B,KIF13A,KIF26A,let-7,LMX1A,LRCH1,LRRC31,LRRN3,LSAMP,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MBD2,MC4R,MCOLN1,MEDAG,MEPE,METTL11B,MIDN,mir-129,MROH2B,MTSS1,MYO3B,MYOD1,NADSYN1,NCKAP5,NELL1,NKX2-5,NRG2,OPN4,ORC3,OTOF,PAK5,PAPOLA,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PELI2,PHLPP1,PHYHD1,PI16,PIK3R4,PKD1L2,PLCE1,PNPLA5,PROS1,PTPRC,PTPRZ1,RAPGEF2,RBM20,RGS20,RHOBTB1,RIMBP2,RIT2,RNF213,RNF6,RORA,SCEL,SCML4,SEMA3E,SH3TC2,SI,SLC12A2,SLC13A2,SLC24A3,SLC35A3,SLC6A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SPEG,STAG3,STARD8,STAT1,STXBP5L,SYCP3,SYNPO2,SYT4,SYT6,TCF7L2,TENM3,TFAP2B,TFEC,TGFBR3,TM9SF2,TMEM132B,TMPO,TNR,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TSGA13,TTC28,TYRP1,VAT1L,VPS13A,VWA3A,VWA3B,WDR73,WNT3A,ZDHHC14,ZNF276,ZNF583 | 201 |
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Colon carcinoma | 7.27E-13 | ABCC1,ABCC3,ABLIM1,ACBD6,ACVRL1,ADCY5,ADGRL3,ADNP,AFAP1L2,AGBL1,AKAP7,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF6,ARID1B,ARMC3,ARPP21,ATP5PF,AUTS2,B3GLCT,BCL11A,BCL11B,BICD2,BTBD9,C1orf105,C1R,CAMTA1,CARD10,CCKBR,CCSER1,CDH13,CDH19,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CRH,CRYAA/CRYAA2,CSMD3,CSNK1G2,CTNND2,CYP51A1,DAB2IP,DAPK1,DEGS2,DISP3,DLST,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,EPHA2,F8,FAM120A,FAM167B,FAM83D,FGF18,FUCA2,FYN,GAB1,GALNT13,GDNF,GFRAL,GINS2,GRIK5,HEG1,HMGN3,HNRNPR,HTR3B,ICE1,IGSF21,IGSF9B,INMT,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNK5,KCTD15,KDM2B,KIF13A,KIF26A,KITLG,KLC1,let-7,LSAMP,MAF,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MEDAG,MIDN,MITF,MOCS2,MR1,MSH5,MUC20,MYO3B,MYOD1,NCKAP5,NELL1,NKX2-5,NOL4,NRG2,NTM,NTPCR,OTOF,PABPC4,PACSIN1,PAK5,PAQR8,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PGBD5,PHLPP1,PHYHD1,PI16,PKD1L2,PLCE1,POU2AF1,PRIMA1,PROS1,PTPRC,PTPRZ1,RAB3C,RAPGEF2,RCC2,REC114,RGS20,RNF213,RNF6,RPH3AL,SEMA3E,SLC12A2,SLC13A1,SLC13A2,SLC25A29,SLC37A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,ST6GALNAC2,STAG3,STARD8,STAT1,SYCP3,SYNPO2,SYT4,TCF7L2,TENM3,TERF2,TFAP2B,TFEC,TGFBR3,TMEM132B,TMPO,TNR,TPTE2,TRAM1L1,TRDN,TRPC7,TRPS1,TSPAN17,TSPAN7,TTC28,VAT1L,VPS13A,VRK1,VWA3B,ZDHHC14,ZNF580,ZNF583 | 195 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Organismal Injury and Abnormalities | Pelvic tumor | 1.28E-12 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD6,ABLIM1,ACBD5,ACSBG1,ACVRL1,ADAT1,ADGRL3,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BICD2,BRINP1,BTBD9,C1R,C6orf118,CAMTA1,CARD10,CBLB,CBLN4,CCDC33,CCDC61,CCKBR,CDH13,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CSF3,CSMD3,CTNND2,CX3CL1,CYP51A1,DAB2IP,DAPK1,DEGS2,DISC1,DISP3,DLST,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,ECD,ENO1,ENPEP,EPHA2,EPS15L1,ERO1A,EXD1,F8,FAM117A,FAM180A,FAM83D,FGF18,FMN1,FNDC7,FUCA2,FYN,GAB1,GALNT13,GALNT17,GATA4,GFRAL,GJB5,GLO1,GNS,GRHL2,GRIK5,HAS2,HEG1,HEXIM2,HIF1A,HNF4G,HNRNPR,IBTK,ICE1,IGSF21,IGSF9B,IL20RA,INMT,IQGAP1,ITPKB,JAK2,JCAD,JUP,KCNH3,KCNJ9,KCNK5,KDM2B,KIF13A,KIF26A,KLC1,let-7,LMX1A,LRCH1,LRRC31,LRRN3,LSAMP,LY86,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MC4R,MCOLN1,MEPE,MGAT4B,mir-129,MITF,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC13,MUC20,MYO3B,MYOD1,NCKAP5,NELL1,NKX2-3,NKX2-5,NOL4,NTM,NTPCR,OCSTAMP,ORC3,OTOF,PABPC4,PAK5,PAPOLA,PARD3,PARP4,PAX2,PCDH17,PCSK2,PDE7B,PGBD5,PHLPP1,PHYHD1,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PLSCR5,PRKCQ,PROS1,PRPF31,PRSS54,PSAP,PSMG1,PTPRC,PTPRZ1,RAD21L1,RAPGEF2,RASSF8,RBM20,RCC2,RGS20,RIMBP2,RIT2,RNF144B,RNF213,RNF6,RORA,SCML4,SEMA3E,SGCD,SH3TC2,SI,SLC12A2,SLC12A8,SLC13A2,SLC22A5,SLC24A3,SLC37A4,SLC6A15,SLC6A4,SLC8A1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STX6,STXBP5L,STXBP6,SYCP3,SYNPO2,SYT17,SYT2,SYT4,TAP1,TCF7L2,TENM3,TFAP2B,TGFBR3,TIMP2,TM9SF2,TMEM132B,TNFSF13B,TNR,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TTC28,TYRP1,USP46,VAT1L,VPS13A,VRK1,VWA3B,WDR73,WNT3A,WNT8B,XCL1,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF583 | 272 |
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Gastroesophageal cancer | 1.53E-12 | AAK1,ABCC1,ACBD5,ADCY5,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,AMD1,ANKS1B,ARHGEF6,ARID1B,ARMC3,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BRINP1,C1R,C6orf118,CA10,CAMTA1,CARD10,CBLB,CCKBR,CCSER1,CDH15,CDH22,CEP350,CHD5,CHD6,CIITA,CMIP,CSMD3,CSNK1G3,CTNND2,CXXC4,CYP51A1,DAB2IP,DAPK1,DISC1,DISP3,DNAH7,DNAH8,DPP10,E2F7,E2F8,ECD,ENPEP,EPHA2,F8,FAM120A,FAM83D,GALNT17,GRHL2,GRIK5,HAS2,HIF1A,HINT1,IBTK,IGSF21,IGSF9B,INMT,IQCF6,IQGAP1,IRX6,ITPKB,JAK2,JCAD,KCNH3,KDM2B,KIF13A,KIF26A,let-7,LMX1A,LRCH1,LRRN3,LSAMP,MAGI2,MAN2B1,MAP2K1,MBD2,MC4R,MEDAG,METTL11B,MIDN,mir-129,MROH2B,MTSS1,MYOD1,NADSYN1,NCKAP5,NELL1,NRG2,OPN4,ORC3,OTOF,PAK5,PAPOLA,PARD3,PARP4,PAX2,PCDH17,PCSK2,PELI2,PHLPP1,PHYHD1,PI16,PIK3R4,PKD1L2,PLCE1,PNPLA5,PROS1,PTPRC,PTPRZ1,RAPGEF2,RBM20,RGS20,RHOBTB1,RIMBP2,RIT2,RNF213,RNF6,RORA,SCEL,SEMA3E,SH3TC2,SI,SLC12A2,SLC13A2,SLC24A3,SLC35A3,SLC6A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SPEG,STAG3,STARD8,STXBP5L,SYCP3,SYNPO2,SYT4,SYT6,TCF7L2,TENM3,TFAP2B,TFEC,TGFBR3,TM9SF2,TMEM132B,TMPO,TNR,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TSGA13,TYRP1,VPS13A,VWA3A,WNT3A,ZDHHC14,ZNF276,ZNF583 | 171 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Colorectal carcinoma | 1.59E-12 | ABCC1,ABCC3,ABLIM1,ACBD5,ACBD6,ACVRL1,ADCY5,ADGRL3,ADNP,AFAP1L2,AGBL1,AKAP7,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF6,ARID1B,ARMC3,ARPP21,ATP5PF,AUTS2,B3GLCT,BCL11A,BCL11B,BICD2,BTBD9,C1orf105,C1R,CAMTA1,CARD10,CCKBR,CCSER1,CDH13,CDH19,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CRH,CRYAA/CRYAA2,CSMD3,CSNK1G2,CTNND2,CYP51A1,DAB2IP,DAPK1,DEGS2,DISP3,DLST,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,ECD,EPHA2,F8,FAM120A,FAM167B,FAM83D,FGF18,FUCA2,FYN,GAB1,GALNT13,GDNF,GFRAL,GINS2,GRIK5,HEG1,HMGN3,HNRNPR,HTR3B,ICE1,IGSF21,IGSF9B,INMT,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNK5,KCTD15,KDM2B,KIF13A,KIF26A,KITLG,KLC1,let-7,LRCH1,LRRC31,LSAMP,MAF,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MEDAG,MIDN,MITF,MOCS2,MR1,MSH5,MUC20,MYO3B,MYOD1,NCKAP5,NELL1,NKX2-5,NOL4,NRG2,NTM,NTPCR,OTOF,PABPC4,PACSIN1,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PGBD5,PHLPP1,PHYHD1,PI16,PKD1L2,PLCE1,POU2AF1,PRIMA1,PROS1,PTPRC,PTPRZ1,RAB3C,RAPGEF2,RCC2,REC114,RGS20,RNF213,RNF6,RPH3AL,SEMA3E,SLC12A2,SLC13A1,SLC13A2,SLC25A29,SLC37A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,ST6GALNAC2,STAG3,STARD8,STAT1,SYCP3,SYNPO2,SYT4,TCF7L2,TENM3,TERF2,TFAP2B,TFEC,TGFBR3,TMEM132B,TMPO,TNR,TPTE2,TRAM1L1,TRDN,TRPC7,TRPS1,TSPAN17,TSPAN7,TTC28,VAT1L,VPS13A,VRK1,VWA3B,ZDHHC14,ZNF580,ZNF583 | 201 |
| Cancer,Organismal Injury and Abnormalities | Pelvic carcinoma | 1.64E-12 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD6,ABLIM1,ACBD5,ACSBG1,ACVRL1,ADAT1,ADGRL3,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BICD2,BRINP1,BTBD9,C6orf118,CAMTA1,CARD10,CBLB,CBLN4,CCDC33,CCDC61,CCKBR,CDH13,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CSMD3,CTNND2,CX3CL1,CYP51A1,DAB2IP,DAPK1,DEGS2,DISC1,DISP3,DLST,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,ECD,ENPEP,EPHA2,EPS15L1,ERO1A,EXD1,F8,FAM117A,FAM180A,FAM83D,FGF18,FMN1,FNDC7,FUCA2,GAB1,GALNT13,GALNT17,GFRAL,GJB5,GLO1,GNS,GRHL2,GRIK5,HAS2,HEG1,HEXIM2,HNF4G,HNRNPR,IBTK,ICE1,IGSF21,IGSF9B,IQGAP1,ITPKB,JAK2,JCAD,JUP,KCNH3,KCNJ9,KCNK5,KDM2B,KIF13A,KIF26A,KLC1,let-7,LMX1A,LRCH1,LRRC31,LRRN3,LSAMP,LY86,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MC4R,MCOLN1,MEPE,MGAT4B,mir-129,MITF,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC13,MUC20,MYO3B,MYOD1,NCKAP5,NKX2-3,NOL4,NTM,NTPCR,OCSTAMP,ORC3,OTOF,PABPC4,PAK5,PAPOLA,PARD3,PARP4,PAX2,PCDH17,PCSK2,PDE7B,PGBD5,PHLPP1,PHYHD1,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PLSCR5,PRKCQ,PROS1,PRPF31,PRSS54,PSAP,PSMG1,PTPRC,PTPRZ1,RAD21L1,RAPGEF2,RASSF8,RBM20,RGS20,RIMBP2,RIT2,RNF144B,RNF213,RNF6,RORA,SCML4,SEMA3E,SGCD,SH3TC2,SI,SLC12A2,SLC12A8,SLC13A2,SLC22A5,SLC24A3,SLC37A4,SLC6A15,SLC6A4,SLC8A1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STX6,STXBP5L,STXBP6,SYCP3,SYNPO2,SYT17,SYT2,SYT4,TAP1,TCF7L2,TENM3,TFAP2B,TGFBR3,TIMP2,TM9SF2,TMEM132B,TNFSF13B,TNR,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TTC28,TYRP1,USP46,VAT1L,VPS13A,VRK1,VWA3B,WDR73,WNT3A,WNT8B,XCL1,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF583 | 261 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Upper gastrointestinal tract cancer | 1.75E-12 | AAK1,ABCC1,ACBD5,ADCY5,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,AMD1,ANKS1B,ARHGEF6,ARID1B,ARMC3,ATP5PF,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BRINP1,BTBD9,C1R,C6orf118,CA10,CAMTA1,CARD10,CBLB,CCKBR,CCSER1,CDH13,CDH15,CDH22,CEP350,CHD5,CHD6,CIITA,CMIP,CSMD3,CSNK1G3,CTNND2,CXXC4,CYP51A1,DAB2IP,DAPK1,DISC1,DISP3,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,ECD,EIF4EBP2,ENPEP,EPHA2,F8,FAM120A,FAM83D,GALNT17,GATA4,GRHL2,GRIK5,HAS2,HEG1,HIF1A,HINT1,HNRNPR,IBTK,IGSF21,IGSF9B,INMT,IQCF6,IQGAP1,IRX6,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCTD15,KDM2B,KIF13A,KIF26A,let-7,LMX1A,LRCH1,LRRN3,LSAMP,MAGI2,MAN2B1,MAP2K1,MAP7,MBD2,MC4R,MCOLN1,MEDAG,MEPE,METTL11B,MIDN,mir-129,MROH2B,MTSS1,MYO3B,MYOD1,NADSYN1,NCKAP5,NELL1,NKX2-5,NRG2,OPN4,ORC3,OTOF,PAK5,PAPOLA,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PELI2,PHLPP1,PHYHD1,PI16,PIK3R4,PKD1L2,PLCE1,PNPLA5,PROS1,PTPRC,PTPRZ1,RAPGEF2,RBM20,RGS20,RHOBTB1,RIMBP2,RIT2,RNF213,RNF6,RORA,SCEL,SCML4,SEMA3E,SH3TC2,SI,SLC12A2,SLC13A2,SLC24A3,SLC35A3,SLC6A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SPEG,STAG3,STARD8,STAT1,STXBP5L,SYCP3,SYNPO2,SYT4,SYT6,TCF7L2,TENM3,TFAP2B,TFEC,TGFBR3,TM9SF2,TMEM132B,TMPO,TNR,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TSGA13,TTC28,TYRP1,VAT1L,VPS13A,VWA3A,WDR73,WNT3A,ZDHHC14,ZNF276,ZNF583 | 193 |
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Colon cancer | 2.04E-12 | ABCC1,ABCC3,ABLIM1,ACBD6,ACVRL1,ADCY5,ADGRL3,ADNP,AFAP1L2,AGBL1,AKAP7,ANKRD22,ANKS1B,AQP3,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF6,ARID1B,ARMC3,ARPP21,ATP5PF,AUTS2,B3GLCT,BCL11A,BCL11B,BICD2,BTBD9,C1orf105,C1R,CAMTA1,CARD10,CCKBR,CCSER1,CDH13,CDH19,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CRH,CRYAA/CRYAA2,CSMD3,CSNK1G2,CTNND2,CYP51A1,DAB2IP,DAPK1,DEGS2,DISP3,DLST,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,EPHA2,F8,FAM120A,FAM167B,FAM83D,FGF18,FUCA2,FYN,GAB1,GALNT13,GDNF,GFRAL,GINS2,GRIK5,HEG1,HMGN3,HNRNPR,HTR3B,ICE1,IGSF21,IGSF9B,INMT,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNK5,KCTD15,KDM2B,KIF13A,KIF26A,KITLG,KLC1,let-7,LSAMP,MAF,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MEDAG,MIDN,MITF,MOCS2,MR1,MSH5,MUC13,MUC20,MYO3B,MYOD1,NCKAP5,NELL1,NKX2-5,NOL4,NRG2,NTM,NTPCR,OTOF,PABPC4,PACSIN1,PAK5,PAQR8,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PGBD5,PHLPP1,PHYHD1,PI16,PKD1L2,PLCE1,POU2AF1,PRIMA1,PROS1,PTPRC,PTPRZ1,RAB3C,RAPGEF2,RCC2,REC114,RGS20,RNF213,RNF6,RPH3AL,SEMA3E,SLC12A2,SLC13A1,SLC13A2,SLC25A29,SLC37A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,ST6GALNAC2,STAG3,STARD8,STAT1,STXBP6,SYCP3,SYNPO2,SYT4,TCF7L2,TENM3,TERF2,TFAP2B,TFEC,TGFBR3,TIMP2,TMEM132B,TMPO,TNR,TPTE2,TRAM1L1,TRDN,TRPC7,TRPS1,TSPAN17,TSPAN7,TTC28,VAT1L,VPS13A,VRK1,VWA3B,ZDHHC14,ZNF580,ZNF583 | 199 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Colorectal adenocarcinoma | 2.3E-12 | ABCC1,ABCC3,ABLIM1,ACBD5,ACBD6,ACVRL1,ADCY5,ADGRL3,ADNP,AFAP1L2,AGBL1,AKAP7,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF6,ARID1B,ARMC3,ARPP21,ATP5PF,AUTS2,B3GLCT,BCL11A,BCL11B,BICD2,BTBD9,C1orf105,C1R,CAMTA1,CARD10,CCKBR,CCSER1,CDH13,CDH19,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CRH,CRYAA/CRYAA2,CSMD3,CSNK1G2,CTNND2,CYP51A1,DAB2IP,DAPK1,DEGS2,DISP3,DLST,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,ECD,EPHA2,F8,FAM120A,FAM167B,FAM83D,FUCA2,FYN,GAB1,GALNT13,GDNF,GFRAL,GRIK5,HEG1,HMGN3,HNRNPR,HTR3B,ICE1,IGSF21,IGSF9B,INMT,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNK5,KCTD15,KDM2B,KIF13A,KIF26A,KITLG,KLC1,let-7,LRCH1,LRRC31,LSAMP,MAF,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MEDAG,MIDN,MITF,MOCS2,MR1,MSH5,MUC20,MYO3B,MYOD1,NCKAP5,NELL1,NKX2-5,NOL4,NRG2,NTM,NTPCR,OTOF,PABPC4,PACSIN1,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PGBD5,PHLPP1,PHYHD1,PI16,PKD1L2,POU2AF1,PRIMA1,PROS1,PTPRC,PTPRZ1,RAB3C,RAPGEF2,RCC2,REC114,RGS20,RNF213,RNF6,RPH3AL,SEMA3E,SLC12A2,SLC13A1,SLC13A2,SLC25A29,SLC37A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,ST6GALNAC2,STAG3,STARD8,STAT1,SYCP3,SYNPO2,SYT4,TCF7L2,TENM3,TERF2,TFAP2B,TFEC,TGFBR3,TMEM132B,TMPO,TNR,TPTE2,TRAM1L1,TRDN,TRPC7,TRPS1,TSPAN17,TSPAN7,TTC28,VAT1L,VPS13A,VWA3B,ZDHHC14,ZNF580,ZNF583 | 197 |
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Colon adenocarcinoma | 2.84E-12 | ABCC1,ABCC3,ABLIM1,ACBD6,ACVRL1,ADCY5,ADGRL3,ADNP,AFAP1L2,AGBL1,AKAP7,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF6,ARID1B,ARMC3,ARPP21,ATP5PF,AUTS2,B3GLCT,BCL11A,BCL11B,BICD2,BTBD9,C1orf105,C1R,CAMTA1,CARD10,CCKBR,CCSER1,CDH13,CDH19,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CRH,CRYAA/CRYAA2,CSMD3,CSNK1G2,CTNND2,CYP51A1,DAB2IP,DAPK1,DEGS2,DISP3,DLST,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,EPHA2,F8,FAM120A,FAM167B,FAM83D,FUCA2,FYN,GAB1,GALNT13,GDNF,GFRAL,GRIK5,HEG1,HMGN3,HNRNPR,HTR3B,ICE1,IGSF21,IGSF9B,INMT,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNK5,KCTD15,KDM2B,KIF13A,KIF26A,KITLG,KLC1,let-7,LSAMP,MAF,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MEDAG,MIDN,MITF,MOCS2,MR1,MSH5,MUC20,MYO3B,MYOD1,NCKAP5,NELL1,NKX2-5,NOL4,NRG2,NTM,NTPCR,OTOF,PABPC4,PACSIN1,PAK5,PAQR8,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PGBD5,PHLPP1,PHYHD1,PI16,PKD1L2,POU2AF1,PRIMA1,PROS1,PTPRC,PTPRZ1,RAB3C,RAPGEF2,RCC2,REC114,RGS20,RNF213,RNF6,RPH3AL,SEMA3E,SLC12A2,SLC13A1,SLC13A2,SLC25A29,SLC37A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,ST6GALNAC2,STAG3,STARD8,STAT1,SYCP3,SYNPO2,SYT4,TCF7L2,TENM3,TERF2,TFAP2B,TFEC,TGFBR3,TMEM132B,TMPO,TNR,TPTE2,TRAM1L1,TRDN,TRPC7,TRPS1,TSPAN17,TSPAN7,TTC28,VAT1L,VPS13A,VWA3B,ZDHHC14,ZNF580,ZNF583 | 191 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Organismal Injury and Abnormalities,Reproductive System Disease | Endometrial carcinoma | 5.34E-12 | AAK1,ABCC1,ABCC12,ABCC6,ABHD6,ABLIM1,ACSBG1,ACVRL1,ADNP,AGBL1,AGO2,AKAP7,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGEF28,ARHGEF6,ARID1B,ARMC3,ARPP21,BANK1,BCL11A,BCL11B,BICD2,BRINP1,BTBD9,C6orf118,CAMTA1,CARD10,CBLB,CBLN4,CCDC61,CCKBR,CDH13,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CPED1,CPN2,CSMD3,CTNND2,CX3CL1,DAPK1,DEGS2,DISC1,DISP3,DLST,DNAH7,DNAH8,DPP10,E2F7,E2F8,ENPEP,EXD1,F8,FAM83D,FNDC7,GAB1,GALNT13,GFRAL,GJB5,GRIK5,HAS2,HEG1,HNF4G,IBTK,ICE1,IGSF9B,IQGAP1,ITPKB,JAK2,KCNJ9,KDM2B,KIF13A,KIF26A,KLC1,LMX1A,LRRN3,LSAMP,MAGI2,MAP2K1,MAP3K21,MAP7,MCOLN1,MEPE,MITF,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC20,MYO3B,MYOD1,NCKAP5,NOL4,ORC3,PAK5,PAPOLA,PARD3,PAX2,PCDH17,PCSK2,PDE7B,PHLPP1,PIK3AP1,PIK3R4,PLCE1,PLPPR1,PRKCQ,PROS1,PRPF31,PSMG1,PTPRC,PTPRZ1,RAD21L1,RAPGEF2,RASSF8,RBM20,RIMBP2,RIT2,RNF144B,RNF213,RNF6,SEMA3E,SI,SLC12A2,SLC12A8,SLC13A2,SLC22A5,SLC24A3,SLC8A1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STXBP5L,STXBP6,SYCP3,SYNPO2,TAP1,TCF7L2,TENM3,TFAP2B,TIMP2,TM9SF2,TNR,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TTC28,TYRP1,VAT1L,VPS13A,VRK1,WDR73,WNT3A,XYLT1,ZDHHC14,ZNF583 | 182 |
| Cancer,Organismal Injury and Abnormalities | Anogenital cancer | 5.44E-12 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD6,ABLIM1,ACSBG1,ACVRL1,ADAT1,ADGRL3,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,ATP5PF,B3GLCT,BANK1,BCL11A,BCL11B,BICD2,BRINP1,BTBD9,C1R,C6orf118,CAMTA1,CARD10,CBLB,CBLN4,CCDC33,CCDC61,CCKBR,CCSER1,CDH13,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CSF3,CSMD3,CTNND2,CX3CL1,CYP51A1,DAB2IP,DAPK1,DEGS2,DISC1,DISP3,DLST,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,EIF1,ENO1,ENPEP,EPHA2,ERO1A,ETNK1,EXD1,F8,FAM117A,FAM180A,FAM83D,FGF18,FMN1,FNDC7,FUCA2,FYN,GAB1,GALNT13,GALNT17,GDNF,GFRAL,GJB5,GLO1,GNS,GRHL2,GRIK5,HAS2,HEG1,HEXIM2,HIF1A,HNF4G,HNRNPR,IBTK,ICE1,IGSF21,IGSF9B,INMT,IQGAP1,ITPKB,JAK2,JUP,KCNH3,KCNJ9,KCNK5,KDM2B,KIF13A,KIF26A,KLC1,let-7,LMX1A,LRCH1,LRRC31,LRRN3,LSAMP,LTB4R2,LY86,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MC4R,MCOLN1,MEPE,MGAT4B,mir-129,MITF,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC13,MUC20,MYO3B,MYOD1,NCKAP5,NELL1,NKX2-3,NKX2-5,NOL4,NTM,NTPCR,OCSTAMP,ORC3,OTOF,PABPC4,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PCDH17,PCSK2,PDE7B,PGBD5,PHLPP1,PHYHD1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PLSCR5,PRKCQ,PROS1,PRPF31,PRSS54,PSAP,PSMG1,PTPRC,PTPRZ1,RAD21L1,RAPGEF2,RASSF8,RBM20,RCC2,RGS20,RIMBP2,RIT2,RNF144B,RNF213,RNF6,RORA,RPH3AL,SCML4,SEMA3E,SGCD,SH3TC2,SI,SLC12A2,SLC12A8,SLC13A2,SLC22A5,SLC24A3,SLC37A4,SLC6A15,SLC6A4,SLC8A1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STX6,STXBP5L,STXBP6,SYCP3,SYNPO2,SYT17,SYT2,SYT4,SYT6,TAP1,TCF7L2,TENM3,TFAP2B,TGFB2,TGFBR3,TIMP2,TM9SF2,TMEM132B,TNFSF13B,TNR,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TTC28,TUBB6,TYRP1,USP46,VAT1L,VPS13A,VRK1,VWA3B,WDR73,WNT3A,WNT8B,XCL1,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF583 | 277 |
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Gastric carcinoma | 6.13E-12 | AAK1,ABCC1,ACBD5,ADCY5,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,AMD1,ANKS1B,ARHGEF6,ARID1B,ARMC3,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BRINP1,C1R,C6orf118,CAMTA1,CBLB,CCKBR,CCSER1,CDH15,CDH22,CEP350,CHD5,CHD6,CIITA,CMIP,CSMD3,CSNK1G3,CTNND2,CXXC4,CYP51A1,DAB2IP,DAPK1,DISC1,DISP3,DNAH7,DNAH8,DPP10,E2F7,E2F8,ECD,ENPEP,EPHA2,F8,FAM120A,FAM83D,GALNT17,GRHL2,GRIK5,HAS2,HIF1A,HINT1,IGSF21,IGSF9B,IQGAP1,IRX6,ITPKB,JAK2,JCAD,KCNH3,KDM2B,KIF13A,KIF26A,LMX1A,LRRN3,MAGI2,MAN2B1,MAP2K1,MC4R,MEDAG,METTL11B,MIDN,MROH2B,MTSS1,MYOD1,NADSYN1,NCKAP5,NELL1,NRG2,ORC3,OTOF,PAK5,PAPOLA,PARP4,PAX2,PCDH17,PCSK2,PELI2,PHLPP1,PHYHD1,PI16,PIK3R4,PKD1L2,PLCE1,PNPLA5,PROS1,PTPRC,PTPRZ1,RAPGEF2,RBM20,RGS20,RHOBTB1,RIMBP2,RIT2,RNF213,RNF6,RORA,SCEL,SEMA3E,SH3TC2,SI,SLC12A2,SLC13A2,SLC24A3,SLC35A3,SLC6A4,SLC8A1,SLCO4C1,SLITRK1,SLITRK6,SPEG,STAG3,STARD8,STXBP5L,SYCP3,SYNPO2,SYT4,SYT6,TCF7L2,TENM3,TFAP2B,TFEC,TGFBR3,TM9SF2,TMPO,TNR,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TSGA13,TYRP1,VPS13A,VWA3A,WNT3A,ZDHHC14,ZNF276,ZNF583 | 157 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Organismal Injury and Abnormalities | Endometrioid carcinoma | 1.03E-11 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD6,ABLIM1,ACSBG1,ACVRL1,ADNP,AGBL1,AGO2,AKAP7,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC3,ARPP21,BANK1,BCL11A,BCL11B,BICD2,BRINP1,BTBD9,C6orf118,CAMTA1,CARD10,CBLB,CBLN4,CCDC33,CCKBR,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CPED1,CPN2,CSMD3,CTNND2,CX3CL1,DAPK1,DISC1,DISP3,DNAH7,DNAH8,DPP10,E2F7,ENPEP,EPHA2,EXD1,F8,FAM83D,FNDC7,FUCA2,GAB1,GALNT13,GFRAL,GJB5,GRIK5,HAS2,HEG1,HNF4G,IBTK,ICE1,IGSF9B,IQGAP1,ITPKB,JAK2,KCNJ9,KDM2B,KIF13A,KIF26A,KLC1,LMX1A,LRRN3,LSAMP,MAG,MAGI2,MAP2K1,MAP3K21,MAP7,MCOLN1,MEPE,MGAT4B,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC20,MYO3B,MYOD1,NCKAP5,NOL4,NTM,ORC3,OTOF,PAK5,PAPOLA,PARD3,PCDH17,PCSK2,PDE7B,PHLPP1,PIK3AP1,PIK3R4,PLCE1,PLPPR1,PRKCQ,PROS1,PRPF31,PSMG1,PTPRC,PTPRZ1,RAD21L1,RAPGEF2,RASSF8,RBM20,RIMBP2,RIT2,RNF144B,RNF213,RNF6,RORA,SEMA3E,SI,SLC12A2,SLC12A8,SLC13A2,SLC22A5,SLC24A3,SLC6A15,SLC8A1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STXBP5L,STXBP6,SYNPO2,TAP1,TCF7L2,TENM3,TFAP2B,TIMP2,TM9SF2,TNR,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TYRP1,VAT1L,VPS13A,VRK1,WDR73,WNT3A,XYLT1,ZDHHC14,ZNF143,ZNF583 | 185 |
| Cancer,Organismal Injury and Abnormalities | Development of adenocarcinoma | 1.05E-11 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD6,ABLIM1,ACSBG1,ACVRL1,ADCY5,ADGRL3,ADNP,AGBL1,AGO2,AKAP7,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,BANK1,BCL11A,BCL11B,BICD2,BRINP1,BTBD9,C1orf105,C6orf118,CAMTA1,CARD10,CBLB,CBLN4,CCDC33,CCKBR,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CPED1,CPN2,CSMD3,CSNK1G2,CTNND2,CX3CL1,CXXC4,DAB2IP,DAPK1,DISC1,DISP3,DLST,DNAH7,DNAH8,DPP10,E2F7,E2F8,ENO1,ENPEP,EPHA2,EXD1,F8,FAM83D,FGF18,FNDC7,FUCA2,GAB1,GALNT13,GFRAL,GJB5,GRHL2,GRIK5,HAS2,HEG1,HIF1A,HINT1,HNF4G,IBTK,ICE1,IGSF21,IGSF9B,IL10RA,IQGAP1,ITPKB,JAK2,JUP,KCNJ9,KDM2B,KIF13A,KIF26A,KLC1,let-7,LMX1A,LRRC31,LRRN3,LSAMP,LY86,MAG,MAGI2,MAP2K1,MAP3K21,MAP7,MCOLN1,MEPE,MGAT4B,mir-129,MITF,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC20,MYO3B,MYOD1,NCKAP5,NOL4,NTM,OCSTAMP,OR13F1,ORC3,OTOF,PAK5,PAPOLA,PARD3,PARP4,PAX2,PCDH17,PCSK2,PDE7B,PHLPP1,PHYHD1,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PLSCR5,PRKCQ,PROS1,PRPF31,PRSS54,PSMG1,PTPRC,PTPRZ1,RAD21L1,RAPGEF2,RASSF8,RBM20,RCC2,RGS20,RIMBP2,RIT2,RNF144B,RNF168,RNF213,RNF6,RORA,RPH3AL,SCML4,SEMA3E,SH3TC2,SI,SLC12A2,SLC12A8,SLC13A2,SLC22A5,SLC24A3,SLC6A15,SLC8A1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STXBP5L,STXBP6,SYNPO2,TAP1,TAS2R1,TCEAL3,TCF7L2,TENM3,TFAP2B,TGFBR3,TIMP2,TM9SF2,TMEM132B,TNR,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TUBB6,TYRP1,VAT1L,VPS13A,VRK1,VWA3B,WDR73,WNT3A,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF519,ZNF583 | 229 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Organismal Injury and Abnormalities | Genitourinary carcinoma | 1.08E-11 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD6,ABLIM1,ACSBG1,ACVRL1,ADAT1,ADGRL3,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,ATP5PF,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BICD2,BRINP1,BTBD9,C1orf105,C6orf118,CAMTA1,CARD10,CBLB,CBLN4,CCDC33,CCDC61,CCKBR,CCSER1,CDH13,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CSMD3,CTNND2,CX3CL1,CXXC4,CYP51A1,DAB2IP,DAPK1,DEGS2,DISC1,DISP3,DLST,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,ENPEP,EPHA2,EPS15L1,ERO1A,ETNK1,EXD1,F8,FAM117A,FAM180A,FAM83D,FGF18,FMN1,FNDC7,FUCA2,FYN,GAB1,GALNT13,GALNT17,GDNF,GFRAL,GJB5,GLO1,GNS,GRHL2,GRIK5,HAS2,HEG1,HEXIM2,HIF1A,HNF4G,HNRNPR,IBTK,ICE1,IGSF21,IGSF9B,IL10RA,IQGAP1,ITPKB,JAK2,JUP,KCNH3,KCNJ9,KCNK5,KDM2B,KIF13A,KIF26A,KLC1,let-7,LMX1A,LRCH1,LRRC31,LRRN3,LSAMP,LTB4R2,LY86,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MC4R,MCOLN1,MEPE,MGAT4B,mir-129,MITF,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC13,MUC20,MYO3B,MYOD1,NCKAP5,NKX2-3,NOL4,NTM,NTPCR,OCSTAMP,ORC3,OTOF,PABPC4,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PCDH17,PCSK2,PDE7B,PGBD5,PHLPP1,PHYHD1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PLSCR5,PRKCQ,PROS1,PRPF31,PRSS54,PSAP,PSMG1,PTPRC,PTPRZ1,RAD21L1,RAPGEF2,RASSF8,RBM20,RCC2,RGS20,RIMBP2,RIT2,RNF144B,RNF168,RNF213,RNF6,RORA,RPH3AL,SCML4,SEMA3E,SGCD,SH3TC2,SI,SLC12A2,SLC12A8,SLC13A2,SLC22A5,SLC24A3,SLC37A4,SLC6A15,SLC6A4,SLC8A1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STX6,STXBP5L,STXBP6,SYCP3,SYNPO2,SYT17,SYT2,SYT4,SYT6,TAP1,TCF7L2,TENM3,TFAP2B,TGFB2,TGFBR3,TIMP2,TM9SF2,TMEM132B,TNFSF13B,TNR,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TTC28,TUBB6,TYRP1,USP46,VAT1L,VPS13A,VRK1,VWA3B,WDR73,WNT3A,WNT8B,XCL1,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF519,ZNF583 | 277 |
| Organismal Injury and Abnormalities,Reproductive System Disease | Abnormal growth in endometrium | 1.26E-11 | AAK1,ABCC1,ABCC12,ABCC6,ABHD6,ABLIM1,ACSBG1,ACVRL1,ADNP,AGBL1,AGO2,AKAP7,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGEF28,ARHGEF6,ARID1B,ARMC3,ARPP21,BANK1,BCL11A,BCL11B,BICD2,BRINP1,BTBD9,C6orf118,CAMTA1,CARD10,CBLB,CBLN4,CCDC61,CCKBR,CDH13,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CPED1,CPN2,CSMD3,CTNND2,CX3CL1,DAPK1,DEGS2,DISC1,DISP3,DLST,DNAH7,DNAH8,DPP10,E2F7,E2F8,ENPEP,EXD1,F8,FAM83D,FNDC7,GAB1,GALNT13,GFRAL,GJB5,GRIK5,HAS2,HEG1,HNF4G,IBTK,ICE1,IGSF9B,IQGAP1,ITPKB,JAK2,KCNJ9,KDM2B,KIF13A,KIF26A,KLC1,let-7,LMX1A,LRRN3,LSAMP,MAF,MAGI2,MAP2K1,MAP3K21,MAP7,MCOLN1,MEPE,MITF,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC20,MYO3B,MYOD1,NCKAP5,NOL4,ORC3,PAK5,PAPOLA,PARD3,PAX2,PCDH17,PCSK2,PDE7B,PERP,PHLPP1,PIK3AP1,PIK3R4,PLCE1,PLPPR1,PRKCQ,PROS1,PRPF31,PSMG1,PTPRC,PTPRZ1,RAD21L1,RAPGEF2,RASSF8,RBM20,RIMBP2,RIT2,RNF144B,RNF213,RNF6,SEMA3E,SI,SLC12A2,SLC12A8,SLC13A2,SLC22A5,SLC24A3,SLC8A1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STXBP5L,STXBP6,SYCP3,SYNPO2,TAP1,TCF7L2,TENM3,TFAP2B,TGFBR3,TIMP2,TM9SF2,TNR,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TTC28,TYRP1,VAT1L,VPS13A,VRK1,WDR73,WNT3A,XYLT1,ZDHHC14,ZNF583 | 186 |
| Cancer,Organismal Injury and Abnormalities,Reproductive System Disease | Endometrioid endometrial adenocarcinoma | 1.31E-11 | AAK1,ABCC1,ABCC12,ABCC6,ABHD6,ABLIM1,ACSBG1,ACVRL1,ADNP,AGO2,AKAP7,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGEF28,ARHGEF6,ARID1B,ARMC3,ARPP21,BANK1,BCL11A,BCL11B,BICD2,BRINP1,BTBD9,C6orf118,CAMTA1,CARD10,CBLB,CCKBR,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CPED1,CPN2,CSMD3,CTNND2,CX3CL1,DAPK1,DISC1,DISP3,DNAH7,DNAH8,DPP10,E2F7,ENPEP,EXD1,F8,FAM83D,FNDC7,GAB1,GALNT13,GFRAL,GJB5,GRIK5,HAS2,HEG1,HNF4G,IBTK,ICE1,IGSF9B,IQGAP1,ITPKB,JAK2,KCNJ9,KDM2B,KIF13A,KIF26A,KLC1,LMX1A,LRRN3,LSAMP,MAGI2,MAP2K1,MAP3K21,MAP7,MCOLN1,MEPE,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC20,MYO3B,MYOD1,NCKAP5,NOL4,ORC3,PAK5,PAPOLA,PARD3,PCDH17,PCSK2,PDE7B,PHLPP1,PIK3AP1,PIK3R4,PLCE1,PLPPR1,PRKCQ,PROS1,PRPF31,PSMG1,PTPRC,PTPRZ1,RAD21L1,RAPGEF2,RASSF8,RBM20,RIMBP2,RIT2,RNF144B,RNF213,RNF6,SEMA3E,SI,SLC12A2,SLC12A8,SLC13A2,SLC22A5,SLC24A3,SLC8A1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STXBP5L,STXBP6,SYNPO2,TAP1,TCF7L2,TENM3,TFAP2B,TIMP2,TM9SF2,TNR,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TYRP1,VAT1L,VPS13A,VRK1,WDR73,WNT3A,XYLT1,ZDHHC14,ZNF583 | 171 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Organismal Injury and Abnormalities,Reproductive System Disease | Abnormality of endometrium | 1.38E-11 | AAK1,ABCC1,ABCC12,ABCC6,ABHD6,ABLIM1,ACSBG1,ACVRL1,ADNP,AGBL1,AGO2,AKAP7,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGEF28,ARHGEF6,ARID1B,ARMC3,ARPP21,BANK1,BCL11A,BCL11B,BICD2,BRINP1,BTBD9,C6orf118,CAMTA1,CARD10,CBLB,CBLN4,CCDC61,CCKBR,CDH13,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CPED1,CPN2,CSMD3,CTNND2,CX3CL1,DAPK1,DEGS2,DISC1,DISP3,DLST,DNAH7,DNAH8,DPP10,E2F7,E2F8,ENPEP,EXD1,F8,FAM83D,FNDC7,GAB1,GALNT13,GFRAL,GJB5,GRIK5,HAS2,HEG1,HNF4G,IBTK,ICE1,IGSF9B,IQGAP1,ITPKB,JAK2,KCNJ9,KDM2B,KIF13A,KIF26A,KLC1,let-7,LMX1A,LRRN3,LSAMP,MAF,MAGI2,MAP2K1,MAP3K21,MAP7,MCOLN1,MEPE,MITF,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC20,MYO3B,MYOD1,NCKAP5,NOL4,ORC3,PAK5,PAPOLA,PARD3,PAX2,PCDH17,PCSK2,PDE7B,PERP,PHLPP1,PIK3AP1,PIK3R4,PLCE1,PLPPR1,PRKCQ,PROS1,PRPF31,PSMG1,PTPRC,PTPRZ1,RAD21L1,RAPGEF2,RASSF8,RBM20,RIMBP2,RIT2,RNF144B,RNF213,RNF6,SEMA3E,SI,SLC12A2,SLC12A8,SLC13A2,SLC22A5,SLC24A3,SLC8A1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STXBP5L,STXBP6,SYCP3,SYNPO2,TAP1,TCF7L2,TENM3,TFAP2B,TGFBR3,TIMP2,TM9SF2,TNR,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TTC28,TYRP1,VAT1L,VPS13A,VRK1,WDR73,WNT3A,XYLT1,ZDHHC14,ZNF583 | 186 |
| Cancer,Organismal Injury and Abnormalities,Reproductive System Disease | Endometrial cancer | 1.7E-11 | AAK1,ABCC1,ABCC12,ABCC6,ABHD6,ABLIM1,ACSBG1,ACVRL1,ADNP,AGBL1,AGO2,AKAP7,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGEF28,ARHGEF6,ARID1B,ARMC3,ARPP21,BANK1,BCL11A,BCL11B,BICD2,BRINP1,BTBD9,C6orf118,CAMTA1,CARD10,CBLB,CBLN4,CCDC61,CCKBR,CDH13,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CPED1,CPN2,CSMD3,CTNND2,CX3CL1,DAPK1,DEGS2,DISC1,DISP3,DLST,DNAH7,DNAH8,DPP10,E2F7,E2F8,ENPEP,EXD1,F8,FAM83D,FNDC7,GAB1,GALNT13,GFRAL,GJB5,GRIK5,HAS2,HEG1,HNF4G,IBTK,ICE1,IGSF9B,IQGAP1,ITPKB,JAK2,KCNJ9,KDM2B,KIF13A,KIF26A,KLC1,let-7,LMX1A,LRRN3,LSAMP,MAF,MAGI2,MAP2K1,MAP3K21,MAP7,MCOLN1,MEPE,MITF,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC20,MYO3B,MYOD1,NCKAP5,NOL4,ORC3,PAK5,PAPOLA,PARD3,PAX2,PCDH17,PCSK2,PDE7B,PHLPP1,PIK3AP1,PIK3R4,PLCE1,PLPPR1,PRKCQ,PROS1,PRPF31,PSMG1,PTPRC,PTPRZ1,RAD21L1,RAPGEF2,RASSF8,RBM20,RIMBP2,RIT2,RNF144B,RNF213,RNF6,SEMA3E,SI,SLC12A2,SLC12A8,SLC13A2,SLC22A5,SLC24A3,SLC8A1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STXBP5L,STXBP6,SYCP3,SYNPO2,TAP1,TCF7L2,TENM3,TFAP2B,TGFBR3,TIMP2,TM9SF2,TNR,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TTC28,TYRP1,VAT1L,VPS13A,VRK1,WDR73,WNT3A,XYLT1,ZDHHC14,ZNF583 | 185 |
| Cancer,Organismal Injury and Abnormalities,Reproductive System Disease | Female genital tract adenocarcinoma | 1.84E-11 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD6,ABLIM1,ACSBG1,ACVRL1,ADNP,AGBL1,AGO2,AKAP7,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC3,ARPP21,BANK1,BCL11A,BCL11B,BICD2,BRINP1,BTBD9,C6orf118,CAMTA1,CARD10,CBLB,CBLN4,CCDC33,CCKBR,CDH13,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CPED1,CPN2,CSMD3,CTNND2,CX3CL1,DAPK1,DISC1,DISP3,DNAH7,DNAH8,DPP10,E2F7,E2F8,ENPEP,EPHA2,EXD1,F8,FAM83D,FGF18,FNDC7,FUCA2,GAB1,GALNT13,GFRAL,GJB5,GRIK5,HAS2,HEG1,HNF4G,IBTK,ICE1,IGSF21,IGSF9B,IQGAP1,ITPKB,JAK2,KCNJ9,KDM2B,KIF13A,KIF26A,KLC1,LMX1A,LRRC31,LRRN3,LSAMP,LY86,MAF,MAG,MAGI2,MAP2K1,MAP3K21,MAP7,MCOLN1,MEPE,MGAT4B,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC20,MYO3B,MYOD1,NCKAP5,NOL4,NTM,ORC3,OTOF,PAK5,PAPOLA,PARD3,PCDH17,PCSK2,PDE7B,PHLPP1,PIK3AP1,PIK3R4,PLCE1,PLPPR1,PRKCQ,PROS1,PRPF31,PRSS54,PSMG1,PTPRC,PTPRZ1,RAD21L1,RAPGEF2,RASSF8,RBM20,RGS20,RIMBP2,RIT2,RNF144B,RNF213,RNF6,RORA,SEMA3E,SI,SLC12A2,SLC12A8,SLC13A2,SLC22A5,SLC24A3,SLC6A15,SLC8A1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STXBP5L,STXBP6,SYNPO2,TAP1,TCF7L2,TENM3,TFAP2B,TGFBR3,TIMP2,TM9SF2,TNR,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TYRP1,VAT1L,VPS13A,VRK1,VWA3B,WDR73,WNT3A,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF583 | 197 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Organismal Injury and Abnormalities,Reproductive System Disease | Female genital tract cancer | 2.05E-11 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD6,ABLIM1,ACSBG1,ACVRL1,ADGRL3,ADNP,AGBL1,AGO2,AKAP7,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC3,ARPP21,BANK1,BCL11A,BCL11B,BICD2,BRINP1,BTBD9,C6orf118,CAMTA1,CARD10,CBLB,CBLN4,CCDC33,CCDC61,CCKBR,CDH13,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CPED1,CPN2,CSF3,CSMD3,CTNND2,CX3CL1,DAPK1,DEGS2,DISC1,DISP3,DLST,DNAH7,DNAH8,DPP10,E2F7,E2F8,ENO1,ENPEP,EPHA2,ERO1A,EXD1,F8,FAM83D,FGF18,FNDC7,FUCA2,GAB1,GALNT13,GFRAL,GJB5,GRIK5,HAS2,HEG1,HIF1A,HNF4G,IBTK,ICE1,IGSF21,IGSF9B,IQGAP1,ITPKB,JAK2,JUP,KCNJ9,KDM2B,KIF13A,KIF26A,KLC1,let-7,LMX1A,LRRC31,LRRN3,LSAMP,LY86,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MCOLN1,MEPE,MGAT4B,mir-129,MITF,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC20,MYO3B,MYOD1,NCKAP5,NOL4,NTM,ORC3,OTOF,PAK5,PAPOLA,PARD3,PAX2,PCDH17,PCSK2,PDE7B,PHLPP1,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PRKCQ,PROS1,PRPF31,PRSS54,PSMG1,PTPRC,PTPRZ1,RAD21L1,RAPGEF2,RASSF8,RBM20,RGS20,RIMBP2,RIT2,RNF144B,RNF213,RNF6,RORA,SEMA3E,SI,SLC12A2,SLC12A8,SLC13A2,SLC22A5,SLC24A3,SLC6A15,SLC6A4,SLC8A1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STXBP5L,STXBP6,SYCP3,SYNPO2,TAP1,TCF7L2,TENM3,TFAP2B,TGFBR3,TIMP2,TM9SF2,TNR,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TTC28,TYRP1,VAT1L,VPS13A,VRK1,VWA3B,WDR73,WNT3A,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF583 | 215 |
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Stomach tumor | 2.29E-11 | AAK1,ABCC1,ACBD5,ADCY5,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,AMD1,ANKS1B,ARHGEF6,ARID1B,ARMC3,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BRINP1,C1R,C6orf118,CAMTA1,CBLB,CCKBR,CCSER1,CDH15,CDH22,CEP350,CHD5,CHD6,CIITA,CMIP,CSMD3,CSNK1G3,CTNND2,CXXC4,CYP51A1,DAB2IP,DAPK1,DISC1,DISP3,DNAH7,DNAH8,DPP10,E2F7,E2F8,ECD,ENPEP,EPHA2,F8,FAM120A,FAM83D,GALNT17,GRHL2,GRIK5,HAS2,HIF1A,HINT1,IGSF21,IGSF9B,IQGAP1,IRX6,ITPKB,JAK2,JCAD,KCNH3,KDM2B,KIF13A,KIF26A,let-7,LMX1A,LRRN3,MAGI2,MAN2B1,MAP2K1,MBD2,MC4R,MEDAG,METTL11B,MIDN,mir-129,MROH2B,MTSS1,MYOD1,NADSYN1,NCKAP5,NELL1,NRG2,ORC3,OTOF,PAK5,PAPOLA,PARP4,PAX2,PCDH17,PCSK2,PELI2,PHLPP1,PHYHD1,PI16,PIK3R4,PKD1L2,PLCE1,PNPLA5,PROS1,PTPRC,PTPRZ1,RAPGEF2,RBM20,RGS20,RHOBTB1,RIMBP2,RIT2,RNF213,RNF6,RORA,SCEL,SEMA3E,SH3TC2,SI,SLC12A2,SLC13A2,SLC24A3,SLC35A3,SLC6A4,SLC8A1,SLCO4C1,SLITRK1,SLITRK6,SPEG,STAG3,STARD8,STXBP5L,SYCP3,SYNPO2,SYT4,SYT6,TCF7L2,TENM3,TFAP2B,TFEC,TGFBR3,TM9SF2,TMPO,TNR,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TSGA13,TYRP1,VPS13A,VWA3A,WNT3A,ZDHHC14,ZNF276,ZNF583 | 160 |
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Gastric cancer | 3.27E-11 | AAK1,ABCC1,ACBD5,ADCY5,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,AMD1,ANKS1B,ARHGEF6,ARID1B,ARMC3,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BRINP1,C1R,C6orf118,CAMTA1,CBLB,CCKBR,CCSER1,CDH15,CDH22,CEP350,CHD5,CHD6,CIITA,CMIP,CSMD3,CSNK1G3,CTNND2,CXXC4,CYP51A1,DAB2IP,DAPK1,DISC1,DISP3,DNAH7,DNAH8,DPP10,E2F7,E2F8,ECD,ENPEP,EPHA2,F8,FAM120A,FAM83D,GALNT17,GRHL2,GRIK5,HAS2,HIF1A,HINT1,IGSF21,IGSF9B,IQGAP1,IRX6,ITPKB,JAK2,JCAD,KCNH3,KDM2B,KIF13A,KIF26A,LMX1A,LRRN3,MAGI2,MAN2B1,MAP2K1,MBD2,MC4R,MEDAG,METTL11B,MIDN,mir-129,MROH2B,MTSS1,MYOD1,NADSYN1,NCKAP5,NELL1,NRG2,ORC3,OTOF,PAK5,PAPOLA,PARP4,PAX2,PCDH17,PCSK2,PELI2,PHLPP1,PHYHD1,PI16,PIK3R4,PKD1L2,PLCE1,PNPLA5,PROS1,PTPRC,PTPRZ1,RAPGEF2,RBM20,RGS20,RHOBTB1,RIMBP2,RIT2,RNF213,RNF6,RORA,SCEL,SEMA3E,SH3TC2,SI,SLC12A2,SLC13A2,SLC24A3,SLC35A3,SLC6A4,SLC8A1,SLCO4C1,SLITRK1,SLITRK6,SPEG,STAG3,STARD8,STXBP5L,SYCP3,SYNPO2,SYT4,SYT6,TCF7L2,TENM3,TFAP2B,TFEC,TGFBR3,TM9SF2,TMPO,TNR,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TSGA13,TYRP1,VPS13A,VWA3A,WNT3A,ZDHHC14,ZNF276,ZNF583 | 159 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Organismal Injury and Abnormalities,Reproductive System Disease | Uterine cancer | 3.35E-11 | AAK1,ABCC1,ABCC12,ABCC6,ABHD6,ABLIM1,ACSBG1,ACVRL1,ADGRL3,ADNP,AGBL1,AGO2,AKAP7,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGEF28,ARHGEF6,ARID1B,ARMC3,ARPP21,BANK1,BCL11A,BCL11B,BICD2,BRINP1,BTBD9,C6orf118,CAMTA1,CARD10,CBLB,CBLN4,CCDC61,CCKBR,CDH13,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CPED1,CPN2,CSMD3,CTNND2,CX3CL1,DAPK1,DEGS2,DISC1,DISP3,DLST,DNAH7,DNAH8,DPP10,E2F7,E2F8,ENO1,ENPEP,EXD1,F8,FAM83D,FNDC7,GAB1,GALNT13,GFRAL,GJB5,GRIK5,HAS2,HEG1,HIF1A,HNF4G,IBTK,ICE1,IGSF9B,IQGAP1,ITPKB,JAK2,JUP,KCNJ9,KDM2B,KIF13A,KIF26A,KLC1,let-7,LMX1A,LRRN3,LSAMP,MAF,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MCOLN1,MEPE,mir-129,MITF,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC20,MYO3B,MYOD1,NCKAP5,NOL4,ORC3,PAK5,PAPOLA,PARD3,PAX2,PCDH17,PCSK2,PDE7B,PHLPP1,PIK3AP1,PIK3R4,PLCE1,PLPPR1,PRKCQ,PROS1,PRPF31,PSMG1,PTPRC,PTPRZ1,RAD21L1,RAPGEF2,RASSF8,RBM20,RIMBP2,RIT2,RNF144B,RNF213,RNF6,SEMA3E,SI,SLC12A2,SLC12A8,SLC13A2,SLC22A5,SLC24A3,SLC6A4,SLC8A1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STXBP5L,STXBP6,SYCP3,SYNPO2,TAP1,TCF7L2,TENM3,TFAP2B,TGFBR3,TIMP2,TM9SF2,TNR,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TTC28,TYRP1,VAT1L,VPS13A,VRK1,WDR73,WNT3A,XYLT1,ZDHHC14,ZNF583 | 192 |
| Cancer,Organismal Injury and Abnormalities,Reproductive System Disease | Endometrial adenocarcinoma | 3.41E-11 | AAK1,ABCC1,ABCC12,ABCC6,ABHD6,ABLIM1,ACSBG1,ACVRL1,ADNP,AGO2,AKAP7,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGEF28,ARHGEF6,ARID1B,ARMC3,ARPP21,BANK1,BCL11A,BCL11B,BICD2,BRINP1,BTBD9,C6orf118,CAMTA1,CARD10,CBLB,CCKBR,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CPED1,CPN2,CSMD3,CTNND2,CX3CL1,DAPK1,DISC1,DISP3,DNAH7,DNAH8,DPP10,E2F7,E2F8,ENPEP,EXD1,F8,FAM83D,FNDC7,GAB1,GALNT13,GFRAL,GJB5,GRIK5,HAS2,HEG1,HNF4G,IBTK,ICE1,IGSF9B,IQGAP1,ITPKB,JAK2,KCNJ9,KDM2B,KIF13A,KIF26A,KLC1,LMX1A,LRRN3,LSAMP,MAGI2,MAP2K1,MAP3K21,MAP7,MCOLN1,MEPE,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC20,MYO3B,MYOD1,NCKAP5,NOL4,ORC3,PAK5,PAPOLA,PARD3,PCDH17,PCSK2,PDE7B,PHLPP1,PIK3AP1,PIK3R4,PLCE1,PLPPR1,PRKCQ,PROS1,PRPF31,PSMG1,PTPRC,PTPRZ1,RAD21L1,RAPGEF2,RASSF8,RBM20,RIMBP2,RIT2,RNF144B,RNF213,RNF6,SEMA3E,SI,SLC12A2,SLC12A8,SLC13A2,SLC22A5,SLC24A3,SLC8A1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STXBP5L,STXBP6,SYNPO2,TAP1,TCF7L2,TENM3,TFAP2B,TIMP2,TM9SF2,TNR,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TYRP1,VAT1L,VPS13A,VRK1,WDR73,WNT3A,XYLT1,ZDHHC14,ZNF583 | 172 |
| Cancer,Organismal Injury and Abnormalities,Reproductive System Disease | Uterine carcinoma | 3.45E-11 | AAK1,ABCC1,ABCC12,ABCC6,ABHD6,ABLIM1,ACSBG1,ACVRL1,ADGRL3,ADNP,AGBL1,AGO2,AKAP7,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGEF28,ARHGEF6,ARID1B,ARMC3,ARPP21,BANK1,BCL11A,BCL11B,BICD2,BRINP1,BTBD9,C6orf118,CAMTA1,CARD10,CBLB,CBLN4,CCDC61,CCKBR,CDH13,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CPED1,CPN2,CSMD3,CTNND2,CX3CL1,DAPK1,DEGS2,DISC1,DISP3,DLST,DNAH7,DNAH8,DPP10,E2F7,E2F8,ENPEP,EXD1,F8,FAM83D,FNDC7,GAB1,GALNT13,GFRAL,GJB5,GRIK5,HAS2,HEG1,HNF4G,IBTK,ICE1,IGSF9B,IQGAP1,ITPKB,JAK2,JUP,KCNJ9,KDM2B,KIF13A,KIF26A,KLC1,let-7,LMX1A,LRRN3,LSAMP,MAF,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MCOLN1,MEPE,mir-129,MITF,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC20,MYO3B,MYOD1,NCKAP5,NOL4,ORC3,PAK5,PAPOLA,PARD3,PAX2,PCDH17,PCSK2,PDE7B,PHLPP1,PIK3AP1,PIK3R4,PLCE1,PLPPR1,PRKCQ,PROS1,PRPF31,PSMG1,PTPRC,PTPRZ1,RAD21L1,RAPGEF2,RASSF8,RBM20,RIMBP2,RIT2,RNF144B,RNF213,RNF6,SEMA3E,SI,SLC12A2,SLC12A8,SLC13A2,SLC22A5,SLC24A3,SLC8A1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STXBP5L,STXBP6,SYCP3,SYNPO2,TAP1,TCF7L2,TENM3,TFAP2B,TGFBR3,TIMP2,TM9SF2,TNR,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TTC28,TYRP1,VAT1L,VPS13A,VRK1,WDR73,WNT3A,XYLT1,ZDHHC14,ZNF583 | 189 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Organismal Injury and Abnormalities,Reproductive System Disease | Development of genital tumor | 4.87E-11 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD6,ABLIM1,ACSBG1,ACVRL1,ADGRL3,ADNP,AGBL1,AGO2,AKAP7,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC3,ARPP21,BANK1,BCL11A,BCL11B,BICD2,BRINP1,BTBD9,C6orf118,CAMTA1,CARD10,CBLB,CBLN4,CCDC33,CCDC61,CCKBR,CDH13,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CPED1,CPN2,CSMD3,CTNND2,CX3CL1,DAPK1,DEGS2,DISC1,DISP3,DLST,DNAH7,DNAH8,DPP10,E2F7,E2F8,ENO1,ENPEP,EPHA2,EXD1,F8,FAM83D,FGF18,FNDC7,FUCA2,GAB1,GALNT13,GFRAL,GJB5,GRIK5,HAS2,HEG1,HIF1A,HNF4G,IBTK,ICE1,IGSF21,IGSF9B,IQGAP1,ITPKB,JAK2,JUP,KCNJ9,KDM2B,KIF13A,KIF26A,KITLG,KLC1,let-7,LMX1A,LRRC31,LRRN3,LSAMP,LY86,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MCOLN1,MEPE,MGAT4B,mir-129,MITF,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC20,MYO3B,MYOD1,NCKAP5,NOL4,NTM,ORC3,OTOF,PAK5,PAPOLA,PARD3,PAX2,PCDH17,PCSK2,PDE7B,PHLPP1,PIK3AP1,PIK3R4,PLCE1,PLPPR1,PRKCQ,PROS1,PRPF31,PRSS54,PSMG1,PTPRC,PTPRZ1,RAD21L1,RAPGEF2,RASSF8,RBM20,RGS20,RIMBP2,RIT2,RNF144B,RNF213,RNF6,RORA,SEMA3E,SI,SLC12A2,SLC12A8,SLC13A2,SLC22A5,SLC24A3,SLC6A15,SLC6A4,SLC8A1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STXBP5L,STXBP6,SYCP3,SYNPO2,TAP1,TCF7L2,TENM3,TFAP2B,TGFBR3,TIMP2,TM9SF2,TNR,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TTC28,TYRP1,VAT1L,VPS13A,VRK1,VWA3B,WDR73,WNT3A,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF583 | 213 |
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Colorectal cancer | 7.38E-11 | ABCC1,ABCC3,ABLIM1,ACBD5,ACBD6,ACVRL1,ADCY5,ADGRL3,ADNP,AFAP1L2,AGBL1,AKAP7,ANKRD22,ANKS1B,AQP3,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC3,ARPP21,ATP5PF,AUTS2,B3GLCT,BCL11A,BCL11B,BICD2,BTBD9,C1orf105,C1R,CAMTA1,CARD10,CCKBR,CCSER1,CDH13,CDH19,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CRH,CRYAA/CRYAA2,CSMD3,CSNK1G2,CTNND2,CYP51A1,DAB2IP,DAPK1,DEGS2,DISP3,DLST,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,ECD,ENO1,EPHA2,F8,FAM120A,FAM167B,FAM83D,FGF18,FUCA2,FYN,GAB1,GALNT13,GDNF,GFRAL,GINS2,GRIK5,HEG1,HIF1A,HMGN3,HNRNPR,HTR3B,ICE1,IGSF21,IGSF9B,IL10RA,INMT,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNK5,KCTD15,KDM2B,KIF13A,KIF26A,KITLG,KLC1,let-7,LRCH1,LRRC31,LSAMP,MAF,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MEDAG,MIDN,mir-129,MITF,MOCS2,MR1,MSH5,MUC13,MUC20,MYO3B,MYOD1,NCKAP5,NELL1,NKX2-5,NOL4,NRG2,NTM,NTPCR,OTOF,PABPC4,PACSIN1,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PGBD5,PHLPP1,PHYHD1,PI16,PKD1L2,PLCE1,POU2AF1,PRIMA1,PROS1,PTPRC,PTPRZ1,RAB3C,RAPGEF2,RCC2,REC114,RGS20,RNF213,RNF6,RPH3AL,SEMA3E,SLC12A2,SLC12A8,SLC13A1,SLC13A2,SLC25A29,SLC37A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,ST6GALNAC2,STAG3,STARD8,STAT1,STXBP6,SYCP3,SYNPO2,SYT4,TCF7L2,TENM3,TERF2,TFAP2B,TFEC,TGFB2,TGFBR3,TIMP2,TMEM132B,TMPO,TNR,TPTE2,TRAM1L1,TRDN,TRPC7,TRPS1,TSPAN17,TSPAN7,TTC28,VAT1L,VPS13A,VRK1,VWA3B,XCL1,ZDHHC14,ZNF580,ZNF583 | 213 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Organismal Injury and Abnormalities,Reproductive System Disease | Tumorigenesis of reproductive tract | 7.84E-11 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD6,ABLIM1,ACSBG1,ACVRL1,ADGRL3,ADNP,AGBL1,AGO2,AKAP7,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC3,ARPP21,BANK1,BCL11A,BCL11B,BICD2,BRINP1,BTBD9,C6orf118,CAMTA1,CARD10,CBLB,CBLN4,CCDC33,CCDC61,CCKBR,CDH13,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CPED1,CPN2,CSF3,CSMD3,CTNND2,CX3CL1,DAPK1,DEGS2,DISC1,DISP3,DLST,DNAH7,DNAH8,DPP10,E2F7,E2F8,ENO1,ENPEP,EPHA2,ERO1A,EXD1,F8,FAM83D,FGF18,FNDC7,FUCA2,GAB1,GALNT13,GATA4,GFRAL,GJB5,GRIK5,HAS2,HEG1,HIF1A,HNF4G,IBTK,ICE1,IGSF21,IGSF9B,IQGAP1,ITPKB,JAK2,JUP,KCNJ9,KDM2B,KIF13A,KIF26A,KLC1,let-7,LMX1A,LRRC31,LRRN3,LSAMP,LY86,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MCOLN1,MEPE,MGAT4B,mir-129,MITF,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC20,MYO3B,MYOD1,NCKAP5,NOL4,NTM,ORC3,OTOF,PAK5,PAPOLA,PARD3,PAX2,PCDH17,PCSK2,PDE7B,PHLPP1,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PRKCQ,PROS1,PRPF31,PRSS54,PSMG1,PTPRC,PTPRZ1,RAD21L1,RAPGEF2,RASSF8,RBM20,RGS20,RIMBP2,RIT2,RNF144B,RNF213,RNF6,RORA,SEMA3E,SI,SLC12A2,SLC12A8,SLC13A2,SLC22A5,SLC24A3,SLC6A15,SLC6A4,SLC8A1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STXBP5L,STXBP6,SYCP3,SYNPO2,TAP1,TCF7L2,TENM3,TFAP2B,TGFBR3,TIMP2,TM9SF2,TNR,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TTC28,TYRP1,VAT1L,VPS13A,VRK1,VWA3B,WDR73,WNT3A,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF583 | 216 |
| Cancer,Organismal Injury and Abnormalities,Reproductive System Disease | Female genital neoplasm | 8.95E-11 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD6,ABLIM1,ACSBG1,ACVRL1,ADGRL3,ADNP,AGBL1,AGO2,AKAP7,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC3,ARPP21,BANK1,BCL11A,BCL11B,BICD2,BRINP1,BTBD9,C6orf118,CAMTA1,CARD10,CBLB,CBLN4,CCDC33,CCDC61,CCKBR,CDH13,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CPED1,CPN2,CSF3,CSMD3,CTNND2,CX3CL1,DAPK1,DEGS2,DISC1,DISP3,DLST,DNAH7,DNAH8,DPP10,E2F7,E2F8,ENO1,ENPEP,EPHA2,ERO1A,EXD1,F8,FAM83D,FGF18,FNDC7,FUCA2,GAB1,GALNT13,GATA4,GFRAL,GJB5,GRIK5,HAS2,HEG1,HIF1A,HNF4G,IBTK,ICE1,IGSF21,IGSF9B,IQGAP1,ITPKB,JAK2,JUP,KCNJ9,KDM2B,KIF13A,KIF26A,KLC1,let-7,LMX1A,LRRC31,LRRN3,LSAMP,LY86,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MCOLN1,MEPE,MGAT4B,mir-129,MITF,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC20,MYO3B,MYOD1,NCKAP5,NOL4,NTM,ORC3,OTOF,PAK5,PAPOLA,PARD3,PAX2,PCDH17,PCSK2,PDE7B,PHLPP1,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PRKCQ,PROS1,PRPF31,PRSS54,PSMG1,PTPRC,PTPRZ1,RAD21L1,RAPGEF2,RASSF8,RBM20,RGS20,RIMBP2,RIT2,RNF144B,RNF213,RNF6,RORA,SEMA3E,SI,SLC12A2,SLC12A8,SLC13A2,SLC22A5,SLC24A3,SLC6A15,SLC6A4,SLC8A1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STXBP5L,STXBP6,SYCP3,SYNPO2,TAP1,TCF7L2,TENM3,TFAP2B,TGFBR3,TIMP2,TM9SF2,TNR,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TTC28,TYRP1,VAT1L,VPS13A,VRK1,VWA3B,WDR73,WNT3A,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF583 | 216 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Organismal Injury and Abnormalities | Malignant genitourinary solid tumor | 1.08E-10 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD6,ABLIM1,ACSBG1,ACVRL1,ADAT1,ADGRL3,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,ATP5PF,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BICD2,BRINP1,BTBD9,C1orf105,C1R,C6orf118,CAMTA1,CARD10,CBLB,CBLN4,CCDC33,CCDC61,CCKBR,CCSER1,CDH13,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CSF3,CSMD3,CTNND2,CX3CL1,CXXC4,CYP51A1,DAB2IP,DAPK1,DEGS2,DISC1,DISP3,DLST,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,EIF1,ENO1,ENPEP,EPHA2,EPS15L1,ERO1A,ETNK1,EXD1,F8,FAM117A,FAM180A,FAM83D,FGF18,FMN1,FNDC7,FUCA2,FYN,GAB1,GALNT13,GALNT17,GDNF,GFRAL,GJB5,GLO1,GNS,GRHL2,GRIK5,HAS2,HEG1,HEXIM2,HIF1A,HNF4G,HNRNPR,IBTK,ICE1,IGSF21,IGSF9B,IL10RA,IL20RA,INMT,IQGAP1,ITPKB,JAK2,JUP,KCNH3,KCNJ9,KCNK5,KDM2B,KIF13A,KIF26A,KLC1,let-7,LMX1A,LRCH1,LRRC31,LRRN3,LSAMP,LTB4R2,LY86,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MC4R,MCOLN1,MEPE,MGAT4B,mir-129,MITF,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC13,MUC20,MYO3B,MYOD1,NCKAP5,NELL1,NKX2-3,NKX2-5,NOL4,NTM,NTPCR,OCSTAMP,ORC3,OTOF,PABPC4,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PCDH17,PCSK2,PDE7B,PGBD5,PHLPP1,PHYHD1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PLSCR5,PRKCQ,PROS1,PRPF31,PRSS54,PSAP,PSMG1,PTPRC,PTPRZ1,RAD21L1,RAPGEF2,RASSF8,RBM20,RCC2,RGS20,RIMBP2,RIT2,RNF144B,RNF168,RNF213,RNF6,RORA,RPH3AL,SCML4,SEMA3E,SGCD,SH3TC2,SI,SLC12A2,SLC12A8,SLC13A2,SLC22A5,SLC24A3,SLC37A4,SLC6A15,SLC6A4,SLC8A1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STX6,STXBP5L,STXBP6,SYCP3,SYNPO2,SYT17,SYT2,SYT4,SYT6,TAP1,TCF7L2,TENM3,TFAP2B,TGFB2,TGFBR3,TIMP2,TM9SF2,TMEM132B,TNFSF13B,TNR,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TTC28,TUBB6,TYRP1,USP46,VAT1L,VPS13A,VRK1,VWA3B,WDR73,WNT3A,WNT8B,XCL1,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF519,ZNF583 | 285 |
| Cancer,Organismal Injury and Abnormalities | Genitourinary tumor | 1.15E-10 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD6,ABLIM1,ACSBG1,ACVRL1,ADAT1,ADGRL3,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,ATP5PF,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BICD2,BRINP1,BTBD9,C1orf105,C1R,C6orf118,CAMTA1,CARD10,CBLB,CBLN4,CCDC33,CCDC61,CCKBR,CCSER1,CDH13,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CPN2,CSF3,CSMD3,CTNND2,CX3CL1,CXXC4,CYP51A1,DAB2IP,DAPK1,DEGS2,DISC1,DISP3,DLST,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,EIF1,ENO1,ENPEP,EPHA2,EPS15L1,ERO1A,ETNK1,EXD1,F8,FAM117A,FAM180A,FAM83D,FGF18,FMN1,FNDC7,FUCA2,FYN,GAB1,GALNT13,GALNT17,GATA4,GDNF,GFRAL,GJB5,GLO1,GNS,GRHL2,GRIK5,HAS2,HEG1,HEXIM2,HIF1A,HNF4G,HNRNPR,IBTK,ICE1,IGSF21,IGSF9B,IL10RA,IL20RA,INMT,IQGAP1,ITPKB,JAK2,JUP,KCNH3,KCNJ9,KCNK5,KDM2B,KIF13A,KIF26A,KITLG,KLC1,let-7,LMX1A,LRCH1,LRRC31,LRRN3,LSAMP,LTB4R2,LY86,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MC4R,MCOLN1,MEPE,MGAT4B,mir-129,MITF,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC13,MUC20,MYO3B,MYOD1,NCKAP5,NELL1,NKX2-3,NKX2-5,NOL4,NRG2,NTM,NTPCR,OCSTAMP,ORC3,OTOF,PABPC4,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PCDH17,PCSK2,PDE7B,PGBD5,PHLPP1,PHYHD1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PLSCR5,PRKCQ,PROS1,PRPF31,PRSS54,PSAP,PSMG1,PTPRC,PTPRZ1,RAD21L1,RAPGEF2,RASSF8,RBM20,RCC2,RGS20,RIMBP2,RIT2,RNF144B,RNF168,RNF213,RNF6,RORA,RPH3AL,SCML4,SEMA3E,SGCD,SH3TC2,SI,SLC12A2,SLC12A8,SLC13A2,SLC22A5,SLC24A3,SLC37A4,SLC6A15,SLC6A4,SLC8A1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STX6,STXBP5L,STXBP6,SYCP3,SYNPO2,SYT17,SYT2,SYT4,SYT6,TAP1,TCF7L2,TENM3,TFAP2B,TGFB2,TGFBR3,TIMP2,TM9SF2,TMEM132B,TNFSF13B,TNR,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TTC28,TUBB6,TYRP1,USP46,VAT1L,VPS13A,VRK1,VWA3B,WDR73,WNT3A,WNT8B,XCL1,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF519,ZNF583 | 288 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Organismal Injury and Abnormalities,Reproductive System Disease | Uterine tumor | 1.39E-10 | AAK1,ABCC1,ABCC12,ABCC6,ABHD6,ABLIM1,ACSBG1,ACVRL1,ADGRL3,ADNP,AGBL1,AGO2,AKAP7,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGEF28,ARHGEF6,ARID1B,ARMC3,ARPP21,BANK1,BCL11A,BCL11B,BICD2,BRINP1,BTBD9,C6orf118,CAMTA1,CARD10,CBLB,CBLN4,CCDC61,CCKBR,CDH13,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CPED1,CPN2,CSMD3,CTNND2,CX3CL1,DAPK1,DEGS2,DISC1,DISP3,DLST,DNAH7,DNAH8,DPP10,E2F7,E2F8,ENO1,ENPEP,EXD1,F8,FAM83D,FNDC7,GAB1,GALNT13,GFRAL,GJB5,GRIK5,HAS2,HEG1,HIF1A,HNF4G,IBTK,ICE1,IGSF9B,IQGAP1,ITPKB,JAK2,JUP,KCNJ9,KDM2B,KIF13A,KIF26A,KLC1,let-7,LMX1A,LRRN3,LSAMP,MAF,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MCOLN1,MEPE,mir-129,MITF,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC20,MYO3B,MYOD1,NCKAP5,NOL4,ORC3,PAK5,PAPOLA,PARD3,PAX2,PCDH17,PCSK2,PDE7B,PHLPP1,PIK3AP1,PIK3R4,PLCE1,PLPPR1,PRKCQ,PROS1,PRPF31,PSMG1,PTPRC,PTPRZ1,RAD21L1,RAPGEF2,RASSF8,RBM20,RIMBP2,RIT2,RNF144B,RNF213,RNF6,RORA,SEMA3E,SI,SLC12A2,SLC12A8,SLC13A2,SLC22A5,SLC24A3,SLC6A4,SLC8A1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STXBP5L,STXBP6,SYCP3,SYNPO2,TAP1,TCF7L2,TENM3,TFAP2B,TGFBR3,TIMP2,TM9SF2,TNR,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TTC28,TYRP1,VAT1L,VPS13A,VRK1,WDR73,WNT3A,XYLT1,ZDHHC14,ZNF583 | 193 |
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Colorectal tumor | 1.95E-10 | ABCC1,ABCC3,ABLIM1,ACBD5,ACBD6,ACVRL1,ADCY5,ADGRL3,ADNP,AFAP1L2,AGBL1,AKAP7,ANKRD22,ANKS1B,AQP3,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC3,ARPP21,ATP5PF,AUTS2,B3GLCT,BCL11A,BCL11B,BICD2,BTBD9,C1orf105,C1R,CAMTA1,CARD10,CCKBR,CCSER1,CDH13,CDH19,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CRH,CRYAA/CRYAA2,CSMD3,CSNK1G2,CTNND2,CYP51A1,DAB2IP,DAPK1,DEGS2,DISP3,DLST,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,ECD,ENO1,EPHA2,F8,FAM120A,FAM167B,FAM83D,FGF18,FUCA2,FYN,GAB1,GALNT13,GDNF,GFRAL,GINS2,GRIK5,HEG1,HIF1A,HMGN3,HNRNPR,HTR3B,ICE1,IGSF21,IGSF9B,IL10RA,INMT,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNK5,KCTD15,KDM2B,KIF13A,KIF26A,KITLG,KLC1,let-7,LRCH1,LRRC31,LSAMP,MAF,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MEDAG,MIDN,mir-129,MITF,MOCS2,MR1,MSH5,MUC13,MUC20,MYO3B,MYOD1,NCKAP5,NELL1,NKX2-5,NOL4,NRG2,NTM,NTPCR,OTOF,PABPC4,PACSIN1,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PGBD5,PHLPP1,PHYHD1,PI16,PKD1L2,PLCE1,POU2AF1,PRIMA1,PROS1,PTPRC,PTPRZ1,RAB3C,RAPGEF2,RCC2,REC114,RGS20,RNF213,RNF6,RPH3AL,SEMA3E,SLC12A2,SLC12A8,SLC13A1,SLC13A2,SLC22A5,SLC25A29,SLC37A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,ST6GALNAC2,STAG3,STARD8,STAT1,STXBP6,SYCP3,SYNPO2,SYT4,TCF7L2,TENM3,TERF2,TFAP2B,TFEC,TGFB2,TGFBR3,TIMP2,TMEM132B,TMPO,TNR,TPTE2,TRAM1L1,TRDN,TRPC7,TRPS1,TSPAN17,TSPAN7,TTC28,VAT1L,VPS13A,VRK1,VWA3B,XCL1,ZDHHC14,ZNF580,ZNF583 | 214 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Organismal Injury and Abnormalities,Reproductive System Disease | Male genital neoplasm | 1.14E-08 | AAK1,ABCC1,ACVRL1,ADAT1,ADGRL3,AFAP1L2,AGBL1,AGO2,AMD1,ANKS1B,ARHGAP31,ARHGAP45,ARID1B,ARMC12,ARPP21,B3GLCT,BCL11A,BCL11B,BRINP1,C1R,CAMTA1,CARD10,CCDC33,CDH19,CDH22,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CSMD3,CX3CL1,CYP51A1,DAB2IP,DISC1,DNAH7,DNAH8,E2F7,EBF1,ENPEP,EPHA2,F8,FAM117A,FAM180A,FGF18,FMN1,FNDC7,FYN,GALNT17,GDNF,GFRAL,GNS,GRHL2,GRIK5,HEG1,HEXIM2,HIF1A,HNRNPR,IBTK,IGSF21,IGSF9B,INMT,JAK2,KCNH3,KCNK5,KITLG,KLC1,let-7,LMX1A,LSAMP,LTB4R2,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MC4R,MR1,MRPL23,MYO3B,NCKAP5,NELL1,NKX2-3,NKX2-5,NRG2,NTPCR,OCSTAMP,OTOF,PABPC4,PAPOLA,PARD3,PARP4,PCDH17,PDE7B,PGBD5,PHYHD1,PLCE1,PLSCR5,PRKCQ,PROS1,PSAP,PTPRC,RAD21L1,RAPGEF2,RBM20,RCC2,RIMBP2,RNF144B,RNF213,SCML4,SEMA3E,SGCD,SH3TC2,SI,SLC12A2,SLC22A5,SLC24A3,SLC37A4,SLC6A15,SLC6A4,SLITRK1,SPEG,STARD8,STAT1,STPG2,STX6,STXBP5L,SYNPO2,SYT17,SYT2,SYT4,TAP1,TENM3,TFAP2B,TGFBR3,TIMP2,TMEM132B,TNFSF13B,TNR,TRAM1L1,TRDN,TRPC7,TTC28,USP46,VPS13A,VWA3B,WNT8B,XCL1,XYLT1,ZNF276 | 153 |
| Cancer,Organismal Injury and Abnormalities,Reproductive System Disease | Malignant neoplasm of male genital organ | 0.000000016 | AAK1,ABCC1,ACVRL1,ADAT1,ADGRL3,AFAP1L2,AGBL1,AGO2,AMD1,ANKS1B,ARHGAP31,ARHGAP45,ARID1B,ARMC12,ARPP21,B3GLCT,BCL11A,BCL11B,BRINP1,C1R,CAMTA1,CARD10,CCDC33,CDH19,CDH22,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CSMD3,CX3CL1,CYP51A1,DAB2IP,DISC1,DNAH7,DNAH8,E2F7,EBF1,ENPEP,EPHA2,F8,FAM117A,FAM180A,FGF18,FMN1,FNDC7,FYN,GALNT17,GDNF,GFRAL,GNS,GRHL2,GRIK5,HEG1,HEXIM2,HIF1A,HNRNPR,IBTK,IGSF21,IGSF9B,INMT,JAK2,KCNH3,KCNK5,KLC1,let-7,LMX1A,LSAMP,LTB4R2,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MC4R,MR1,MRPL23,MYO3B,NCKAP5,NELL1,NKX2-3,NKX2-5,NTPCR,OCSTAMP,OTOF,PABPC4,PAPOLA,PARD3,PARP4,PCDH17,PDE7B,PGBD5,PHYHD1,PLCE1,PLSCR5,PRKCQ,PROS1,PSAP,PTPRC,RAD21L1,RAPGEF2,RBM20,RCC2,RIMBP2,RNF144B,RNF213,SCML4,SEMA3E,SGCD,SH3TC2,SI,SLC12A2,SLC22A5,SLC24A3,SLC37A4,SLC6A15,SLC6A4,SLITRK1,SPEG,STARD8,STAT1,STPG2,STX6,STXBP5L,SYNPO2,SYT17,SYT2,SYT4,TAP1,TENM3,TFAP2B,TGFBR3,TIMP2,TMEM132B,TNFSF13B,TNR,TRAM1L1,TRDN,TRPC7,TTC28,USP46,VPS13A,VWA3B,WNT8B,XCL1,XYLT1,ZNF276 | 151 |
| Cancer,Organismal Injury and Abnormalities,Reproductive System Disease | Prostate cancer | 2.88E-08 | AAK1,ABCC1,ACVRL1,ADAT1,ADGRL3,AFAP1L2,AGBL1,AGO2,AMD1,ANKS1B,ARHGAP31,ARHGAP45,ARID1B,ARMC12,ARPP21,B3GLCT,BCL11A,BCL11B,BRINP1,C1R,CAMTA1,CARD10,CCDC33,CDH19,CDH22,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CSMD3,CX3CL1,CYP51A1,DAB2IP,DISC1,DNAH7,DNAH8,E2F7,EBF1,ENPEP,EPHA2,F8,FAM117A,FAM180A,FMN1,FNDC7,FYN,GALNT17,GFRAL,GNS,GRHL2,GRIK5,HEG1,HEXIM2,HIF1A,HNRNPR,IBTK,IGSF21,IGSF9B,INMT,JAK2,KCNH3,KCNK5,KLC1,let-7,LMX1A,LSAMP,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MC4R,MR1,MRPL23,MYO3B,NCKAP5,NELL1,NKX2-3,NKX2-5,NTPCR,OCSTAMP,OTOF,PABPC4,PAPOLA,PARD3,PARP4,PCDH17,PDE7B,PGBD5,PHYHD1,PLCE1,PLSCR5,PRKCQ,PROS1,PSAP,PTPRC,RAD21L1,RAPGEF2,RBM20,RCC2,RIMBP2,RNF144B,RNF213,SCML4,SEMA3E,SGCD,SH3TC2,SI,SLC12A2,SLC22A5,SLC24A3,SLC37A4,SLC6A15,SLC6A4,SLITRK1,SPEG,STARD8,STAT1,STPG2,STX6,STXBP5L,SYNPO2,SYT17,SYT2,SYT4,TAP1,TENM3,TFAP2B,TGFBR3,TIMP2,TMEM132B,TNFSF13B,TNR,TRAM1L1,TRDN,TRPC7,TTC28,USP46,VPS13A,VWA3B,WNT8B,XCL1,XYLT1,ZNF276 | 148 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Organismal Injury and Abnormalities | Development of neuroepithelial tumor | 3.15E-08 | AAK1,ABCC1,ABCC3,ABCC6,ABHD16B,ACBD5,ACVRL1,ADCY5,ADGRL3,ADNP,AGO2,AMZ1,ANKS1B,AQP3,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-<br>ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,AUTS2,BANK1,BCL11A,BCL11B,BICD2,BRINP1,C1orf105,C1R,C6orf118,CAMTA1,CARD10,CBLB,CCDC190,CCDC33,CCKBR,CDH13,CDH15,CDH22,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CPED1,CPN2,CRYAA/CRYAA2,CSF3,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CXXC4,CYP51A1,DAB2IP,DISP3,DLST,DNAH7,DNAH8,DPP10,E2F8,EBF1,ENPEP,EPHA2,EXD1,F8,FAM120A,FAM167B,FGF18,FMN1,FNDC7,FYN,GALNT13,GALNT17,GATA4,GFRAL,GRHL2,GRIK5,HAS2,HEG1,HEXIM2,HIF1A,HNF4G,IBTK,ICE1,IFT46,IGSF21,IGSF9B,INMT,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNK5,KCTD15,KDM2B,KIF13A,KIF26A,KLC1,KLF1,KLF13,LMX1A,LRCH1,LRRC31,LYSMD4,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MBD2,MC4R,MEDAG,MGAT4B,MIDN,mir-129,MITF,MOCS2,MR1,MROH2B,MTSS1,MUC13,MUC20,MYO3B,NADSYN1,NCKAP5,NELL1,NHLRC3,NOL4,NRG2,NTM,NTPCR,ODF3B,OR13F1,OTOF,OXR1,PABPC4,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PCDH17,PCSK2,PDE7B,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLSCR5,PNPLA5,PRIMA1,PRKCQ,PRPF31,PSAP,PTPRC,PTPRZ1,RAB3C,RAPGEF2,RASSF8,RCC2,REC114,REEP3,RGS20,RHOBTB1,RIMBP2,RNF168,RNF213,RNF6,RPH3AL,SCML4,SEMA3E,SH3TC2,SI,SLC12A2,SLC13A2,SLC22A5,SLC24A3,SLC25A29,SLC35A3,SLC37A4,SLC38A8,SLC6A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STMND1,STX6,STXBP5L,SYNPO2,SYPL1,TAS2R1,TCF7L2,TENM3,TERF2,TFAP2B,TFEC,TGFB2,TIMP2,TM9SF2,TMPO,TNFSF13B,TNR,TPTE2,TRPC7,TRPS1,TSGA13,TSPAN17,TTC28,TYRP1,VPS13A,VWA3A,WDR73,XCL1,XYLT1,ZDHHC14,ZNF276,ZNF519,ZNF583 | 236 |
| Cancer,Organismal Injury and Abnormalities | Breast or colorectal cancer | 3.25E-08 | AAK1,ABCC1,ABCC12,ABCC3,ABLIM1,ACBD5,ACBD6,ACVRL1,ADCY5,ADGRL3,ADNP,AFAP1L2,AGBL1,AGO2,AKAP7,ANKRD22,ANKS1B,AQP3,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-<br>ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC3,ARPP21,ATP5PF,AUTS2,B3GLCT,BANK1,BCL11A,BCL11B,BICD2,BTBD9,C1orf105,C1R,CAMTA1,CARD10,CCKBR,CCSER1,CDH13,CDH19,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CMIP,CPED1,CRH,CRYAA/CRYAA2,CSF3,CSMD3,CSNK1G2,CTNND2,CYP51A1,DAB2IP,DAPK1,DEGS2,DISP3,DLST,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,ECD,EIF1,ENO1,EPHA2,ETNK1,F8,FAM120A,FAM167B,FAM83D,FGF18,FUCA2,FYN,GAB1,GALNT13,GDNF,GFRAL,GINS2,GLO1,GRHL2,GRIK5,HEG1,HIF1A,HMGN3,HNRNPR,HTR3B,ICE1,IGSF21,IGSF9B,IL10RA,INMT,IQGAP1,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNK5,KCTD15,KDM2B,KIF13A,KIF26A,KITLG,KLC1,let-7,LRCH1,LRRC31,LSAMP,MAF,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MEDAG,MIDN,mir-129,MITF,MOCS2,MR1,MSH5,MUC13,MUC20,MYO3B,MYOD1,NCKAP5,NELL1,NKX2-5,NOL4,NRG2,NTM,NTPCR,OTOF,PABPC4,PACSIN1,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PGBD5,PHLPP1,PHYHD1,PI16,PIK3R4,PKD1L2,PLCE1,PLPPR1,POU2AF1,PRIMA1,PRKCQ,PROS1,PTPRC,PTPRZ1,RAB3C,RAD21L1,RAPGEF2,RCC2,REC114,RGS20,RNF213,RNF6,RPH3AL,SEMA3E,SLC12A2,SLC12A8,SLC13A1,SLC13A2,SLC25A29,SLC37A4,SLC6A15,SLC6A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,ST6GALNAC2,STAG3,STARD8,STAT1,STXBP6,SYCP3,SYNPO2,SYT17,SYT4,SYT6,TCF7L2,TENM3,TERF2,TFAP2B,TFEC,TGFB2,TGFBR3,TIMP2,TMEM132B,TMPO,TNR,TPTE2,TRAM1L1,TRDN,TRPC7,TRPS1,TSPAN17,TSPAN7,TTC28,TUBB6,TYRP1,VAT1L,VPS13A,VRK1,VWA3B,XCL1,ZDHHC14,ZNF580,ZNF583 | 233 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Organismal Injury and Abnormalities,Reproductive System Disease | Breast or gynecological cancer | 4.08E-08 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD6,ABLIM1,ACSBG1,ACVRL1,ADGRL3,ADNP,AGBL1,AGO2,AKAP7,ALKAL2,AMD1,AMZ1,ANKRD22,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC3,ARPP21,ATP5PF,BANK1,BCL11A,BCL11B,BICD2,BRINP1,BTBD9,C6orf118,CAMTA1,CARD10,CBLB,CBLN4,CCDC33,CCDC61,CCKBR,CCSER1,CDH13,CDH19,CDH22,CENPN,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CPED1,CPN2,CSF3,CSMD3,CTNND2,CX3CL1,DAPK1,DEGS2,DISC1,DISP3,DLST,DNAH7,DNAH8,DPP10,E2F7,E2F8,EIF1,ENO1,ENPEP,EPHA2,ERO1A,ETNK1,EXD1,F8,FAM83D,FGF18,FNDC7,FUCA2,FYN,GAB1,GALNT13,GFRAL,GJB5,GLO1,GRHL2,GRIK5,HAS2,HEG1,HIF1A,HNF4G,IBTK,ICE1,IGSF21,IGSF9B,IQGAP1,ITPKB,JAK2,JUP,KCNJ9,KDM2B,KIF13A,KIF26A,KLC1,let-7,LMX1A,LRCH1,LRRC31,LRRN3,LSAMP,LY86,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MCOLN1,MEPE,MGAT4B,mir-129,MITF,MR1,MROH2B,MRPL23,MSH5,MTSS1,MUC13,MUC20,MYO3B,MYOD1,NCKAP5,NOL4,NTM,ORC3,OTOF,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PCDH17,PCSK2,PDE7B,PHLPP1,PHYHD1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PRKCQ,PROS1,PRPF31,PRSS54,PSMG1,PTPRC,PTPRZ1,RAD21L1,RAPGEF2,RASSF8,RBM20,RGS20,RIMBP2,RIT2,RNF144B,RNF213,RNF6,RORA,RPH3AL,SEMA3E,SI,SLC12A2,SLC12A8,SLC13A2,SLC22A5,SLC24A3,SLC6A15,SLC6A4,SLC8A1,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STXBP5L,STXBP6,SYCP3,SYNPO2,SYT17,SYT6,TAP1,TCF7L2,TENM3,TFAP2B,TGFB2,TGFBR3,TIMP2,TM9SF2,TNR,TPTE2,TRAM1L1,TRDN,TRIQK,TRPC7,TRPS1,TTC28,TUBB6,TYRP1,VAT1L,VPS13A,VRK1,VWA3B,WDR73,WNT3A,XYLT1,ZDHHC14,ZNF143,ZNF276,ZNF583 | 233 |
| Cancer,Neurological Disease,Organismal Injury and Abnormalities | Glioma | 5.33E-08 | AAK1,ABCC1,ABCC3,ABCC6,ABHD16B,ACBD5,ACVRL1,ADCY5,ADGRL3,ADNP,AGO2,AMZ1,ANKS1B,AQP3,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,AUTS2,BANK1,BCL11A,BCL11B,BICD2,BRINP1,C1orf105,C1R,C6orf118,CAMTA1,CARD10,CBLB,CCDC190,CCDC33,CCKBR,CDH13,CDH15,CDH22,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CPED1,CPN2,CRYAA/CRYAA2,CSF3,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CXXC4,DAB2IP,DISP3,DLST,DNAH7,DNAH8,DPP10,E2F8,EBF1,ENPEP,EPHA2,EXD1,F8,FAM120A,FAM167B,FGF18,FMN1,FNDC7,FYN,GALNT13,GALNT17,GATA4,GFRAL,GRHL2,GRIK5,HAS2,HEG1,HEXIM2,HIF1A,HNF4G,IBTK,ICE1,IFT46,IGSF21,IGSF9B,INMT,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNK5,KCTD15,KDM2B,KIF13A,KIF26A,KLC1,KLF1,KLF13,LMX1A,LRCH1,LRRC31,LYSMD4,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MBD2,MC4R,MEDAG,MGAT4B,MIDN,mir-129,MITF,MOCS2,MR1,MROH2B,MTSS1,MUC13,MUC20,MYO3B,NADSYN1,NCKAP5,NELL1,NHLRC3,NOL4,NRG2,NTM,NTPCR,ODF3B,OR13F1,OTOF,OXR1,PABPC4,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PCDH17,PCSK2,PDE7B,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLSCR5,PNPLA5,PRIMA1,PRKCQ,PRPF31,PSAP,PTPRC,PTPRZ1,RAB3C,RAPGEF2,RASSF8,RCC2,REC114,REEP3,RGS20,RHOBTB1,RIMBP2,RNF168,RNF213,RNF6,RPH3AL,SCML4,SEMA3E,SH3TC2,SI,SLC12A2,SLC13A2,SLC22A5,SLC24A3,SLC25A29,SLC35A3,SLC37A4,SLC38A8,SLC6A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STMND1,STX6,STXBP5L,SYNPO2,SYPL1,TAS2R1,TCF7L2,TENM3,TERF2,TFAP2B,TFEC,TGFB2,TIMP2,TM9SF2,TMPO,TNFSF13B,TNR,TPTE2,TRPC7,TRPS1,TSGA13,TSPAN17,TTC28,TYRP1,VPS13A,VWA3A,WDR73,XCL1,XYLT1,ZDHHC14,ZNF276,ZNF519,ZNF583 | 235 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Neurological Disease,Organismal Injury and Abnormalities | Glioma cancer | 6.69E-08 | AAK1,ABCC1,ABCC3,ABCC6,ABHD16B,ACBD5,ACVRL1,ADCY5,ADGRL3,ADNP,AGO2,AMZ1,ANKS1B,AQP3,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,AUTS2,BANK1,BCL11A,BCL11B,BICD2,BRINP1,C1orf105,C1R,C6orf118,CAMTA1,CARD10,CBLB,CCDC190,CCDC33,CCKBR,CDH13,CDH15,CDH22,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CPED1,CPN2,CRYAA/CRYAA2,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CXXC4,DAB2IP,DISP3,DLST,DNAH7,DNAH8,DPP10,E2F8,EBF1,ENPEP,EPHA2,EXD1,F8,FAM120A,FAM167B,FGF18,FMN1,FNDC7,FYN,GALNT13,GALNT17,GFRAL,GRHL2,GRIK5,HAS2,HEG1,HEXIM2,HIF1A,HNF4G,IBTK,ICE1,IFT46,IGSF21,IGSF9B,INMT,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNK5,KCTD15,KDM2B,KIF13A,KIF26A,KLC1,KLF1,KLF13,LMX1A,LRCH1,LRRC31,LYSMD4,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MBD2,MC4R,MEDAG,MGAT4B,MIDN,mir-129,MITF,MOCS2,MR1,MROH2B,MTSS1,MUC13,MUC20,MYO3B,NADSYN1,NCKAP5,NHLRC3,NOL4,NRG2,NTM,NTPCR,ODF3B,OR13F1,OTOF,OXR1,PABPC4,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PCDH17,PCSK2,PDE7B,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLSCR5,PNPLA5,PRIMA1,PRKCQ,PRPF31,PSAP,PTPRC,PTPRZ1,RAB3C,RAPGEF2,RASSF8,RCC2,REC114,REEP3,RGS20,RHOBTB1,RIMBP2,RNF168,RNF213,RNF6,RPH3AL,SCML4,SEMA3E,SH3TC2,SI,SLC12A2,SLC13A2,SLC22A5,SLC24A3,SLC25A29,SLC35A3,SLC37A4,SLC38A8,SLC6A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STMND1,STX6,STXBP5L,SYNPO2,SYPL1,TAS2R1,TCF7L2,TENM3,TERF2,TFAP2B,TFEC,TGFB2,TIMP2,TM9SF2,TMPO,TNFSF13B,TNR,TPTE2,TRPC7,TRPS1,TSGA13,TSPAN17,TTC28,TYRP1,VPS13A,VWA3A,WDR73,XCL1,XYLT1,ZDHHC14,ZNF519,ZNF583 | 231 |
| Cancer,Neurological Disease,Organismal Injury and Abnormalities | Nervous system neoplasm | 8.18E-08 | AAK1,ABCC1,ABCC3,ABCC6,ABHD16B,ACBD5,ACVRL1,ADCY5,ADGRL3,ADNP,AGO2,AMZ1,ANKS1B,AQP3,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,AUTS2,BANK1,BCL11A,BCL11B,BICD2,BRINP1,C1orf105,C1R,C6orf118,CAMTA1,CARD10,CBLB,CCDC190,CCDC33,CCKBR,CDH13,CDH15,CDH22,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CPED1,CPN2,CRYAA/CRYAA2,CSF3,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CXXC4,CYB561,CYP51A1,DAB2IP,DISP3,DLST,DNAH7,DNAH8,DPP10,E2F8,EBF1,ENPEP,EPHA2,EXD1,F8,FAM120A,FAM167B,FGF18,FMN1,FNDC7,FYN,GALNT13,GALNT17,GATA4,GDNF,GFRAL,GINS2,GRHL2,GRIK5,HAS2,HEG1,HEXIM2,HIF1A,HNF4G,IBTK,ICE1,IFT46,IGSF21,IGSF9B,INMT,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNK5,KCTD15,KDM2B,KIF13A,KIF26A,KLC1,KLF1,KLF13,LMX1A,LRCH1,LRRC31,LYSMD4,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MBD2,MC4R,MEDAG,MGAT4B,MIDN,mir-129,MITF,MOCS2,MR1,MROH2B,MTSS1,MUC13,MUC20,MYO3B,NADSYN1,NCKAP5,NELL1,NHLRC3,NOL4,NRG2,NTM,NTPCR,ODF3B,OR13F1,OTOF,OXR1,PABPC4,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PCDH17,PCSK2,PDE7B,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLSCR5,PNPLA5,PRIMA1,PRKCQ,PRPF31,PSAP,PTPRC,PTPRZ1,RAB3C,RAPGEF2,RASSF8,RCC2,REC114,REEP3,RGS20,RHOBTB1,RIMBP2,RNF168,RNF213,RNF6,RPH3AL,SCML4,SEMA3E,SH3TC2,SI,SLC12A2,SLC13A2,SLC22A5,SLC24A3,SLC25A29,SLC35A3,SLC37A4,SLC38A8,SLC6A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STMND1,STX6,STXBP5L,SYNPO2,SYPL1,TAS2R1,TCF7L2,TENM3,TERF2,TFAP2B,TFEC,TGFB2,TIMP2,TM9SF2,TMPO,TNFSF13B,TNR,TPTE2,TRPC7,TRPS1,TSGA13,TSPAN17,TTC28,TYRP1,VPS13A,VWA3A,WDR73,XCL1,XYLT1,ZDHHC14,ZNF276,ZNF519,ZNF583 | 239 |
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Gastroesophageal adenocarcinoma | 9.76E-08 | ABCC1,ADCY5,ADNP,AFAP1L2,AGBL1,AKAP7,ARID1B,ARMC3,AUTS2,BANK1,BCL11A,BCL11B,BRINP1,C6orf118,CA10,CAMTA1,CARD10,CBLB,CCKBR,CHD5,CHD6,CIITA,CMIP,CSMD3,CSNK1G3,CTNND2,DISC1,DISP3,DNAH7,DNAH8,E2F7,E2F8,ENPEP,EPHA2,F8,FAM83D,GALNT17,HAS2,IBTK,IGSF21,IGSF9B,INMT,IQCF6,IRX6,ITPKB,JAK2,JCAD,KCNH3,KDM2B,KIF13A,KIF26A,LMX1A,LRCH1,LRRN3,LSAMP,MAGI2,MAN2B1,MAP2K1,MC4R,MROH2B,MTSS1,NADSYN1,NCKAP5,OPN4,OTOF,PAK5,PCDH17,PCSK2,PHLPP1,PHYHD1,PI16,PLCE1,PNPLA5,PTPRC,PTPRZ1,RGS20,RIMBP2,SEMA3E,SI,SLC12A2,SLC13A2,SLC35A3,SLC6A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SPEG,STAG3,STXBP5L,SYCP3,TCF7L2,TENM3,TFAP2B,TGFBR3,TMEM132B,TPTE2,TRAM1L1,TRPS1,VWA3A,ZDHHC14,ZNF276 | 103 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Neurological Disease,Organismal Injury and Abnormalities | Central nervous system solid tumor | 0.000000112 | AAK1,ABCC1,ABCC3,ABCC6,ABHD16B,ACBD5,ACVRL1,ADCY5,ADGRL3,ADNP,AGO2,AMZ1,ANKS1B,AQP3,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,AUTS2,BANK1,BCL11A,BCL11B,BICD2,BRINP1,C1orf105,C1R,C6orf118,CAMTA1,CARD10,CBLB,CCDC190,CCDC33,CCKBR,CDH13,CDH15,CDH22,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CPED1,CPN2,CRYAA/CRYAA2,CSF3,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CXXC4,CYB561,CYP51A1,DAB2IP,DISP3,DLST,DNAH7,DNAH8,DPP10,E2F8,EBF1,ENPEP,EPHA2,EXD1,F8,FAM120A,FAM167B,FGF18,FMN1,FNDC7,FYN,GALNT13,GALNT17,GATA4,GFRAL,GRHL2,GRIK5,HAS2,HEG1,HEXIM2,HIF1A,HNF4G,IBTK,ICE1,IFT46,IGSF21,IGSF9B,INMT,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNK5,KCTD15,KDM2B,KIF13A,KIF26A,KLC1,KLF1,KLF13,LMX1A,LRCH1,LRRC31,LYSMD4,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MBD2,MC4R,MEDAG,MGAT4B,MIDN,mir-129,MITF,MOCS2,MR1,MROH2B,MTSS1,MUC13,MUC20,MYO3B,NADSYN1,NCKAP5,NELL1,NHLRC3,NOL4,NRG2,NTM,NTPCR,ODF3B,OR13F1,OTOF,OXR1,PABPC4,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PCDH17,PCSK2,PDE7B,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLSCR5,PNPLA5,PRIMA1,PRKCQ,PRPF31,PSAP,PTPRC,PTPRZ1,RAB3C,RAPGEF2,RASSF8,RCC2,REC114,REEP3,RGS20,RHOBTB1,RIMBP2,RNF168,RNF213,RNF6,RPH3AL,SCML4,SEMA3E,SH3TC2,SI,SLC12A2,SLC13A2,SLC22A5,SLC24A3,SLC25A29,SLC35A3,SLC37A4,SLC38A8,SLC6A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STMND1,STX6,STXBP5L,SYNPO2,SYPL1,TAS2R1,TCF7L2,TENM3,TERF2,TFAP2B,TFEC,TGFB2,TIMP2,TM9SF2,TMPO,TNFSF13B,TNR,TPTE2,TRPC7,TRPS1,TSGA13,TSPAN17,TTC28,TYRP1,VPS13A,VWA3A,WDR73,XCL1,XYLT1,ZDHHC14,ZNF276,ZNF519,ZNF583 | 237 |
| Cancer,Gastrointestinal Disease,Hepatic System Disease,Organismal Injury and Abnormalities | Liver carcinoma | 0.000000117 | ABCC1,ABCC12,ABCC3,ABCC6,ABHD16B,ACVRL1,ADAT1,ADCY5,ADGRL3,ADNP,AGBL1,AGO2,ALKAL2,ANKS1B,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARID1B,ATP5PF,AUTS2,BANK1,BCL11A,C1R,C6orf118,CAMTA1,CBLB,CCDC33,CCSER1,CDH13,CDH15,CDH19,CEP350,CHD5,CHD6,CHEK2,CSMD3,CTNND2,CYB561,CYP51A1,DAB2IP,DBX2,DISC1,DISP3,DNAH7,DNAH8,DPP10,E2F7,E2F8,ECD,ENO1,EPHA2,EPS15L1,F8,FAM83D,FMN1,GALNT13,GALNT17,GFRAL,GJB5,GRHL2,GRIK5,HEG1,HIF1A,HNF4G,IBTK,ICE1,IGSF9B,IQCF6,IQGAP1,JAK2,JCAD,JUP,KBTBD12,KIF26A,KLF13,let-7,LRRC31,LSAMP,MAGI2,MAP3K21,MBD2,MC4R,MDFIC,METTL11B,MIDN,MTSS1,MYO3B,NCKAP5,NOL4,NRG2,OCSTAMP,OR13F1,OTOF,OXR1,PABPC4,PAK5,PAPOLA,PAQR8,PARD3,PAX2,PCDH17,PELI2,PEX26,PHYHD1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PRKCQ,PSAP,PTPRC,PTPRZ1,RAPGEF2,RBM20,REC114,RIMBP2,RIT2,RNF144B,RNF168,RNF213,RNF6,RORA,SEMA3E,SH3TC2,SI,SLC13A1,SLC37A4,SLIT3,SLITRK1,SLITRK6,SMC1B,SPEG,SRBD1,ST6GALNAC2,STARD8,STAT1,STPG2,STXBP5L,SYNPO2,SYT4,SYT6,TCEAL3,TCF7L2,TENM3,TERF2,TFAP2B,TFEC,TGFB2,TIMP2,TMBIM6,TMCC3,TMEM132B,TMEM98,TMPO,TNR,TRAM1L1,TRDN,TRPC7,TRPS1,TSPAN7,TTC28,TYRP1,VPS13A,VWA3B,ZNF143,ZNF519 | 168 |
| Cancer,Organismal Injury and Abnormalities | Upper aerodigestive tract carcinoma | 0.000000125 | ABCC1,ADCY5,AGBL1,AGO2,AKAP7,AMD1,ANKS1B,ARHGAP31,ARPP21,ATP5PF,AUTS2,BCL11A,BRINP1,BTBD9,C6orf118,CA10,CAMTA1,CARD10,CCSER1,CDH13,CDH19,CEP350,CHD5,CHD6,CIITA,CSMD3,CTNND2,CXXC4,DAPK1,DNAH7,E2F7,EBF1,EIF4EBP2,ENPEP,EPHA2,FAM120A,GATA4,GRIK5,HAS2,HEG1,HNRNPR,IQCF6,IRX6,JAK2,JCAD,JUP,KCTD15,KDM2B,KIF13A,KIF26A,let-7,LRCH1,LSAMP,MAG,MAP7,MCOLN1,MEPE,MROH2B,MTSS1,MYO3B,NKX2-5,NRG2,OPN4,OTOF,PAPOLA,PARD3,PAX5,PCDH17,PELI2,PRKCQ,PSAP,PTPRC,PTPRZ1,RIMBP2,RIT2,RNF213,RNF6,SCML4,SI,SLC12A2,SLCO4C1,SLIT3,SLITRK1,STAG3,STARD8,STAT1,STXBP5L,TMEM132B,TMPO,TNR,TPTE2,TRPC7,TRPS1,TTC28,VAT1L,WDR73,ZDHHC14 | 97 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Hepatobiliary carcinoma | 0.000000128 | ABCC1,ABCC12,ABCC3,ABCC6,ABHD16B,ACVRL1,ADAT1,ADCY5,ADGRL3,ADNP,AGBL1,AGO2,ALKAL2,ANKS1B,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARID1B,ATP5PF,AUTS2,BANK1,BCL11A,BICD2,C1R,C6orf118,CAMTA1,CBLB,CCDC33,CCSER1,CDH13,CDH15,CDH19,CEP350,CHD5,CHD6,CHEK2,CSMD3,CTNND2,CYB561,CYP51A1,DAB2IP,DBX2,DISC1,DISP3,DLST,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,ECD,ENO1,EPHA2,EPS15L1,F8,FAM83D,FGF18,FMN1,GALNT13,GALNT17,GFRAL,GJB5,GRHL2,GRIK5,HEG1,HIF1A,HNF4G,IBTK,ICE1,IGSF9B,IQCF6,IQGAP1,JAK2,JCAD,JUP,KBTBD12,KCNH3,KIF13A,KIF26A,KLF13,let-7,LRRC31,LSAMP,MAGI2,MAP3K21,MBD2,MC4R,MDFIC,METTL11B,MIDN,MSH5,MTSS1,MYO3B,NCKAP5,NELL1,NOL4,NRG2,OCSTAMP,OR13F1,OTOF,OXR1,PABPC4,PAK5,PAPOLA,PAQR8,PARD3,PAX2,PCDH17,PELI2,PEX26,PHYHD1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PRKCQ,PSAP,PTPRC,PTPRZ1,RAPGEF2,RBM20,REC114,RIMBP2,RIT2,RNF144B,RNF168,RNF213,RNF6,RORA,SEMA3E,SH3TC2,SI,SLC13A1,SLC37A4,SLIT3,SLITRK1,SLITRK6,SMC1B,SPEG,SRBD1,ST6GALNAC2,STARD8,STAT1,STPG2,STXBP5L,SYNPO2,SYT4,SYT6,TCEAL3,TCF7L2,TENM3,TERF2,TFAP2B,TFEC,TGFB2,TIMP2,TMBIM6,TMCC3,TMEM132B,TMEM98,TMPO,TNR,TRAM1L1,TRDN,TRPC7,TRPS1,TSPAN7,TTC28,TYRP1,VPS13A,VWA3B,ZNF143,ZNF519 | 176 |
| Cancer,Neurological Disease,Organismal Injury and Abnormalities | Brain glioma | 0.000000139 | AAK1,ABCC1,ABCC3,ABCC6,ABHD16B,ACBD5,ACVRL1,ADCY5,ADGRL3,ADNP,AGO2,AMZ1,ANKS1B,AQP3,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,AUTS2,BANK1,BCL11A,BCL11B,BICD2,BRINP1,C1orf105,C1R,C6orf118,CAMTA1,CARD10,CBLB,CCDC190,CCDC33,CCKBR,CDH13,CDH15,CDH22,CEP350,CFAP43,CHD5,CHD6,CHEK2,CPED1,CPN2,CRYAA/CRYAA2,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CXXC4,DAB2IP,DISP3,DLST,DNAH7,DNAH8,DPP10,E2F8,EBF1,ENPEP,EPHA2,EXD1,F8,FAM120A,FAM167B,FGF18,FMN1,FNDC7,FYN,GALNT13,GALNT17,GFRAL,GRHL2,GRIK5,HAS2,HEG1,HEXIM2,HIF1A,HNF4G,IBTK,ICE1,IFT46,IGSF21,IGSF9B,INMT,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNK5,KCTD15,KDM2B,KIF13A,KIF26A,KLC1,KLF1,KLF13,LMX1A,LRCH1,LRRC31,LYSMD4,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MBD2,MC4R,MEDAG,MGAT4B,MIDN,MITF,MOCS2,MR1,MROH2B,MTSS1,MUC13,MUC20,MYO3B,NADSYN1,NCKAP5,NELL1,NHLRC3,NOL4,NRG2,NTM,NTPCR,ODF3B,OR13F1,OTOF,OXR1,PABPC4,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PCDH17,PCSK2,PDE7B,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLSCR5,PNPLA5,PRIMA1,PRKCQ,PRPF31,PSAP,PTPRC,PTPRZ1,RAB3C,RASSF8,RCC2,REC114,REEP3,RGS20,RHOBTB1,RIMBP2,RNF168,RNF213,RNF6,RPH3AL,SCML4,SEMA3E,SH3TC2,SI,SLC13A2,SLC24A3,SLC25A29,SLC35A3,SLC37A4,SLC38A8,SLC6A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STMND1,STX6,STXBP5L,SYNPO2,SYPL1,TAS2R1,TCF7L2,TENM3,TERF2,TFAP2B,TFEC,TGFB2,TIMP2,TM9SF2,TMPO,TNFSF13B,TNR,TPTE2,TRPC7,TRPS1,TSGA13,TSPAN17,TTC28,TYRP1,VPS13A,VWA3A,WDR73,XCL1,XYLT1,ZDHHC14,ZNF276,ZNF519,ZNF583 | 227 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Neurological Disease,Organismal Injury and Abnormalities | Brain lesion | 0.000000163 | AAK1,ABCC1,ABCC3,ABCC6,ABHD16B,ACBD5,ACVRL1,ADCY5,ADGRL3,ADNP,AGO2,AMZ1,ANKS1B,AQP3,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,AUTS2,BANK1,BCL11A,BCL11B,BICD2,BRINP1,C1orf105,C1R,C6orf118,CAMTA1,CARD10,CBLB,CCDC190,CCDC33,CCKBR,CDH13,CDH15,CDH22,CEP350,CFAP43,CHD5,CHD6,CHEK2,CPED1,CPN2,CRYAA/CRYAA2,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CXXC4,CYP51A1,DAB2IP,DISP3,DLST,DNAH7,DNAH8,DPP10,E2F8,EBF1,ENPEP,EPHA2,EXD1,F8,FAM120A,FAM167B,FGF18,FMN1,FNDC7,FYN,GALNT13,GALNT17,GDNF,GFRAL,GRHL2,GRIK5,HAS2,HEG1,HEXIM2,HIF1A,HNF4G,IBTK,ICE1,IFT46,IGSF21,IGSF9B,INMT,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNK5,KCTD15,KDM2B,KIF13A,KIF26A,KLC1,KLF1,KLF13,LMX1A,LRCH1,LRRC31,LYSMD4,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MBD2,MC4R,MEDAG,MGAT4B,MIDN,MITF,MOCS2,MR1,MROH2B,MTSS1,MUC13,MUC20,MYO3B,NADSYN1,NCKAP5,NELL1,NHLRC3,NOL4,NRG2,NTM,NTPCR,ODF3B,OR13F1,OTOF,OXR1,PABPC4,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PCDH17,PCSK2,PDE7B,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLSCR5,PNPLA5,PRIMA1,PRKCQ,PROS1,PRPF31,PSAP,PTPRC,PTPRZ1,RAB3C,RASSF8,RCC2,REC114,REEP3,RGS20,RHOBTB1,RIMBP2,RNF168,RNF213,RNF6,RPH3AL,SCML4,SEMA3E,SH3TC2,SI,SLC13A2,SLC24A3,SLC25A29,SLC35A3,SLC37A4,SLC38A8,SLC6A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STMND1,STX6,STXBP5L,SYNPO2,SYPL1,TAS2R1,TCF7L2,TENM3,TERF2,TFAP2B,TFEC,TGFB2,TIMP2,TM9SF2,TMPO,TNFSF13B,TNR,TPTE2,TRPC7,TRPS1,TSGA13,TSPAN17,TTC28,TYRP1,VPS13A,VWA3A,WDR73,XCL1,XYLT1,ZDHHC14,ZNF276,ZNF519,ZNF583 | 230 |
| Cancer,Organismal Injury and Abnormalities | Malignant neoplasm of aerodigestive tract | 0.000000182 | ABCC1,ADCY5,AGBL1,AGO2,AKAP7,AMD1,ANKS1B,ARHGAP31,ARPP21,ATP5PF,AUTS2,BCL11A,BRINP1,BTBD9,C6orf118,CA10,CAMTA1,CARD10,CCSER1,CDH13,CDH19,CEP350,CHD5,CHD6,CIITA,CSMD3,CTNND2,CXXC4,DAPK1,DNAH7,E2F7,EBF1,EIF4EBP2,ENPEP,EPHA2,FAM120A,GATA4,GRIK5,HAS2,HEG1,HNRNPR,IQCF6,IRX6,JAK2,JCAD,JUP,KCTD15,KDM2B,KIF13A,KIF26A,let-7,LRCH1,LSAMP,MAG,MAP7,MCOLN1,MEPE,MROH2B,MTSS1,MYO3B,NKX2-5,NRG2,OPN4,OTOF,PAPOLA,PARD3,PAX5,PCDH17,PELI2,PRKCQ,PSAP,PTPRC,PTPRZ1,RIMBP2,RIT2,RNF213,RNF6,SCML4,SI,SLC12A2,SLC6A4,SLCO4C1,SLIT3,SLITRK1,STAG3,STARD8,STAT1,STXBP5L,TMEM132B,TMPO,TNR,TPTE2,TRPC7,TRPS1,TTC28,VAT1L,WDR73,ZDHHC14 | 98 |
| Cancer,Neurological Disease,Organismal Injury and Abnormalities | Central nervous system cancer | 0.00000019 | AAK1,ABCC1,ABCC3,ABCC6,ABHD16B,ACBD5,ACVRL1,ADCY5,ADGRL3,ADNP,AGO2,AMZ1,ANKS1B,AQP3,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,AUTS2,BANK1,BCL11A,BCL11B,BICD2,BRINP1,C1orf105,C1R,C6orf118,CAMTA1,CARD10,CBLB,CCDC190,CCDC33,CCKBR,CDH13,CDH15,CDH22,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CPED1,CPN2,CRYAA/CRYAA2,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CXXC4,CYB561,DAB2IP,DISP3,DLST,DNAH7,DNAH8,DPP10,E2F8,EBF1,ENPEP,EPHA2,EXD1,F8,FAM120A,FAM167B,FGF18,FMN1,FNDC7,FYN,GALNT13,GALNT17,GFRAL,GRHL2,GRIK5,HAS2,HEG1,HEXIM2,HIF1A,HNF4G,IBTK,ICE1,IFT46,IGSF21,IGSF9B,INMT,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNK5,KCTD15,KDM2B,KIF13A,KIF26A,KLC1,KLF1,KLF13,LMX1A,LRCH1,LRRC31,LYSMD4,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MBD2,MC4R,MEDAG,MGAT4B,MIDN,mir-129,MITF,MOCS2,MR1,MROH2B,MTSS1,MUC13,MUC20,MYO3B,NADSYN1,NCKAP5,NHLRC3,NOL4,NRG2,NTM,NTPCR,ODF3B,OR13F1,OTOF,OXR1,PABPC4,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PCDH17,PCSK2,PDE7B,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLSCR5,PNPLA5,PRIMA1,PRKCQ,PRPF31,PSAP,PTPRC,PTPRZ1,RAB3C,RAPGEF2,RASSF8,RCC2,REC114,REEP3,RGS20,RHOBTB1,RIMBP2,RNF168,RNF213,RNF6,RPH3AL,SCML4,SEMA3E,SH3TC2,SI,SLC12A2,SLC13A2,SLC22A5,SLC24A3,SLC25A29,SLC35A3,SLC37A4,SLC38A8,SLC6A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STMND1,STX6,STXBP5L,SYNPO2,SYPL1,TAS2R1,TCF7L2,TENM3,TERF2,TFAP2B,TFEC,TGFB2,TIMP2,TM9SF2,TMPO,TNFSF13B,TNR,TPTE2,TRPC7,TRPS1,TSGA13,TSPAN17,TTC28,TYRP1,VPS13A,VWA3A,WDR73,XCL1,XYLT1,ZDHHC14,ZNF519,ZNF583 | 232 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Neurological Disease,Organismal Injury and Abnormalities | Brain tumor | 0.000000229 | AAK1,ABCC1,ABCC3,ABCC6,ABHD16B,ACBD5,ACVRL1,ADCY5,ADGRL3,ADNP,AGO2,AMZ1,ANKS1B,AQP3,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,AUTS2,BANK1,BCL11A,BCL11B,BICD2,BRINP1,C1orf105,C1R,C6orf118,CAMTA1,CARD10,CBLB,CCDC190,CCDC33,CCKBR,CDH13,CDH15,CDH22,CEP350,CFAP43,CHD5,CHD6,CHEK2,CPED1,CPN2,CRYAA/CRYAA2,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CXXC4,CYP51A1,DAB2IP,DISP3,DLST,DNAH7,DNAH8,DPP10,E2F8,EBF1,ENPEP,EPHA2,EXD1,F8,FAM120A,FAM167B,FGF18,FMN1,FNDC7,FYN,GALNT13,GALNT17,GFRAL,GRHL2,GRIK5,HAS2,HEG1,HEXIM2,HIF1A,HNF4G,IBTK,ICE1,IFT46,IGSF21,IGSF9B,INMT,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCNK5,KCTD15,KDM2B,KIF13A,KIF26A,KLC1,KLF1,KLF13,LMX1A,LRCH1,LRRC31,LYSMD4,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MBD2,MC4R,MEDAG,MGAT4B,MIDN,MITF,MOCS2,MR1,MROH2B,MTSS1,MUC13,MUC20,MYO3B,NADSYN1,NCKAP5,NELL1,NHLRC3,NOL4,NRG2,NTM,NTPCR,ODF3B,OR13F1,OTOF,OXR1,PABPC4,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PCDH17,PCSK2,PDE7B,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLSCR5,PNPLA5,PRIMA1,PRKCQ,PRPF31,PSAP,PTPRC,PTPRZ1,RAB3C,RASSF8,RCC2,REC114,REEP3,RGS20,RHOBTB1,RIMBP2,RNF168,RNF213,RNF6,RPH3AL,SCML4,SEMA3E,SH3TC2,SI,SLC13A2,SLC24A3,SLC25A29,SLC35A3,SLC37A4,SLC38A8,SLC6A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,STMND1,STX6,STXBP5L,SYNPO2,SYPL1,TAS2R1,TCF7L2,TENM3,TERF2,TFAP2B,TFEC,TGFB2,TIMP2,TM9SF2,TMPO,TNFSF13B,TNR,TPTE2,TRPC7,TRPS1,TSGA13,TSPAN17,TTC28,TYRP1,VPS13A,VWA3A,WDR73,XCL1,XYLT1,ZDHHC14,ZNF276,ZNF519,ZNF583 | 228 |
| Cancer,Gastrointestinal Disease,Hepatic System Disease,Organismal Injury and Abnormalities | Hepatobiliary system cancer | 0.000000247 | ABCC1,ABCC12,ABCC3,ABCC6,ABHD16B,ACVRL1,ADAT1,ADCY5,ADGRL3,ADNP,AGBL1,AGO2,ALKAL2,ANKS1B,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARID1B,ATP5PF,AUTS2,BANK1,BCL11A,BICD2,C1R,C6orf118,CAMTA1,CBLB,CCDC33,CCSER1,CDH13,CDH15,CDH19,CEP350,CHD5,CHD6,CHEK2,CSMD3,CTNND2,CYB561,CYP51A1,DAB2IP,DBX2,DISC1,DISP3,DLST,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,ECD,ENO1,EPHA2,EPS15L1,F8,FAM120A,FAM83D,FGF18,FMN1,GALNT13,GALNT17,GFRAL,GJB5,GRHL2,GRIK5,HEG1,HIF1A,HNF4G,IBTK,ICE1,IGSF9B,IQCF6,IQGAP1,JAK2,JCAD,JUP,KBTBD12,KCNH3,KIF13A,KIF26A,KLF13,let-7,LRRC31,LSAMP,MAGI2,MAP3K21,MBD2,MC4R,MDFIC,METTL11B,MIDN,MSH5,MTSS1,MYO3B,NCKAP5,NELL1,NOL4,NRG2,NSMCE2,OCSTAMP,OR13F1,OTOF,OXR1,PABPC4,PAK5,PAPOLA,PAQR8,PARD3,PAX2,PCDH17,PELI2,PEX26,PHYHD1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PRKCQ,PSAP,PTPRC,PTPRZ1,RAPGEF2,RBM20,REC114,RIMBP2,RIT2,RNF144B,RNF168,RNF213,RNF6,RORA,SEMA3E,SH3TC2,SI,SLC13A1,SLC37A4,SLC6A4,SLIT3,SLITRK1,SLITRK6,SMC1B,SPEG,SRBD1,ST6GALNAC2,STARD8,STAT1,STPG2,STXBP5L,SYNPO2,SYT4,SYT6,TCEAL3,TCF7L2,TENM3,TERF2,TFAP2B,TFEC,TGFB2,TIMP2,TMBIM6,TMCC3,TMEM132B,TMEM98,TMPO,TNR,TRAM1L1,TRDN,TRPC7,TRPS1,TSPAN7,TTC28,TYRP1,VPS13A,VWA3B,ZNF143,ZNF519 | 179 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Gastrointestinal Disease,Hepatic System Disease,Organismal Injury and Abnormalities | Liver cancer | 0.000000252 | ABCC1,ABCC12,ABCC3,ABCC6,ABHD16B,ACVRL1,ADAT1,ADCY5,ADGRL3,ADNP,AGBL1,AGO2,ALKAL2,ANKS1B,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARID1B,ATP5PF,AUTS2,BANK1,BCL11A,C1R,C6orf118,CAMTA1,CBLB,CCDC33,CCSER1,CDH13,CDH15,CDH19,CEP350,CHD5,CHD6,CHEK2,CSMD3,CTNND2,CYB561,CYP51A1,DAB2IP,DBX2,DISC1,DISP3,DNAH7,DNAH8,DPP10,E2F7,E2F8,ECD,ENO1,EPHA2,EPS15L1,F8,FAM120A,FAM83D,FMN1,GALNT13,GALNT17,GFRAL,GJB5,GRHL2,GRIK5,HEG1,HIF1A,HNF4G,IBTK,ICE1,IGSF9B,IQCF6,IQGAP1,JAK2,JCAD,JUP,KBTBD12,KIF26A,KLF13,let-7,LRRC31,LSAMP,MAGI2,MAP3K21,MBD2,MC4R,MDFIC,METTL11B,MIDN,MTSS1,MYO3B,NCKAP5,NOL4,NRG2,NSMCE2,OCSTAMP,OR13F1,OTOF,OXR1,PABPC4,PAK5,PAPOLA,PAQR8,PARD3,PAX2,PCDH17,PELI2,PEX26,PHYHD1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PRKCQ,PSAP,PTPRC,PTPRZ1,RAPGEF2,RBM20,REC114,RIMBP2,RIT2,RNF144B,RNF168,RNF213,RNF6,RORA,SEMA3E,SH3TC2,SI,SLC13A1,SLC37A4,SLC6A4,SLIT3,SLITRK1,SLITRK6,SMC1B,SPEG,SRBD1,ST6GALNAC2,STARD8,STAT1,STPG2,STXBP5L,SYNPO2,SYT4,SYT6,TCEAL3,TCF7L2,TENM3,TERF2,TFAP2B,TFEC,TGFB2,TIMP2,TMBIM6,TMCC3,TMEM132B,TMEM98,TMPO,TNR,TRAM1L1,TRDN,TRPC7,TRPS1,TSPAN7,TTC28,TYRP1,VPS13A,VWA3B,ZNF143,ZNF519 | 171 |
| Cancer,Organismal Injury and Abnormalities | Cancer of cells | 0.000000263 | AAK1,ABCC1,ABCC3,ABHD6,ABLIM1,ACVRL1,ADCY5,ADGRL3,AFAP1L2,AGBL1,AGO2,AKAP7,AMD1,ANKS1B,ARHGAP31,ARHGEF28,ARID1B,ARMC3,ARPP21,AUTS2,BCL11A,BCL11B,BICD2,BRINP1,BTBD9,C1orf105,C1R,C6orf118,CAMTA1,CBLB,CCDC61,CCKBR,CCSER1,CDH13,CDH19,CEP350,CHD5,CHD6,CHEK2,CIITA,CMIP,CPN2,CSF3,CSMD3,CSNK1G2,CTNND2,CXXC4,CYB561,CYP51A1,DAB2IP,DAPK1,DBX2,DISP3,DNAH7,DNAH8,DPH6,DPP10,E2F7,E2F8,EBF1,EIF4EBP2,ENPEP,EPHA2,FAM120A,FAM167B,FGF18,FYN,GALNT13,GRIK5,HAS2,HEG1,HIF1A,HNF4G,HNRNPR,IBTK,IGSF21,IGSF9B,IQGAP1,IRX6,ITPKB,JAK2,JCAD,JUP,KCNK5,KCTD15,KDM2B,KIF26A,KITLG,KLC1,let-7,LRRN3,LTB4R2,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MBD2,MC4R,MEPE,MIDN,mir-129,MR1,MROH2B,MTSS1,MUC13,MUC20,MYO3B,MYOD1,NADSYN1,NELL1,NHLRC3,NKX2-3,NKX2-5,NRG2,OPN4,OR6S1,OTOF,PABPC4,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PAX5,PCDH17,PDE7B,PELI2,PEX26,PHLPP1,PHYHD1,PKD1L2,PLCE1,POU2AF1,PRKCQ,PSAP,PTPRC,PTPRZ1,RAPGEF2,RHOBTB1,RIMBP2,RIT2,RNF213,RNF6,RORA,SCML4,SEMA3E,SH3TC2,SI,SLC12A2,SLC22A5,SLC25A29,SLIT3,SLITRK1,SOAT1,SPEG,SRPK2,STAG3,STARD8,STAT1,STXBP5L,STXBP6,SYT17,TCEAL3,TCF7L2,TENM3,TFEC,TGFB2,TGFBR3,TIMP2,TMEM132B,TMPO,TNFSF13B,TNR,TPTE2,TRAM1L1,TRDN,TRPC7,TRPS1,TSPAN7,TTC28,TUBB6,TYRP1,VAT1L,VPS13A,VWA3B,ZDHHC14,ZNF276 | 191 |
| Tissue Development | Growth of epithelial tissue | 0.00000051 | ACVRL1,BCL11B,CDH13,CSMD3,DAB2IP,E2F7,E2F8,EPHA2,FGF18,FYN,HAS2,HIF1A,IQGAP1,JAK2,JUP,KITLG,let-7,MAGI2,MAP2K1,mir-129,MITF,MTSS1,NKX2-3,NRG2,PARD3,PAX2,PLCE1,PROS1,PTPRZ1,RNF144B,SLC8A1,STAT1,STX6,TCF7L2,TERF2,TFAP2B,TGFB2,TGFBR3,TIMP2,TMPO,TYRP1,WNT3A,ZNF580 | 43 |
| Cancer,Organismal Injury and Abnormalities,Reproductive System Disease | Prostatic adenocarcinoma | 0.000000839 | AAK1,ABCC1,ACVRL1,ADAT1,ADGRL3,AFAP1L2,AGBL1,AGO2,ANKS1B,ARHGAP31,ARHGAP45,ARID1B,ARMC12,B3GLCT,BCL11A,BCL11B,BRINP1,CAMTA1,CARD10,CCDC33,CDH19,CDH22,CHD5,CHD6,CHEK2,CMIP,CPED1,CSMD3,CYP51A1,DAB2IP,DISC1,DNAH7,DNAH8,E2F7,EBF1,ENPEP,EPHA2,F8,FAM117A,FAM180A,FMN1,FNDC7,GALNT17,GFRAL,GNS,GRHL2,GRIK5,HEG1,HEXIM2,HNRNPR,IGSF21,IGSF9B,JAK2,KCNH3,KCNK5,LMX1A,LSAMP,MAG,MAN2B1,MAP2K1,MAP3K21,MAP7,MC4R,MR1,MRPL23,MYO3B,NCKAP5,NTPCR,OCSTAMP,OTOF,PABPC4,PAPOLA,PARP4,PCDH17,PGBD5,PHYHD1,PLCE1,PLSCR5,PRKCQ,PROS1,PTPRC,RAD21L1,RAPGEF2,RBM20,RIMBP2,RNF213,SCML4,SEMA3E,SGCD,SH3TC2,SI,SLC12A2,SLC24A3,SLC37A4,SLC6A15,SLC6A4,SLITRK1,SPEG,STARD8,STAT1,STPG2,STX6,STXBP5L,SYT17,SYT2,SYT4,TAP1,TENM3,TFAP2B,TGFBR3,TMEM132B,TNFSF13B,TNR,TRAM1L1,TRDN,TRPC7,TTC28,USP46,VPS13A,VWA3B,WNT8B,XCL1,XYLT1 | 123 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cardiovascular Disease,Developmental Disorder,Organismal Injury and Abnormalities | Hypoplasia of heart | 0.000000883 | ACVRL1,CYP51A1,GATA4,HAS2,JUP,NKX2-5,PARD3,SLC8A1,TGFB2,TGFBR3 | 10 |
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Pancreatobiliary tumor | 0.00000091 | AAK1,ABCC3,ACBD5,ACVRL1,ADGRL3,ADNP,AFAP1L2,AMD1,ANKS1B,ARHGAP8/PRR5-ARHGAP8,ARHGEF6,ARID1B,ARMC12,BANK1,BFSP2,BICD2,BRINP1,C6orf118,CA10,CCKBR,CDH19,CENPN,CFAP43,CHD6,CHEK2,CIITA,CSMD3,CXXC4,CYP51A1,DAPK1,DISC1,DISP3,DLST,DNAH7,DNAH8,EBF1,ECD,ENO1,EPHA2,EPS15L1,F8,FAM117A,FGF18,GALNT17,GATA4,GNS,GRIK5,HIF1A,HNF4G,HTR3B,IBTK,ICE1,IFT46,IGSF9B,IQGAP1,JAK2,JCAD,KCNH3,KCTD15,KIF13A,KLC1,KLF1,let-7,LMX1A,MAGI2,MAP2K1,MAP3K21,MGAT4B,MITF,MOCS2,MSH5,MUC20,MYO3B,NCKAP5,NELL1,NOL4,NRG2,NTM,OTOF,PAPOLA,PARP4,PCSK2,PNPLA5,POU2AF1,PRIMA1,PTPRC,RAPGEF2,RASSF8,RIMBP2,RIT2,RNF213,RORA,SEMA3E,SI,SLC12A8,SLC24A3,SLC25A29,SLC6A15,SLC6A4,SLC8A1,SLITRK6,SPEG,STPG2,STXBP5L,SYT17,SYT2,TCEAL3,TCF7L2,TENM3,TERF2,TFAP2B,TFEC,TGFB2,TM9SF2,TMEM132B,TMPO,TNR,TOMM20,TPTE2,TRDN,USP46,VWA3A,VWA3B,WNT3A | 124 |
| Cancer,Organismal Injury and Abnormalities,Reproductive System Disease | Prostatic carcinoma | 0.000000939 | AAK1,ABCC1,ACVRL1,ADAT1,ADGRL3,AFAP1L2,AGBL1,AGO2,ANKS1B,ARHGAP31,ARHGAP45,ARID1B,ARMC12,B3GLCT,BCL11A,BCL11B,BRINP1,CAMTA1,CARD10,CCDC33,CDH19,CDH22,CHD5,CHD6,CHEK2,CMIP,CPED1,CSMD3,CYP51A1,DAB2IP,DISC1,DNAH7,DNAH8,E2F7,EBF1,ENPEP,EPHA2,F8,FAM117A,FAM180A,FMN1,FNDC7,GALNT17,GFRAL,GNS,GRHL2,GRIK5,HEG1,HEXIM2,HNRNPR,IGSF21,IGSF9B,JAK2,KCNH3,KCNK5,KLC1,LMX1A,LSAMP,MAG,MAN2B1,MAP2K1,MAP3K21,MAP7,MC4R,MR1,MRPL23,MYO3B,NCKAP5,NKX2-3,NTPCR,OCSTAMP,OTOF,PABPC4,PAPOLA,PARP4,PCDH17,PGBD5,PHYHD1,PLCE1,PLSCR5,PRKCQ,PROS1,PSAP,PTPRC,RAD21L1,RAPGEF2,RBM20,RIMBP2,RNF213,SCML4,SEMA3E,SGCD,SH3TC2,SI,SLC12A2,SLC22A5,SLC24A3,SLC37A4,SLC6A15,SLC6A4,SLITRK1,SPEG,STARD8,STAT1,STPG2,STX6,STXBP5L,SYT17,SYT2,SYT4,TAP1,TENM3,TFAP2B,TGFBR3,TMEM132B,TNFSF13B,TNR,TRAM1L1,TRDN,TRPC7,TTC28,USP46,VPS13A,VWA3B,WNT8B,XCL1,XYLT1,ZNF276 | 128 |
| Cancer,Organismal Injury and Abnormalities | Neoplasia of cells | 0.00000113 | AAK1,ABCC1,ABCC3,ABHD6,ABLIM1,ACVRL1,ADCY5,ADGRL3,AFAP1L2,AGBL1,AGO2,AKAP7,ALKAL2,AMD1,ANKRD22,ANKS1B,ARHGAP31,ARHGEF28,ARID1B,ARMC3,ARPP21,AUTS2,B3GLCT,BCL11A,BCL11B,BICD2,BRINP1,BTBD9,C1orf105,C1R,C6orf118,CAMTA1,CBLB,CCDC61,CCKBR,CCSER1,CDH13,CDH19,CEP350,CHD5,CHD6,CHEK2,CIITA,CMIP,CPN2,CSF3,CSMD3,CSNK1G2,CTNND2,CXXC4,CYB561,CYP51A1,DAB2IP,DAPK1,DBX2,DISP3,DNAH7,DNAH8,DPH6,DPP10,E2F7,E2F8,EBF1,EIF4EBP2,ENPEP,EPHA2,ETNK1,FAM117A,FAM120A,FAM167B,FGF18,FMN1,FYN,GALNT13,GATA4,GJB5,GRHL2,GRIK5,HAS2,HEG1,HIF1A,HNF4G,HNRNPR,IBTK,IGSF21,IGSF9B,IQGAP1,IRX6,ITPKB,JAK2,JCAD,JUP,KCNK5,KCTD15,KDM2B,KIF26A,KITLG,KLC1,let-7,LRRN3,LTB4R2,MAF,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MBD2,MC4R,MEPE,MIDN,mir-129,MITF,MR1,MROH2B,MTSS1,MUC13,MUC20,MYO3B,MYOD1,NADSYN1,NELL1,NHLRC3,NKX2-3,NKX2-5,NRG2,OPN4,OR6S1,OTOF,PABPC4,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PELI2,PEX26,PHLPP1,PHYHD1,PKD1L2,PLCE1,POU2AF1,PRKCQ,PSAP,PTPRC,PTPRZ1,RAPGEF2,RHOBTB1,RIMBP2,RIT2,RNF213,RNF6,RORA,RPL3,RPLP1,SCML4,SEMA3E,SH3TC2,SI,SLC12A2,SLC13A2,SLC22A5,SLC25A29,SLC6A15,SLIT3,SLITRK1,SOAT1,SPEG,SRPK2,STAG3,STARD8,STAT1,STXBP5L,STXBP6,SYNPO2,SYT17,TCEAL3,TCF7L2,TENM3,TFEC,TGFB2,TGFBR3,TIMP2,TMEM132B,TMPO,TNFSF13B,TNR,TPTE2,TRAM1L1,TRDN,TRPC7,TRPS1,TSPAN7,TTC28,TUBB6,TYRP1,VAT1L,VPS13A,VWA3B,ZDHHC14,ZNF276 | 207 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Organismal Injury and Abnormalities | Cancer of head | 0.00000152 | ABCC1,ACBD5,ADCY5,ADGRL3,ADNP,AKAP7,AMD1,ANKS1B,AQP3,ARHGAP31,ARHGEF28,ARID1B,ATP5PF,AUTS2,BCL11A,BICD2,BRINP1,BTBD9,C1R,C6orf118,CAMTA1,CBLB,CCDC33,CCKBR,CDH13,CDH15,CEP350,CFAP43,CHD5,CHD6,CHEK2,CPED1,CSMD3,CTNND2,CXXC4,CYP51A1,DISP3,DNAH7,DNAH8,E2F7,EBF1,EIF4EBP2,ENPEP,EPHA2,FAM120A,FAM167B,FGF18,GRIK5,HAS2,HEG1,HIF1A,HNRNPR,IBTK,ICE1,IFT46,IGSF9B,ITPKB,JAK2,JCAD,JUP,KCNK5,KDM2B,KIF13A,KIF26A,KLF13,LMX1A,MAF,MAN2B1,MAP2K1,MAP3K21,MAP7,MEPE,MIDN,MITF,MOCS2,MR1,MTSS1,MYO3B,NCKAP5,NHLRC3,NRG2,ODF3B,OTOF,PABPC4,PAPOLA,PARD3,PARP4,PAX2,PCDH17,PCSK2,PDE7B,PELI2,PIK3AP1,PLCE1,PLSCR5,PRIMA1,PRKCQ,PRPF31,PTPRC,PTPRZ1,RAB3C,RASSF8,RIMBP2,RNF168,RNF213,RNF6,SCML4,SH3TC2,SI,SLC13A2,SLC35A3,SLIT3,SLITRK1,SPEG,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,SYNPO2,TAS2R1,TERF2,TGFB2,TMPO,TNR,TRPC7,TRPS1,TSPAN17,TTC28,TYRP1,VAT1L,ZDHHC14 | 132 |
| Cardiovascular System Development and Function,Organismal Development | Angiogenesis | 0.00000173 | ACVRL1,AGO2,CCKBR,CDH13,CSF3,CX3CL1,CYP51A1,DAB2IP,E2F7,E2F8,ENPEP,EPHA2,ERO1A,FGF18,GAB1,GATA4,GDNF,HAS2,HEG1,HIF1A,IQGAP1,JAK2,JCAD,JUP,KDM2B,KITLG,KLF1,let-7,MAN2B1,MAP2K1,mir-129,NELL1,NKX2-3,NKX2-5,NRG2,PROS1,PSAP,PTPRZ1,RAPGEF2,RNF213,RORA,SEMA3E,SLC8A1,SLIT3,SRPK2,STAT1,STX6,TCF7L2,TFAP2B,TGFB2,TGFBR3,TIMP2,TUBB6,ZNF580 | 54 |
| Cancer,Organismal Injury and Abnormalities | Extraadrenal retroperitoneal tumor | 0.00000186 | AAK1,ABCC3,ACBD5,ACVRL1,ADGRL3,ADNP,AFAP1L2,AGBL1,AMD1,ANKS1B,ARHGAP8/PRR5-ARHGAP8,ARHGEF6,ARID1B,ARMC12,BFSP2,BRINP1,C1orf105,C6orf118,CA10,CCKBR,CDH19,CENPN,CFAP43,CHD6,CHEK2,CIITA,CSMD3,CXXC4,CYP51A1,DAB2IP,DAPK1,DISC1,DISP3,DLST,DNAH7,DNAH8,E2F7,E2F8,ENO1,ENPEP,EPHA2,EPS15L1,F8,FAM117A,GALNT17,GATA4,GNS,GRIK5,HIF1A,HNF4G,HTR3B,ICE1,IFT46,IL10RA,IQGAP1,JAK2,JCAD,KCTD15,KDM2B,KLC1,KLF1,LMX1A,MAGI2,MAP2K1,MAP3K21,MGAT4B,mir-129,MITF,MOCS2,MR1,MUC20,MYO3B,NCKAP5,NELL1,NRG2,NTM,OCSTAMP,OTOF,PARP4,PAX2,PCDH17,PCSK2,PHLPP1,PHYHD1,PKD1L2,PNPLA5,POU2AF1,PRIMA1,PTPRC,PTPRZ1,RAD21L1,RAPGEF2,RASSF8,RCC2,RIMBP2,RIT2,RNF168,RNF213,RORA,RPH3AL,SEMA3E,SI,SLC12A2,SLC12A8,SLC24A3,SLC25A29,SLC6A15,SLC6A4,SLC8A1,SLIT3,SLITRK6,SPEG,STPG2,SYT17,SYT2,TENM3,TERF2,TFAP2B,TFEC,TGFB2,TGFBR3,TIMP2,TM9SF2,TMEM132B,TMPO,TNR,TOMM20,TPTE2,TRDN,TUBB6,USP46,VPS13A,VWA3A,WNT3A,ZNF519 | 135 |
| Cancer,Neurological Disease,Organismal Injury and Abnormalities | Grade 3-4 glioma cancer | 0.00000218 | AAK1,ABCC1,ABCC3,ABCC6,ABHD16B,ACVRL1,ADCY5,ADGRL3,ADNP,AGO2,AMZ1,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,AUTS2,BANK1,BCL11A,BCL11B,BRINP1,C1orf105,C1R,C6orf118,CAMTA1,CARD10,CCDC190,CCDC33,CCKBR,CDH13,CDH15,CDH22,CEP350,CFAP43,CHD5,CHD6,CHEK2,CPN2,CRYAA/CRYAA2,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CXXC4,DAB2IP,DISP3,DLST,DNAH7,DNAH8,DPP10,E2F8,EBF1,ENPEP,EPHA2,EXD1,F8,FAM120A,FGF18,FMN1,FNDC7,FYN,GALNT13,GALNT17,GFRAL,GRHL2,GRIK5,HAS2,HEG1,HEXIM2,HIF1A,HNF4G,IBTK,ICE1,IFT46,IGSF21,IGSF9B,INMT,ITPKB,JAK2,JCAD,JUP,KBTBD12,KCNH3,KCTD15,KDM2B,KIF13A,KIF26A,KLC1,KLF1,LMX1A,LRCH1,LRRC31,LYSMD4,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MBD2,MC4R,MEDAG,MGAT4B,MROH2B,MUC13,MUC20,MYO3B,NADSYN1,NCKAP5,NOL4,NTM,NTPCR,OR13F1,OTOF,OXR1,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PDE7B,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLSCR5,PNPLA5,PRKCQ,PSAP,PTPRC,PTPRZ1,RCC2,REC114,REEP3,RGS20,RHOBTB1,RIMBP2,RNF168,RNF213,RPH3AL,SCML4,SEMA3E,SH3TC2,SI,SLC24A3,SLC25A29,SLC37A4,SLC38A8,SLC6A4,SLC8A1,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SOAT1,SPEG,SRBD1,SRPK2,ST6GALNAC2,STARD8,STAT1,STMND1,STX6,STXBP5L,SYNPO2,SYPL1,TAS2R1,TCF7L2,TENM3,TERF2,TFAP2B,TFEC,TGFB2,TIMP2,TM9SF2,TMPO,TNFSF13B,TNR,TPTE2,TRPC7,TRPS1,TSGA13,TTC28,VPS13A,VWA3A,WDR73,XCL1,XYLT1,ZNF519,ZNF583 | 194 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Organismal Injury and Abnormalities | Breast or pancreatic cancer | 0.00000264 | AAK1,ABCC1,ABCC12,ABCC3,ABHD6,ABLIM1,ACVRL1,ADGRL3,ADNP,AFAP1L2,AGBL1,AGO2,AMD1,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC12,ARMC3,ATP5PF,BANK1,BCL11B,BFSP2,BICD2,BRINP1,C6orf118,CA10,CAMTA1,CBLN4,CCDC33,CCKBR,CCSER1,CDH19,CENPN,CFAP43,CHD5,CHD6,CHEK2,CIITA,CSF3,CSMD3,CTNND2,CXXC4,CYP51A1,DAPK1,DISC1,DISP3,DNAH7,DNAH8,E2F7,E2F8,EIF1,ENO1,ENPEP,EPHA2,EPS15L1,ERO1A,ETNK1,F8,FAM117A,FGF18,FUCA2,FYN,GALNT17,GATA4,GLO1,GNS,GRHL2,GRIK5,HAS2,HIF1A,HTR3B,ICE1,IFT46,IGSF21,IQGAP1,ITPKB,JAK2,JCAD,KCTD15,KDM2B,KLC1,KLF1,let-7,LMX1A,LRCH1,LRRC31,LY86,MAG,MAGI2,MAP2K1,MAP3K21,MGAT4B,mir-129,MITF,MOCS2,MUC13,MUC20,MYO3B,NCKAP5,NELL1,NTM,OTOF,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PCSK2,PHYHD1,PI16,PIK3R4,PKD1L2,PLPPR1,PNPLA5,POU2AF1,PRIMA1,PRKCQ,PRSS54,PTPRZ1,RAD21L1,RAPGEF2,RASSF8,RGS20,RIMBP2,RNF144B,RNF213,RORA,RPH3AL,SEMA3E,SI,SLC12A8,SLC25A29,SLC6A15,SLC6A4,SLC8A1,SLIT3,SLITRK1,SLITRK6,SMC1B,SPEG,SRPK2,STAG3,STARD8,STAT1,STXBP5L,SYNPO2,SYT17,SYT2,SYT6,TAP1,TCF7L2,TENM3,TERF2,TFAP2B,TFEC,TGFB2,TGFBR3,TIMP2,TM9SF2,TMEM132B,TMPO,TNR,TPTE2,TRDN,TRPC7,TRPS1,TUBB6,TYRP1,USP46,VPS13A,VWA3A,VWA3B,WNT3A,ZDHHC14,ZNF143,ZNF276 | 181 |
| Gastrointestinal Disease,Hepatic System Disease,Organismal Injury and Abnormalities | Liver lesion | 0.00000345 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD16B,ABHD6,ACVRL1,ADAT1,ADCY5,ADGRL3,ADNP,AGBL1,AGO2,ALKAL2,ANKS1B,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARID1B,ATP5PF,AUTS2,BANK1,BCL11A,BRINP1,C1R,C6orf118,CAMTA1,CBLB,CCDC33,CCSER1,CDH13,CDH15,CDH19,CEP350,CHD5,CHD6,CHEK2,CPN2,CSMD3,CTNND2,CX3CL1,CYB561,CYP51A1,DAB2IP,DBX2,DISC1,DISP3,DNAH7,DNAH8,DPP10,E2F7,E2F8,ECD,ENO1,EPHA2,EPS15L1,F8,FAM120A,FAM83D,FMN1,GALNT13,GALNT17,GFRAL,GJB5,GRHL2,GRIK5,HEG1,HIF1A,HNF4G,IBTK,ICE1,IGSF9B,IQCF6,IQGAP1,ITPKB,JAK2,JCAD,JUP,KBTBD12,KIF26A,KLF13,let-7,LRCH1,LRRC31,LSAMP,MAGI2,MAP2K1,MAP3K21,MBD2,MC4R,MDFIC,METTL11B,MIDN,MTSS1,MYO3B,NCKAP5,NOL4,NRG2,NSMCE2,OCSTAMP,OR13F1,OTOF,OXR1,PABPC4,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PCDH17,PDE7B,PELI2,PEX26,PHLPP1,PHYHD1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PRKCQ,PROS1,PSAP,PTPRC,PTPRZ1,RAB3C,RAPGEF2,RBM20,RCC2,REC114,RIMBP2,RIT2,RNF144B,RNF168,RNF213,RNF6,RORA,SEMA3E,SH3TC2,SI,SLC13A1,SLC37A4,SLC6A4,SLIT3,SLITRK1,SLITRK6,SMC1B,SOAT1,SPEG,SRBD1,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STXBP5L,SYNPO2,SYT4,SYT6,TCEAL3,TCF7L2,TENM3,TERF2,TFAP2B,TFEC,TGFB2,TIMP2,TMBIM6,TMCC3,TMEM132B,TMEM98,TMPO,TNR,TPTE2,TRAM1L1,TRDN,TRPC7,TRPS1,TSPAN17,TSPAN7,TTC28,TYRP1,USP46,VPS13A,VWA3B,WNT3A,XCL1,XYLT1,ZNF143,ZNF519 | 193 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Neurological Disease,Organismal Injury and Abnormalities | Astrocytoma | 0.00000352 | AAK1,ABCC1,ABCC3,ABCC6,ABHD16B,ACVRL1,ADCY5,ADGRL3,ADNP,AGO2,AMZ1,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC3,ARPP21,AUTS2,BCL11A,BCL11B,BRINP1,C1orf105,C1R,C6orf118,CAMTA1,CCDC33,CCKBR,CDH13,CDH15,CDH22,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CRYAA/CRYAA2,CSF3,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CXXC4,DAB2IP,DISP3,DLST,DNAH7,DNAH8,DPP10,EBF1,ENPEP,EPHA2,EXD1,F8,FAM120A,FGF18,FMN1,FNDC7,FYN,GALNT13,GALNT17,GATA4,GFRAL,GRIK5,HAS2,HEG1,HEXIM2,HIF1A,HNF4G,IBTK,ICE1,IGSF21,INMT,ITPKB,JCAD,JUP,KBTBD12,KCNH3,KCTD15,KDM2B,KIF13A,KIF26A,KLC1,KLF1,LMX1A,LRCH1,LRRC31,LYSMD4,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MBD2,MC4R,MEDAG,mir-129,MROH2B,MUC13,MUC20,MYO3B,NADSYN1,NCKAP5,NOL4,NTM,NTPCR,OR13F1,OTOF,PAK5,PARD3,PARP4,PDE7B,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLSCR5,PRKCQ,PSAP,PTPRC,PTPRZ1,RAPGEF2,RCC2,REC114,REEP3,RGS20,RHOBTB1,RIMBP2,RNF168,RNF213,RPH3AL,SCML4,SEMA3E,SH3TC2,SI,SLC12A2,SLC22A5,SLC24A3,SLC25A29,SLC37A4,SLC38A8,SLC6A4,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SOAT1,SPEG,SRBD1,ST6GALNAC2,STARD8,STAT1,STMND1,STX6,STXBP5L,SYNPO2,SYPL1,TAS2R1,TCF7L2,TENM3,TERF2,TFAP2B,TGFB2,TM9SF2,TMPO,TNFSF13B,TNR,TPTE2,TRPC7,TRPS1,TSGA13,TTC28,VWA3A,WDR73,XYLT1,ZNF519,ZNF583 | 181 |
| Cancer,Organismal Injury and Abnormalities | Malignant neoplasm of retroperitoneum | 0.00000365 | AAK1,ADGRL3,ADNP,AFAP1L2,AGBL1,AMD1,ANKS1B,ARHGAP8/PRR5-ARHGAP8,ARHGEF6,ARID1B,ARMC12,BFSP2,BRINP1,C1orf105,C6orf118,CA10,CCKBR,CDH19,CENPN,CFAP43,CHD6,CHEK2,CIITA,CSMD3,CXXC4,CYP51A1,DAB2IP,DAPK1,DISC1,DISP3,DLST,DNAH7,DNAH8,E2F7,E2F8,ENO1,ENPEP,EPHA2,EPS15L1,F8,FAM117A,GALNT17,GATA4,GNS,GRIK5,HIF1A,HTR3B,ICE1,IFT46,IL10RA,IQGAP1,JAK2,JCAD,KCTD15,KDM2B,KLC1,KLF1,LMX1A,MAGI2,MAP2K1,MAP3K21,MGAT4B,mir-129,MITF,MOCS2,MR1,MUC20,MYO3B,NCKAP5,NELL1,NTM,OCSTAMP,OTOF,PARP4,PAX2,PCDH17,PCSK2,PHLPP1,PHYHD1,PKD1L2,PNPLA5,POU2AF1,PRIMA1,PTPRZ1,RAD21L1,RAPGEF2,RASSF8,RCC2,RIMBP2,RNF168,RNF213,RORA,RPH3AL,SEMA3E,SLC12A2,SLC12A8,SLC25A29,SLC6A15,SLC6A4,SLC8A1,SLIT3,SLITRK6,SPEG,SYT17,SYT2,TENM3,TERF2,TFAP2B,TFEC,TGFB2,TGFBR3,TIMP2,TM9SF2,TMEM132B,TMPO,TNR,TPTE2,TRDN,TUBB6,USP46,VPS13A,VWA3A,WNT3A,ZNF519 | 124 |
| Gene Expression | Expression of RNA | 0.00000384 | ABLIM1,ACVRL1,ADNP,AFAP1L2,AGO2,ARHGEF28,ARID1B,AUTS2,BANK1,BCL11A,BCL11B,CAMTA1,CDH13,CHD5,CHEK2,CIITA,CRH,CRYAA/CRYAA2,CSF3,CX3CL1,DAB2IP,DAPK1,DISC1,DMRT2,E2F7,E2F8,EBF1,ECD,EIF1,EIF4EBP2,ENO1,FYN,GATA4,GDNF,GLO1,GRHL2,HEXIM2,HIF1A,HINT1,HNF4G,IBTK,IQGAP1,IRX6,JAK2,JUP,KDM2B,KLF1,KLF13,let-7,LMX1A,LOC257642,MAF,MAGI2,MAP2K1,MBD2,MC4R,MDFIC,mir-129,MITF,MRPL23,MYOD1,NELL1,NKX2-3,NKX2-5,PABPC4,PAX2,PAX5,POU2AF1,PRKCQ,PTPRC,PTPRZ1,RBMS3,RIT2,RNF6,RORA,SLC13A1,SLC24A3,SLC6A4,SLC8A1,SLIT3,SRPK2,STAT1,TCF7L2,TERF2,TFAP2B,TFEC,TGFB2,TGFBR3,TMPO,TRPS1,VRK1,WNT3A,WNT8B,XCL1,ZNF143,ZNF580 | 96 |
| Cell Signaling | MAPKKK cascade | 0.00000426 | BANK1,CX3CL1,DAB2IP,FGF18,FYN,GAB1,GDNF,GFRAL,IQGAP1,ITPKB,JAK2,JCAD,KITLG,MAP2K1,NRG2,PELI2,PHLPP1,PSAP,PTPRC,RAPGEF2,RIT2,TIMP2 | 22 |
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Gastric adenocarcinoma | 0.00000461 | ABCC1,ADCY5,ADNP,AFAP1L2,AGBL1,AKAP7,ARID1B,ARMC3,AUTS2,BANK1,BCL11A,BCL11B,BRINP1,CAMTA1,CBLB,CCKBR,CHD6,CIITA,CMIP,CSMD3,CSNK1G3,CTNND2,DISC1,DISP3,DNAH7,DNAH8,E2F7,E2F8,ENPEP,EPHA2,F8,FAM83D,GALNT17,HAS2,IGSF21,IGSF9B,IRX6,ITPKB,JAK2,JCAD,KCNH3,KDM2B,KIF26A,LMX1A,LRRN3,MAGI2,MAN2B1,MAP2K1,MC4R,MROH2B,MTSS1,NADSYN1,NCKAP5,OTOF,PAK5,PCDH17,PCSK2,PHLPP1,PHYHD1,PI16,PLCE1,PNPLA5,PTPRC,PTPRZ1,RGS20,RIMBP2,SEMA3E,SI,SLC12A2,SLC13A2,SLC35A3,SLC6A4,SLC8A1,SLITRK1,SLITRK6,SPEG,STAG3,STXBP5L,SYCP3,TCF7L2,TENM3,TFAP2B,TGFBR3,TPTE2,TRAM1L1,TRPS1,VWA3A,ZDHHC14,ZNF276 | 89 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Organismal Injury and Abnormalities | Ductal carcinoma | 0.00000468 | AAK1,ACVRL1,ADGRL3,AFAP1L2,AMD1,ANKS1B,ARHGAP8/PRR5-ARHGAP8,ARHGEF6,ARID1B,ARMC12,BANK1,BICD2,C6orf118,CA10,CCSER1,CDH19,CENPN,CFAP43,CHD6,CHEK2,CIITA,CSMD3,CXXC4,CYP51A1,DAPK1,DISC1,DISP3,DLST,DNAH7,DNAH8,EBF1,ECD,EPHA2,EPS15L1,F8,FAM117A,FGF18,FYN,GALNT17,GATA4,GNS,GRIK5,HIF1A,HNF4G,IBTK,ICE1,IFT46,IGSF9B,IQGAP1,ITPKB,JAK2,JCAD,KCNH3,KDM2B,KIF13A,KLF1,let-7,LMX1A,MAGI2,MAP2K1,MAP3K21,mir-129,MITF,MOCS2,MSH5,MUC20,MYO3B,NCKAP5,NELL1,NOL4,NTM,OTOF,PAK5,PAPOLA,PARD3,PARP4,PCSK2,PIK3R4,PNPLA5,POU2AF1,PRIMA1,PTPRC,RAPGEF2,RASSF8,RIMBP2,RIT2,RNF213,RORA,SEMA3E,SLC12A8,SLC25A29,SLC6A15,SLC8A1,SLIT3,SLITRK6,SPEG,STAT1,STXBP5L,SYT17,SYT2,SYT6,TCF7L2,TENM3,TERF2,TFAP2B,TFEC,TGFB2,TM9SF2,TMEM132B,TMPO,TNR,TPTE2,TRDN,USP46,VWA3A,VWA3B,WNT3A | 117 |
| Cancer,Organismal Injury and Abnormalities | Extrapulmonary squamous cell carcinoma | 0.0000051 | ABCC1,ABCC3,ABHD6,ACVRL1,ADCY5,ADGRL3,AGBL1,AGO2,AKAP7,AMD1,ANKS1B,ARHGAP31,ARMC3,ARPP21,AUTS2,BCL11A,BCL11B,BICD2,BRINP1,BTBD9,C6orf118,CAMTA1,CCDC61,CCSER1,CDH13,CDH19,CEP350,CHD5,CHD6,CHEK2,CIITA,CPN2,CSMD3,CTNND2,CXXC4,CYB561,DBX2,DISP3,DNAH7,DNAH8,DPP10,E2F7,EBF1,EIF4EBP2,ENPEP,EPHA2,FAM120A,FGF18,FYN,GALNT13,GRIK5,HAS2,HEG1,HNF4G,HNRNPR,IGSF21,IRX6,JAK2,JCAD,JUP,KCTD15,KDM2B,KIF26A,let-7,LRRN3,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MC4R,MEPE,mir-129,MROH2B,MTSS1,MUC13,MYO3B,NADSYN1,NELL1,NRG2,OR6S1,OTOF,PAK5,PAPOLA,PAQR8,PARP4,PCDH17,PELI2,PEX26,PHYHD1,PKD1L2,PLCE1,PRKCQ,PSAP,PTPRC,PTPRZ1,RAPGEF2,RHOBTB1,RIMBP2,RIT2,RNF213,RNF6,SCML4,SH3TC2,SI,SLC12A2,SLC22A5,SLC25A29,SLIT3,SLITRK1,SOAT1,SPEG,STAG3,STARD8,STAT1,STXBP5L,SYT17,TFEC,TMEM132B,TMPO,TNR,TRDN,TRPC7,TRPS1,TTC28,VAT1L,VPS13A,VWA3B,ZDHHC14,ZNF276 | 131 |
| Cancer,Dermatological Diseases and Conditions,Organismal Injury and Abnormalities | Skin squamous cell carcinoma | 0.00000513 | ABCC3,ACVRL1,ADCY5,ANKS1B,ARMC3,BRINP1,C6orf118,CCSER1,CDH19,CPN2,CSMD3,CTNND2,DBX2,DISP3,DNAH7,DNAH8,DPP10,FYN,GALNT13,GRIK5,HNF4G,IGSF21,IRX6,JCAD,MAG,MAGI2,MC4R,MEPE,MROH2B,NELL1,OR6S1,OTOF,PAK5,PEX26,PLCE1,RHOBTB1,RNF213,SI,STXBP5L,TMEM132B,TNR,TRDN,TRPC7 | 43 |
| Cancer,Gastrointestinal Disease,Hepatic System Disease,Organismal Injury and Abnormalities | Liver tumor | 0.00000513 | AAK1,ABCC1,ABCC12,ABCC3,ABCC6,ABHD16B,ACVRL1,ADAT1,ADCY5,ADGRL3,ADNP,AGBL1,AGO2,ALKAL2,ANKS1B,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARID1B,ATP5PF,AUTS2,BANK1,BCL11A,BRINP1,C1R,C6orf118,CAMTA1,CBLB,CCDC33,CCSER1,CDH13,CDH15,CDH19,CEP350,CHD5,CHD6,CHEK2,CPN2,CSMD3,CTNND2,CX3CL1,CYB561,CYP51A1,DAB2IP,DBX2,DISC1,DISP3,DNAH7,DNAH8,DPP10,E2F7,E2F8,ECD,ENO1,EPHA2,EPS15L1,F8,FAM120A,FAM83D,FMN1,GALNT13,GALNT17,GFRAL,GJB5,GRHL2,GRIK5,HEG1,HIF1A,HNF4G,IBTK,ICE1,IGSF9B,IQCF6,IQGAP1,ITPKB,JAK2,JCAD,JUP,KBTBD12,KIF26A,KLF13,let-7,LRCH1,LRRC31,LSAMP,MAGI2,MAP3K21,MBD2,MC4R,MDFIC,METTL11B,MIDN,MTSS1,MYO3B,NCKAP5,NOL4,NRG2,NSMCE2,OCSTAMP,OR13F1,OTOF,OXR1,PABPC4,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PCDH17,PELI2,PEX26,PHLPP1,PHYHD1,PI16,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLPPR1,PRKCQ,PSAP,PTPRC,PTPRZ1,RAB3C,RAPGEF2,RBM20,RCC2,REC114,RIMBP2,RIT2,RNF144B,RNF168,RNF213,RNF6,RORA,SEMA3E,SH3TC2,SI,SLC13A1,SLC37A4,SLC6A4,SLIT3,SLITRK1,SLITRK6,SMC1B,SPEG,SRBD1,ST6GALNAC2,STAG3,STARD8,STAT1,STPG2,STXBP5L,SYNPO2,SYT4,SYT6,TCEAL3,TCF7L2,TENM3,TERF2,TFAP2B,TFEC,TGFB2,TIMP2,TMBIM6,TMCC3,TMEM132B,TMEM98,TMPO,TNR,TPTE2,TRAM1L1,TRDN,TRPC7,TRPS1,TSPAN17,TSPAN7,TTC28,TYRP1,USP46,VPS13A,VWA3B,XYLT1,ZNF143,ZNF519 | 186 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Neurological Disease,Organismal Injury and Abnormalities | Grade 4 high grade glioma | 0.0000057 | AAK1,ABCC1,ABCC3,ABCC6,ABHD16B,ACVRL1,ADCY5,ADGRL3,ADNP,AGO2,AMZ1,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC3,ARPP21,AUTS2,BCL11A,BCL11B,BRINP1,C1orf105,C1R,C6orf118,CAMTA1,CCDC33,CCKBR,CDH13,CDH15,CDH22,CEP350,CFAP43,CHD5,CHD6,CHEK2,CRYAA/CRYAA2,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CXXC4,DAB2IP,DISP3,DLST,DNAH7,DNAH8,DPP10,EBF1,ENPEP,EPHA2,EXD1,F8,FAM120A,FGF18,FMN1,FNDC7,FYN,GALNT13,GALNT17,GFRAL,GRIK5,HAS2,HEG1,HEXIM2,HIF1A,HNF4G,IBTK,ICE1,IGSF21,INMT,ITPKB,JCAD,JUP,KBTBD12,KCNH3,KCTD15,KDM2B,KIF13A,KIF26A,KLC1,KLF1,LMX1A,LRCH1,LRRC31,LYSMD4,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MBD2,MC4R,MEDAG,MROH2B,MUC13,MUC20,MYO3B,NADSYN1,NCKAP5,NOL4,NTM,NTPCR,OR13F1,OTOF,PAK5,PARD3,PARP4,PDE7B,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLSCR5,PRKCQ,PSAP,PTPRC,PTPRZ1,RCC2,REC114,REEP3,RGS20,RHOBTB1,RIMBP2,RNF168,RNF213,RPH3AL,SCML4,SEMA3E,SH3TC2,SI,SLC24A3,SLC25A29,SLC37A4,SLC38A8,SLC6A4,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SOAT1,SPEG,SRBD1,ST6GALNAC2,STARD8,STAT1,STMND1,STX6,STXBP5L,SYNPO2,SYPL1,TAS2R1,TCF7L2,TENM3,TERF2,TFAP2B,TGFB2,TM9SF2,TMPO,TNFSF13B,TNR,TPTE2,TRPC7,TRPS1,TSGA13,TTC28,VWA3A,WDR73,XYLT1,ZNF519,ZNF583 | 173 |
| Cancer,Neurological Disease,Organismal Injury and Abnormalities | Grade 4 malignant glioma | 0.0000057 | AAK1,ABCC1,ABCC3,ABCC6,ABHD16B,ACVRL1,ADCY5,ADGRL3,ADNP,AGO2,AMZ1,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC3,ARPP21,AUTS2,BCL11A,BCL11B,BRINP1,C1orf105,C1R,C6orf118,CAMTA1,CCDC33,CCKBR,CDH13,CDH15,CDH22,CEP350,CFAP43,CHD5,CHD6,CHEK2,CRYAA/CRYAA2,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CXXC4,DAB2IP,DISP3,DLST,DNAH7,DNAH8,DPP10,EBF1,ENPEP,EPHA2,EXD1,F8,FAM120A,FGF18,FMN1,FNDC7,FYN,GALNT13,GALNT17,GFRAL,GRIK5,HAS2,HEG1,HEXIM2,HIF1A,HNF4G,IBTK,ICE1,IGSF21,INMT,ITPKB,JCAD,JUP,KBTBD12,KCNH3,KCTD15,KDM2B,KIF13A,KIF26A,KLC1,KLF1,LMX1A,LRCH1,LRRC31,LYSMD4,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MBD2,MC4R,MEDAG,MROH2B,MUC13,MUC20,MYO3B,NADSYN1,NCKAP5,NOL4,NTM,NTPCR,OR13F1,OTOF,PAK5,PARD3,PARP4,PDE7B,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLSCR5,PRKCQ,PSAP,PTPRC,PTPRZ1,RCC2,REC114,REEP3,RGS20,RHOBTB1,RIMBP2,RNF168,RNF213,RPH3AL,SCML4,SEMA3E,SH3TC2,SI,SLC24A3,SLC25A29,SLC37A4,SLC38A8,SLC6A4,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SOAT1,SPEG,SRBD1,ST6GALNAC2,STARD8,STAT1,STMND1,STX6,STXBP5L,SYNPO2,SYPL1,TAS2R1,TCF7L2,TENM3,TERF2,TFAP2B,TGFB2,TM9SF2,TMPO,TNFSF13B,TNR,TPTE2,TRPC7,TRPS1,TSGA13,TTC28,VWA3A,WDR73,XYLT1,ZNF519,ZNF583 | 173 |
| Cancer,Neurological Disease,Organismal Injury and Abnormalities | Grade 4 astrocytoma | 0.0000057 | AAK1,ABCC1,ABCC3,ABCC6,ABHD16B,ACVRL1,ADCY5,ADGRL3,ADNP,AGO2,AMZ1,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC3,ARPP21,AUTS2,BCL11A,BCL11B,BRINP1,C1orf105,C1R,C6orf118,CAMTA1,CCDC33,CCKBR,CDH13,CDH15,CDH22,CEP350,CFAP43,CHD5,CHD6,CHEK2,CRYAA/CRYAA2,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CXXC4,DAB2IP,DISP3,DLST,DNAH7,DNAH8,DPP10,EBF1,ENPEP,EPHA2,EXD1,F8,FAM120A,FGF18,FMN1,FNDC7,FYN,GALNT13,GALNT17,GFRAL,GRIK5,HAS2,HEG1,HEXIM2,HIF1A,HNF4G,IBTK,ICE1,IGSF21,INMT,ITPKB,JCAD,JUP,KBTBD12,KCNH3,KCTD15,KDM2B,KIF13A,KIF26A,KLC1,KLF1,LMX1A,LRCH1,LRRC31,LYSMD4,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MBD2,MC4R,MEDAG,MROH2B,MUC13,MUC20,MYO3B,NADSYN1,NCKAP5,NOL4,NTM,NTPCR,OR13F1,OTOF,PAK5,PARD3,PARP4,PDE7B,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLSCR5,PRKCQ,PSAP,PTPRC,PTPRZ1,RCC2,REC114,REEP3,RGS20,RHOBTB1,RIMBP2,RNF168,RNF213,RPH3AL,SCML4,SEMA3E,SH3TC2,SI,SLC24A3,SLC25A29,SLC37A4,SLC38A8,SLC6A4,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SOAT1,SPEG,SRBD1,ST6GALNAC2,STARD8,STAT1,STMND1,STX6,STXBP5L,SYNPO2,SYPL1,TAS2R1,TCF7L2,TENM3,TERF2,TFAP2B,TGFB2,TM9SF2,TMPO,TNFSF13B,TNR,TPTE2,TRPC7,TRPS1,TSGA13,TTC28,VWA3A,WDR73,XYLT1,ZNF519,ZNF583 | 173 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Dermatological Diseases and Conditions,Organismal Injury and Abnormalities | Skin carcinoma | 0.00000594 | ABCC3,ACVRL1,ADCY5,ANKS1B,ARMC3,B3GLCT,BCL11B,BRINP1,C6orf118,CCSER1,CDH19,CHD6,CPN2,CSMD3,CTNND2,DBX2,DISC1,DISP3,DNAH7,DNAH8,DPP10,FYN,GALNT13,GRHL2,GRIK5,HNF4G,IBTK,IGSF21,IRX6,JCAD,MAG,MAGI2,MC4R,MEPE,MROH2B,MUC13,MUC20,NELL1,NKX2-5,NOL4,OR6S1,OTOF,OXR1,PAK5,PEX26,PI16,PKD1L2,PLCE1,RHOBTB1,RNF213,SI,SPEG,STAT1,STXBP5L,TMEM132B,TNR,TRDN,TRPC7,TYRP1,VWA3B,XYLT1 | 61 |
| Cancer,Neurological Disease,Organismal Injury and Abnormalities | High grade astrocytoma | 0.00000595 | AAK1,ABCC1,ABCC3,ABCC6,ABHD16B,ACVRL1,ADCY5,ADGRL3,ADNP,AGO2,AMZ1,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC3,ARPP21,AUTS2,BCL11A,BCL11B,BRINP1,C1orf105,C1R,C6orf118,CAMTA1,CCDC33,CCKBR,CDH13,CDH15,CDH22,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CRYAA/CRYAA2,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CXXC4,DAB2IP,DISP3,DLST,DNAH7,DNAH8,DPP10,EBF1,ENPEP,EPHA2,EXD1,F8,FAM120A,FGF18,FMN1,FNDC7,FYN,GALNT13,GALNT17,GFRAL,GRIK5,HAS2,HEG1,HEXIM2,HIF1A,HNF4G,IBTK,ICE1,IGSF21,INMT,ITPKB,JCAD,JUP,KBTBD12,KCNH3,KCTD15,KDM2B,KIF13A,KIF26A,KLC1,KLF1,LMX1A,LRCH1,LRRC31,LYSMD4,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MBD2,MC4R,MEDAG,mir-129,MROH2B,MUC13,MUC20,MYO3B,NADSYN1,NCKAP5,NOL4,NTM,NTPCR,OR13F1,OTOF,PAK5,PARD3,PARP4,PDE7B,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLSCR5,PRKCQ,PSAP,PTPRC,PTPRZ1,RAPGEF2,RCC2,REC114,REEP3,RGS20,RHOBTB1,RIMBP2,RNF168,RNF213,RPH3AL,SCML4,SEMA3E,SH3TC2,SI,SLC12A2,SLC22A5,SLC24A3,SLC25A29,SLC37A4,SLC38A8,SLC6A4,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SOAT1,SPEG,SRBD1,ST6GALNAC2,STARD8,STAT1,STMND1,STX6,STXBP5L,SYNPO2,SYPL1,TAS2R1,TCF7L2,TENM3,TERF2,TFAP2B,TGFB2,TM9SF2,TMPO,TNFSF13B,TNR,TPTE2,TRPC7,TRPS1,TSGA13,TTC28,VWA3A,WDR73,XYLT1,ZNF519,ZNF583 | 179 |
| Cancer,Neurological Disease,Organismal Injury and Abnormalities | Brain astrocytoma | 0.00000645 | AAK1,ABCC1,ABCC3,ABCC6,ABHD16B,ACVRL1,ADCY5,ADGRL3,ADNP,AGO2,AMZ1,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,ARMC3,ARPP21,AUTS2,BCL11A,BCL11B,BRINP1,C1orf105,C1R,C6orf118,CAMTA1,CCDC33,CCKBR,CDH13,CDH15,CDH22,CEP350,CFAP43,CHD5,CHD6,CHEK2,CRYAA/CRYAA2,CSMD3,CSNK1G2,CSNK1G3,CTNND2,CXXC4,DAB2IP,DISP3,DLST,DNAH7,DNAH8,DPP10,EBF1,ENPEP,EPHA2,EXD1,F8,FAM120A,FGF18,FMN1,FNDC7,FYN,GALNT13,GALNT17,GFRAL,GRIK5,HAS2,HEG1,HEXIM2,HIF1A,HNF4G,IBTK,ICE1,IGSF21,INMT,ITPKB,JCAD,JUP,KBTBD12,KCNH3,KCTD15,KDM2B,KIF13A,KIF26A,KLC1,KLF1,LMX1A,LRCH1,LRRC31,LYSMD4,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MBD2,MC4R,MEDAG,MROH2B,MUC13,MUC20,MYO3B,NADSYN1,NCKAP5,NOL4,NTM,NTPCR,OR13F1,OTOF,PAK5,PARD3,PARP4,PDE7B,PIK3AP1,PIK3R4,PKD1L2,PLCE1,PLSCR5,PRKCQ,PSAP,PTPRC,PTPRZ1,RCC2,REC114,REEP3,RGS20,RHOBTB1,RIMBP2,RNF168,RNF213,RPH3AL,SCML4,SEMA3E,SH3TC2,SI,SLC24A3,SLC25A29,SLC37A4,SLC38A8,SLC6A4,SLCO4C1,SLIT3,SLITRK1,SLITRK6,SOAT1,SPEG,SRBD1,ST6GALNAC2,STARD8,STAT1,STMND1,STX6,STXBP5L,SYNPO2,SYPL1,TAS2R1,TCF7L2,TENM3,TERF2,TFAP2B,TGFB2,TM9SF2,TMPO,TNFSF13B,TNR,TPTE2,TRPC7,TRPS1,TSGA13,TTC28,VWA3A,WDR73,XYLT1,ZNF519,ZNF583 | 173 |
| Cardiovascular System Development and Function | Development of vasculature | 0.00000732 | ABCC6,ACVRL1,AGO2,CCKBR,CDH13,CSF3,CX3CL1,CYP51A1,DAB2IP,E2F7,E2F8,ENPEP,EPHA2,ERO1A,FGF18,GAB1,GATA4,GDNF,HAS2,HEG1,HIF1A,IQGAP1,JAK2,JCAD,JUP,KDM2B,KITLG,KLF1,let-7,MAN2B1,MAP2K1,mir-129,NELL1,NKX2-3,NKX2-5,NRG2,PROS1,PSAP,PTPRZ1,RAPGEF2,RNF213,RORA,SEMA3E,SLC6A4,SLC8A1,SLIT3,SRPK2,STAT1,STX6,TCF7L2,TFAP2B,TGFB2,TGFBR3,TIMP2,TUBB6,ZNF580 | 56 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Organismal Injury and Abnormalities | Lymphohematopoietic neoplasia | 0.00000747 | ABCC1,ABCC3,ABLIM1,ACVRL1,ADCY5,AFAP1L2,AGBL1,ANKRD22,ANKS1B,ARHGEF28,ARID1B,ARPP21,B3GLCT,BCL11A,BCL11B,BRINP1,C1orf105,C1R,C6orf118,CAMTA1,CBLB,CCKBR,CCSER1,CEP350,CHD5,CHD6,CHEK2,CIITA,CMIP,CSF3,CSMD3,CSNK1G2,CTNND2,CYB561,CYP51A1,DAB2IP,DAPK1,DNAH7,DNAH8,E2F7,EBF1,ENO1,ENPEP,EPHA2,ETNK1,F8,FAM117A,FAM120A,FAM167B,FMN1,FYN,GATA4,GDNF,GJB5,HIF1A,HNF4G,IQGAP1,ITPKB,JAK2,KCNK5,KCTD15,KDM2B,KIF26A,KITLG,KLC1,let-7,LRRN3,MAF,MAGI2,MAP2K1,MAP3K21,MAP7,MIDN,mir-129,MR1,MUC20,MYO3B,MYOD1,NELL1,NHLRC3,NKX2-3,NKX2-5,NRG2,OPN4,OTOF,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PKD1L2,PLCE1,POU2AF1,PRKCQ,PTPRC,PTPRZ1,RHOBTB1,RNF213,RORA,RPL3,RPLP1,SEMA3E,SI,SLC13A2,SLC22A5,SLC6A15,SLC6A4,SLC8A1,SLIT3,SPEG,SRPK2,STAG3,STAT1,STXBP6,SYNPO2,TCEAL3,TCF7L2,TENM3,TGFB2,TIMP2,TNFSF13B,TNR,TRAM1L1,TSPAN7,TTC28,TUBB6,TYRP1,VWA3A,VWA3B,WNT3A,ZNF276 | 133 |
| Cancer,Organismal Injury and Abnormalities | Head and neck squamous cell carcinoma | 0.00000761 | ABCC1,ABCC3,ADCY5,AGBL1,AGO2,AKAP7,AMD1,ANKS1B,ARHGAP31,ARPP21,AUTS2,BCL11A,BCL11B,BICD2,BRINP1,BTBD9,C6orf118,CAMTA1,CCDC61,CCSER1,CDH13,CDH19,CEP350,CHD5,CHD6,CHEK2,CSMD3,CTNND2,CXXC4,CYB561,DNAH7,DPP10,E2F7,EBF1,EIF4EBP2,ENPEP,EPHA2,FAM120A,FGF18,GALNT13,GRIK5,HAS2,HEG1,HNRNPR,JAK2,JCAD,KCTD15,KDM2B,KIF26A,let-7,LRRN3,MAG,MAGI2,MAP2K1,MAP3K21,MAP7,MEPE,MROH2B,MTSS1,MUC13,MYO3B,NADSYN1,NELL1,NRG2,OTOF,PAK5,PAPOLA,PAQR8,PARP4,PCDH17,PELI2,PHYHD1,PKD1L2,PRKCQ,PSAP,PTPRC,PTPRZ1,RAPGEF2,RIMBP2,RIT2,SCML4,SH3TC2,SI,SLC12A2,SLC22A5,SLC25A29,SLIT3,SLITRK1,SOAT1,SPEG,STAG3,STARD8,STAT1,STXBP5L,SYT17,TFEC,TMEM132B,TMPO,TNR,TRPC7,TRPS1,TTC28,VAT1L,VPS13A,VWA3B,ZDHHC14,ZNF276 | 107 |
| Cancer,Organismal Injury and Abnormalities | Blue round small cell tumor | 0.00000792 | ABCC1,ABCC12,ABCC3,ADCY5,ADGRL3,AFAP1L2,ANKS1B,ARHGAP8/PRR5-ARHGAP8,ARID1B,ARMC12,BCL11A,BRINP1,C1orf105,C6orf118,CBLB,CCKBR,CCSER1,CDH19,CDH22,CEP350,CFAP43,CHD6,CHEK2,CSMD3,CTNND2,CYP51A1,DAPK1,DISP3,DNAH8,DPP10,ENPEP,EPS15L1,F8,FMN1,GALNT13,GALNT17,GDNF,GRIK5,HNF4G,HTR3B,ICE1,IL20RA,IQGAP1,IRX6,JAK2,KCNH3,KIF13A,LSAMP,MAG,MAN2B1,MAP2K1,MAP3K21,MBD2,MCOLN1,MROH2B,MYO3B,MYOD1,NCKAP5,NELL1,NOL4,NRG2,OR6S1,OTOF,PAK5,PARP4,PCDH17,PCSK2,PGBD5,PHYHD1,PIK3AP1,PKD1L2,PLCE1,PRKCQ,PROS1,PTPRC,RBM20,REEP3,RORA,SH3TC2,SI,SLC12A2,SLC24A3,SLC8A1,SLIT3,SLITRK1,SOAT1,STARD8,STXBP5L,SYT6,TAS2R1,TENM3,TERF2,TFAP2B,TNFSF13B,TNR,TRPS1,VAT1L,VPS13A,VRK1,XYLT1,ZDHHC14 | 101 |
| Cellular Growth and Proliferation | Outgrowth of cells | 0.00000802 | ABCC1,ADNP,ARID1B,BICD2,CSF3,DAB2IP,DISC1,EPHA2,FGF18,GAB1,GDNF,IQGAP1,JAK2,KIF26A,KITLG,MAG,MAP2K1,PAK5,PAX2,PSAP,PTPRZ1,RIT2,RNF6,SLC12A2,TIMP2,TNFSF13B,WNT3A | 27 |
| Cancer,Organismal Injury and Abnormalities | Neoplasia of epithelial cells | 0.00000851 | AAK1,ABCC1,ABCC3,ABHD6,ACVRL1,ADCY5,ADGRL3,AGBL1,AGO2,AKAP7,AMD1,ANKS1B,ARHGAP31,ARMC3,ARPP21,AUTS2,BCL11A,BCL11B,BICD2,BRINP1,BTBD9,C6orf118,CAMTA1,CCDC61,CCSER1,CDH13,CDH19,CEP350,CHD5,CHD6,CHEK2,CIITA,CPN2,CSMD3,CTNND2,CXXC4,CYB561,DAPK1,DBX2,DISP3,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,EIF4EBP2,ENPEP,EPHA2,FAM120A,FGF18,FYN,GALNT13,GRIK5,HAS2,HEG1,HNF4G,HNRNPR,IBTK,IGSF21,IGSF9B,IQGAP1,IRX6,ITPKB,JAK2,JCAD,JUP,KCTD15,KDM2B,KIF26A,let-7,LRRN3,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MC4R,MEPE,MIDN,mir-129,MITF,MROH2B,MTSS1,MUC13,MUC20,MYO3B,NADSYN1,NELL1,NKX2-5,NRG2,OR6S1,OTOF,PABPC4,PAK5,PAPOLA,PAQR8,PARP4,PCDH17,PELI2,PEX26,PHYHD1,PKD1L2,PLCE1,PRKCQ,PSAP,PTPRC,PTPRZ1,RAPGEF2,RHOBTB1,RIMBP2,RIT2,RNF213,RNF6,SCML4,SH3TC2,SI,SLC12A2,SLC22A5,SLC25A29,SLIT3,SLITRK1,SOAT1,SPEG,STAG3,STARD8,STAT1,STXBP5L,SYT17,TENM3,TFEC,TMEM132B,TMPO,TNR,TPTE2,TRDN,TRPC7,TRPS1,TTC28,VAT1L,VPS13A,VWA3B,ZDHHC14,ZNF276 | 145 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Developmental Disorder,Embryonic Development,Organismal Development,Tissue Morphology | Abnormal morphology of atrioventricular canal cushion | 0.00000904 | ACVRL1,HAS2,JUP,NKX2-5,SLC8A1,TGFB2 | 6 |
| Cancer,Organismal Injury and Abnormalities | Lymphoid cancer | 0.00000907 | ABCC1,ABCC3,ABLIM1,ACVRL1,AFAP1L2,AGBL1,ARHGEF28,ARID1B,ARPP21,BCL11A,BCL11B,BRINP1,C1orf105,C1R,C6orf118,CAMTA1,CBLB,CCKBR,CCSER1,CEP350,CHD5,CHD6,CHEK2,CIITA,CMIP,CSNK1G2,CTNND2,CYB561,CYP51A1,DAB2IP,DAPK1,DNAH7,E2F7,EBF1,ENO1,ENPEP,EPHA2,FAM120A,FAM167B,FYN,HIF1A,IQGAP1,ITPKB,JAK2,KCNK5,KCTD15,KDM2B,KITLG,KLC1,let-7,LRRN3,MAF,MAGI2,MAP2K1,MIDN,MR1,MYOD1,NELL1,NHLRC3,NKX2-3,NKX2-5,NRG2,OPN4,OTOF,PARD3,PARP4,PAX2,PAX5,PCDH17,PDE7B,PKD1L2,PLCE1,POU2AF1,PRKCQ,PTPRC,PTPRZ1,RHOBTB1,RNF213,RORA,SEMA3E,SI,SLC8A1,SLIT3,SPEG,SRPK2,STAT1,STXBP6,TCEAL3,TCF7L2,TGFB2,TIMP2,TNFSF13B,TRAM1L1,TSPAN7,TTC28,TUBB6,TYRP1,VWA3A,VWA3B,WNT3A,ZNF276 | 101 |
| Cell Morphology,Nervous System Development and Function,Tissue Morphology | Morphology of neurons | 0.00000927 | ACVRL1,ARID1B,BICD2,BRINP1,CRH,CTNND2,CX3CL1,DISC1,EIF4EBP2,FYN,GDNF,IQGAP1,KIF26A,KLC1,LMX1A,MAG,MAGI2,MAN2B1,MCOLN1,OPN4,OTOF,PACSIN1,PARD3,PRKCQ,PSAP,PTPRC,RAB3B,SLC12A2,SLC6A15,SLC6A4,SLITRK6,TAP1,TIMP2,TNR,VPS13A | 35 |
| Cancer,Hematological Disease,Organismal Injury and Abnormalities | Hematopoietic neoplasm | 0.00000994 | ABCC1,ABCC3,ABLIM1,ACVRL1,ADCY5,AFAP1L2,AGBL1,ANKRD22,ANKS1B,ARHGEF28,ARID1B,ARPP21,B3GLCT,BCL11A,BCL11B,BRINP1,C1orf105,C1R,C6orf118,CAMTA1,CBLB,CCKBR,CCSER1,CEP350,CHD5,CHD6,CHEK2,CIITA,CMIP,CSF3,CSMD3,CSNK1G2,CTNND2,CYB561,CYP51A1,DAPK1,DNAH7,DNAH8,E2F7,EBF1,ENO1,ENPEP,EPHA2,ETNK1,F8,FAM117A,FAM120A,FAM167B,FMN1,FYN,GATA4,GDNF,GJB5,HIF1A,HNF4G,IQGAP1,ITPKB,JAK2,KCNK5,KCTD15,KDM2B,KIF26A,KITLG,KLC1,let-7,LRRN3,MAF,MAGI2,MAP2K1,MAP3K21,MAP7,MIDN,mir-129,MR1,MUC20,MYO3B,MYOD1,NELL1,NHLRC3,NKX2-3,NKX2-5,NRG2,OPN4,OTOF,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PKD1L2,PLCE1,POU2AF1,PRKCQ,PTPRC,PTPRZ1,RHOBTB1,RNF213,RORA,RPL3,RPLP1,SEMA3E,SI,SLC13A2,SLC22A5,SLC6A15,SLC6A4,SLC8A1,SLIT3,SPEG,SRPK2,STAG3,STAT1,STXBP6,SYNPO2,TCEAL3,TCF7L2,TENM3,TGFB2,TIMP2,TNFSF13B,TNR,TRAM1L1,TSPAN7,TTC28,TUBB6,TYRP1,VWA3A,VWA3B,WNT3A,ZNF276 | 132 |
| Cancer,Organismal Injury and Abnormalities | Lymphohematopoietic cancer | 0.0000109 | ABCC1,ABCC3,ABLIM1,ACVRL1,ADCY5,AFAP1L2,AGBL1,ANKRD22,ANKS1B,ARHGEF28,ARID1B,ARPP21,B3GLCT,BCL11A,BCL11B,BRINP1,C1orf105,C1R,C6orf118,CAMTA1,CBLB,CCKBR,CCSER1,CEP350,CHD5,CHD6,CHEK2,CIITA,CMIP,CSF3,CSMD3,CSNK1G2,CTNND2,CYB561,CYP51A1,DAB2IP,DAPK1,DNAH7,DNAH8,E2F7,EBF1,ENO1,ENPEP,EPHA2,ETNK1,FAM117A,FAM120A,FAM167B,FMN1,FYN,GATA4,GJB5,HIF1A,HNF4G,IQGAP1,ITPKB,JAK2,KCNK5,KCTD15,KDM2B,KIF26A,KITLG,KLC1,let-7,LRRN3,MAF,MAGI2,MAP2K1,MAP3K21,MAP7,MIDN,mir-129,MR1,MUC20,MYO3B,MYOD1,NELL1,NHLRC3,NKX2-3,NKX2-5,NRG2,OPN4,OTOF,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PKD1L2,PLCE1,POU2AF1,PRKCQ,PTPRC,PTPRZ1,RHOBTB1,RNF213,RORA,RPL3,RPLP1,SEMA3E,SI,SLC13A2,SLC22A5,SLC6A15,SLC6A4,SLC8A1,SLIT3,SPEG,SRPK2,STAG3,STAT1,STXBP6,SYNPO2,TCEAL3,TCF7L2,TENM3,TGFB2,TIMP2,TNFSF13B,TNR,TRAM1L1,TSPAN7,TTC28,TUBB6,TYRP1,VWA3A,VWA3B,WNT3A,ZNF276 | 131 |
| Tissue Morphology | Quantity of cells | 0.0000111 | ADNP,ARHGEF6,ARID1B,BANK1,BCL11A,BCL11B,BRINP1,CBLN4,CCKBR,CDH13,CHD5,CIITA,CRH,CSF3,CX3CL1,DISC1,EBF1,EIF4EBP2,ENO1,FGF18,FYN,GATA4,GDNF,HIF1A,HINT1,IL10RA,ITPKB,JAK2,KDM2B,KIF13A,KITLG,KLF13,let-7,LMX1A,MAF,MAP2K1,MAP7,MC4R,MEPE,MGAT4B,MITF,MR1,MSH5,MYOD1,NKX2-3,NKX2-5,NRG2,PACSIN1,PARD3,PAX5,PCDH17,PCSK2,PHLPP1,PIK3AP1,PLCE1,POU2AF1,PRKCQ,PROS1,PSAP,PTPRC,PTPRZ1,RAB3B,RAD21L1,RAPGEF2,RORA,SEMA3E,SLC12A2,SLC37A4,SLC8A1,SOAT1,ST6GALNAC2,STAT1,TAP1,TCF7L2,TGFB2,TGFBR3,TIMP2,TMPO,TNFSF13B,TNR,WNT3A,XCL1,ZNF143 | 83 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Hematological Disease,Immunological Disease,Organismal Injury and Abnormalities | Lymphocytic cancer | 0.0000112 | ABCC1,ABCC3,ABLIM1,ACVRL1,AFAP1L2,AGBL1,ARHGEF28,ARID1B,ARPP21,BCL11A,BCL11B,BRINP1,C1orf105,C1R,C6orf118,CAMTA1,CBLB,CCKBR,CCSER1,CEP350,CHD5,CHD6,CHEK2,CIITA,CMIP,CSNK1G2,CTNND2,CYB561,CYP51A1,DAPK1,DNAH7,E2F7,EBF1,ENO1,ENPEP,EPHA2,FAM120A,FAM167B,FYN,HIF1A,IQGAP1,ITPKB,JAK2,KCNK5,KCTD15,KDM2B,KITLG,KLC1,let-7,LRRN3,MAF,MAGI2,MAP2K1,MIDN,MR1,MYOD1,NELL1,NHLRC3,NKX2-3,NKX2-5,NRG2,OPN4,OTOF,PARD3,PARP4,PAX2,PAX5,PCDH17,PDE7B,PKD1L2,PLCE1,POU2AF1,PRKCQ,PTPRC,PTPRZ1,RHOBTB1,RNF213,RORA,SEMA3E,SI,SLC8A1,SLIT3,SPEG,SRPK2,STAT1,STXBP6,TCEAL3,TCF7L2,TGFB2,TIMP2,TNFSF13B,TRAM1L1,TSPAN7,TTC28,TUBB6,TYRP1,VWA3A,VWA3B,WNT3A,ZNF276 | 100 |
| Cancer,Hematological Disease,Organismal Injury and Abnormalities | Lymphocytic neoplasm | 0.0000118 | ABCC1,ABCC3,ABLIM1,ACVRL1,AFAP1L2,AGBL1,ARHGEF28,ARID1B,ARPP21,BCL11A,BCL11B,BRINP1,C1orf105,C1R,C6orf118,CAMTA1,CBLB,CCKBR,CCSER1,CEP350,CHD5,CHD6,CHEK2,CIITA,CMIP,CSNK1G2,CTNND2,CYB561,CYP51A1,DAPK1,DNAH7,E2F7,EBF1,ENO1,ENPEP,EPHA2,FAM120A,FAM167B,FYN,HIF1A,IQGAP1,ITPKB,JAK2,KCNK5,KCTD15,KDM2B,KITLG,KLC1,let-7,LRRN3,MAF,MAGI2,MAP2K1,MIDN,MR1,MYOD1,NELL1,NHLRC3,NKX2-3,NKX2-5,NRG2,OPN4,OTOF,PARD3,PARP4,PAX2,PAX5,PCDH17,PDE7B,PKD1L2,PLCE1,POU2AF1,PRKCQ,PTPRC,PTPRZ1,RHOBTB1,RNF213,RORA,SEMA3E,SI,SLC8A1,SLIT3,SPEG,SRPK2,STAT1,STXBP6,TCEAL3,TCF7L2,TGFB2,TIMP2,TNFSF13B,TRAM1L1,TSPAN7,TTC28,TUBB6,TYRP1,VWA3A,VWA3B,WNT3A,ZNF276 | 100 |
| Cancer,Endocrine System Disorders,Gastrointestinal Disease,Organismal Injury and Abnormalities | Pancreatic cancer | 0.0000119 | AAK1,ADGRL3,ADNP,AFAP1L2,AMD1,ANKS1B,ARHGAP8/PRR5-ARHGAP8,ARHGEF6,ARID1B,ARMC12,BFSP2,BRINP1,C6orf118,CA10,CCKBR,CDH19,CENPN,CFAP43,CHD6,CHEK2,CIITA,CSMD3,CXXC4,CYP51A1,DAPK1,DISC1,DISP3,DNAH7,DNAH8,ENO1,EPHA2,EPS15L1,F8,FAM117A,GALNT17,GATA4,GNS,GRIK5,HIF1A,HTR3B,ICE1,IFT46,IQGAP1,JAK2,JCAD,KCTD15,KLC1,KLF1,LMX1A,MAGI2,MAP2K1,MAP3K21,MGAT4B,MITF,MOCS2,MUC20,MYO3B,NCKAP5,NELL1,NTM,OTOF,PARP4,PCSK2,PNPLA5,POU2AF1,PRIMA1,RAPGEF2,RASSF8,RIMBP2,RNF213,RORA,SEMA3E,SLC12A8,SLC25A29,SLC6A15,SLC6A4,SLC8A1,SLITRK6,SPEG,SYT17,SYT2,TENM3,TERF2,TFAP2B,TFEC,TGFB2,TM9SF2,TMEM132B,TMPO,TNR,TPTE2,TRDN,USP46,VWA3A,WNT3A | 95 |
| Connective Tissue Development and Function,Tissue Development | Growth of connective tissue | 0.000012 | ALKAL2,BCL11B,CDH13,CIITA,CSF3,DAB2IP,E2F7,E2F8,EPHA2,ERO1A,FGF18,FYN,HAS2,HIF1A,HINT1,IL10RA,JAK2,JUP,KDM2B,KITLG,MAP2K1,NELL1,PARD3,PAX2,PHLPP1,PLCE1,PTPRC,PTPRZ1,RNF144B,SLC6A4,STAT1,TGFB2,TIMP2,TMPO,TNFSF13B,TRPS1,WNT3A | 37 |
| Cancer,Organismal Injury and Abnormalities | Squamous-cell carcinoma | 0.0000121 | AAK1,ABCC1,ABCC3,ABHD6,ACVRL1,ADCY5,ADGRL3,AGBL1,AGO2,AKAP7,AMD1,ANKS1B,ARHGAP31,ARMC3,ARPP21,AUTS2,BCL11A,BCL11B,BICD2,BRINP1,BTBD9,C6orf118,CAMTA1,CCDC61,CCSER1,CDH13,CDH19,CEP350,CHD5,CHD6,CHEK2,CIITA,CPN2,CSMD3,CTNND2,CXXC4,CYB561,DAPK1,DBX2,DISP3,DNAH7,DNAH8,DPP10,E2F7,E2F8,EBF1,EIF4EBP2,ENPEP,EPHA2,FAM120A,FGF18,FYN,GALNT13,GRIK5,HAS2,HEG1,HNF4G,HNRNPR,IBTK,IGSF21,IGSF9B,IQGAP1,IRX6,ITPKB,JAK2,JCAD,JUP,KCTD15,KDM2B,KIF26A,let-7,LRRN3,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MAP7,MC4R,MEPE,MIDN,mir-129,MROH2B,MTSS1,MUC13,MUC20,MYO3B,NADSYN1,NELL1,NKX2-5,NRG2,OR6S1,OTOF,PABPC4,PAK5,PAPOLA,PAQR8,PARP4,PCDH17,PELI2,PEX26,PHYHD1,PKD1L2,PLCE1,PRKCQ,PSAP,PTPRC,PTPRZ1,RAPGEF2,RHOBTB1,RIMBP2,RIT2,RNF213,RNF6,SCML4,SH3TC2,SI,SLC12A2,SLC22A5,SLC25A29,SLIT3,SLITRK1,SOAT1,SPEG,STAG3,STARD8,STAT1,STXBP5L,SYT17,TENM3,TFEC,TMEM132B,TMPO,TNR,TPTE2,TRDN,TRPC7,TRPS1,TTC28,VAT1L,VPS13A,VWA3B,ZDHHC14,ZNF276 | 144 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Endocrine System Disorders,Gastrointestinal Disease,Organismal Injury and Abnormalities | Pancreatic tumor | 0.0000126 | AAK1,ABCC3,ACBD5,ACVRL1,ADGRL3,ADNP,AFAP1L2,AMD1,ANKS1B,ARHGAP8/PRR5-ARHGAP8,ARHGEF6,ARID1B,ARMC12,BFSP2,BRINP1,C6orf118,CA10,CCKBR,CDH19,CENPN,CFAP43,CHD6,CHEK2,CIITA,CSMD3,CXXC4,CYP51A1,DAPK1,DISC1,DISP3,DNAH7,DNAH8,ENO1,EPHA2,EPS15L1,F8,FAM117A,GALNT17,GATA4,GNS,GRIK5,HIF1A,HNF4G,HTR3B,ICE1,IFT46,IQGAP1,JAK2,JCAD,KCTD15,KLC1,KLF1,LMX1A,MAGI2,MAP2K1,MAP3K21,MGAT4B,MITF,MOCS2,MUC20,MYO3B,NCKAP5,NELL1,NRG2,NTM,OTOF,PARP4,PCSK2,PNPLA5,POU2AF1,PRIMA1,PTPRC,RAPGEF2,RASSF8,RIMBP2,RIT2,RNF213,RORA,SEMA3E,SI,SLC12A8,SLC24A3,SLC25A29,SLC6A15,SLC6A4,SLC8A1,SLITRK6,SPEG,STPG2,SYT17,SYT2,TENM3,TERF2,TFAP2B,TFEC,TGFB2,TM9SF2,TMEM132B,TMPO,TNR,TOMM20,TPTE2,TRDN,USP46,VWA3A,WNT3A | 106 |
| Cellular Development,Cellular Growth and Proliferation,Nervous System Development and Function,Tissue Development | Outgrowth of neurons | 0.0000135 | ADNP,ARID1B,BICD2,CSF3,DAB2IP,DISC1,EPHA2,FGF18,GAB1,GDNF,IQGAP1,KIF26A,KITLG,MAG,MAP2K1,PAK5,PAX2,PSAP,PTPRZ1,RIT2,RNF6,SLC12A2,TIMP2,TNFSF13B,WNT3A | 25 |
| Cancer,Hematological Disease,Organismal Injury and Abnormalities | Hematologic cancer | 0.000014 | ABCC1,ABCC3,ABLIM1,ACVRL1,ADCY5,AFAP1L2,AGBL1,ANKRD22,ANKS1B,ARHGEF28,ARID1B,ARPP21,B3GLCT,BCL11A,BCL11B,BRINP1,C1orf105,C1R,C6orf118,CAMTA1,CBLB,CCKBR,CCSER1,CEP350,CHD5,CHD6,CHEK2,CIITA,CMIP,CSF3,CSMD3,CSNK1G2,CTNND2,CYB561,CYP51A1,DAPK1,DNAH7,DNAH8,E2F7,EBF1,ENO1,ENPEP,EPHA2,ETNK1,FAM117A,FAM120A,FAM167B,FMN1,FYN,GATA4,GJB5,HIF1A,HNF4G,IQGAP1,ITPKB,JAK2,KCNK5,KCTD15,KDM2B,KIF26A,KITLG,KLC1,let-7,LRRN3,MAF,MAGI2,MAP2K1,MAP3K21,MAP7,MIDN,mir-129,MR1,MUC20,MYO3B,MYOD1,NELL1,NHLRC3,NKX2-3,NKX2-5,NRG2,OPN4,OTOF,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PKD1L2,PLCE1,POU2AF1,PRKCQ,PTPRC,PTPRZ1,RHOBTB1,RNF213,RORA,RPL3,RPLP1,SEMA3E,SI,SLC13A2,SLC22A5,SLC6A15,SLC6A4,SLC8A1,SLIT3,SPEG,SRPK2,STAG3,STAT1,STXBP6,SYNPO2,TCEAL3,TCF7L2,TENM3,TGFB2,TIMP2,TNFSF13B,TNR,TRAM1L1,TSPAN7,TTC28,TUBB6,TYRP1,VWA3A,VWA3B,WNT3A,ZNF276 | 130 |
| Gene Expression | Transcription | 0.0000152 | ABLIM1,ACVRL1,ADNP,AFAP1L2,AGO2,ARID1B,AUTS2,BCL11A,BCL11B,CAMTA1,CDH13,CHD5,CHEK2,CIITA,CRH,CRYAA/CRYAA2,CSF3,CX3CL1,DAB2IP,DISC1,DMRT2,E2F7,E2F8,EBF1,ECD,ENO1,FYN,GATA4,GDNF,GLO1,GRHL2,HEXIM2,HIF1A,HINT1,HNF4G,IBTK,IQGAP1,IRX6,JAK2,KDM2B,KLF1,KLF13,let-7,LMX1A,LOC257642,MAF,MAGI2,MAP2K1,MBD2,MC4R,MDFIC,mir-129,MITF,MYOD1,NELL1,NKX2-3,NKX2-5,PAX2,PAX5,POU2AF1,PRKCQ,PTPRC,PTPRZ1,RBMS3,RIT2,RNF6,RORA,SLC13A1,SLC24A3,SLC6A4,SLC8A1,SLIT3,SRPK2,STAT1,TCF7L2,TERF2,TFAP2B,TFEC,TGFB2,TGFBR3,TMPO,TNFSF13B,TRPS1,VRK1,WNT3A,WNT8B,XCL1,ZNF143,ZNF580 | 89 |
| Cell Cycle,DNA Replication, Recombination, and Repair | Synapsis | 0.0000158 | GDNF,MSH5,RAD21L1,REC114,SMC1B,STAG3,SYCP3 | 7 |
| Cellular Movement | Cell movement | 0.0000198 | ABCC1,ABHD6,ACVRL1,ADGRL3,AGO2,AMD1,AQP3,ARHGAP31,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,AUTS2,BCL11B,BICD2,CARD10,CBLB,CCKBR,CDH13,CFAP43,CHD5,CIITA,CRH,CSF3,CTNND2,CX3CL1,DISC1,EBF1,ENO1,EPHA2,FAM120A,FGF18,FYN,GAB1,GDNF,GPSM3,GRHL2,HAS2,HIF1A,IL10RA,IL20RA,IQGAP1,JAK2,JUP,KCNK5,KDM2B,KIF13A,KITLG,let-7,LMX1A,LRCH1,LTB4R2,MAG,MAGI2,MAP2K1,MAP3K21,MC4R,mir-129,MITF,MR1,MTSS1,MUC13,MUC20,NKX2-3,PARD3,PAX2,PAX5,PHLPP1,PLCE1,POU2AF1,PPIC,PRKCQ,PROS1,PTPRC,PTPRZ1,RAPGEF2,RASSF8,RCC2,RORA,SEMA3E,SLC12A2,SLC37A4,SLC8A1,SLIT3,ST6GALNAC2,STAT1,STX6,TCF7L2,TERF2,TGFB2,TGFBR3,TIMP2,TMPO,TNFSF13B,TNR,TRPS1,TSPAN17,VPS13A,WNT3A,XCL1,ZNF580 | 100 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Endocrine System Disorders,Gastrointestinal Disease,Organismal Injury and Abnormalities | Pancreatic carcinoma | 0.0000209 | AAK1,ADGRL3,ADNP,AFAP1L2,AMD1,ANKS1B,ARHGAP8/PRR5-ARHGAP8,ARHGEF6,ARID1B,ARMC12,BFSP2,BRINP1,C6orf118,CA10,CCKBR,CDH19,CENPN,CFAP43,CHD6,CHEK2,CIITA,CSMD3,CXXC4,CYP51A1,DAPK1,DISC1,DISP3,DNAH7,DNAH8,EPHA2,EPS15L1,F8,FAM117A,GALNT17,GATA4,GNS,GRIK5,HIF1A,ICE1,IFT46,IQGAP1,JAK2,JCAD,KCTD15,KLC1,KLF1,LMX1A,MAGI2,MAP2K1,MAP3K21,MITF,MOCS2,MUC20,MYO3B,NCKAP5,NELL1,NTM,OTOF,PARP4,PCSK2,PNPLA5,POU2AF1,PRIMA1,RAPGEF2,RASSF8,RIMBP2,RNF213,RORA,SEMA3E,SLC12A8,SLC25A29,SLC6A15,SLC8A1,SLITRK6,SPEG,SYT17,SYT2,TENM3,TERF2,TFAP2B,TFEC,TM9SF2,TMEM132B,TMPO,TNR,TPTE2,TRDN,USP46,VWA3A,WNT3A | 90 |
| Cardiovascular Disease,Developmental Disorder,Organismal Injury and Abnormalities | Hypoplasia of heart chamber | 0.000021 | CYP51A1,HAS2,JUP,PARD3,SLC8A1,TGFB2,TGFBR3 | 7 |
| Cell Morphology,Cellular Assembly and Organization,Cellular Function and Maintenance | Formation of cellular protrusions | 0.0000253 | ABLIM1,ADNP,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,AUTS2,BCL11B,CDH13,CEP350,CRH,CSMD3,CTNND2,DAB2IP,DISC1,Dmd,EIF4EBP2,EPHA2,FMN1,FYN,GAB1,GDNF,IFT46,IQGAP1,KITLG,MAG,MAGI2,MAP2K1,MAP7,MTSS1,MYO3B,PACSIN1,PAK5,PARD3,PAX2,PLCE1,PRKCQ,PTPRZ1,RAPGEF2,RIT2,SEMA3E,SLIT3,SLITRK1,SLITRK6,TCF7L2,TGFBR3,TNR,WNT3A | 48 |
| Cellular Development,Cellular Growth and Proliferation,Nervous System Development and Function,Tissue Development | Development of neurons | 0.0000257 | ADGRL3,ADNP,ARHGEF28,ARID1B,BCL11B,CRH,CSMD3,CTNND2,CX3CL1,DAB2IP,DISC1,Dmd,EIF4EBP2,FMN1,FYN,GDNF,IGSF21,IGSF9B,IRX6,JAK2,KITLG,LRRN3,MAG,MAGI2,MAP2K1,MAP7,MTSS1,MYOD1,NRG2,PACSIN1,PARD3,PAX2,PTPRZ1,RAPGEF2,RIT2,SEMA3E,SLC12A2,SLIT3,SLITRK1,SLITRK6,TGFB2,TNR,WNT3A | 43 |
| Cancer,Hematological Disease,Organismal Injury and Abnormalities | Myeloid or lymphoid neoplasm | 0.0000272 | ABCC1,ABCC3,ABLIM1,ACVRL1,ADCY5,AFAP1L2,AGBL1,ANKRD22,ANKS1B,ARHGEF28,ARID1B,ARPP21,B3GLCT,BCL11A,BCL11B,BRINP1,C1orf105,C1R,C6orf118,CAMTA1,CBLB,CCKBR,CCSER1,CEP350,CHD5,CHD6,CHEK2,CIITA,CMIP,CSF3,CSMD3,CSNK1G2,CTNND2,CYB561,CYP51A1,DAPK1,DNAH7,DNAH8,E2F7,EBF1,ENO1,ENPEP,EPHA2,ETNK1,FAM117A,FAM120A,FAM167B,FMN1,FYN,GATA4,GJB5,HIF1A,HNF4G,IQGAP1,ITPKB,JAK2,KCNK5,KCTD15,KDM2B,KIF26A,KITLG,KLC1,let-7,LRRN3,MAF,MAGI2,MAP2K1,MAP3K21,MAP7,MIDN,mir-129,MR1,MUC20,MYO3B,MYOD1,NELL1,NHLRC3,NKX2-3,NKX2-5,NRG2,OPN4,OTOF,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PKD1L2,PLCE1,POU2AF1,PRKCQ,PTPRC,PTPRZ1,RHOBTB1,RNF213,RORA,RPL3,RPLP1,SEMA3E,SI,SLC13A2,SLC22A5,SLC6A15,SLC8A1,SLIT3,SPEG,SRPK2,STAG3,STAT1,STXBP6,SYNPO2,TCEAL3,TCF7L2,TENM3,TGFB2,TIMP2,TNFSF13B,TNR,TRAM1L1,TSPAN7,TTC28,TUBB6,TYRP1,VWA3A,VWA3B,WNT3A,ZNF276 | 129 |
| Cancer,Organismal Injury and Abnormalities | Upper aero-digestive squamous cell carcinoma | 0.0000282 | ABCC1,ADCY5,AGBL1,AGO2,AKAP7,AMD1,ANKS1B,ARHGAP31,ARPP21,AUTS2,BCL11A,BRINP1,BTBD9,C6orf118,CAMTA1,CCSER1,CDH13,CDH19,CEP350,CHD6,CSMD3,CTNND2,CXXC4,DNAH7,E2F7,EBF1,EIF4EBP2,ENPEP,EPHA2,FAM120A,GRIK5,HAS2,HEG1,HNRNPR,JAK2,JCAD,KCTD15,KDM2B,KIF26A,let-7,MAG,MAP7,MEPE,MROH2B,MTSS1,MYO3B,OTOF,PAPOLA,PCDH17,PELI2,PRKCQ,PSAP,PTPRC,RIMBP2,RIT2,RNF213,RNF6,SCML4,SI,SLC12A2,SLIT3,SLITRK1,STAG3,STAT1,STXBP5L,TMEM132B,TMPO,TNR,TRPC7,TRPS1,TTC28,VAT1L,ZDHHC14 | 73 |
| Hair and Skin Development and Function,Organ Development | Growth of skin | 0.0000291 | BCL11B,CDH13,E2F7,E2F8,EPHA2,FGF18,FYN,HAS2,JUP,MAP2K1,PARD3,PLCE1,PTPRZ1,RAPGEF2,RNF144B,TGFB2,WNT3A | 17 |
| Cellular Development,Cellular Growth and Proliferation,Nervous System Development and Function,Tissue Development | Outgrowth of neurites | 0.0000297 | ADNP,ARID1B,CSF3,DAB2IP,DISC1,EPHA2,FGF18,GAB1,GDNF,IQGAP1,KIF26A,KITLG,MAG,MAP2K1,PAK5,PAX2,PSAP,PTPRZ1,RIT2,RNF6,SLC12A2,TIMP2,TNFSF13B,WNT3A | 24 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cellular Movement | Migration of cells | 0.0000315 | ABCC1,ABHD6,ACVRL1,ADGRL3,AGO2,AQP3,ARHGAP31,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,AUTS2,BCL11B,BICD2,CARD10,CBLB,CCKBR,CDH13,CHD5,CIITA,CRH,CSF3,CX3CL1,DISC1,EBF1,EPHA2,FAM120A,FGF18,FYN,GAB1,GDNF,GPSM3,GRHL2,HAS2,HIF1A,IL10RA,IL20RA,IQGAP1,JAK2,JUP,KCNK5,KDM2B,KIF13A,KITLG,let-7,LMX1A,LRCH1,LTB4R2,MAG,MAGI2,MAP2K1,MAP3K21,MC4R,mir-129,MITF,MR1,MTSS1,MUC13,MUC20,NKX2-3,PAX5,PLCE1,POU2AF1,PPIC,PRKCQ,PROS1,PTPRC,PTPRZ1,RAPGEF2,RASSF8,RCC2,RORA,SEMA3E,SLC12A2,SLC37A4,SLC8A1,SLIT3,STAT1,STX6,TCF7L2,TERF2,TGFB2,TGFBR3,TIMP2,TMPO,TNFSF13B,TNR,TRPS1,TSPAN17,WNT3A,XCL1,ZNF580 | 91 |
| Cancer,Endocrine System Disorders,Gastrointestinal Disease,Organismal Injury and Abnormalities | Pancreatic adenocarcinoma | 0.000033 | AAK1,ADGRL3,ADNP,AFAP1L2,AMD1,ANKS1B,ARHGAP8/PRR5-ARHGAP8,ARHGEF6,ARID1B,ARMC12,C6orf118,CA10,CCKBR,CDH19,CENPN,CFAP43,CHD6,CHEK2,CIITA,CSMD3,CXXC4,CYP51A1,DAPK1,DISC1,DISP3,DNAH7,DNAH8,EPHA2,EPS15L1,F8,FAM117A,GALNT17,GATA4,GNS,GRIK5,HIF1A,ICE1,IFT46,IQGAP1,JAK2,JCAD,KLF1,LMX1A,MAGI2,MAP2K1,MAP3K21,MITF,MOCS2,MUC20,MYO3B,NCKAP5,NTM,OTOF,PARP4,PCSK2,PNPLA5,POU2AF1,PRIMA1,RAPGEF2,RASSF8,RIMBP2,RNF213,RORA,SEMA3E,SLC12A8,SLC25A29,SLC6A15,SLC8A1,SLITRK6,SPEG,SYT17,SYT2,TENM3,TERF2,TFAP2B,TFEC,TM9SF2,TMEM132B,TMPO,TNR,TPTE2,TRDN,USP46,VWA3A,WNT3A | 85 |
| Cellular Assembly and Organization,Cellular Function and Maintenance | Microtubule dynamics | 0.0000333 | ABCC1,ABLIM1,ADNP,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,AUTS2,BCL11B,BICD2,CBLN4,CDH13,CEP350,CRH,CSMD3,CTNND2,DAB2IP,DAPK1,DISC1,Dmd,EIF4EBP2,EPHA2,FMN1,FYN,GAB1,GDNF,HAS2,IFT46,IQGAP1,JAK2,KITLG,KLC1,MAG,MAGI2,MAP2K1,MAP7,MTSS1,MYO3B,PACSIN1,PAK5,PARD3,PAX2,PLCE1,PRKCQ,PTPRZ1,RAPGEF2,RIT2,RNF6,SEMA3E,SLIT3,SLITRK1,SLITRK6,TCF7L2,TGFBR3,TNR,TRDN,WDR73,WNT3A | 58 |
| Nervous System Development and Function | Morphology of nervous system | 0.0000337 | ACVRL1,ARID1B,BICD2,BRINP1,CRH,CTNND2,CX3CL1,DISC1,EBF1,EIF4EBP2,FYN,GDNF,IQGAP1,IRX6,KIF26A,KLC1,LMX1A,MAG,MAGI2,MAN2B1,MAP2K1,MCOLN1,MITF,OPN4,OTOF,PACSIN1,PARD3,PAX2,PRKCQ,PROS1,PRPF31,PSAP,PTPRC,PTPRZ1,RAB3B,RORA,SLC12A2,SLC6A15,SLC6A4,SLITRK6,TAP1,TCF7L2,TGFB2,TIMP2,TNR,VPS13A,WNT3A | 47 |
| Cellular Function and Maintenance | Cellular homeostasis | 0.0000337 | ABCC1,ABCC3,ACBD5,ADCY5,AQP3,BCL11A,BCL11B,CBLB,CCKBR,CHEK2,CIITA,CRH,CX3CL1,DAPK1,DISC1,EBF1,EPHA2,ERO1A,FYN,GAB1,GATA4,GDNF,GRIK5,HIF1A,HTR3B,IBTK,IL10RA,ITPKB,JAK2,KCNK5,KITLG,let-7,MAF,MAP2K1,MBD2,MC4R,MCOLN1,MITF,MTSS1,NKX2-3,PAPOLA,PAX5,PHLPP1,PIK3R4,PLCE1,POU2AF1,PRKCQ,PSAP,PTPRC,RAPGEF2,RORA,RPH3AL,SGCD,SLC12A2,SLC22A5,SLC24A3,SLC37A4,SLC8A1,SOAT1,STAT1,STXBP5L,SYNPO2,TCF7L2,TFAP2B,TIMP2,TMBIM6,TMEM98,TNFSF13B,TOMM20,TRDN,TRPC7,VPS13A,WNT3A | 73 |
| Embryonic Development,Organismal Development,Tissue Development | Morphogenesis of embryonic tissue | 0.0000358 | CX3CL1,EPHA2,GATA4,GDNF,HIF1A,IRX6,NKX2-5,PAX2,TCF7L2,TGFB2,TGFBR3,TIMP2 | 12 |
| Cellular Growth and Proliferation,Tissue Development | Proliferation of epithelial cells | 0.0000364 | BCL11B,CDH13,CSMD3,DAB2IP,E2F7,E2F8,EPHA2,FGF18,FYN,HAS2,HIF1A,JAK2,JUP,KITLG,MAGI2,MAP2K1,MITF,MTSS1,NKX2-3,PARD3,PAX2,PLCE1,PTPRZ1,RNF144B,TCF7L2,TGFB2,TGFBR3,TMPO,TYRP1,WNT3A | 30 |
| Developmental Disorder | Thoracic hypoplasia | 0.0000399 | ACVRL1,BCL11A,BCL11B,CYP51A1,GATA4,HAS2,JUP,NKX2-5,PARD3,PTPRC,SLC8A1,TGFB2,TGFBR3 | 13 |
| Developmental Disorder,Embryonic Development,Organismal Development,Tissue Morphology | Lack of atrioventricular canal cushion | 0.00004 | ACVRL1,HAS2,NKX2-5,SLC8A1 | 4 |
| Cancer,Hematological Disease,Immunological Disease,Organismal Injury and Abnormalities | T-lymphoblastic leukemia/lymphoma | 0.0000408 | BCL11B,CCSER1,CHD5,CTNND2,EBF1,ENO1,EPHA2,FYN,JAK2,KCTD15,LRRN3,OTOF,PAX5,PTPRC,RHOBTB1,RNF213,SLC8A1,TNFSF13B,VWA3A,WNT3A | 20 |
| Cell-To-Cell Signaling and Interaction | Activation of cells | 0.0000423 | ACVRL1,BANK1,BCL11B,BRINP1,CBLB,CRH,CRYAA/CRYAA2,CSF3,CX3CL1,EBF1,ENPEP,FYN,GDNF,HIF1A,IL10RA,IQGAP1,ITPKB,JAK2,KITLG,let-7,MAF,MAG,MAP2K1,MC4R,MEPE,MR1,MYOD1,PACSIN1,PAX5,PHLPP1,POU2AF1,PRKCQ,PROS1,PSAP,PTPRC,RAB3B,RAB3C,RASSF8,RORA,SLC6A15,SLC6A4,SLIT3,STAT1,TERF2,TGFB2,TGFBR3,TNFSF13B,TRPC7,WNT3A | 49 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Organismal Development | Abnormal morphology of body cavity | 0.0000436 | ABCC1,ACVRL1,ADCY5,AGO2,BANK1,BCL11A,BCL11B,CCKBR,CIITA,CMIP,CRH,CSF3,CYP51A1,DAPK1,DMRT2,FMN1,GATA4,GDNF,HAS2,HIF1A,IFT46,IQGAP1,ITPKB,JAK2,JUP,KIF26A,KLF13,let-7,MAGI2,MAN2B1,MAP2K1,MCOLN1,MSH5,MTSS1,MYOD1,NKX2-3,NKX2-5,PARD3,PAX2,PCSK2,PLCE1,PSAP,PTPRC,RAD21L1,RBM20,REC114,SGCD,SLC12A2,SLC37A4,SLC6A4,SLC8A1,SLIT3,SOAT1,SPEG,STAT1,TCF7L2,TFAP2B,TGFB2,TGFBR3,TIMP2,TMPO,TNFSF13B,TRPS1,XYLT1 | 64 |
| Cell Signaling | Small GTPase mediated signal transduction | 0.0000442 | ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF6,AUTS2,CDH13,DAB2IP,HEG1,ITPKB,JAK2,KITLG,MAP2K1,PLCE1,RAPGEF2,RHOBTB1,RIT2,STARD8,TGFB2,TIMP2 | 19 |
| Cardiovascular Disease,Developmental Disorder,Hereditary Disorder,Organismal Injury and Abnormalities | Ventricular septal defect type 3 | 0.0000509 | GATA4,NKX2-5,TGFB2 | 3 |
| Cancer,Hematological Disease,Immunological Disease,Organismal Injury and Abnormalities | B-cell lymphoma | 0.0000517 | ABCC1,ABLIM1,ACVRL1,AFAP1L2,AGBL1,ARHGEF28,ARID1B,ARPP21,BCL11B,CAMTA1,CEP350,CHD6,CHEK2,CIITA,CMIP,EPHA2,FYN,HIF1A,IQGAP1,ITPKB,JAK2,KCNK5,KDM2B,KLC1,let-7,LRRN3,MAP2K1,MR1,MYOD1,NHLRC3,NKX2-3,NKX2-5,NRG2,OPN4,PARP4,PAX5,POU2AF1,PTPRC,PTPRZ1,RNF213,SEMA3E,SPEG,SRPK2,STXBP6,TIMP2,TRAM1L1,TUBB6,VWA3B | 48 |
| Cellular Function and Maintenance,Tissue Development | Organization of neurons | 0.0000517 | ADGRL3,ARHGEF28,CTNND2,GDNF,IL10RA,LMX1A,SEMA3E,SLITRK1,TNR,WNT3A | 10 |
| Cancer,Organismal Injury and Abnormalities,Respiratory Disease | Respiratory system tumor | 0.0000518 | AAK1,ABCC1,ABCC12,ABCC3,ACVRL1,ADCY5,ADGRL3,AFAP1L2,AGBL1,AGO2,ANKRD22,ANKS1B,ARHGAP31,ARHGAP8/PRR5-ARHGAP8,ARHGEF6,ARID1B,ARMC12,ARMC3,ARPP21,BCL11A,BICD2,BRINP1,C1orf105,C6orf118,CAMTA1,CBLB,CCKBR,CCSER1,CDH13,CDH19,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CPED1,CSF3,CSMD3,CSNK1G2,CTNND2,DAPK1,DISP3,DNAH7,DNAH8,DPP10,E2F7,E2F8,ENO1,ENPEP,EPHA2,EPS15L1,F8,FMN1,GALNT13,GALNT17,GATA4,GRHL2,GRIK5,HEG1,HIF1A,HNF4G,HTR3B,IBTK,ICE1,IGSF9B,IL20RA,IQGAP1,IRX6,ITPKB,JAK2,JCAD,JUP,KCNH3,KCTD15,KIF13A,KIF26A,let-7,LRRN3,LSAMP,LTB4R2,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MBD2,MCOLN1,MIDN,mir-129,MROH2B,MUC20,MYO3B,NCKAP5,NELL1,NKX2-5,NOL4,NRG2,NTM,OCSTAMP,OR13F1,OTOF,PABPC4,PAK5,PARD3,PARP4,PAX5,PCDH17,PCSK2,PGBD5,PHYHD1,PIK3AP1,PKD1L2,PLCE1,PLSCR5,PRKCQ,PROS1,PSAP,PTPRC,PTPRZ1,RBM20,REEP3,RIMBP2,RIT2,RNF213,RORA,SCML4,SEMA3E,SH3TC2,SI,SLC12A2,SLC6A15,SLC6A4,SLC8A1,SLIT3,SLITRK1,SOAT1,SPEG,STAG3,STARD8,STAT1,STXBP5L,SYT6,TAS2R1,TCEAL3,TENM3,TERF2,TFAP2B,TMBIM6,TMEM132B,TNFSF13B,TNR,TPTE2,TRPC7,TRPS1,VAT1L,VPS13A,VWA3B,WDR73,XYLT1,ZNF583 | 161 |
| Cellular Growth and Proliferation,Connective Tissue Development and Function,Tissue Development | Proliferation of connective tissue cells | 0.0000524 | ALKAL2,BCL11B,CDH13,CIITA,CSF3,DAB2IP,E2F7,E2F8,EPHA2,ERO1A,FGF18,FYN,HAS2,HIF1A,HINT1,JUP,KDM2B,KITLG,MAP2K1,NELL1,PARD3,PAX2,PHLPP1,PLCE1,PTPRZ1,RNF144B,SLC6A4,STAT1,TGFB2,TIMP2,TMPO,TRPS1,WNT3A | 33 |
| Cellular Development,Cellular Growth and Proliferation,Hair and Skin Development and Function,Organ Development,Tissue Development | Proliferation of epidermal cells | 0.0000551 | BCL11B,CDH13,E2F7,E2F8,EPHA2,FYN,HAS2,JUP,MAP2K1,PARD3,PLCE1,PTPRZ1,RNF144B,TGFB2 | 14 |
| Cell Morphology,Hematological Disease,Immunological Disease,Lymphoid Tissue Structure and Development | Lack of lymphocytes | 0.0000572 | BCL11A,BCL11B,EBF1,ITPKB,NKX2-3,PIK3AP1,TAP1 | 7 |
| Cancer,Endocrine System Disorders,Gastrointestinal Disease,Organismal Injury and Abnormalities | Pancreatic ductal adenocarcinoma | 0.0000604 | AAK1,ADGRL3,AFAP1L2,AMD1,ANKS1B,ARHGAP8/PRR5-ARHGAP8,ARHGEF6,ARID1B,ARMC12,C6orf118,CA10,CDH19,CENPN,CFAP43,CHD6,CHEK2,CIITA,CSMD3,CXXC4,CYP51A1,DAPK1,DISC1,DISP3,DNAH7,DNAH8,EPHA2,EPS15L1,F8,FAM117A,GALNT17,GATA4,GNS,GRIK5,ICE1,IFT46,IQGAP1,JAK2,JCAD,KLF1,LMX1A,MAGI2,MAP2K1,MAP3K21,MITF,MOCS2,MUC20,MYO3B,NCKAP5,NTM,OTOF,PARP4,PCSK2,PNPLA5,POU2AF1,PRIMA1,RAPGEF2,RASSF8,RIMBP2,RNF213,RORA,SEMA3E,SLC12A8,SLC25A29,SLC6A15,SLC8A1,SLITRK6,SPEG,SYT17,SYT2,TENM3,TERF2,TFAP2B,TFEC,TM9SF2,TMEM132B,TMPO,TNR,TPTE2,TRDN,USP46,VWA3A,WNT3A | 82 |
| Cellular Development,Nervous System Development and Function,Tissue Development | Differentiation of dopaminergic neurons | 0.0000622 | GDNF,HIF1A,LMX1A,PAX2,PAX5,WNT3A | 6 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cardiovascular System Development and Function,Organismal Development | Vasculogenesis | 0.0000665 | ACVRL1,CCKBR,CDH13,CSF3,CX3CL1,CYP51A1,EPHA2,ERO1A,GAB1,GATA4,GDNF,HAS2,HEG1,HIF1A,IQGAP1,JAK2,KLF1,let-7,MAN2B1,MAP2K1,mir-129,NELL1,NKX2-3,NKX2-5,NRG2,PROS1,PSAP,PTPRZ1,RAPGEF2,RORA,SEMA3E,SLC8A1,SLIT3,STAT1,STX6,TCF7L2,TFAP2B,TGFB2,TGFBR3,TIMP2,TUBB6,ZNF580 | 42 |
| Cell Morphology | Enlargement of cells | 0.0000698 | ACVRL1,CCKBR,CSF3,DAPK1,GATA4,GDNF,HIF1A,JAK2,KIF13A,KLC1,MAGI2,MAP2K1,MC4R,MYOD1,PARD3,PLCE1,SLC12A2,SLC8A1,SPEG,TERF2,TFAP2B,TGFBR3,TRDN | 23 |
| Cellular Movement | Chemorepulsion | 0.0000718 | FYN,GDNF,PTPRZ1,SEMA3E,SLIT3,TNR | 6 |
| Cell Death and Survival | Apoptosis of leukocytes | 0.0000731 | BCL11A,BCL11B,CHEK2,CIITA,CSF3,CX3CL1,FYN,HIF1A,JAK2,KITLG,KLF13,MAP2K1,PAX5,PELI2,PERP,PIK3AP1,POU2AF1,PRKCQ,PROS1,PTPRC,SOAT1,STAT1,TGFB2,TNFSF13B,WNT3A,XCL1 | 26 |
| Cancer,Organismal Injury and Abnormalities,Respiratory Disease | Development of lung tumor | 0.0000741 | AAK1,ABCC3,ADCY5,ADGRL3,AGO2,ANKRD22,ANKS1B,ARHGEF6,ARID1B,ARMC3,BCL11A,BRINP1,C1orf105,CFAP43,CHD5,CHD6,CHEK2,CIITA,CPED1,CSMD3,CSNK1G2,CTNND2,DAPK1,DNAH7,DNAH8,DPP10,E2F7,E2F8,ENO1,EPHA2,F8,GRHL2,ICE1,IGSF9B,IQGAP1,ITPKB,JAK2,JUP,let-7,LRRN3,LTB4R2,MAG,MAGI2,MAP2K1,MAP3K21,MYO3B,NCKAP5,NTM,OCSTAMP,OR13F1,PAK5,PARD3,PARP4,PCDH17,PHYHD1,PLCE1,PLSCR5,PRKCQ,PTPRC,SCML4,SEMA3E,SH3TC2,SI,SLC12A2,SLC6A15,SLC8A1,SLIT3,SLITRK1,SPEG,STARD8,STAT1,STXBP5L,TAS2R1,TCEAL3,TENM3,TFAP2B,TMEM132B,TNR,TRPS1,VWA3B | 80 |
| Embryonic Development,Organismal Development | Development of body axis | 0.0000781 | ABCC6,AGO2,BCL11B,BFSP2,CFAP43,CRYAA/CRYAA2,CX3CL1,DISC1,EBF1,EPHA2,FYN,GATA4,GDNF,GRHL2,HIF1A,Ifitm1,IFT46,IRX6,KDM2B,LMX1A,MAF,MAN2B1,MAP2K1,MCOLN1,MITF,MYO3B,NKX2-3,NKX2-5,OPN4,PACSIN1,PARD3,PAX2,PAX5,PRKCQ,PRPF31,PSAP,RAPGEF2,RORA,SEMA3E,SLC6A4,SLIT3,SLITRK6,STAT1,TCF7L2,TGFB2,TGFBR3,TIMP2,TMEM98,TYRP1,WNT3A | 50 |
| Cell Cycle,DNA Replication, Recombination, and Repair | Homologous pairing of chromosomes | 0.0000787 | MSH5,RAD21L1,SMC1B,SYCP3 | 4 |
| Embryonic Development,Nervous System Development and Function,Organ Development,Organismal Development,Tissue Development,Visual System Development and Function | Formation of eye | 0.0000795 | ABCC6,BFSP2,CRYAA/CRYAA2,EBF1,EPHA2,FYN,HIF1A,IRX6,MAF,MAN2B1,MCOLN1,MITF,OPN4,PACSIN1,PAX2,PAX5,PRKCQ,PRPF31,PSAP,SEMA3E,STAT1,TGFB2,TIMP2,TMEM98,TYRP1 | 25 |
| Cellular Development,Cellular Growth and Proliferation,Connective Tissue Development and Function,Hair and Skin Development and Function,Organ Development,Tissue Development | Proliferation of keratinocytes | 0.0000812 | BCL11B,CDH13,E2F7,E2F8,EPHA2,FYN,HAS2,JUP,PARD3,PLCE1,PTPRZ1,RNF144B,TGFB2 | 13 |
| Cancer,Organismal Injury and Abnormalities,Respiratory Disease | Lung cancer | 0.0000826 | AAK1,ABCC1,ABCC12,ABCC3,ACVRL1,ADCY5,ADGRL3,AFAP1L2,AGBL1,AGO2,ANKRD22,ANKS1B,ARHGAP8/PRR5-ARHGAP8,ARHGEF6,ARID1B,ARMC12,ARMC3,BCL11A,BICD2,BRINP1,C1orf105,C6orf118,CBLB,CCKBR,CCSER1,CDH13,CDH19,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CPED1,CSF3,CSMD3,CSNK1G2,CTNND2,DAPK1,DISP3,DNAH7,DNAH8,DPP10,E2F7,E2F8,ENO1,ENPEP,EPHA2,EPS15L1,F8,FMN1,GALNT13,GALNT17,GRHL2,GRIK5,HEG1,HIF1A,HNF4G,HTR3B,IBTK,ICE1,IGSF9B,IL20RA,IQGAP1,IRX6,ITPKB,JAK2,JUP,KCNH3,KIF13A,KIF26A,let-7,LRRN3,LSAMP,LTB4R2,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MBD2,MCOLN1,MIDN,mir-129,MROH2B,MUC20,MYO3B,NCKAP5,NELL1,NOL4,NTM,OCSTAMP,OR13F1,OTOF,PABPC4,PAK5,PARD3,PARP4,PAX5,PCDH17,PCSK2,PGBD5,PHYHD1,PIK3AP1,PKD1L2,PLCE1,PLSCR5,PRKCQ,PROS1,PTPRC,PTPRZ1,RBM20,REEP3,RIMBP2,RNF213,RORA,SCML4,SEMA3E,SH3TC2,SI,SLC12A2,SLC6A15,SLC6A4,SLC8A1,SLIT3,SLITRK1,SOAT1,SPEG,STARD8,STAT1,STXBP5L,SYT6,TAS2R1,TCEAL3,TENM3,TERF2,TFAP2B,TMBIM6,TMEM132B,TNFSF13B,TNR,TPTE2,TRPC7,TRPS1,VAT1L,VPS13A,VWA3B,XYLT1,ZNF583 | 149 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cellular Development,Cellular Growth and Proliferation,Embryonic Development,Hematological System Development and Function,Hematopoiesis,Humoral Immune Response,Lymphoid Tissue Structure and Development,Organ Development,Organismal Development,Tissue Development | Development of B lymphocytes | 0.0000874 | CSF3,EBF1,FYN,HIF1A,ITPKB,KITLG,MAP2K1,PAX5,POU2AF1,PTPRC,RORA,TNFSF13B | 12 |
| Cancer,Endocrine System Disorders,Organismal Injury and Abnormalities,Respiratory Disease | Small cell lung carcinoma | 0.0000912 | ABCC1,ABCC12,ADGRL3,AFAP1L2,ANKS1B,ARHGAP8/PRR5-ARHGAP8,ARID1B,ARMC12,BCL11A,BRINP1,C1orf105,C6orf118,CBLB,CCKBR,CCSER1,CDH19,CEP350,CFAP43,CHD6,CHEK2,CSMD3,CTNND2,DAPK1,DISP3,DNAH8,DPP10,ENPEP,EPS15L1,F8,GALNT13,GALNT17,GRIK5,HNF4G,HTR3B,ICE1,IL20RA,IQGAP1,IRX6,JAK2,KCNH3,KIF13A,LSAMP,MAG,MAN2B1,MAP3K21,MBD2,MCOLN1,MROH2B,MYO3B,NCKAP5,NELL1,NOL4,OTOF,PAK5,PARP4,PCDH17,PCSK2,PGBD5,PHYHD1,PIK3AP1,PKD1L2,PLCE1,PROS1,PTPRC,RBM20,REEP3,RORA,SH3TC2,SI,SLC12A2,SLC8A1,SLIT3,SLITRK1,SOAT1,STARD8,STXBP5L,SYT6,TAS2R1,TENM3,TERF2,TNFSF13B,TNR,TRPS1,VAT1L,VPS13A,XYLT1 | 86 |
| Cancer,Endocrine System Disorders,Organismal Injury and Abnormalities,Reproductive System Disease | Gonadal tumor | 0.0000948 | ABCC3,ABHD6,ADNP,AGBL1,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARID1B,BICD2,C6orf118,CAMTA1,CBLN4,CCDC33,CHD5,CHEK2,CIITA,CSF3,CSMD3,CTNND2,DNAH7,E2F8,ENO1,ENPEP,EPHA2,ERO1A,FGF18,FUCA2,GATA4,GDNF,HAS2,IGSF21,JAK2,KDM2B,KITLG,let-7,LRRC31,LTB4R2,LY86,MAG,MAGI2,MAP2K1,MAP3K21,MGAT4B,MYO3B,NCKAP5,NRG2,NTM,OTOF,PAK5,PAPOLA,PCSK2,PKD1L2,PRKCQ,PRSS54,RGS20,RIMBP2,RNF144B,RORA,SI,SLC6A15,SLITRK1,SMC1B,SPEG,SRPK2,STAT1,STXBP5L,SYNPO2,TAP1,TENM3,TFAP2B,TGFBR3,TNR,TPTE2,TRPC7,VPS13A,VWA3B,ZDHHC14,ZNF143,ZNF276 | 79 |
| Cancer,Organismal Injury and Abnormalities,Respiratory Disease | Nonsquamous non-small cell lung carcinoma | 0.0000959 | AAK1,ABCC3,ADCY5,ADGRL3,AGO2,ANKRD22,ANKS1B,ARHGEF6,ARID1B,ARMC3,BCL11A,BRINP1,C1orf105,CFAP43,CHD5,CHD6,CHEK2,CIITA,CPED1,CSMD3,CSNK1G2,CTNND2,DAPK1,DNAH7,DNAH8,DPP10,E2F7,E2F8,ENO1,EPHA2,F8,GALNT13,GRHL2,ICE1,IGSF9B,IQGAP1,ITPKB,JAK2,JUP,LRRN3,MAG,MAGI2,MAP2K1,MAP3K21,MYO3B,NCKAP5,NTM,OCSTAMP,OR13F1,PAK5,PARD3,PARP4,PCDH17,PHYHD1,PLCE1,PLSCR5,PRKCQ,PTPRC,SCML4,SEMA3E,SH3TC2,SI,SLC12A2,SLC6A15,SLC8A1,SLIT3,SLITRK1,SPEG,STARD8,STAT1,STXBP5L,TAS2R1,TCEAL3,TENM3,TFAP2B,TMEM132B,TNR,TRPS1,VWA3B | 79 |
| Cancer,Hematological Disease,Immunological Disease,Organismal Injury and Abnormalities | B-cell non-Hodgkin lymphoma | 0.0000967 | ABCC1,ABLIM1,ACVRL1,AFAP1L2,AGBL1,ARHGEF28,ARID1B,ARPP21,BCL11B,CAMTA1,CEP350,CHD6,CHEK2,CIITA,EPHA2,FYN,HIF1A,IQGAP1,JAK2,KCNK5,KDM2B,KLC1,let-7,LRRN3,MAP2K1,MYOD1,NHLRC3,NKX2-3,NKX2-5,NRG2,OPN4,PARP4,PAX5,POU2AF1,PTPRC,PTPRZ1,RNF213,SEMA3E,SPEG,SRPK2,STXBP6,TIMP2,TRAM1L1,TUBB6,VWA3B | 45 |
| Cell Death and Survival | Cell survival | 0.0001 | ABCC1,ABCC3,ABCC6,ACTL6A,ACVRL1,ADNP,AFAP1L2,AGO2,AKAP7,ALG6,ANKS1B,AQP3,ARID1B,BCL11B,CARD10,CBLB,CDH13,CHEK2,CRH,CSF3,CX3CL1,DAB2IP,EBF1,ECD,ENO1,EPHA2,EPS15L1,FAM120A,FGF18,FYN,GAB1,GATA4,GDNF,HIF1A,HINT1,IQGAP1,ITPKB,JAK2,JUP,KITLG,LMX1A,MAP2K1,MCOLN1,MITF,MSH5,MTSS1,MUC20,MYOD1,PHLPP1,PLCE1,POU2AF1,PRKCQ,PSAP,PTPRC,PTPRZ1,RASSF8,SAP30L,SLC37A4,STAT1,TCF7L2,TERF2,TGFB2,TIMP2,TNFSF13B,TPTE2,VPS13A,VRK1,WNT3A | 68 |
| Cancer,Hematological Disease,Immunological Disease,Organismal Injury and Abnormalities | Lymphoma | 0.000101 | ABCC1,ABLIM1,ACVRL1,AFAP1L2,AGBL1,ARHGEF28,ARID1B,ARPP21,BCL11B,C1R,CAMTA1,CBLB,CEP350,CHD6,CHEK2,CIITA,CMIP,CSNK1G2,CYB561,CYP51A1,DAPK1,EPHA2,FAM167B,FYN,HIF1A,IQGAP1,ITPKB,JAK2,KCNK5,KDM2B,KLC1,let-7,LRRN3,MAF,MAP2K1,MR1,MYOD1,NHLRC3,NKX2-3,NKX2-5,NRG2,OPN4,PARP4,PAX5,PCDH17,PDE7B,POU2AF1,PRKCQ,PTPRC,PTPRZ1,RNF213,SEMA3E,SLIT3,SPEG,SRPK2,STAT1,STXBP6,TCF7L2,TGFB2,TIMP2,TNFSF13B,TRAM1L1,TUBB6,VWA3B | 64 |
| Nervous System Development and Function | Sensory system development | 0.000105 | ABCC6,BFSP2,CRYAA/CRYAA2,EBF1,EPHA2,FYN,HIF1A,IRX6,LMX1A,MAF,MAN2B1,MCOLN1,MITF,OPN4,PACSIN1,PAX2,PAX5,PRKCQ,PRPF31,PSAP,SEMA3E,SLC12A2,STAT1,TGFB2,TIMP2,TMEM98,TYRP1 | 27 |
| Cellular Function and Maintenance,Molecular Transport | Efflux of anion | 0.000106 | ABCC1,ABCC3,FYN,SLC12A2 | 4 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cell-To-Cell Signaling and Interaction,Cellular Assembly and Organization,Cellular Function and Maintenance | Organization of intercellular junctions | 0.000108 | ADGRL3,CTNND2,HEG1,IL10RA,LMX1A,SEMA3E,SLITRK1,TGFB2,TNR,WNT3A | 10 |
| Cancer,Organismal Injury and Abnormalities,Respiratory Disease | Non-small cell lung carcinoma | 0.000108 | AAK1,ABCC3,ACVRL1,ADCY5,ADGRL3,AGBL1,AGO2,ANKRD22,ANKS1B,ARHGEF6,ARID1B,ARMC3,BCL11A,BRINP1,C1orf105,C6orf118,CCKBR,CDH13,CFAP43,CHD5,CHD6,CHEK2,CIITA,CPED1,CSMD3,CSNK1G2,CTNND2,DAPK1,DNAH7,DNAH8,DPP10,E2F7,E2F8,ENO1,EPHA2,F8,GALNT13,GRHL2,HEG1,HIF1A,IBTK,ICE1,IGSF9B,IQGAP1,ITPKB,JAK2,JUP,let-7,LRRN3,MAG,MAGI2,MAP2K1,MAP3K21,MIDN,MROH2B,MUC20,MYO3B,NCKAP5,NELL1,NTM,OCSTAMP,OR13F1,PABPC4,PAK5,PARD3,PARP4,PAX5,PCDH17,PHYHD1,PLCE1,PLSCR5,PRKCQ,PTPRC,RIMBP2,RNF213,SCML4,SEMA3E,SH3TC2,SI,SLC12A2,SLC6A15,SLC8A1,SLIT3,SLITRK1,SPEG,STARD8,STAT1,STXBP5L,TAS2R1,TCEAL3,TENM3,TFAP2B,TMEM132B,TNR,TPTE2,TRPC7,TRPS1,VWA3B,ZNF583 | 99 |
| Developmental Disorder | Hypoplasia | 0.00011 | ACVRL1,BCL11A,BCL11B,CYP51A1,FMN1,GATA4,GDNF,HAS2,JUP,KITLG,LMX1A,MAP2K1,NKX2-5,OXR1,PARD3,PAX2,PIK3AP1,POU2AF1,PROS1,PTPRC,SLC38A8,SLC8A1,SLIT3,TGFB2,TGFBR3,TRPS1,VRK1 | 27 |
| Cellular Development,Nervous System Development and Function,Tissue Development | Differentiation of neurons | 0.000112 | ALKAL2,ARPP21,BCL11B,BRINP1,CSF3,DISP3,Dmd,EBF1,EPHA2,GDNF,HIF1A,let-7,LMX1A,MAG,MAP2K1,NKX2-5,PAX2,PAX5,PTPRZ1,RIT2,SLC6A4,TGFB2,TIMP2,WNT3A | 24 |
| Gene Expression | Transactivation of RNA | 0.000114 | ACVRL1,AFAP1L2,CEP350,CIITA,GATA4,HIF1A,HNF4G,JUP,KLF1,KLF13,MAF,MAP2K1,MDFIC,MITF,MYOD1,NKX2-5,OPN4,PARD3,PAX2,PLCE1,POU2AF1,PRKCQ,RORA,STAT1,TCF7L2,TFAP2B,TRPS1,WNT3A | 28 |
| Cancer,Organismal Injury and Abnormalities,Reproductive System Disease | Breast or ovarian carcinoma | 0.000116 | AAK1,ABCC12,ABCC3,ABHD6,ABLIM1,ACVRL1,ADGRL3,ADNP,AGBL1,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARID1B,ARMC3,ATP5PF,BANK1,BCL11B,BICD2,C6orf118,CAMTA1,CBLN4,CCDC33,CCSER1,CHD5,CHEK2,CSMD3,CTNND2,DAPK1,DNAH7,DNAH8,E2F7,E2F8,ENPEP,EPHA2,ERO1A,ETNK1,F8,FGF18,FUCA2,FYN,HAS2,HIF1A,ICE1,IGSF21,IQGAP1,ITPKB,JAK2,KDM2B,KLC1,let-7,LRCH1,LRRC31,LY86,MAG,MAGI2,MAP2K1,MAP3K21,MGAT4B,mir-129,MITF,MUC13,MYO3B,NCKAP5,NTM,OTOF,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PCSK2,PHYHD1,PI16,PIK3R4,PKD1L2,PLPPR1,PRKCQ,PRSS54,PTPRZ1,RAD21L1,RAPGEF2,RGS20,RIMBP2,RNF144B,RNF213,RORA,SI,SLC6A15,SLC8A1,SLIT3,SLITRK1,SLITRK6,SMC1B,SPEG,SRPK2,STAG3,STARD8,STAT1,STXBP5L,SYNPO2,SYT17,SYT6,TAP1,TCF7L2,TENM3,TFAP2B,TGFB2,TGFBR3,TNR,TPTE2,TRDN,TRPC7,TYRP1,VPS13A,VWA3B,ZDHHC14,ZNF143,ZNF276 | 121 |
| Embryonic Development,Organismal Development | Development of head | 0.00012 | ABCC6,AGO2,BCL11B,BFSP2,CFAP43,CRYAA/CRYAA2,CX3CL1,DISC1,EBF1,EPHA2,FYN,GDNF,GRHL2,HIF1A,IRX6,KDM2B,LMX1A,MAF,MAN2B1,MAP2K1,MCOLN1,MITF,MYO3B,NKX2-3,NKX2-5,OPN4,PACSIN1,PARD3,PAX2,PAX5,PRKCQ,PRPF31,PSAP,RAPGEF2,RORA,SEMA3E,SLC6A4,SLIT3,SLITRK6,STAT1,TCF7L2,TGFB2,TGFBR3,TIMP2,TMEM98,TYRP1,WNT3A | 47 |
| Cellular Assembly and Organization,Cellular Function and Maintenance | Organization of cytoskeleton | 0.000121 | ABCC1,ABLIM1,ACVRL1,ADNP,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,AUTS2,BCL11B,BFSP2,BICD2,CBLN4,CDH13,CEP350,CRH,CRYAA/CRYAA2,CSMD3,CTNND2,DAB2IP,DAPK1,DISC1,Dmd,EIF4EBP2,EPHA2,FMN1,FYN,GAB1,GDNF,HAS2,IFT46,IQGAP1,JAK2,JUP,KITLG,KLC1,MAG,MAGI2,MAP2K1,MAP7,MTSS1,MYO3B,PACSIN1,PAK5,PARD3,PAX2,PLCE1,PRKCQ,PTPRZ1,RAPGEF2,RIT2,RNF6,SEMA3E,SLIT3,SLITRK1,SLITRK6,TCF7L2,TGFB2,TGFBR3,TNR,TRDN,WDR73,WNT3A | 63 |
| Cell Signaling | Ras protein signal transduction | 0.000123 | DAB2IP,ITPKB,JAK2,KITLG,MAP2K1,PLCE1,RIT2,TGFB2,TIMP2 | 9 |
| Cell Morphology | Morphology of tumor cell lines | 0.000123 | AMD1,CDH13,DAB2IP,DAPK1,FYN,GRHL2,IQGAP1,KDM2B,KITLG,MAP2K1,MITF,PAX2,PAX5,PHLPP1,PTPRC,RORA,TCF7L2 | 17 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Endocrine System Disorders,Organismal Injury and Abnormalities | Extrapancreatic neuroendocrine tumor | 0.000123 | ABCC1,ABCC12,ACBD5,ACVRL1,ADGRL3,AFAP1L2,ANKS1B,ARHGAP8/PRR5-ARHGAP8,ARHGEF6,ARID1B,ARMC12,BCL11A,BRINP1,C1orf105,C6orf118,CBLB,CCKBR,CCSER1,CDH19,CEP350,CFAP43,CHD6,CHEK2,CSMD3,CTNND2,DAPK1,DISP3,DNAH8,DPP10,ENPEP,EPS15L1,F8,GALNT13,GALNT17,GDNF,GRIK5,HNF4G,HTR3B,ICE1,IL20RA,IQGAP1,IRX6,JAK2,KCNH3,KCNK5,KIF13A,let-7,LSAMP,MAG,MAN2B1,MAP3K21,MBD2,MCOLN1,MROH2B,MYO3B,NCKAP5,NELL1,NOL4,NRG2,OTOF,PAK5,PARP4,PCDH17,PCSK2,PGBD5,PHYHD1,PIK3AP1,PKD1L2,PLCE1,PROS1,PTPRC,RBM20,REEP3,RIT2,RORA,SH3TC2,SI,SLC12A2,SLC12A8,SLC24A3,SLC8A1,SLIT3,SLITRK1,SOAT1,STARD8,STPG2,STXBP5L,SYT6,TAS2R1,TENM3,TERF2,TNFSF13B,TNR,TRPS1,VAT1L,VPS13A,XYLT1 | 97 |
| Molecular Transport,Protein Trafficking | Secretion of protein | 0.000125 | CBLN4,CYP51A1,PRKCQ,PSAP,RAB3B,RAB3C,RPH3AL,SOAT1,STXBP5L,SYT4,TGFB2 | 11 |
| Cellular Assembly and Organization | Organization of plasma membrane | 0.000131 | ADGRL3,CDH13,CDH15,CTNND2,GDNF,IL10RA,JUP,LMX1A,SEMA3E,SLITRK1,TNR,WNT3A | 12 |
| Cancer,Endocrine System Disorders,Organismal Injury and Abnormalities | Neuroendocrine tumor | 0.000133 | ABCC1,ABCC12,ACBD5,ACVRL1,ADGRL3,AFAP1L2,ANKS1B,ARHGAP8/PRR5-ARHGAP8,ARHGEF6,ARID1B,ARMC12,BCL11A,BRINP1,C1orf105,C6orf118,CBLB,CCKBR,CCSER1,CDH19,CEP350,CFAP43,CHD6,CHEK2,CSMD3,CTNND2,DAPK1,DISP3,DNAH8,DPP10,ENPEP,EPS15L1,F8,GALNT13,GALNT17,GDNF,GRIK5,HIF1A,HNF4G,HTR3B,ICE1,IL20RA,IQGAP1,IRX6,JAK2,KCNH3,KCNK5,KIF13A,let-7,LSAMP,MAG,MAN2B1,MAP3K21,MBD2,MCOLN1,MROH2B,MYO3B,NCKAP5,NELL1,NOL4,NRG2,OTOF,PAK5,PARP4,PCDH17,PCSK2,PGBD5,PHYHD1,PIK3AP1,PKD1L2,PLCE1,PROS1,PTPRC,RBM20,REEP3,RIT2,RORA,SH3TC2,SI,SLC12A2,SLC12A8,SLC24A3,SLC8A1,SLIT3,SLITRK1,SOAT1,STARD8,STPG2,STXBP5L,SYT6,TAS2R1,TENM3,TERF2,TNFSF13B,TNR,TRPS1,VAT1L,VPS13A,XYLT1 | 98 |
| Cellular Assembly and Organization | Formation of cellular membrane | 0.000138 | ADGRL3,ADNP,CRH,DISC1,FYN,IGSF21,IGSF9B,IQGAP1,JUP,LRRN3,MYOD1,NRG2,PARD3,SLC12A2,SLITRK1,SLITRK6,TMPO,TNR | 18 |
| Cancer,Endocrine System Disorders,Organismal Injury and Abnormalities,Reproductive System Disease | Ovarian carcinoma | 0.00014 | ABCC3,ABHD6,ADNP,AGBL1,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARID1B,BICD2,C6orf118,CAMTA1,CBLN4,CCDC33,CHD5,CHEK2,CSMD3,CTNND2,DNAH7,ENPEP,EPHA2,ERO1A,FGF18,FUCA2,HAS2,IGSF21,JAK2,KDM2B,LRRC31,LY86,MAG,MAGI2,MAP2K1,MAP3K21,MGAT4B,MYO3B,NCKAP5,NTM,OTOF,PAK5,PAPOLA,PCSK2,PKD1L2,PRKCQ,PRSS54,RGS20,RIMBP2,RNF144B,RORA,SI,SLC6A15,SLITRK1,SMC1B,SPEG,SRPK2,STAT1,STXBP5L,SYNPO2,TAP1,TENM3,TFAP2B,TNR,TPTE2,TRPC7,VPS13A,VWA3B,ZDHHC14,ZNF143,ZNF276 | 68 |
| Cancer,Organismal Injury and Abnormalities,Respiratory Disease | Lung adenocarcinoma | 0.000141 | AAK1,ABCC3,ADCY5,ADGRL3,AGO2,ANKRD22,ANKS1B,ARHGEF6,ARID1B,ARMC3,BCL11A,BRINP1,C1orf105,CFAP43,CHD5,CHD6,CHEK2,CIITA,CPED1,CSMD3,CSNK1G2,CTNND2,DAPK1,DNAH7,DNAH8,DPP10,E2F7,E2F8,ENO1,EPHA2,F8,GRHL2,ICE1,IGSF9B,IQGAP1,ITPKB,JAK2,JUP,LRRN3,MAG,MAGI2,MAP2K1,MAP3K21,MYO3B,NCKAP5,NTM,OCSTAMP,OR13F1,PAK5,PARD3,PARP4,PCDH17,PHYHD1,PLCE1,PLSCR5,PRKCQ,PTPRC,SCML4,SEMA3E,SH3TC2,SI,SLC12A2,SLC6A15,SLC8A1,SLIT3,SLITRK1,SPEG,STARD8,STAT1,STXBP5L,TAS2R1,TCEAL3,TENM3,TFAP2B,TMEM132B,TNR,TRPS1,VWA3B | 78 |
| Gene Expression | Transactivation | 0.000141 | ACVRL1,AFAP1L2,CEP350,CIITA,GAB1,GATA4,HIF1A,HNF4G,JUP,KLF1,KLF13,MAF,MAP2K1,MDFIC,MITF,MYOD1,NKX2-5,OPN4,PARD3,PAX2,PLCE1,POU2AF1,PRKCQ,RORA,STAT1,TCF7L2,TFAP2B,TRPS1,WNT3A | 29 |
| Embryonic Development,Organismal Development | Growth of embryo | 0.000142 | ACVRL1,AGO2,AMD1,CSF3,CX3CL1,DISC1,DISP3,FGF18,GATA4,GDNF,HIF1A,JAK2,KDM2B,KIF26A,KITLG,let-7,MAP2K1,NKX2-5,NRG2,ORC3,RAPGEF2,SLC12A2,SLC8A1,STAT1,TCF7L2,TIMP2,WNT3A | 27 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Organismal Injury and Abnormalities,Respiratory Disease | Lung carcinoma | 0.000148 | AAK1,ABCC1,ABCC12,ABCC3,ACVRL1,ADCY5,ADGRL3,AFAP1L2,AGBL1,AGO2,ANKRD22,ANKS1B,ARHGAP8/PRR5-ARHGAP8,ARHGEF6,ARID1B,ARMC12,ARMC3,BCL11A,BICD2,BRINP1,C1orf105,C6orf118,CBLB,CCKBR,CCSER1,CDH13,CDH19,CEP350,CFAP43,CHD5,CHD6,CHEK2,CIITA,CPED1,CSMD3,CSNK1G2,CTNND2,DAPK1,DISP3,DNAH7,DNAH8,DPP10,E2F7,E2F8,ENO1,ENPEP,EPHA2,EPS15L1,F8,FMN1,GALNT13,GALNT17,GRHL2,GRIK5,HEG1,HIF1A,HNF4G,HTR3B,IBTK,ICE1,IGSF9B,IL20RA,IQGAP1,IRX6,ITPKB,JAK2,JUP,KCNH3,KIF13A,KIF26A,let-7,LRRN3,LSAMP,MAG,MAGI2,MAN2B1,MAP2K1,MAP3K21,MBD2,MCOLN1,MIDN,MROH2B,MUC20,MYO3B,NCKAP5,NELL1,NOL4,NTM,OCSTAMP,OR13F1,OTOF,PABPC4,PAK5,PARD3,PARP4,PAX5,PCDH17,PCSK2,PGBD5,PHYHD1,PIK3AP1,PKD1L2,PLCE1,PLSCR5,PRKCQ,PROS1,PTPRC,RBM20,REEP3,RIMBP2,RNF213,RORA,SCML4,SEMA3E,SH3TC2,SI,SLC12A2,SLC6A15,SLC8A1,SLIT3,SLITRK1,SOAT1,SPEG,STARD8,STAT1,STXBP5L,SYT6,TAS2R1,TCEAL3,TENM3,TERF2,TFAP2B,TMEM132B,TNFSF13B,TNR,TPTE2,TRPC7,TRPS1,VAT1L,VPS13A,VWA3B,XYLT1,ZNF583 | 143 |
| Cancer,Hematological Disease,Immunological Disease,Organismal Injury and Abnormalities | Neoplasia of leukocytes | 0.000151 | ABCC1,ABCC3,ABLIM1,ACVRL1,AFAP1L2,AGBL1,ARHGEF28,ARID1B,ARPP21,BCL11A,BCL11B,BRINP1,C1orf105,C1R,C6orf118,CAMTA1,CBLB,CCKBR,CEP350,CHD6,CHEK2,CIITA,CMIP,CSNK1G2,CTNND2,CYB561,CYP51A1,DAPK1,DNAH7,E2F7,EBF1,ENPEP,EPHA2,ETNK1,FAM120A,FAM167B,FYN,HIF1A,IQGAP1,ITPKB,JAK2,KCNK5,KDM2B,KITLG,KLC1,let-7,LRRN3,MAF,MAGI2,MAP2K1,MIDN,MR1,MYOD1,NELL1,NHLRC3,NKX2-3,NKX2-5,NRG2,OPN4,PARD3,PARP4,PAX2,PAX5,PCDH17,PDE7B,PKD1L2,PLCE1,POU2AF1,PRKCQ,PTPRC,PTPRZ1,RHOBTB1,RNF213,RORA,SEMA3E,SI,SLIT3,SPEG,SRPK2,STAT1,STXBP6,TCEAL3,TCF7L2,TGFB2,TIMP2,TNFSF13B,TRAM1L1,TSPAN7,TTC28,TUBB6,TYRP1,VWA3B,ZNF276 | 93 |
| Cellular Development,Cellular Growth and Proliferation,Nervous System Development and Function,Tissue Development | Growth of neurites | 0.000155 | ADNP,ARID1B,CSF3,CTNND2,DAB2IP,DISC1,EPHA2,FGF18,GAB1,GDNF,HIF1A,IQGAP1,KIF26A,KITLG,MAG,MAP2K1,PAK5,PAX2,PSAP,PTPRZ1,RIT2,RNF6,SLC12A2,TIMP2,TNFSF13B,WNT3A | 26 |
| Cardiovascular Disease,Developmental Disorder,Organismal Injury and Abnormalities | Hypoplasia of heart ventricle | 0.000157 | CYP51A1,JUP,PARD3,SLC8A1,TGFB2,TGFBR3 | 6 |
| Cancer,Organismal Injury and Abnormalities | Lymphoreticular neoplasm | 0.000159 | ABCC1,ABCC3,ABLIM1,ACVRL1,ADCY5,AFAP1L2,AGBL1,ANKRD22,ANKS1B,ARHGEF28,ARID1B,ARPP21,B3GLCT,BCL11B,BRINP1,C1R,CAMTA1,CBLB,CEP350,CHD6,CHEK2,CIITA,CMIP,CSF3,CSMD3,CSNK1G2,CTNND2,CYB561,CYP51A1,DAPK1,DNAH7,DNAH8,EPHA2,ETNK1,FAM117A,FAM167B,FMN1,FYN,GATA4,GJB5,HIF1A,HNF4G,IQGAP1,ITPKB,JAK2,KCNK5,KDM2B,KIF26A,KLC1,let-7,LRRN3,MAF,MAP2K1,MAP3K21,MAP7,mir-129,MR1,MUC20,MYO3B,MYOD1,NHLRC3,NKX2-3,NKX2-5,NRG2,OPN4,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PLCE1,POU2AF1,PRKCQ,PTPRC,PTPRZ1,RNF213,RPL3,RPLP1,SEMA3E,SLC13A2,SLC22A5,SLC6A15,SLIT3,SPEG,SRPK2,STAG3,STAT1,STXBP6,SYNPO2,TCEAL3,TCF7L2,TENM3,TGFB2,TIMP2,TNFSF13B,TNR,TRAM1L1,TUBB6,VWA3B,ZNF276 | 102 |
| Embryonic Development,Organ Development,Organismal Development,Tissue Development | Development of sensory organ | 0.000164 | ABCC6,BFSP2,CRYAA/CRYAA2,EBF1,EPHA2,FYN,HIF1A,IRX6,MAF,MAN2B1,MCOLN1,MITF,MYO3B,NKX2-5,OPN4,PACSIN1,PAX2,PAX5,PRKCQ,PRPF31,PSAP,SEMA3E,SLITRK6,STAT1,TGFB2,TIMP2,TMEM98,TYRP1,WNT3A | 29 |
| Lipid Metabolism,Molecular Transport,Small Molecule Biochemistry | Transport of leukotriene C4 | 0.000174 | ABCC1,ABCC3,ABCC6 | 3 |
| Cell Morphology,Nervous System Development and Function,Neurological Disease,Tissue Morphology | Abnormal morphology of neurons | 0.000182 | ACVRL1,BICD2,BRINP1,CX3CL1,EIF4EBP2,FYN,GDNF,KIF26A,LMX1A,MAG,MAGI2,MAN2B1,MCOLN1,OPN4,OTOF,PACSIN1,PARD3,PRKCQ,PSAP,PTPRC,SLC12A2,SLC6A15,SLC6A4,SLITRK6,TNR,VPS13A | 26 |
| Cell Cycle,DNA Replication, Recombination, and Repair | Synapsis of cells | 0.000182 | GDNF,MSH5,RAD21L1,STAG3,SYCP3 | 5 |
| Cellular Assembly and Organization | Organization of cellular membrane | 0.000191 | AAK1,ADGRL3,CDH13,CDH15,CTNND2,EPS15L1,GDNF,IL10RA,JUP,LMX1A,REEP3,SEMA3E,SGCD,SLITRK1,SYT2,TNR,WNT3A | 17 |
| Cellular Development,Cellular Growth and Proliferation,Nervous System Development and Function,Tissue Development | Proliferation of neuronal cells | 0.000194 | ADNP,ARID1B,BICD2,CSF3,CTNND2,CX3CL1,DAB2IP,DISC1,EPHA2,FGF18,GAB1,GDNF,HIF1A,IQGAP1,IRX6,KIF26A,KITLG,MAG,MAP2K1,PAK5,PAX2,PSAP,PTPRZ1,RIT2,RNF6,SLC12A2,TIMP2,TNFSF13B,WNT3A | 29 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cellular Development,Cellular Growth and Proliferation,Connective Tissue Development and Function,Hematological System Development and Function,Hematopoiesis,Organismal Development,Tissue Development | Generation of erythroid precursor cells | 0.000195 | AGO2,CSF3,HIF1A,JAK2,KITLG,KLF1,STAT1 | 7 |
| Cancer,Neurological Disease,Organismal Injury and Abnormalities | Gliomatosis cerebri | 0.000197 | ACBD5,ADGRL3,ADNP,ANKS1B,AQP3,ARHGAP31,ARHGEF28,BICD2,C1R,CAMTA1,CBLB,CCDC33,CCKBR,CDH13,CDH15,CEP350,CFAP43,CHD5,CHD6,CHEK2,CPED1,CTNND2,DISP3,DNAH7,DNAH8,EPHA2,FAM167B,FGF18,HIF1A,IBTK,ICE1,IFT46,IGSF9B,ITPKB,JCAD,JUP,KCNK5,KIF13A,KIF26A,KLF13,LMX1A,MAF,MAN2B1,MAP3K21,MIDN,MITF,MOCS2,MR1,MTSS1,MYO3B,NCKAP5,NHLRC3,NRG2,ODF3B,OTOF,PABPC4,PAPOLA,PARD3,PARP4,PCDH17,PCSK2,PDE7B,PIK3AP1,PLCE1,PLSCR5,PRIMA1,PRKCQ,PRPF31,PTPRC,PTPRZ1,RAB3C,RASSF8,RIMBP2,RNF168,RNF213,RNF6,SH3TC2,SI,SLC13A2,SLC35A3,SLIT3,SPEG,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,SYNPO2,TAS2R1,TGFB2,TSPAN17,TTC28,TYRP1,ZDHHC14 | 94 |
| Cell Death and Survival | Cell viability | 0.000202 | ABCC1,ABCC3,ACTL6A,ACVRL1,ADNP,AFAP1L2,AGO2,AKAP7,ALG6,ANKS1B,AQP3,ARID1B,BCL11B,CARD10,CDH13,CHEK2,CRH,CSF3,CX3CL1,DAB2IP,EBF1,ECD,ENO1,EPHA2,EPS15L1,FAM120A,FGF18,GAB1,GATA4,GDNF,HIF1A,HINT1,IQGAP1,ITPKB,JAK2,KITLG,LMX1A,MAP2K1,MCOLN1,MITF,MSH5,MTSS1,MUC20,MYOD1,PHLPP1,PLCE1,POU2AF1,PRKCQ,PSAP,PTPRC,PTPRZ1,RASSF8,SAP30L,SLC37A4,STAT1,TCF7L2,TERF2,TGFB2,TIMP2,TNFSF13B,TPTE2,VPS13A,VRK1,WNT3A | 64 |
| Cancer,Hematological Disease,Immunological Disease,Organismal Injury and Abnormalities | Non-Hodgkin lymphoma | 0.000208 | ABCC1,ABLIM1,ACVRL1,AFAP1L2,AGBL1,ARHGEF28,ARID1B,ARPP21,BCL11B,C1R,CAMTA1,CBLB,CEP350,CHD6,CHEK2,CIITA,DAPK1,EPHA2,FYN,HIF1A,IQGAP1,ITPKB,JAK2,KCNK5,KDM2B,KLC1,let-7,LRRN3,MAF,MAP2K1,MR1,MYOD1,NHLRC3,NKX2-3,NKX2-5,NRG2,OPN4,PARP4,PAX5,PCDH17,PDE7B,POU2AF1,PRKCQ,PTPRC,PTPRZ1,RNF213,SEMA3E,SPEG,SRPK2,STAT1,STXBP6,TIMP2,TRAM1L1,TUBB6,VWA3B | 55 |
| Cancer,Hematological Disease,Immunological Disease,Organismal Injury and Abnormalities | Philadelphia-positive chronic myeloid leukemia | 0.000213 | ABCC3,EPHA2,FYN,JAK2,RPL3 | 5 |
| Cancer,Hematological Disease,Immunological Disease,Organismal Injury and Abnormalities | Tumorigenesis of lymphocytes | 0.000217 | ABCC1,ABCC3,ABLIM1,ACVRL1,AFAP1L2,AGBL1,ARHGEF28,ARID1B,ARPP21,BCL11A,BCL11B,BRINP1,C1orf105,C1R,C6orf118,CAMTA1,CBLB,CCKBR,CEP350,CHD6,CHEK2,CIITA,CMIP,CSNK1G2,CTNND2,CYB561,CYP51A1,DAPK1,DNAH7,E2F7,EBF1,ENPEP,EPHA2,FAM120A,FAM167B,FYN,HIF1A,IQGAP1,ITPKB,JAK2,KCNK5,KDM2B,KITLG,KLC1,let-7,LRRN3,MAF,MAGI2,MAP2K1,MIDN,MR1,MYOD1,NELL1,NHLRC3,NKX2-3,NKX2-5,NRG2,OPN4,PARP4,PAX5,PCDH17,PDE7B,PKD1L2,PLCE1,POU2AF1,PRKCQ,PTPRC,PTPRZ1,RNF213,RORA,SEMA3E,SI,SLIT3,SPEG,SRPK2,STAT1,STXBP6,TCEAL3,TCF7L2,TGFB2,TIMP2,TNFSF13B,TRAM1L1,TSPAN7,TTC28,TUBB6,TYRP1,VWA3B,ZNF276 | 89 |
| Developmental Disorder | Hypoplasia of organ | 0.000229 | ACVRL1,BCL11A,BCL11B,CYP51A1,FMN1,GATA4,GDNF,HAS2,JUP,LMX1A,MAP2K1,NKX2-5,OXR1,PARD3,PAX2,PIK3AP1,POU2AF1,PROS1,PTPRC,SLC8A1,SLIT3,TGFB2,TGFBR3,VRK1 | 24 |
| Cell Death and Survival | Necrosis | 0.000237 | AAK1,ABCC1,ABCC3,ACVRL1,ADCY5,ADNP,AFAP1L2,AKAP7,ARHGEF6,BCL11A,BCL11B,BRINP1,CBLB,CHEK2,CIITA,CRH,CRYAA/CRYAA2,CSF3,CX3CL1,DAB2IP,DAPK1,DLST,E2F7,E2F8,EBF1,ECD,ENO1,EPHA2,FGF18,FYN,GAB1,GATA4,GDNF,GFRAL,GLO1,GRHL2,GRIK5,HAS2,HIF1A,HINT1,ITPKB,JAK2,JUP,KDM2B,KITLG,KLF13,let-7,LMX1A,LTB4R2,MAF,MAG,MAP2K1,MCOLN1,MITF,MSH5,MTSS1,MYOD1,NKX2-5,OXR1,PARD3,PAX2,PAX5,PCSK2,PDE7B,PELI2,PERP,PHLPP1,PIK3AP1,PLCE1,POU2AF1,PRKCQ,PROS1,PSAP,PTPRC,PTPRZ1,RAPGEF2,RNF144B,RPL3,Serpinb6b,SGCD,SLC8A1,SLIT3,SOAT1,SRPK2,STAT1,STX6,SYCP3,TCF7L2,TERF2,TFAP2B,TGFB2,TGFBR3,TIMP2,TMBIM6,TMCC3,TNFSF13B,TOMM20,TPTE2,TRPS1,TUBB6,TYRP1,VPS13A,VRK1,WNT3A,XCL1 | 105 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cell-To-Cell Signaling and Interaction,Cellular Assembly and Organization,Cellular Development,Cellular Function and Maintenance,Cellular Growth and Proliferation,Nervous System Development and Function,Tissue Development | Developmental process of synapse | 0.000242 | ADGRL3,ADNP,CRH,DISC1,FYN,IGSF21,IGSF9B,LRRN3,MYOD1,NRG2,PARD3,SLC12A2,SLITRK1,SLITRK6,TNR | 15 |
| Embryonic Development,Nervous System Development and Function,Organ Development,Organ Morphology,Organismal Development,Tissue Development,Visual System Development and Function | Morphology of eye | 0.000243 | ABCC6,BFSP2,CRYAA/CRYAA2,IRX6,MAF,MAN2B1,MCOLN1,MITF,OPN4,PACSIN1,PAX2,PRKCQ,PRPF31,PSAP,STAT1,TGFB2,TMEM98,TYRP1 | 18 |
| Cell Death and Survival | Regeneration of cells | 0.000246 | CSF3,GDNF,HIF1A,JAK2,let-7,MAG,MAP2K1,OPN4,PCSK2,SLC12A2,XYLT1 | 11 |
| Immunological Disease | Abnormal morphology of immune system | 0.000256 | BCL11A,BCL11B,CSF3,EBF1,FYN,ITPKB,KLF13,MAN2B1,NKX2-3,PIK3AP1,POU2AF1,PRKCQ,PSAP,PTPRC,SOAT1,TAP1,XCL1 | 17 |
| Cancer,Endocrine System Disorders,Organismal Injury and Abnormalities,Reproductive System Disease | Ovarian tumor | 0.000257 | ABCC3,ABHD6,ADNP,AGBL1,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARID1B,BICD2,C6orf118,CAMTA1,CBLN4,CCDC33,CHD5,CHEK2,CSF3,CSMD3,CTNND2,DNAH7,E2F8,ENO1,ENPEP,EPHA2,ERO1A,FGF18,FUCA2,GATA4,HAS2,IGSF21,JAK2,KDM2B,let-7,LRRC31,LY86,MAG,MAGI2,MAP2K1,MAP3K21,MGAT4B,MYO3B,NCKAP5,NTM,OTOF,PAK5,PAPOLA,PCSK2,PKD1L2,PRKCQ,PRSS54,RGS20,RIMBP2,RNF144B,RORA,SI,SLC6A15,SLITRK1,SMC1B,SPEG,SRPK2,STAT1,STXBP5L,SYNPO2,TAP1,TENM3,TFAP2B,TGFBR3,TNR,TPTE2,TRPC7,VPS13A,VWA3B,ZDHHC14,ZNF143,ZNF276 | 74 |
| Cellular Development | Differentiation of nervous system | 0.000263 | ALKAL2,ARPP21,BCL11B,BRINP1,CSF3,DISC1,DISP3,Dmd,EBF1,EPHA2,GDNF,HIF1A,let-7,LMX1A,MAG,MAP2K1,NKX2-5,PAX2,PAX5,PTPRZ1,RIT2,SLC6A4,TCF7L2,TGFB2,TIMP2,TMEM98,WNT3A | 27 |
| Cancer,Neurological Disease,Organismal Injury and Abnormalities | Brain cancer | 0.000269 | ACBD5,ADGRL3,ADNP,ANKS1B,AQP3,ARHGAP31,ARHGEF28,ARID1B,BICD2,C1R,CAMTA1,CBLB,CCDC33,CCKBR,CDH13,CDH15,CEP350,CFAP43,CHD5,CHD6,CHEK2,CPED1,CTNND2,DISP3,DNAH7,DNAH8,EPHA2,FAM167B,FGF18,HIF1A,IBTK,ICE1,IFT46,IGSF9B,ITPKB,JAK2,JCAD,JUP,KCNK5,KIF13A,KIF26A,KLF13,LMX1A,MAF,MAN2B1,MAP2K1,MAP3K21,MIDN,MITF,MOCS2,MR1,MTSS1,MYO3B,NCKAP5,NHLRC3,NRG2,ODF3B,OTOF,PABPC4,PAPOLA,PARD3,PARP4,PCDH17,PCSK2,PDE7B,PIK3AP1,PLCE1,PLSCR5,PRIMA1,PRKCQ,PRPF31,PTPRC,PTPRZ1,RAB3C,RASSF8,RIMBP2,RNF168,RNF213,RNF6,SH3TC2,SI,SLC13A2,SLC35A3,SLIT3,SPEG,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,SYNPO2,TAS2R1,TERF2,TGFB2,TSPAN17,TTC28,TYRP1,ZDHHC14 | 98 |
| Cellular Development,Cellular Growth and Proliferation,Hematological System Development and Function,Humoral Immune Response,Lymphoid Tissue Structure and Development | Proliferation of B lymphocytes | 0.000274 | ARHGEF6,BANK1,BCL11A,CBLB,CRH,EBF1,FYN,HIF1A,KITLG,LY86,MAG,PIK3AP1,POU2AF1,PTPRC,ST6GALNAC2,STAT1,TNFSF13B,WNT3A | 18 |
| Digestive System Development and Function,Gastrointestinal Disease,Nervous System Development and Function,Neurological Disease | Abnormal morphology of enteric ganglion | 0.000274 | GDNF,KIF26A,PSAP | 3 |
| Cell-To-Cell Signaling and Interaction,Nervous System Development and Function | Synaptic transmission | 0.000291 | ADNP,AKAP7,ANKS1B,CCKBR,CRH,EIF4EBP2,FYN,GRIK5,HIF1A,HTR3B,JAK2,KCNJ9,PCDH17,PDE7B,RIMBP2,RIT2,SLC6A4,SYPL1,TNR,WNT3A | 20 |
| Cellular Movement | Cell movement of tumor cell lines | 0.000293 | AGO2,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,CARD10,CBLB,CCKBR,CDH13,CSF3,CX3CL1,EPHA2,FAM120A,FYN,GAB1,GDNF,GRHL2,HAS2,HIF1A,IL20RA,IQGAP1,JAK2,JUP,KITLG,let-7,MAP2K1,MAP3K21,MITF,MTSS1,MUC13,MUC20,PARD3,PAX2,PAX5,PHLPP1,PPIC,PRKCQ,PTPRZ1,RASSF8,SEMA3E,SLC12A2,ST6GALNAC2,STAT1,TCF7L2,TGFB2,TGFBR3,TIMP2,TMPO,TRPS1,WNT3A,XCL1 | 50 |
| Cancer,Organismal Injury and Abnormalities | Metastasis of intestinal cell lines | 0.000302 | MAP2K1,TCF7L2 | 2 |
| Tissue Morphology | Sensitivity of epithelial tissue | 0.000302 | ABCC1,TERF2 | 2 |
| Auditory and Vestibular System Development and Function,Auditory Disease,Cell Morphology,Organ Morphology,Organismal Development,Organismal Injury and Abnormalities | Abnormal morphology of interdental cells | 0.000302 | SLC12A2,TGFB2 | 2 |
| Cell Death and Survival,Lipid Metabolism,Small Molecule Biochemistry | Cytotoxicity of 15-deoxy-delta-12,14 -PGJ 2 | 0.000302 | ABCC1,ABCC3 | 2 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cellular Function and Maintenance,Molecular Transport | Efflux of organic anion | 0.000302 | ABCC1,ABCC3 | 2 |
| Cancer,Organismal Injury and Abnormalities | Multiple cancers | 0.000303 | AAK1,ABCC1,ABCC12,ABCC3,ABHD6,ABLIM1,ACVRL1,ADGRL3,ADNP,AGBL1,AGO2,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARID1B,ARMC3,ATP5PF,BANK1,BCL11B,BICD2,C6orf118,CAMTA1,CBLN4,CCDC33,CCSER1,CHD5,CHEK2,CIITA,CSF3,CSMD3,CTNND2,DAPK1,DNAH7,DNAH8,E2F7,E2F8,EIF1,ENO1,ENPEP,EPHA2,ERO1A,ETNK1,F8,FAM120A,FGF18,FUCA2,FYN,GLO1,GRHL2,HAS2,HIF1A,ICE1,IGSF21,IQGAP1,ITPKB,JAK2,KDM2B,KLC1,let-7,LRCH1,LRRC31,LY86,MAG,MAGI2,MAP2K1,MAP3K21,MGAT4B,MIDN,mir-129,MITF,MR1,MUC13,MYO3B,NCKAP5,NTM,OTOF,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PCSK2,PHYHD1,PI16,PIK3R4,PKD1L2,PLPPR1,PRKCQ,PRSS54,PTPRC,PTPRZ1,RAD21L1,RAPGEF2,RGS20,RIMBP2,RNF144B,RNF213,RORA,RPH3AL,SI,SLC6A15,SLC6A4,SLC8A1,SLIT3,SLITRK1,SLITRK6,SMC1B,SPEG,SRPK2,STAG3,STARD8,STAT1,STXBP5L,SYNPO2,SYT17,SYT6,TAP1,TCEAL3,TCF7L2,TENM3,TFAP2B,TGFB2,TGFBR3,TIMP2,TNR,TPTE2,TRDN,TRPC7,TRPS1,TTC28,TUBB6,TYRP1,VPS13A,VWA3B,ZDHHC14,ZNF143,ZNF276 | 140 |
| Cellular Movement | Migration of tumor cell lines | 0.000316 | AGO2,ARHGAP8/PRR5-ARHGAP8,ARHGEF6,CARD10,CBLB,CCKBR,CDH13,CSF3,CX3CL1,EPHA2,FAM120A,FYN,GAB1,GDNF,GRHL2,HAS2,HIF1A,IL20RA,IQGAP1,JAK2,JUP,KITLG,let-7,MAP2K1,MAP3K21,MITF,MTSS1,MUC13,MUC20,PAX5,PPIC,PRKCQ,PTPRZ1,RASSF8,SEMA3E,SLC12A2,STAT1,TCF7L2,TGFBR3,TIMP2,TMPO,TRPS1,WNT3A,XCL1 | 44 |
| Cancer,Hematological Disease,Organismal Injury and Abnormalities | Hematologic cancer of cells | 0.000318 | ABCC1,ABCC3,ABLIM1,ACVRL1,AFAP1L2,AGBL1,ARHGEF28,ARID1B,ARPP21,BCL11B,BRINP1,C1orf105,C1R,C6orf118,CAMTA1,CBLB,CCKBR,CEP350,CHD6,CHEK2,CIITA,CMIP,CSNK1G2,CTNND2,CYB561,CYP51A1,DAPK1,DNAH7,E2F7,EBF1,ENPEP,EPHA2,FAM167B,FYN,HIF1A,IQGAP1,ITPKB,JAK2,KCNK5,KDM2B,KLC1,let-7,LRRN3,MAF,MAGI2,MAP2K1,MR1,MYOD1,NELL1,NHLRC3,NKX2-3,NKX2-5,NRG2,OPN4,PARD3,PARP4,PAX2,PAX5,PCDH17,PDE7B,PKD1L2,PLCE1,POU2AF1,PRKCQ,PTPRC,PTPRZ1,RHOBTB1,RNF213,RORA,SEMA3E,SI,SLIT3,SPEG,SRPK2,STAT1,STXBP6,TCF7L2,TGFB2,TIMP2,TNFSF13B,TRAM1L1,TSPAN7,TUBB6,TYRP1,VWA3B | 85 |
| Post-Translational Modification | Phosphorylation of protein | 0.000322 | AAK1,ACVRL1,AFAP1L2,CBLB,CHEK2,CRH,CRYAA/CRYAA2,CSNK1G2,CSNK1G3,CX3CL1,DAB2IP,DAPK1,FYN,GATA4,IBTK,IQGAP1,ITPKB,JAK2,KITLG,LRRN3,MAP2K1,MYO3B,MYOD1,PELI2,PHLPP1,PRKCQ,PSAP,PTPRC,RIT2,SRPK2,TGFB2,VRK1,WNT3A | 33 |
| Hematological System Development and Function,Lymphoid Tissue Structure and Development,Tissue Morphology | Quantity of helper T lymphocytes | 0.000323 | CIITA,CSF3,HIF1A,IL10RA,MAF,PIK3AP1,POU2AF1,PRKCQ,STAT1,TAP1 | 10 |
| Cancer,Hematological Disease,Immunological Disease,Organismal Injury and Abnormalities | B cell cancer | 0.000325 | ABCC1,ABLIM1,ACVRL1,AFAP1L2,AGBL1,ARHGEF28,ARID1B,ARPP21,BCL11A,BCL11B,BRINP1,C1orf105,C6orf118,CAMTA1,CCKBR,CEP350,CHD6,CHEK2,CIITA,CMIP,DAPK1,DNAH7,E2F7,EBF1,ENPEP,EPHA2,FAM120A,FYN,HIF1A,IQGAP1,ITPKB,JAK2,KCNK5,KDM2B,KITLG,KLC1,let-7,LRRN3,MAP2K1,MIDN,MR1,MYOD1,NELL1,NHLRC3,NKX2-3,NKX2-5,NRG2,OPN4,PARP4,PAX5,PDE7B,PLCE1,POU2AF1,PTPRC,PTPRZ1,RNF213,RORA,SEMA3E,SPEG,SRPK2,STXBP6,TCEAL3,TGFB2,TIMP2,TRAM1L1,TSPAN7,TTC28,TUBB6,TYRP1,VWA3B,ZNF276 | 71 |
| Cell-To-Cell Signaling and Interaction,Cellular Assembly and Organization,Cellular Function and Maintenance,Tissue Development | Organization of synapse | 0.000338 | ADGRL3,CTNND2,IL10RA,LMX1A,SEMA3E,SLITRK1,TNR,WNT3A | 8 |
| Cellular Assembly and Organization | Formation of plasma membrane | 0.000339 | ADGRL3,ADNP,CRH,DISC1,FYN,IGSF21,IGSF9B,IQGAP1,JUP,LRRN3,MYOD1,NRG2,PARD3,SLC12A2,SLITRK1,SLITRK6,TNR | 17 |
| Cell Morphology,Cellular Assembly and Organization,Cellular Function and Maintenance | Formation of lamellipodia | 0.000346 | ABLIM1,ARHGEF6,AUTS2,CDH13,CTNND2,FYN,GAB1,GDNF,KITLG,PARD3,PLCE1,TGFBR3 | 12 |
| Cell Death and Survival | Cell death of immune cells | 0.000351 | ABCC1,BCL11A,BCL11B,CHEK2,CIITA,CSF3,CX3CL1,DAPK1,EBF1,FYN,HIF1A,ITPKB,JAK2,KITLG,KLF13,MAP2K1,PAX5,PELI2,PERP,PIK3AP1,PLCE1,POU2AF1,PRKCQ,PROS1,PTPRC,Serpinb6b,SOAT1,STAT1,TGFB2,TNFSF13B,WNT3A,XCL1 | 32 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Hematological Disease,Organismal Injury and Abnormalities | Mature lymphocytic neoplasm | 0.000351 | ABCC1,ABCC3,ABLIM1,ACVRL1,AFAP1L2,AGBL1,ARHGEF28,ARID1B,ARPP21,BCL11A,BCL11B,C1R,CAMTA1,CBLB,CEP350,CHD6,CHEK2,CIITA,CTNND2,DAPK1,DNAH7,E2F7,EBF1,EPHA2,FAM120A,FYN,HIF1A,IQGAP1,ITPKB,JAK2,KCNK5,KDM2B,KITLG,KLC1,let-7,LRRN3,MAF,MAGI2,MAP2K1,MIDN,MR1,MYOD1,NHLRC3,NKX2-3,NKX2-5,NRG2,OPN4,PARP4,PAX5,PCDH17,PDE7B,PKD1L2,POU2AF1,PRKCQ,PTPRC,PTPRZ1,SEMA3E,SI,SPEG,SRPK2,STAT1,STXBP6,TCEAL3,TGFB2,TIMP2,TRAM1L1,TTC28,TUBB6,VWA3B,ZNF276 | 70 |
| Cell Morphology,Cellular Function and Maintenance | Length of cells | 0.000359 | ARID1B,CRH,CTNND2,DISC1,EIF4EBP2,FYN,GDNF,MAG,PARD3,TIMP2 | 10 |
| Organismal Development | Growth of organism | 0.000361 | ABCC1,ACVRL1,ADNP,AGO2,AMD1,ARHGEF28,CSF3,CX3CL1,DISC1,DISP3,FGF18,GATA4,GDNF,GRHL2,HEG1,HIF1A,JAK2,KDM2B,KIF26A,KITLG,let-7,MAP2K1,MC4R,NKX2-5,NRG2,ORC3,PCSK2,PRKCQ,RAPGEF2,SLC12A2,SLC13A1,SLC8A1,SLITRK1,SLITRK6,STAT1,TAP1,TCF7L2,TIMP2,WNT3A | 39 |
| Embryonic Development,Organismal Development | Morphogenesis of embryo | 0.000368 | CX3CL1,EPHA2,FMN1,GATA4,GDNF,GRHL2,HIF1A,IRX6,NKX2-5,PAX2,TCF7L2,TFAP2B,TGFB2,TGFBR3,TIMP2 | 15 |
| Cancer,Hematological Disease,Immunological Disease,Organismal Injury and Abnormalities | B-cell neoplasm | 0.000384 | ABCC1,ABCC3,ABLIM1,ACVRL1,AFAP1L2,AGBL1,ARHGEF28,ARID1B,ARPP21,BCL11A,BCL11B,BRINP1,C1orf105,C6orf118,CAMTA1,CCKBR,CEP350,CHD6,CHEK2,CIITA,CMIP,CTNND2,DAPK1,DNAH7,E2F7,EBF1,ENPEP,EPHA2,FAM120A,FYN,HIF1A,IQGAP1,ITPKB,JAK2,KCNK5,KDM2B,KITLG,KLC1,let-7,LRRN3,MAGI2,MAP2K1,MIDN,MR1,MYOD1,NELL1,NHLRC3,NKX2-3,NKX2-5,NRG2,OPN4,PARP4,PAX5,PDE7B,PKD1L2,PLCE1,POU2AF1,PTPRC,PTPRZ1,RNF213,RORA,SEMA3E,SI,SPEG,SRPK2,STXBP6,TCEAL3,TGFB2,TIMP2,TRAM1L1,TSPAN7,TTC28,TUBB6,TYRP1,VWA3B,ZNF276 | 76 |
| Developmental Disorder | Dysgenesis | 0.000388 | ACVRL1,B3GLCT,BCL11A,BCL11B,CYP51A1,FMN1,GATA4,GDNF,HAS2,JUP,KITLG,LMX1A,MAP2K1,NKX2-5,OXR1,PARD3,PAX2,PIK3AP1,POU2AF1,PROS1,PTPRC,SLC38A8,SLC8A1,SLIT3,TGFB2,TGFBR3,TRPS1,VRK1 | 28 |
| Organismal Development | Morphology of body cavity | 0.0004 | ABCC1,ACVRL1,ADCY5,AGO2,BANK1,BCL11A,BCL11B,CCKBR,CIITA,CMIP,CRH,CSF3,CYP51A1,DAPK1,DMRT2,FGF18,FMN1,GATA4,GDNF,HAS2,HIF1A,IFT46,IQGAP1,ITPKB,JAK2,JUP,KIF26A,KITLG,KLF13,let-7,MAGI2,MAN2B1,MAP2K1,MCOLN1,MSH5,MTSS1,MYOD1,NKX2-3,NKX2-5,PARD3,PAX2,PCSK2,PLCE1,PSAP,PTPRC,RAD21L1,RBM20,REC114,SGCD,SLC12A2,SLC13A1,SLC37A4,SLC6A4,SLC8A1,SLIT3,SOAT1,SPEG,STAT1,TCF7L2,TFAP2B,TGFB2,TGFBR3,TIMP2,TMPO,TNFSF13B,TRPS1,XYLT1 | 67 |
| Cellular Development,Cellular Growth and Proliferation | Cell proliferation of tumor cell lines | 0.000403 | ABCC1,ABLIM1,AGO2,ARHGEF6,ATP5PF,BRINP1,BTBD9,CARD10,CCKBR,CDH13,CHEK2,CMIP,CRH,CSF3,CSNK1G3,CX3CL1,CXXC4,DAB2IP,DEGS2,DLST,E2F8,EIF1,EIF4EBP2,EPHA2,FAM120A,FYN,GAB1,GATA4,GDNF,GRHL2,HAS2,HIF1A,HNF4G,IQGAP1,JAK2,JUP,KDM2B,KIF13A,KITLG,let-7,LSAMP,MAF,MAP2K1,MAP3K21,MBD2,MCOLN1,MITF,MUC13,MYOD1,NRG2,PAX2,PAX5,PHLPP1,PLCE1,PRKCQ,PRPF31,PTPRZ1,RAPGEF2,RASSF8,RORA,SLIT3,STAT1,STX6,TCF7L2,TFAP2B,TGFB2,TGFBR3,TIMP2,TMPO,TNFSF13B,TPTE2,TRPS1,TYRP1,WNT3A,ZNF143 | 75 |
| Cell Cycle | G0/G1 phase transition of leukemia cell lines | 0.000406 | CSF3,KITLG,STAT1 | 3 |
| Cellular Function and Maintenance | Organization of cells | 0.00041 | ADGRL3,ARHGEF28,CTNND2,GATA4,GDNF,IL10RA,LMX1A,NKX2-5,SEMA3E,SLITRK1,TNR,WNT3A | 12 |
| Cell Morphology | Morphology of leukocytes | 0.000412 | BCL11A,BCL11B,CSF3,EBF1,FYN,ITPKB,KITLG,KLF13,MAN2B1,MITF,NKX2-3,PIK3AP1,POU2AF1,PRKCQ,PSAP,PTPRC,SOAT1,TAP1 | 18 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Hematological Disease,Organismal Injury and Abnormalities | Neoplasia of blood cells | 0.000414 | ABCC1,ABCC3,ABLIM1,ACVRL1,ADCY5,AFAP1L2,AGBL1,ANKRD22,ANKS1B,ARHGEF28,ARID1B,ARPP21,B3GLCT,BCL11A,BCL11B,BRINP1,C1orf105,C1R,C6orf118,CAMTA1,CBLB,CCKBR,CEP350,CHD6,CHEK2,CIITA,CMIP,CSF3,CSMD3,CSNK1G2,CTNND2,CYB561,CYP51A1,DAPK1,DNAH7,DNAH8,E2F7,EBF1,ENPEP,EPHA2,ETNK1,FAM117A,FAM120A,FAM167B,FMN1,FYN,GATA4,GJB5,HIF1A,HNF4G,IQGAP1,ITPKB,JAK2,KCNK5,KDM2B,KIF26A,KITLG,KLC1,let-7,LRRN3,MAF,MAGI2,MAP2K1,MAP3K21,MAP7,MIDN,mir-129,MR1,MUC20,MYO3B,MYOD1,NELL1,NHLRC3,NKX2-3,NKX2-5,NRG2,OPN4,PARD3,PARP4,PAX2,PAX5,PCDH17,PCSK2,PDE7B,PKD1L2,PLCE1,POU2AF1,PRKCQ,PTPRC,PTPRZ1,RHOBTB1,RNF213,RORA,RPL3,RPLP1,SEMA3E,SI,SLC13A2,SLC22A5,SLC6A15,SLIT3,SPEG,SRPK2,STAG3,STAT1,STXBP6,SYNPO2,TCEAL3,TCF7L2,TENM3,TGFB2,TIMP2,TNFSF13B,TNR,TRAM1L1,TSPAN7,TTC28,TUBB6,TYRP1,VWA3B,ZNF276 | 121 |
| Cell Morphology | Size of tumor cell lines | 0.000416 | DAB2IP,FYN,KDM2B,MAP2K1,PHLPP1,PTPRC | 6 |
| Cellular Development,Cellular Growth and Proliferation,Embryonic Development,Hematological System Development and Function,Hematopoiesis,Lymphoid Tissue Structure and Development,Organ Development,Organismal Development,Tissue Development | Arrest in differentiation of lymphocytes | 0.000416 | EBF1,ITPKB,PAX5,POU2AF1,PTPRC,TNFSF13B | 6 |
| Cell Morphology,Hematological Disease,Hematological System Development and Function,Immunological Disease,Lymphoid Tissue Structure and Development | Lack of T lymphocytes | 0.000427 | BCL11A,BCL11B,ITPKB,TAP1 | 4 |
| Developmental Disorder,Organ Morphology,Organismal Development,Organismal Injury and Abnormalities,Renal and Urological Disease,Renal and Urological System Development and Function | Agenesis of kidney | 0.000429 | FMN1,GDNF,PAX2,SLIT3,TGFB2 | 5 |
| Organismal Development,Organismal Injury and Abnormalities | Abnormal morphology of abdomen | 0.000435 | ACVRL1,BANK1,CCKBR,CMIP,CRH,CSF3,DAPK1,DMRT2,FMN1,GDNF,IQGAP1,ITPKB,JAK2,JUP,KIF26A,KLF13,let-7,MAGI2,MAN2B1,MCOLN1,MSH5,MTSS1,NKX2-3,PAX2,PCSK2,PSAP,PTPRC,RAD21L1,REC114,SLC12A2,SLC37A4,SLC6A4,SLIT3,SOAT1,STAT1,TCF7L2,TFAP2B,TGFB2,TGFBR3,TMPO,TNFSF13B | 41 |
| Cell Morphology | Morphology of blood cells | 0.000449 | BCL11A,BCL11B,CSF3,EBF1,FYN,ITPKB,JAK2,KITLG,KLF1,KLF13,MAN2B1,MITF,NKX2-3,PIK3AP1,POU2AF1,PRKCQ,PSAP,PTPRC,RAPGEF2,SOAT1,STAT1,TAP1 | 22 |
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Rectum tumor | 0.00045 | ACBD5,ARHGEF28,ARPP21,CAMTA1,CHD6,CHEK2,CPED1,DPP10,E2F7,ECD,EPHA2,HIF1A,ICE1,ITPKB,JCAD,KCNK5,LRCH1,LRRC31,MAP2K1,MAP3K21,MYO3B,PAPOLA,PHYHD1,PLCE1,RAPGEF2,SLIT3,STAG3,TCF7L2,TENM3,TPTE2,TRPC7,VWA3B | 32 |
| Tissue Morphology | Quantity of stem cells | 0.00047 | BCL11A,BCL11B,CIITA,CSF3,EBF1,GDNF,HIF1A,ITPKB,JAK2,KITLG,KLF13,let-7,MAF,PIK3AP1,PROS1,PTPRC,RAPGEF2,SLC12A2,ST6GALNAC2,STAT1,TAP1,TCF7L2,TMPO,TNFSF13B,WNT3A | 25 |
| Cancer,Hematological Disease,Immunological Disease,Organismal Injury and Abnormalities | Mature B-cell neoplasm | 0.000479 | ABCC1,ABCC3,ABLIM1,ACVRL1,AFAP1L2,AGBL1,ARHGEF28,ARID1B,ARPP21,BCL11A,BCL11B,CAMTA1,CEP350,CHD6,CHEK2,CIITA,CTNND2,DAPK1,DNAH7,E2F7,EBF1,FAM120A,HIF1A,IQGAP1,JAK2,KCNK5,KDM2B,KITLG,KLC1,let-7,LRRN3,MAGI2,MAP2K1,MIDN,MR1,MYOD1,NHLRC3,NKX2-3,NKX2-5,NRG2,OPN4,PARP4,PAX5,PDE7B,PKD1L2,POU2AF1,PTPRC,PTPRZ1,SEMA3E,SI,SPEG,SRPK2,STXBP6,TCEAL3,TGFB2,TIMP2,TRAM1L1,TTC28,TUBB6,VWA3B,ZNF276 | 61 |
| Cell-mediated Immune Response,Cellular Development,Cellular Function and Maintenance,Cellular Growth and Proliferation,Embryonic Development,Hematological System Development and Function,Hematopoiesis,Lymphoid Tissue Structure and Development,Organ Development,Organismal Development,Tissue Development | Generation of helper T lymphocytes | 0.000489 | HIF1A,MAF,POU2AF1,PRKCQ,RORA,STAT1,TNFSF13B | 7 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cell Morphology,Cellular Assembly and Organization,Cellular Function and Maintenance,Nervous System Development and Function | Extension of neurites | 0.000504 | ADNP,AUTS2,DISC1,EPHA2,FYN,KITLG,MAG,RAPGEF2,RNF6,SEMA3E,TNR,WNT3A | 12 |
| Auditory and Vestibular System Development and Function,Auditory Disease,Nervous System Development and Function,Neurological Disease,Organ Morphology,Organismal Development,Organismal Injury and Abnormalities | Abnormal morphology of spiral ganglion | 0.000515 | MAN2B1,PAX2,SLITRK6,TGFB2 | 4 |
| Cancer,Endocrine System Disorders,Organismal Injury and Abnormalities,Reproductive System Disease | Development of gonadal tumor | 0.000528 | ABCC3,ABHD6,AGBL1,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARID1B,BICD2,C6orf118,CAMTA1,CBLN4,CCDC33,CHEK2,CSMD3,CTNND2,DNAH7,ENPEP,EPHA2,FGF18,FUCA2,HAS2,IGSF21,JAK2,KDM2B,KITLG,LRRC31,LY86,MAG,MAGI2,MAP2K1,MAP3K21,MGAT4B,MYO3B,NCKAP5,NTM,OTOF,PAK5,PAPOLA,PCSK2,PRSS54,RGS20,RIMBP2,RNF144B,RORA,SI,SLC6A15,SLITRK1,SPEG,SRPK2,STAT1,STXBP5L,SYNPO2,TAP1,TENM3,TFAP2B,TNR,TPTE2,TRPC7,VPS13A,VWA3B,ZDHHC14,ZNF143,ZNF276 | 63 |
| Gene Expression | Transcription of RNA | 0.00054 | ABLIM1,ACVRL1,AFAP1L2,AGO2,ARID1B,AUTS2,BCL11A,BCL11B,CAMTA1,CDH13,CHD5,CHEK2,CIITA,CSF3,CX3CL1,DAB2IP,DISC1,DMRT2,E2F7,E2F8,EBF1,ECD,ENO1,GATA4,GDNF,GLO1,GRHL2,HEXIM2,HIF1A,HINT1,HNF4G,IBTK,IQGAP1,IRX6,JAK2,KDM2B,KLF1,KLF13,let-7,LMX1A,LOC257642,MAF,MAGI2,MAP2K1,MBD2,MC4R,MDFIC,MITF,MYOD1,NKX2-3,NKX2-5,PAX2,PAX5,POU2AF1,PRKCQ,PTPRZ1,RIT2,RNF6,RORA,SLC13A1,STAT1,TCF7L2,TFAP2B,TFEC,TGFBR3,TMPO,TRPS1,VRK1,WNT3A,XCL1,ZNF143 | 71 |
| Cell Death and Survival,Cellular Development,Nervous System Development and Function,Tissue Development,Tissue Morphology | Regeneration of neurons | 0.000545 | CSF3,GDNF,JAK2,let-7,MAG,MAP2K1,OPN4,SLC12A2,XYLT1 | 9 |
| Cellular Development,Tissue Development | Differentiation of epithelial tissue | 0.000558 | ACVRL1,AQP3,CCKBR,E2F7,E2F8,EPHA2,FYN,GAB1,GATA4,GRHL2,KITLG,LMX1A,MAP2K1,MITF,MYOD1,PAX2,RNF144B,SCEL,SLC8A1,TYRP1,WNT3A | 21 |
| Cancer,Endocrine System Disorders,Organismal Injury and Abnormalities,Reproductive System Disease | Ovarian cancer | 0.000562 | ABCC3,ABHD6,ADNP,AGBL1,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARID1B,BICD2,C6orf118,CAMTA1,CBLN4,CCDC33,CHD5,CHEK2,CSF3,CSMD3,CTNND2,DNAH7,E2F8,ENO1,ENPEP,EPHA2,ERO1A,FGF18,FUCA2,HAS2,IGSF21,JAK2,KDM2B,LRRC31,LY86,MAG,MAGI2,MAP2K1,MAP3K21,MGAT4B,MYO3B,NCKAP5,NTM,OTOF,PAK5,PAPOLA,PCSK2,PKD1L2,PRKCQ,PRSS54,RGS20,RIMBP2,RNF144B,RORA,SI,SLC6A15,SLITRK1,SMC1B,SPEG,SRPK2,STAT1,STXBP5L,SYNPO2,TAP1,TENM3,TFAP2B,TNR,TPTE2,TRPC7,VPS13A,VWA3B,ZDHHC14,ZNF143,ZNF276 | 71 |
| Cell Morphology,Cellular Development,Cellular Growth and Proliferation | Morphogenesis of breast cell lines | 0.000573 | GAB1,HIF1A,RORA | 3 |
| Cellular Development,Cellular Growth and Proliferation,Hematological System Development and Function,Hematopoiesis,Lymphoid Tissue Structure and Development,Tissue Development | Formation of colony-forming units granulocytes | 0.000573 | CSF3,KITLG,let-7 | 3 |
| Cell-To-Cell Signaling and Interaction,Hematological System Development and Function,Immune Cell Trafficking,Inflammatory Response | Activation of leukocytes | 0.000598 | BANK1,BCL11B,BRINP1,CBLB,CRH,CRYAA/CRYAA2,CSF3,CX3CL1,EBF1,FYN,GDNF,HIF1A,ITPKB,JAK2,KITLG,let-7,MAF,MAP2K1,MR1,PAX5,POU2AF1,PRKCQ,PROS1,PSAP,PTPRC,RAB3B,RAB3C,RORA,SLC6A4,STAT1,TERF2,TNFSF13B,WNT3A | 33 |
| Behavior | Locomotion | 0.0006 | ADCY5,ADGRL3,BTBD9,CCKBR,CRH,EBF1,GDNF,HINT1,HNF4G,KCNJ9,LMX1A,MAG,MC4R,OXR1,PAK5,PSAP,RGS20,SLC22A5,SLITRK6,VPS13A | 20 |
| Cancer,Organismal Injury and Abnormalities | Soft tissue neoplasm | 0.000604 | ABCC1,ABCC3,ADCY5,AGBL1,ARID1B,CBLN4,CCDC61,CCKBR,CDH22,CHD5,CHEK2,CSMD3,CTNND2,DAPK1,DEGS2,DISP3,DLST,EPHA2,FMN1,FYN,GATA4,ICE1,JAK2,KIF26A,let-7,MAP2K1,MAP7,MITF,MYOD1,NRG2,OR6S1,PAK5,PARD3,PRKCQ,PTPRC,REEP3,SEMA3E,SI,SLC24A3,STAT1,SYCP3,SYNPO2,TFAP2B,TGFBR3,TTC28,VRK1,ZDHHC14,ZNF276 | 48 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Oral cancer | 0.000605 | ABCC1,ADCY5,AKAP7,AMD1,ANKS1B,ATP5PF,AUTS2,BCL11A,BRINP1,BTBD9,C6orf118,CDH13,CHD6,CSMD3,CTNND2,CXXC4,E2F7,EBF1,EIF4EBP2,ENPEP,EPHA2,FAM120A,GRIK5,HAS2,HEG1,HNRNPR,JAK2,JCAD,KDM2B,MAP7,MEPE,MTSS1,MYO3B,OTOF,PAPOLA,PCDH17,PELI2,PTPRC,SCML4,SLIT3,SLITRK1,STARD8,STAT1,TMPO,TNR,TRPC7,TRPS1,TTC28,VAT1L,ZDHHC14 | 50 |
| Cellular Development,Cellular Growth and Proliferation,Hematological System Development and Function,Hematopoiesis,Lymphoid Tissue Structure and Development,Tissue Development | Proliferation of myeloid progenitor cells | 0.000605 | ACTL6A,CSF3,ITPKB,JAK2,KITLG,PIK3AP1 | 6 |
| Organ Morphology,Organismal Development,Renal and Urological System Development and Function | Morphology of renal tubule | 0.000606 | DAPK1,GDNF,HIF1A,MTSS1,PCSK2,PSAP,TFAP2B,TGFB2 | 8 |
| Cellular Assembly and Organization,Cellular Function and Maintenance | Organization of cytoplasm | 0.000607 | ABCC1,ABLIM1,ACVRL1,ADNP,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARHGEF6,ARID1B,AUTS2,BCL11B,BFSP2,BICD2,CBLN4,CDH13,CEP350,CRH,CRYAA/CRYAA2,CSMD3,CTNND2,DAB2IP,DAPK1,DISC1,Dmd,EIF4EBP2,EPHA2,FMN1,FYN,GAB1,GDNF,HAS2,IFT46,IQGAP1,JAK2,JUP,KITLG,KLC1,MAG,MAGI2,MAP2K1,MAP7,MTSS1,MYO3B,PACSIN1,PAK5,PARD3,PAX2,PLCE1,PRKCQ,PTPRZ1,RAPGEF2,RIT2,RNF6,SEMA3E,SLC22A5,SLIT3,SLITRK1,SLITRK6,STX6,TCF7L2,TGFB2,TGFBR3,TNR,TRDN,WDR73,WNT3A | 65 |
| Cancer,Hematological Disease,Immunological Disease,Organismal Injury and Abnormalities | Diffuse lymphoma | 0.000629 | ABCC1,ACVRL1,AFAP1L2,AGBL1,ARHGEF28,ARID1B,ARPP21,BCL11B,CAMTA1,CEP350,CHD6,CHEK2,CIITA,EPHA2,FYN,IQGAP1,JAK2,KCNK5,KDM2B,KLC1,let-7,LRRN3,NHLRC3,NKX2-3,NKX2-5,OPN4,PARP4,PAX5,PTPRC,SEMA3E,SPEG,STXBP6,TRAM1L1,TUBB6,VWA3B | 35 |
| Cell-To-Cell Signaling and Interaction,Cellular Assembly and Organization,Cellular Function and Maintenance | Assembly of intercellular junctions | 0.000661 | ADGRL3,ADNP,CRH,DISC1,FYN,IGSF21,IGSF9B,JUP,LRRN3,MYOD1,NRG2,PARD3,SLC12A2,SLITRK1,SLITRK6,TNR | 16 |
| Cancer,Hematological Disease,Immunological Disease,Organismal Injury and Abnormalities | T-cell malignant neoplasm | 0.000661 | ARID1B,BCL11B,C1R,CBLB,CCSER1,CHD5,CIITA,CTNND2,EBF1,ENO1,EPHA2,FYN,ITPKB,JAK2,KCTD15,let-7,LRRN3,MAF,MAP2K1,OPN4,OTOF,PAX5,PCDH17,PDE7B,PRKCQ,PTPRC,RHOBTB1,RNF213,SLC8A1,STAT1,TIMP2,TNFSF13B,VWA3A,WNT3A | 34 |
| Cell Morphology,Cellular Function and Maintenance,Nervous System Development and Function,Tissue Morphology | Length of neurons | 0.000676 | ARID1B,CRH,CTNND2,DISC1,EIF4EBP2,GDNF,MAG,PARD3,TIMP2 | 9 |
| Molecular Transport | Secretion of molecule | 0.000678 | ABCC3,BCL11B,CBLB,CBLN4,CCKBR,CRH,CX3CL1,CYP51A1,FYN,GAB1,GDNF,HAS2,IQGAP1,PCSK2,PRKCQ,PSAP,PTPRC,RAB3B,RAB3C,RPH3AL,SLC12A2,SOAT1,STAT1,STXBP5L,STXBP6,SYT4,TGFB2 | 27 |
| Cancer,Organismal Injury and Abnormalities,Respiratory Disease | Lung squamous cell carcinoma | 0.000681 | AAK1,ACVRL1,ADGRL3,AGBL1,BCL11A,BRINP1,C6orf118,CHEK2,CSMD3,DAPK1,E2F7,E2F8,EPHA2,GALNT13,HEG1,IBTK,IGSF9B,IQGAP1,ITPKB,JAK2,let-7,MAP2K1,MAP3K21,MIDN,MROH2B,MUC20,MYO3B,NELL1,PABPC4,PAK5,PHYHD1,PLCE1,PRKCQ,RIMBP2,RNF213,SI,SLIT3,SLITRK1,SPEG,TENM3,TNR,TPTE2,TRPC7,TRPS1 | 44 |
| Cell Morphology,Connective Tissue Development and Function | Morphology of fibroblast cell lines | 0.000685 | ACVRL1,AMD1,FYN,GRHL2,HIF1A,KDM2B,PHLPP1,TFAP2B | 8 |
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Oral cavity carcinoma | 0.000703 | ABCC1,ADCY5,AKAP7,AMD1,ANKS1B,ATP5PF,AUTS2,BCL11A,BRINP1,BTBD9,C6orf118,CDH13,CHD6,CSMD3,CTNND2,CXXC4,E2F7,EBF1,EIF4EBP2,ENPEP,EPHA2,FAM120A,GRIK5,HAS2,HEG1,HNRNPR,JCAD,KDM2B,MAP7,MEPE,MTSS1,MYO3B,OTOF,PAPOLA,PCDH17,PELI2,PTPRC,SCML4,SLIT3,SLITRK1,STARD8,STAT1,TMPO,TNR,TRPC7,TRPS1,TTC28,VAT1L,ZDHHC14 | 49 |
| Cellular Development,Cellular Growth and Proliferation,Hematological System Development and Function,Hematopoiesis | Proliferation of LSK cells | 0.000728 | CSF3,JAK2,KITLG,PIK3AP1 | 4 |
| Cancer,Organismal Injury and Abnormalities | Clear-cell adenocarcinoma | 0.00073 | AGBL1,ARID1B,ARMC12,C1orf105,CENPN,CHEK2,CSMD3,DAPK1,DLST,DNAH7,DNAH8,E2F7,E2F8,ENPEP,F8,HIF1A,JAK2,KDM2B,MAP2K1,mir-129,MR1,OCSTAMP,PCDH17,PHLPP1,PHYHD1,PKD1L2,PTPRZ1,RAD21L1,RCC2,RIMBP2,RNF168,RPH3AL,SLC12A2,SLC8A1,STAT1,TGFBR3,TIMP2,TMEM132B,TNR,TRDN,TUBB6,VPS13A,ZNF519 | 43 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Hematological Disease,Immunological Disease,Organismal Injury and Abnormalities | Mature B cell malignant tumor | 0.000742 | ABCC1,ABLIM1,ACVRL1,AFAP1L2,AGBL1,ARHGEF28,ARID1B,ARPP21,BCL11A,BCL11B,CAMTA1,CEP350,CHD6,CHEK2,CIITA,FAM120A,HIF1A,IQGAP1,JAK2,KCNK5,KDM2B,KITLG,KLC1,let-7,LRRN3,MAP2K1,MIDN,MR1,MYOD1,NHLRC3,NKX2-3,NKX2-5,NRG2,OPN4,PARP4,PAX5,POU2AF1,PTPRC,PTPRZ1,SEMA3E,SPEG,SRPK2,STXBP6,TCEAL3,TGFB2,TIMP2,TRAM1L1,TTC28,TUBB6,VWA3B,ZNF276 | 51 |
| Gene Expression | Transcription of DNA | 0.000765 | ABLIM1,ACVRL1,AFAP1L2,AGO2,AUTS2,BCL11A,BCL11B,CAMTA1,CDH13,CHD5,CHEK2,CIITA,CSF3,CX3CL1,DAB2IP,DMRT2,E2F7,E2F8,EBF1,ECD,ENO1,GATA4,GDNF,GLO1,GRHL2,HEXIM2,HIF1A,HINT1,HNF4G,IRX6,JAK2,KDM2B,KLF1,KLF13,let-7,LMX1A,LOC257642,MAF,MAP2K1,MBD2,MDFIC,MITF,MYOD1,NKX2-3,NKX2-5,PAX2,PAX5,PRKCQ,RIT2,RNF6,RORA,STAT1,TCF7L2,TFAP2B,TFEC,TMPO,TRPS1,WNT3A,XCL1,ZNF143 | 60 |
| Cancer,Hematological Disease,Immunological Disease,Organismal Injury and Abnormalities | Unclassifiable B-cell lymphoma with features intermediate between diffuse large B-cell lymphoma and classical Hodgkin lymphoma | 0.000777 | PAX5,POU2AF1,PTPRC | 3 |
| Neurological Disease | Hypomyelination of sciatic nerve | 0.000777 | GAB1,MAF,SH3TC2 | 3 |
| Cancer,Endocrine System Disorders,Organismal Injury and Abnormalities,Reproductive System Disease | Ovarian adenocarcinoma | 0.000792 | ABCC3,ABHD6,AGBL1,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARID1B,BICD2,C6orf118,CAMTA1,CBLN4,CCDC33,CHEK2,CSMD3,CTNND2,DNAH7,ENPEP,EPHA2,FGF18,FUCA2,HAS2,IGSF21,JAK2,KDM2B,LRRC31,LY86,MAG,MAGI2,MAP2K1,MAP3K21,MGAT4B,MYO3B,NCKAP5,NTM,OTOF,PAK5,PAPOLA,PCSK2,PRSS54,RGS20,RIMBP2,RNF144B,RORA,SI,SLC6A15,SLITRK1,SPEG,SRPK2,STAT1,STXBP5L,SYNPO2,TAP1,TENM3,TFAP2B,TNR,TPTE2,TRPC7,VPS13A,VWA3B,ZDHHC14,ZNF143,ZNF276 | 62 |
| Cancer,Organismal Injury and Abnormalities,Tissue Morphology,Tumor Morphology | Size of carcinoma | 0.000855 | EIF4EBP2,HINT1,IQGAP1,TGFB2 | 4 |
| Cardiovascular System Development and Function,Embryonic Development,Organ Development,Organ Morphology,Organismal Development,Tissue Development | Morphogenesis of atrium | 0.000855 | GATA4,NKX2-5,SLIT3,TGFB2 | 4 |
| Cell-mediated Immune Response,Cellular Development,Cellular Function and Maintenance,Cellular Growth and Proliferation,Embryonic Development,Hematological System Development and Function,Hematopoiesis,Lymphoid Tissue Structure and Development,Organ Development,Organismal Development,Tissue Development | Development of helper T lymphocytes | 0.000867 | HIF1A,MAF,POU2AF1,PRKCQ,RORA,STAT1,TNFSF13B | 7 |
| Cell Morphology,Lymphoid Tissue Structure and Development | Morphology of lymphatic system cells | 0.000867 | BCL11A,BCL11B,CSF3,EBF1,FYN,ITPKB,JAK2,NKX2-3,PIK3AP1,POU2AF1,PRKCQ,PTPRC,STAT1,TAP1 | 14 |
| Cellular Movement,Immune Cell Trafficking | Cell movement of lymphatic system cells | 0.000872 | ABCC1,AQP3,BCL11B,CBLB,CSF3,CX3CL1,FYN,HIF1A,JAK2,KCNK5,KITLG,LRCH1,MR1,PLCE1,POU2AF1,PRKCQ,RORA,SEMA3E,STAT1,TERF2,TIMP2,TNFSF13B,XCL1 | 23 |
| Infectious Diseases | Cryptococcosis | 0.000896 | CYP51A1,SLC6A4 | 2 |
| Cellular Development,Cellular Growth and Proliferation,Embryonic Development,Hematological System Development and Function,Hematopoiesis,Humoral Immune Response,Lymphoid Tissue Structure and Development,Organ Development,Organismal Development,Tissue Development | Differentiation of transitional type 2 B lymphocytes | 0.000896 | FYN,TNFSF13B | 2 |
| Hematological System Development and Function,Hematopoiesis,Tissue Morphology | Quantity of CD34+ cells | 0.000896 | CSF3,HIF1A | 2 |
| Cancer,Cellular Development,Organismal Injury and Abnormalities,Tumor Morphology | Maturation of acute myeloblastic leukemia cells | 0.000896 | CSF3,GDNF | 2 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cell Death and Survival,Cell Morphology,Connective Tissue Development and Function,Connective Tissue Disorders,Organismal Injury and Abnormalities,Skeletal and Muscular Disorders,Skeletal and Muscular System Development and Function,Tissue Development,Tissue Morphology | Loss of osteoblasts | 0.000896 | CSF3,KITLG | 2 |
| Cell Morphology,Cell-To-Cell Signaling and Interaction,Cellular Assembly and Organization | Morphology of desmosomes | 0.000896 | JUP,PERP | 2 |
| Cellular Compromise | Disappearance of actin stress fibers | 0.000896 | MTSS1,PAK5 | 2 |
| Cellular Development,Embryonic Development,Nervous System Development and Function,Organismal Development,Tissue Development | Differentiation of melanoblasts | 0.000896 | KITLG,WNT3A | 2 |
| Nervous System Development and Function,Neurological Disease | Abnormal morphology of nervous system | 0.000926 | ACVRL1,BICD2,BRINP1,CX3CL1,EBF1,EIF4EBP2,FYN,GDNF,KIF26A,LMX1A,MAG,MAGI2,MAN2B1,MCOLN1,OPN4,OTOF,PACSIN1,PARD3,PAX2,PRKCQ,PROS1,PRPF31,PSAP,PTPRC,PTPRZ1,RORA,SLC12A2,SLC6A15,SLC6A4,SLITRK6,TCF7L2,TGFB2,TNR,VPS13A,WNT3A | 35 |
| Cancer,Hematological Disease,Immunological Disease,Organismal Injury and Abnormalities | Diffuse B-cell lymphoma | 0.000927 | ABCC1,ACVRL1,AFAP1L2,AGBL1,ARHGEF28,ARPP21,CAMTA1,CEP350,CHD6,CHEK2,CIITA,EPHA2,FYN,IQGAP1,JAK2,KCNK5,KDM2B,KLC1,LRRN3,NHLRC3,NKX2-3,NKX2-5,OPN4,PARP4,PAX5,PTPRC,SEMA3E,SPEG,STXBP6,TRAM1L1,TUBB6,VWA3B | 32 |
| Cell Morphology,Immunological Disease | Abnormal morphology of leukocytes | 0.000928 | BCL11A,BCL11B,CSF3,EBF1,FYN,ITPKB,KLF13,NKX2-3,PIK3AP1,POU2AF1,PRKCQ,PTPRC,TAP1 | 13 |
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Oral squamous cell carcinoma | 0.000961 | ABCC1,ADCY5,AKAP7,AMD1,ANKS1B,AUTS2,BCL11A,BRINP1,BTBD9,C6orf118,CDH13,CHD6,CSMD3,CTNND2,CXXC4,E2F7,EBF1,EIF4EBP2,ENPEP,EPHA2,FAM120A,GRIK5,HAS2,HEG1,HNRNPR,JCAD,KDM2B,MAP7,MEPE,MTSS1,MYO3B,OTOF,PAPOLA,PCDH17,PELI2,PTPRC,SCML4,SLIT3,SLITRK1,STAT1,TMPO,TNR,TRPC7,TRPS1,TTC28,VAT1L,ZDHHC14 | 47 |
| Cancer,Organismal Injury and Abnormalities,Reproductive System Disease | Breast or ovarian cancer | 0.000965 | AAK1,ABCC1,ABCC12,ABCC3,ABHD6,ABLIM1,ACVRL1,ADGRL3,ADNP,AGBL1,AGO2,ANKS1B,ARHGAP31,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARID1B,ARMC3,ATP5PF,BANK1,BCL11B,BICD2,C6orf118,CAMTA1,CBLN4,CCDC33,CCSER1,CHD5,CHEK2,CSF3,CSMD3,CTNND2,DAPK1,DNAH7,DNAH8,E2F7,E2F8,EIF1,ENO1,ENPEP,EPHA2,ERO1A,ETNK1,F8,FGF18,FUCA2,FYN,GLO1,GRHL2,HAS2,HIF1A,ICE1,IGSF21,IQGAP1,ITPKB,JAK2,KDM2B,KLC1,let-7,LRCH1,LRRC31,LY86,MAG,MAGI2,MAP2K1,MAP3K21,MGAT4B,mir-129,MITF,MUC13,MYO3B,NCKAP5,NTM,OTOF,PAK5,PAPOLA,PAQR8,PARD3,PARP4,PAX2,PCSK2,PHYHD1,PI16,PIK3R4,PKD1L2,PLPPR1,PRKCQ,PRSS54,PTPRZ1,RAD21L1,RAPGEF2,RGS20,RIMBP2,RNF144B,RNF213,RORA,RPH3AL,SI,SLC6A15,SLC6A4,SLC8A1,SLIT3,SLITRK1,SLITRK6,SMC1B,SPEG,SRPK2,STAG3,STARD8,STAT1,STXBP5L,SYNPO2,SYT17,SYT6,TAP1,TCF7L2,TENM3,TFAP2B,TGFB2,TGFBR3,TIMP2,TNR,TPTE2,TRDN,TRPC7,TRPS1,TUBB6,TYRP1,VPS13A,VWA3B,ZDHHC14,ZNF143,ZNF276 | 133 |
| Cellular Development,Cellular Growth and Proliferation,Connective Tissue Development and Function,Hematological System Development and Function,Hematopoiesis,Organismal Development,Tissue Development | Development of colony-forming erythroid cells | 0.000997 | CSF3,HIF1A,JAK2,KITLG | 4 |
| Cancer,Organismal Injury and Abnormalities,Renal and Urological Disease | Renal clear cell adenocarcinoma | 0.00101 | AGBL1,ARID1B,ARMC12,C1orf105,CENPN,CHEK2,CSMD3,DAPK1,DLST,DNAH7,DNAH8,E2F7,E2F8,ENPEP,F8,HIF1A,KDM2B,MAP2K1,mir-129,MR1,OCSTAMP,PCDH17,PHLPP1,PHYHD1,PKD1L2,PTPRZ1,RAD21L1,RCC2,RIMBP2,RNF168,RPH3AL,SLC12A2,SLC8A1,TGFBR3,TIMP2,TMEM132B,TNR,TRDN,TUBB6,VPS13A,ZNF519 | 41 |
| Carbohydrate Metabolism | Accumulation of glycosides | 0.00102 | ABCC1,ABCC3,MAP2K1 | 3 |
| Cardiovascular System Development and Function,Embryonic Development,Organ Development,Organismal Development,Tissue Development | Formation of ventricular septum | 0.00106 | CYP51A1,GATA4,HEG1,NKX2-5,SLIT3,TGFB2,TGFBR3 | 7 |
| Cell Death and Survival | Apoptosis of mononuclear leukocytes | 0.00107 | BCL11A,BCL11B,CHEK2,CIITA,FYN,HIF1A,KITLG,KLF13,MAP2K1,PAX5,PERP,POU2AF1,PRKCQ,PTPRC,STAT1,TGFB2,TNFSF13B,WNT3A,XCL1 | 19 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cell Morphology,Cellular Assembly and Organization,Cellular Function and Maintenance | Extension of cellular protrusions | 0.0011 | ADNP,AUTS2,CTNND2,DISC1,EPHA2,FYN,KITLG,MAG,RAPGEF2,RNF6,SEMA3E,TNR,WNT3A | 13 |
| Cell Morphology,Immunological Disease,Lymphoid Tissue Structure and Development | Abnormal morphology of lymphocytes | 0.0011 | BCL11A,BCL11B,EBF1,FYN,ITPKB,NKX2-3,PIK3AP1,POU2AF1,PRKCQ,PTPRC,TAP1 | 11 |
| Cellular Function and Maintenance | Homeostasis of leukocytes | 0.00112 | BCL11A,BCL11B,CBLB,CIITA,EBF1,FYN,GATA4,HIF1A,IL10RA,ITPKB,KITLG,let-7,MAF,MAP2K1,MBD2,NKX2-3,PAX5,PHLPP1,POU2AF1,PRKCQ,PSAP,PTPRC,RORA,SLC37A4,STAT1,TMEM98,TNFSF13B,WNT3A | 28 |
| Cell Death and Survival | Cell viability of leukocytes | 0.00117 | BCL11B,CHEK2,CSF3,CX3CL1,EBF1,HIF1A,ITPKB,JAK2,KITLG,MAP2K1,POU2AF1,PRKCQ,PTPRC,STAT1,TNFSF13B | 15 |
| Auditory and Vestibular System Development and Function,Auditory Disease,Cell Morphology,Nervous System Development and Function,Neurological Disease,Organ Morphology,Organismal Development,Organismal Injury and Abnormalities,Tissue Morphology | Abnormal morphology of hair cells | 0.00119 | MCOLN1,OTOF,PSAP,SLC12A2,SLITRK6 | 5 |
| Psychological Disorders | Severe psychological disorder | 0.0012 | ABLIM1,ACSBG1,ATP5PF,CA10,CCKBR,CRH,DEGS2,DISC1,DPP10,EBF1,FYN,GRIK5,HINT1,HTR3B,IBTK,KLC1,let-7,MAG,MAGI2,MC4R,NELL1,PDE7B,RIT2,RPL3,SLC12A2,SLC6A15,SLC6A4,SRPK2,SYT2,SYT4,TCF7L2,TRDN | 32 |
| Cardiovascular System Development and Function,Cellular Movement | Movement of vascular endothelial cells | 0.00121 | ACVRL1,ARHGEF6,CDH13,CSF3,GAB1,HIF1A,IQGAP1,MTSS1,PROS1,PTPRZ1,SEMA3E,STX6,TIMP2 | 13 |
| Cell Death and Survival | Cell viability of tumor cell lines | 0.00123 | ABCC1,ABCC3,ACVRL1,ADNP,AGO2,AKAP7,ANKS1B,AQP3,ARID1B,CARD10,CHEK2,CRH,DAB2IP,ENO1,EPHA2,EPS15L1,FAM120A,GAB1,HIF1A,HINT1,IQGAP1,JAK2,KITLG,MAP2K1,MCOLN1,MITF,MTSS1,MUC20,PHLPP1,PLCE1,POU2AF1,PRKCQ,PSAP,PTPRZ1,RASSF8,SLC37A4,TCF7L2,TERF2,TIMP2,TNFSF13B,TPTE2,VRK1,WNT3A | 43 |
| Cellular Development,Embryonic Development,Organismal Development | Differentiation of embryonic cells | 0.00124 | CSF3,E2F7,E2F8,GATA4,GDNF,GJB5,HIF1A,KDM2B,KITLG,LMX1A,MYOD1,NKX2-5,PAX2,TGFB2,WNT3A | 15 |
| Cellular Development,Cellular Growth and Proliferation,Hematological System Development and Function,Hematopoiesis,Tissue Development | Development of hematopoietic progenitor cells | 0.00126 | AGO2,BCL11B,CSF3,EBF1,FYN,HIF1A,JAK2,KITLG,KLF1,let-7,MAP2K1,PAX5,PRKCQ,PTPRC,RORA,STAT1,TNFSF13B | 17 |
| Auditory and Vestibular System Development and Function,Auditory Disease,Organ Morphology,Organismal Development,Organismal Injury and Abnormalities | Abnormal morphology of inner ear | 0.00128 | MAN2B1,MCOLN1,OTOF,PAX2,PSAP,SLC12A2,SLITRK6,TGFB2 | 8 |
| Cellular Development,Cellular Growth and Proliferation,Hematological System Development and Function,Hematopoiesis,Humoral Immune Response,Lymphoid Tissue Structure and Development | Proliferation of pre-B lymphocytes | 0.00131 | BCL11A,EBF1,KITLG,STAT1,WNT3A | 5 |
| Connective Tissue Development and Function,Tissue Development | Deposition of connective tissue | 0.00131 | CCKBR,EBF1,HIF1A | 3 |
| Nervous System Development and Function,Neurological Disease,Organ Morphology,Organismal Development,Organismal Injury and Abnormalities | Abnormal morphology of stratum pyramidale | 0.00131 | BICD2,FYN,TNR | 3 |
| Cancer,Organismal Injury and Abnormalities | Metastatic potential of breast cancer cell lines | 0.00131 | GRHL2,HIF1A,PSAP | 3 |
| Cell-To-Cell Signaling and Interaction,Nervous System Development and Function | Activation of ganglion cells | 0.00131 | CRH,GDNF,MAG | 3 |
| Cellular Movement,Hematological System Development and Function,Immune Cell Trafficking | Lymphocyte migration | 0.00132 | ABCC1,AQP3,BCL11B,CBLB,CSF3,CX3CL1,FYN,JAK2,KCNK5,LRCH1,MR1,PLCE1,PRKCQ,RORA,SEMA3E,STAT1,TERF2,TIMP2,TNFSF13B,XCL1 | 20 |
| Cell-mediated Immune Response,Cellular Development,Cellular Function and Maintenance,Cellular Growth and Proliferation,Embryonic Development,Hematological System Development and Function,Hematopoiesis,Lymphoid Tissue Structure and Development,Organ Development,Organismal Development,Tissue Development | T cell development | 0.00135 | BCL11A,BCL11B,CBLB,CIITA,EBF1,FYN,GATA4,HIF1A,IL10RA,ITPKB,KITLG,let-7,MAF,MAP2K1,MBD2,PAX5,PHLPP1,POU2AF1,PRKCQ,PSAP,PTPRC,RORA,STAT1,TMEM98,TNFSF13B,WNT3A | 26 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Neurological Disease,Organismal Injury and Abnormalities | Cerebral disorder | 0.00135 | ACBD5,ADGRL3,ADNP,ANKS1B,AQP3,ARHGAP31,ARHGEF28,ARPP21,BICD2,BRINP1,C1R,CAMTA1,CBLB,CCDC33,CCKBR,CDH13,CDH15,CEP350,CFAP43,CHD5,CHD6,CHEK2,CPED1,CTNND2,CX3CL1,DISP3,DNAH7,DNAH8,EIF4EBP2,EPHA2,FAM167B,FGF18,FYN,HIF1A,IBTK,ICE1,IFT46,IGSF9B,ITPKB,JCAD,JUP,KCNK5,KIF13A,KIF26A,KLF13,let-7,LMX1A,MAF,MAN2B1,MAP3K21,MIDN,mir-129,MITF,MOCS2,MR1,MTSS1,MYO3B,NCKAP5,NHLRC3,NRG2,ODF3B,OTOF,PABPC4,PAPOLA,PARD3,PARP4,PCDH17,PCSK2,PDE7B,PIK3AP1,PLCE1,PLSCR5,PRIMA1,PRKCQ,PROS1,PRPF31,PSAP,PTPRC,PTPRZ1,RAB3C,RASSF8,RIMBP2,RNF168,RNF213,RNF6,SH3TC2,SI,SLC13A2,SLC35A3,SLC6A4,SLIT3,SPEG,SRPK2,ST6GALNAC2,STAG3,STARD8,STAT1,SYNPO2,TAS2R1,TGFB2,TNR,TSPAN17,TTC28,TYRP1,VRK1,ZDHHC14 | 106 |
| Gene Expression | Activation of DNA endogenous promoter | 0.00136 | ABLIM1,ACVRL1,AGO2,AUTS2,BCL11A,BCL11B,CAMTA1,CDH13,CHD5,CIITA,CSF3,CX3CL1,DAB2IP,DMRT2,E2F7,E2F8,EBF1,ECD,ENO1,GATA4,GDNF,GLO1,GRHL2,HEXIM2,HIF1A,HNF4G,JAK2,KDM2B,KLF1,KLF13,let-7,LMX1A,MAF,MBD2,MITF,MYOD1,NKX2-3,NKX2-5,PAX2,PAX5,RIT2,RORA,STAT1,TCF7L2,TFAP2B,TFEC,TRPS1,WNT3A,ZNF143 | 49 |
| Cellular Movement,Hematological System Development and Function,Immune Cell Trafficking | Cell movement of mononuclear leukocytes | 0.00136 | ABCC1,AQP3,BCL11B,CBLB,CIITA,CSF3,CX3CL1,FYN,HIF1A,JAK2,KCNK5,KITLG,LRCH1,MR1,PLCE1,POU2AF1,PRKCQ,RORA,SEMA3E,SLIT3,STAT1,TERF2,TIMP2,TNFSF13B,XCL1 | 25 |
| Cell Morphology,Cellular Assembly and Organization,Cellular Development,Cellular Function and Maintenance,Cellular Growth and Proliferation,Nervous System Development and Function,Organismal Development,Tissue Development | Neuritogenesis | 0.00136 | ARHGEF28,ARID1B,BCL11B,CRH,CSMD3,CTNND2,DAB2IP,DISC1,Dmd,EIF4EBP2,FMN1,FYN,GDNF,MAG,MAGI2,MAP2K1,MAP7,MTSS1,PACSIN1,PARD3,PAX2,PTPRZ1,RAPGEF2,RIT2,SEMA3E,SLIT3,SLITRK1,SLITRK6,TNR,WNT3A | 30 |
| Cellular Movement,Hematological System Development and Function,Immune Cell Trafficking | Cell movement of lymphocytes | 0.00137 | ABCC1,AQP3,BCL11B,CBLB,CSF3,CX3CL1,FYN,HIF1A,JAK2,KCNK5,LRCH1,MR1,PLCE1,POU2AF1,PRKCQ,RORA,SEMA3E,STAT1,TERF2,TIMP2,TNFSF13B,XCL1 | 22 |
| Cellular Function and Maintenance,Molecular Transport | Exocytosis | 0.00138 | CX3CL1,KITLG,MCOLN1,OTOF,RAB3B,RAB3C,STX6,STXBP5L,STXBP6,SYT2,SYT4,SYT6 | 12 |
| Organismal Injury and Abnormalities | Disorder of pigmentation | 0.00141 | ABCC3,ACSBG1,CYP51A1,KITLG,MITF,SCEL,TERF2,TGFB2,TYRP1 | 9 |
| Organ Morphology,Reproductive System Development and Function | Quantity of gonad | 0.00142 | CHD5,FYN,GDNF,KITLG,MAP2K1,MAP7,MSH5,PSAP,RAD21L1,REC114,SLC12A2,TGFB2,TGFBR3 | 13 |
| Cellular Movement,Hematological System Development and Function,Immune Cell Trafficking | Migration of mononuclear leukocytes | 0.00143 | ABCC1,AQP3,BCL11B,CBLB,CSF3,CX3CL1,FYN,JAK2,KCNK5,KITLG,LRCH1,MR1,PLCE1,PRKCQ,RORA,SEMA3E,STAT1,TERF2,TIMP2,TNFSF13B,XCL1 | 21 |
| Cellular Movement | Invasion of cells | 0.00145 | ABLIM1,AGO2,AMD1,CARD10,CCKBR,CDH13,CHD5,CSF3,CTNND2,EPHA2,FAM120A,FYN,GAB1,GDNF,HAS2,HIF1A,IL20RA,IQGAP1,JAK2,JUP,KITLG,let-7,LTB4R2,MAP2K1,MAP3K21,MBD2,MITF,MUC13,MUC20,PARD3,PAX2,PAX5,PHLPP1,PPIC,PRKCQ,PTPRZ1,RORA,SLC12A2,STAT1,TCF7L2,TGFB2,TGFBR3,TIMP2,TMBIM6,TMPO,TRPS1,WNT3A | 47 |
| Cardiovascular System Development and Function,Cellular Movement | Migration of endothelial cells | 0.00145 | ACVRL1,ARHGEF6,CDH13,CSF3,FGF18,GAB1,HIF1A,IQGAP1,JUP,MAP2K1,mir-129,PROS1,PTPRZ1,SEMA3E,SLIT3,STX6,TGFB2,TIMP2,ZNF580 | 19 |
| Embryonic Development,Organismal Development | Development of body trunk | 0.00145 | ACVRL1,BCL11B,CRH,CSF3,CX3CL1,CYP51A1,DMRT2,FGF18,FMN1,FYN,GAB1,GATA4,GDNF,GRHL2,HAS2,HEG1,HIF1A,HNF4G,IFT46,JAK2,JUP,KITLG,KLF1,let-7,MAP2K1,MC4R,NKX2-3,NKX2-5,PARD3,PAX2,PAX5,PLCE1,PSAP,PTPRC,RAPGEF2,RBM20,SGCD,SLC22A5,SLC8A1,SLIT3,SPEG,STX6,TCF7L2,TFAP2B,TGFB2,TGFBR3,TIMP2,TRPS1,TUBB6,WNT3A | 50 |
| Cell Death and Survival | Cell viability of blood cells | 0.00152 | ACTL6A,BCL11B,CHEK2,CSF3,CX3CL1,EBF1,HIF1A,ITPKB,JAK2,KITLG,MAP2K1,POU2AF1,PRKCQ,PTPRC,STAT1,TNFSF13B | 16 |
| Amino Acid Metabolism,Hair and Skin Development and Function,Small Molecule Biochemistry | Synthesis of melanin | 0.00152 | KITLG,MITF,RAPGEF2,TYRP1 | 4 |
| DNA Replication, Recombination, and Repair | Recombination | 0.00153 | BCL11A,BCL11B,CHEK2,GDNF,MSH5,NSMCE2,RAD21L1,REC114,SMC1B,STAG3,SYCP3,TERF2 | 12 |
| Cardiovascular System Development and Function,Cellular Movement | Migration of vascular endothelial cells | 0.00153 | ACVRL1,ARHGEF6,CDH13,CSF3,GAB1,HIF1A,IQGAP1,PROS1,PTPRZ1,SEMA3E,STX6,TIMP2 | 12 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cell-mediated Immune Response,Cellular Development,Cellular Function and Maintenance,Cellular Growth and Proliferation,Embryonic Development,Hematological System Development and Function,Hematopoiesis,Lymphoid Tissue Structure and Development,Organ Development,Organismal Development,Tissue Development | Differentiation of T lymphocytes | 0.00154 | BCL11A,BCL11B,CIITA,EBF1,GATA4,HIF1A,IL10RA,ITPKB,KITLG,let-7,MAF,MAP2K1,MBD2,PRKCQ,PSAP,PTPRC,RORA,STAT1,TMEM98,TNFSF13B | 20 |
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Rectum cancer | 0.00155 | ACBD5,ARPP21,CAMTA1,CHD6,CHEK2,CPED1,DPP10,E2F7,ECD,EPHA2,HIF1A,ICE1,ITPKB,JCAD,KCNK5,LRCH1,LRRC31,MAP2K1,MAP3K21,MYO3B,PAPOLA,PHYHD1,RAPGEF2,SLIT3,STAG3,TCF7L2,TENM3,TPTE2,TRPC7,VWA3B | 30 |
| Neurological Disease | Abnormality of peripheral ganglia | 0.00157 | GDNF,KIF26A,MAN2B1,PAX2,PSAP,SLC12A2,SLITRK6,TGFB2 | 8 |
| Cancer,Organismal Injury and Abnormalities | Metastatic potential of tumor cell lines | 0.00158 | GRHL2,HIF1A,MITF,PSAP,TGFB2 | 5 |
| Cell Death and Survival | Apoptosis of lymphocytes | 0.00161 | BCL11A,BCL11B,CHEK2,CIITA,FYN,HIF1A,KITLG,KLF13,MAP2K1,PERP,POU2AF1,PRKCQ,PTPRC,STAT1,TGFB2,TNFSF13B,WNT3A,XCL1 | 18 |
| Embryonic Development,Organismal Development | Development of abdomen | 0.00162 | ACVRL1,CRH,CSF3,CX3CL1,FMN1,GAB1,GATA4,GDNF,GRHL2,HIF1A,HNF4G,JAK2,KITLG,KLF1,let-7,MAP2K1,NKX2-3,NKX2-5,PAX2,PAX5,PLCE1,PSAP,RAPGEF2,TCF7L2,TFAP2B,TGFB2,TGFBR3,TIMP2 | 28 |
| Embryonic Development,Nervous System Development and Function,Ophthalmic Disease,Organ Development,Organ Morphology,Organismal Development,Organismal Injury and Abnormalities,Tissue Development,Visual System Development and Function | Abnormal morphology of anterior segment of the eye | 0.00163 | BFSP2,CRYAA/CRYAA2,MAF,MAN2B1,PSAP,STAT1,TGFB2 | 7 |
| Cardiovascular System Development and Function,Embryonic Development,Organ Development,Organismal Development,Tissue Development | Cardiogenesis | 0.00164 | CSF3,CYP51A1,GAB1,GATA4,HAS2,HEG1,HIF1A,IFT46,JUP,KITLG,MAP2K1,NKX2-5,PARD3,PLCE1,RAPGEF2,RBM20,SGCD,SLC22A5,SLC8A1,SLIT3,SPEG,STX6,TGFB2,TGFBR3,TUBB6,WNT3A | 26 |
| Cell Morphology,Cellular Assembly and Organization,Cellular Development,Cellular Function and Maintenance,Cellular Growth and Proliferation,Nervous System Development and Function,Organismal Development,Tissue Development | Axonogenesis | 0.00164 | ARHGEF28,BCL11B,GDNF,MAG,MAP2K1,MAP7,PACSIN1,PARD3,PAX2,PTPRZ1,SEMA3E,SLITRK1,SLITRK6,WNT3A | 14 |
| Cellular Development,Cellular Growth and Proliferation,Hematological System Development and Function,Hematopoiesis,Lymphoid Tissue Structure and Development,Tissue Development | Hematopoiesis of mononuclear leukocytes | 0.00165 | BCL11A,BCL11B,CBLB,CIITA,CSF3,EBF1,FYN,GATA4,HIF1A,IL10RA,ITPKB,KITLG,let-7,MAF,MAP2K1,MBD2,MR1,MYOD1,NKX2-3,PAX5,PHLPP1,PIK3AP1,POU2AF1,PRKCQ,PSAP,PTPRC,RORA,SEMA3E,STAT1,TMEM98,TNFSF13B,WNT3A | 32 |
| Nervous System Development and Function,Neurological Disease | Abnormal morphology of vestibular ganglion | 0.00165 | MAN2B1,PAX2,SLITRK6 | 3 |
| Cellular Movement,Hematopoiesis,Immune Cell Trafficking,Inflammatory Response,Lymphoid Tissue Structure and Development | Homing of bone marrow cells | 0.00165 | CSF3,FYN,KITLG | 3 |
| Auditory and Vestibular System Development and Function,Auditory Disease,Cell Morphology,Nervous System Development and Function,Neurological Disease,Organ Morphology,Organismal Development,Organismal Injury and Abnormalities,Tissue Morphology | Abnormal morphology of inner hair cells | 0.00165 | OTOF,PSAP,SLC12A2 | 3 |
| Nervous System Development and Function,Neurological Disease,Organ Morphology,Organismal Development,Organismal Injury and Abnormalities | Abnormal morphology of hippocampal CA1 region | 0.00165 | BRINP1,EIF4EBP2,TNR | 3 |
| Cell Death and Survival,Organismal Injury and Abnormalities | Cell death of melanocytes | 0.00165 | EPHA2,MITF,TYRP1 | 3 |
| Cardiovascular System Development and Function,Embryonic Development,Organ Development,Organ Morphology,Organismal Development,Tissue Development | Morphogenesis of atrial septum | 0.00165 | GATA4,NKX2-5,TGFB2 | 3 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Hematological System Development and Function,Tissue Morphology | Quantity of blood cells | 0.00167 | ARHGEF6,BANK1,BCL11A,BCL11B,CDH13,CIITA,CSF3,CX3CL1,EBF1,FYN,HIF1A,HINT1,IL10RA,ITPKB,JAK2,KITLG,KLF13,let-7,MAF,MAP2K1,MGAT4B,MR1,NKX2-3,PARD3,PAX5,PIK3AP1,PLCE1,POU2AF1,PRKCQ,PROS1,PSAP,PTPRC,RAPGEF2,RORA,SEMA3E,SLC37A4,SLC8A1,SOAT1,ST6GALNAC2,STAT1,TAP1,TIMP2,TMPO,TNFSF13B,XCL1 | 45 |
| Connective Tissue Development and Function,Connective Tissue Disorders,Organismal Injury and Abnormalities,Skeletal and Muscular Disorders,Skeletal and Muscular System Development and Function,Tissue Development | Abnormal morphology of bone | 0.00168 | B3GLCT,BICD2,CSF3,CYP51A1,DMRT2,EBF1,FMN1,HIF1A,IL20RA,KITLG,MEPE,PAX2,PTPRC,SLC13A1,SLC37A4,STAT1,TGFB2,TGFBR3,TRPS1,WNT3A | 20 |
| Cellular Function and Maintenance | Ion homeostasis of cells | 0.0017 | ABCC1,ABCC3,ADCY5,CCKBR,CRH,CX3CL1,DAPK1,ERO1A,FYN,GDNF,HIF1A,HTR3B,IBTK,JAK2,KCNK5,KITLG,PLCE1,PTPRC,SGCD,SLC12A2,SLC22A5,SLC24A3,SLC37A4,SLC8A1,TFAP2B,TMBIM6,TRDN,TRPC7 | 28 |
| Developmental Disorder,Hereditary Disorder,Ophthalmic Disease,Organismal Injury and Abnormalities | Autosomal recessive congenital eye anomaly | 0.0017 | B3GLCT,CRPPA,CRYAA/CRYAA2,MITF,TENM3,TYRP1 | 6 |
| Cell-To-Cell Signaling and Interaction,Nervous System Development and Function | Neurotransmission | 0.00172 | ADNP,AKAP7,ANKS1B,CCKBR,CRH,EIF4EBP2,FYN,GRIK5,HIF1A,HTR3B,JAK2,KCNJ9,MC4R,PCDH17,PDE7B,RIMBP2,RIT2,SLC6A4,SYPL1,TNR,WNT3A | 21 |
| Cell Cycle | Interphase of leukemia cell lines | 0.00173 | CSF3,JAK2,KITLG,SRPK2,STAT1 | 5 |
| Developmental Disorder,Nervous System Development and Function | Abnormal myelination | 0.00173 | FYN,MAG,PSAP,PTPRC,PTPRZ1 | 5 |
| Cellular Movement | Cell movement of brain cells | 0.00174 | BICD2,CX3CL1,DISC1,GDNF,KITLG,PTPRZ1,SLC12A2,TNR | 8 |
| Organismal Development | Morphology of head | 0.00177 | ABCC6,AQP3,B3GLCT,BCL11B,BFSP2,BICD2,BRINP1,CRYAA/CRYAA2,CX3CL1,CYP51A1,DMRT2,EBF1,EIF4EBP2,FYN,GDNF,IRX6,MAF,MAN2B1,MAP2K1,MCOLN1,MITF,OPN4,OTOF,PACSIN1,PAX2,PRKCQ,PROS1,PRPF31,PSAP,PTPRC,RORA,SLC12A2,SLC6A4,SLITRK6,SOAT1,STAT1,TCF7L2,TGFB2,TMEM98,TNR,TRPS1,TYRP1 | 42 |
| Organismal Injury and Abnormalities | Fibrin-rich network | 0.00177 | F8,PROS1 | 2 |
| Cellular Response to Therapeutics | Drug resistance of leukemia cells | 0.00177 | ABCC1,ABCC6 | 2 |
| Cancer,Cell Death and Survival,Organismal Injury and Abnormalities,Tumor Morphology | Apoptosis of chronic myelogenous leukemia cells | 0.00177 | HIF1A,JAK2 | 2 |
| Connective Tissue Development and Function,Connective Tissue Disorders,Organ Morphology,Organismal Development,Organismal Injury and Abnormalities,Skeletal and Muscular Disorders,Skeletal and Muscular System Development and Function,Tissue Development | Abnormal morphology of trochanter | 0.00177 | TGFB2,TGFBR3 | 2 |
| Cell-To-Cell Signaling and Interaction,Cellular Assembly and Organization,Hematological System Development and Function,Immune Cell Trafficking,Infectious Diseases,Inflammatory Response | Cell-cell fusion of bone marrow-derived macrophages | 0.00177 | OCSTAMP,STAT1 | 2 |
| Carbohydrate Metabolism,Drug Metabolism,Molecular Transport,Small Molecule Biochemistry | Accumulation of etoposide | 0.00177 | ABCC1,ABCC3 | 2 |
| Cardiovascular Disease,Developmental Disorder,Organismal Injury and Abnormalities | Hypoplasia of atrium | 0.00177 | HAS2,PARD3 | 2 |
| Endocrine System Disorders,Gastrointestinal Disease,Hereditary Disorder,Metabolic Disease,Organismal Injury and Abnormalities | Maturity-onset diabetes of the young type 5 | 0.00177 | GATA4,PAX2 | 2 |
| Connective Tissue Disorders,Organismal Injury and Abnormalities | Pseudoxanthoma elasticum | 0.00177 | ABCC6,XYLT1 | 2 |
| Inflammatory Disease,Inflammatory Response,Neurological Disease,Organismal Injury and Abnormalities | HIV-associated encephalitis | 0.00177 | HIF1A,PTPRC | 2 |
| Cell-To-Cell Signaling and Interaction,Cellular Assembly and Organization,Hematological System Development and Function,Immune Cell Trafficking,Infectious Diseases,Inflammatory Response | Cell-cell fusion of foreign body giant cell | 0.00177 | OCSTAMP,STAT1 | 2 |
| Cellular Development | Dedifferentiation of fibroblast cell lines | 0.00177 | let-7,WNT3A | 2 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cellular Development,Cellular Growth and Proliferation,Embryonic Development,Organ Development,Organismal Development,Skeletal and Muscular System Development and Function,Tissue Development | Myogenesis of germ cell tumor cell lines | 0.00177 | NKX2-5,WNT3A | 2 |
| Digestive System Development and Function,Gastrointestinal Disease,Organ Morphology,Organismal Development,Organismal Injury and Abnormalities | Abnormal morphology of distended stomach | 0.00177 | GDNF,ITPKB | 2 |
| Cell-To-Cell Signaling and Interaction,Nervous System Development and Function | Priming of dorsal root ganglion cells | 0.00177 | GDNF,MAG | 2 |
| Connective Tissue Disorders,Organismal Injury and Abnormalities,Skeletal and Muscular Disorders | Hemarthrosis | 0.00177 | F8,PROS1 | 2 |
| Cell Morphology,Inflammatory Response | Shape change of monocytes | 0.00177 | CX3CL1,SLIT3 | 2 |
| Cardiovascular Disease,Organismal Injury and Abnormalities | Angiogenesis of infarct | 0.00177 | CSF3,KITLG | 2 |
| Drug Metabolism,Molecular Transport,Vitamin and Mineral Metabolism | Transport of leucovorin | 0.00177 | ABCC1,ABCC3 | 2 |
| Cellular Development,Cellular Growth and Proliferation,Embryonic Development,Organ Development,Organismal Development,Skeletal and Muscular System Development and Function,Tissue Development | Myogenesis of carcinoma cell lines | 0.00177 | NKX2-5,WNT3A | 2 |
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Rectal adenocarcinoma | 0.00182 | ACBD5,ARPP21,CAMTA1,CHD6,CHEK2,CPED1,DPP10,E2F7,ECD,EPHA2,ICE1,ITPKB,JCAD,KCNK5,LRCH1,LRRC31,MAP2K1,MAP3K21,MYO3B,PAPOLA,PHYHD1,RAPGEF2,SLIT3,STAG3,TCF7L2,TENM3,TPTE2,TRPC7,VWA3B | 29 |
| Cell-mediated Immune Response,Cellular Development,Cellular Function and Maintenance,Cellular Growth and Proliferation,Embryonic Development,Hematological System Development and Function,Hematopoiesis,Lymphoid Tissue Structure and Development,Organ Development,Organismal Development,Tissue Development | Differentiation of Th17 cells | 0.00183 | HIF1A,IL10RA,let-7,MAF,PRKCQ,RORA,STAT1,TNFSF13B | 8 |
| Cardiovascular System Development and Function,Organ Morphology,Organismal Development,Skeletal and Muscular System Development and Function | Morphology of myocardium | 0.00183 | ACVRL1,GATA4,HIF1A,JUP,NKX2-5,SLC8A1,TGFB2,TGFBR3 | 8 |
| Cardiovascular System Development and Function,Cellular Movement | Cell movement of endothelial cells | 0.00187 | ACVRL1,ARHGEF6,CDH13,CSF3,FGF18,GAB1,HIF1A,IQGAP1,JUP,MAP2K1,mir-129,MTSS1,PROS1,PTPRZ1,SEMA3E,SLIT3,STX6,TGFB2,TIMP2,ZNF580 | 20 |
| Cell-To-Cell Signaling and Interaction,Hematological System Development and Function | Activation of blood cells | 0.00187 | BANK1,BCL11B,BRINP1,CBLB,CRH,CRYAA/CRYAA2,CSF3,CX3CL1,EBF1,FYN,GDNF,HIF1A,ITPKB,JAK2,KITLG,let-7,MAF,MAP2K1,MR1,PAX5,POU2AF1,PRKCQ,PROS1,PSAP,PTPRC,RAB3B,RAB3C,RORA,SLC6A4,STAT1,TERF2,TNFSF13B,TRPC7,WNT3A | 34 |
| Cancer,Organismal Injury and Abnormalities,Respiratory Disease | Undifferentiated lung carcinoma | 0.00188 | AAK1,BCL11A,CHEK2,DAPK1,GALNT13,IQGAP1,ITPKB,JAK2,MAP2K1,MYO3B,PAK5,PRKCQ,SPEG | 13 |
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Esophageal adenocarcinoma | 0.00188 | AGBL1,C6orf118,CA10,CARD10,CHD5,CIITA,CSMD3,CTNND2,IQCF6,IRX6,JAK2,KIF13A,LRCH1,LSAMP,OPN4,PTPRZ1,RIMBP2,SLCO4C1,SLIT3,STXBP5L,TMEM132B,ZDHHC14 | 22 |
| Cancer,Organismal Injury and Abnormalities,Renal and Urological Disease | Urinary tract cancer | 0.00189 | ABCC1,ABCC6,ADGRL3,AGBL1,ANKS1B,ARID1B,ARMC12,AUTS2,BICD2,C1orf105,CDH22,CENPN,CEP350,CHD5,CHD6,CHEK2,CIITA,CPED1,CSMD3,CXXC4,CYP51A1,DAB2IP,DAPK1,DLST,DNAH7,DNAH8,E2F7,E2F8,ENPEP,EPHA2,EPS15L1,F8,GALNT17,GLO1,HIF1A,IBTK,IL10RA,IL20RA,KDM2B,MAGI2,MAN2B1,MAP2K1,mir-129,MITF,MR1,MROH2B,MUC13,OCSTAMP,ORC3,OTOF,PAK5,PARD3,PAX2,PCDH17,PHLPP1,PHYHD1,PKD1L2,PSAP,PTPRZ1,RAD21L1,RCC2,RIMBP2,RNF168,RPH3AL,SLC12A2,SLC24A3,SLC6A4,SLC8A1,SLIT3,SPEG,SRBD1,TCF7L2,TFAP2B,TGFBR3,TIMP2,TM9SF2,TMEM132B,TNR,TRDN,TUBB6,VAT1L,VPS13A,ZNF276,ZNF519 | 84 |
| Organismal Functions | Hypoactivity of mice | 0.00189 | ADCY5,ITPKB,KIF13A,MAG,PSAP,SLC6A4,SLITRK1,SLITRK6,STXBP5L,VPS13A | 10 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Developmental Disorder,Embryonic Development,Organismal Development,Tissue Morphology | Abnormal morphology of neural tube | 0.00189 | AGO2,IFT46,RAPGEF2,TCF7L2,WNT3A | 5 |
| Cell-To-Cell Signaling and Interaction,Nervous System Development and Function | Inhibitory postsynaptic potential | 0.00189 | CRH,CX3CL1,EIF4EBP2,IGSF9B,PACSIN1 | 5 |
| Cell Death and Survival | Cell death of mononuclear leukocytes | 0.00191 | BCL11A,BCL11B,CHEK2,CIITA,CSF3,FYN,HIF1A,KITLG,KLF13,MAP2K1,PAX5,PERP,POU2AF1,PRKCQ,PTPRC,STAT1,TGFB2,TNFSF13B,WNT3A,XCL1 | 20 |
| Cancer,Hematological Disease,Immunological Disease,Organismal Injury and Abnormalities | High grade lymphocytic cancer | 0.00191 | ACVRL1,AFAP1L2,ARID1B,BCL11B,CAMTA1,CIITA,EPHA2,FYN,IQGAP1,JAK2,KDM2B,let-7,MR1,NKX2-3,NKX2-5,PAX5,PTPRC,SPEG,STXBP6,TUBB6 | 20 |
| Cardiovascular System Development and Function | Morphology of cardiovascular system | 0.00192 | ABCC1,ACVRL1,ADCY5,AGO2,CIITA,CSF3,CYP51A1,EPHA2,FGF18,GAB1,GATA4,GDNF,HAS2,HIF1A,IFT46,JUP,KITLG,KLF1,let-7,MAN2B1,MAP2K1,MCOLN1,MYOD1,NKX2-3,NKX2-5,PARD3,PLCE1,PROS1,PSAP,RBM20,SGCD,SLC6A4,SLC8A1,SPEG,TGFB2,TGFBR3,TIMP2,TMPO,XYLT1 | 39 |
| Cell Death and Survival | Apoptosis of lymphatic system cells | 0.00193 | BCL11A,BCL11B,CHEK2,CIITA,CSF3,FYN,HIF1A,KITLG,KLF13,MAP2K1,PERP,POU2AF1,PRKCQ,PTPRC,STAT1,TGFB2,TNFSF13B,WNT3A,XCL1 | 19 |
| Cellular Development,Cellular Growth and Proliferation,Connective Tissue Development and Function,Hematological System Development and Function,Hematopoiesis,Organismal Development,Tissue Development | Development of erythroid cells | 0.00196 | AGO2,CSF3,KITLG,KLF1 | 4 |
| Cancer,Organismal Injury and Abnormalities | Hyperplasia of glandular epithelial cells | 0.00196 | CDH13,CRH,DAB2IP,RORA | 4 |
| Cardiovascular Disease,Developmental Disorder,Organismal Injury and Abnormalities | Hypoplasia of trabeculae carne | 0.00196 | JUP,SLC8A1,TGFB2,TGFBR3 | 4 |
| Cell-To-Cell Signaling and Interaction,Cellular Assembly and Organization | Adhesion of nuclear matrix | 0.00196 | CDH13,CX3CL1,DISC1,JUP | 4 |
| Cardiovascular System Development and Function,Organ Morphology,Skeletal and Muscular System Development and Function,Tissue Morphology | Quantity of cardiomyocytes | 0.00196 | GATA4,NKX2-5,SLC8A1,TGFBR3 | 4 |
| Cancer,Hematological Disease,Immunological Disease,Organismal Injury and Abnormalities | Refractory chronic myeloid leukemia | 0.00196 | EPHA2,FYN,JAK2,RPL3 | 4 |
| Cellular Movement | Migration of central nervous system cells | 0.00201 | BICD2,CX3CL1,DISC1,GDNF,KITLG,PTPRZ1,SLC12A2,TNR | 8 |
| Tissue Development | Development of epithelial tissue | 0.00201 | ACVRL1,BCL11B,CDH13,EPHA2,GAB1,GDNF,GRHL2,HEG1,HIF1A,IQGAP1,KITLG,let-7,MAP2K1,MAP7,mir-129,MITF,NRG2,PAX2,PROS1,SLC8A1,STAT1,STX6,TFAP2B,TGFB2,TIMP2,ZNF580 | 26 |
| Cardiovascular System Development and Function,Embryonic Development,Organ Development,Organ Morphology,Organismal Development,Tissue Development | Morphogenesis of atrioventricular valve | 0.00204 | GATA4,SLIT3,TGFB2 | 3 |
| Cellular Development,Cellular Growth and Proliferation,Connective Tissue Development and Function,Hematological System Development and Function,Hematopoiesis,Organismal Development,Tissue Development | Development of burst-forming erythroid cells | 0.00204 | JAK2,KITLG,STAT1 | 3 |
| Cell Morphology,Cellular Development,Cellular Growth and Proliferation,Organismal Development,Tissue Development | Morphogenesis of epithelial cells | 0.00207 | BCL11B,GAB1,GDNF,GRHL2,TIMP2 | 5 |
| Embryonic Development,Nervous System Development and Function,Organ Development,Organismal Development,Tissue Development | Formation of mesencephalon | 0.00207 | KDM2B,LMX1A,PAX2,PAX5,WNT3A | 5 |
| Cancer,Organismal Injury and Abnormalities | Mixed neoplasia | 0.00208 | ABCC3,AGBL1,ARHGAP45,ARHGAP8/PRR5-ARHGAP8,ARHGEF28,ARID1B,BICD2,C6orf118,CAMTA1,CBLN4,CCDC33,CCDC61,CHD5,CHEK2,CSMD3,CTNND2,CYP51A1,DAB2IP,DAPK1,DEGS2,DISP3,DLST,EPHA2,FUCA2,JAK2,KIF26A,MAG,MAGI2,MAP2K1,MAP7,MGAT4B,MITF,MYO3B,NTM,OTOF,PAPOLA,PARD3,PCSK2,RORA,SEMA3E,SI,SLC6A15,SLC8A1,SLITRK1,SPEG,SRPK2,STAT1,SYCP3,SYNPO2,TAP1,TENM3,TFAP2B,TNR,TTC28,VPS13A,ZDHHC14,ZNF143 | 57 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cardiovascular Disease,Cardiovascular System Development and Function,Organ Morphology,Organismal Development,Organismal Injury and Abnormalities | Abnormal morphology of atrium | 0.0021 | CYP51A1,JUP,NKX2-5,PARD3,SLC8A1,TGFB2 | 6 |
| Cell-To-Cell Signaling and Interaction,Hematological System Development and Function,Immune Cell Trafficking,Inflammatory Response | Activation of antigen presenting cells | 0.00215 | CRH,CRYAA/CRYAA2,CSF3,CX3CL1,GDNF,JAK2,let-7,MAF,MAP2K1,PROS1,PSAP,RAB3B,RAB3C,RORA,SLC6A4,STAT1,WNT3A | 17 |
| Organ Morphology,Organismal Development,Renal and Urological System Development and Function | Morphology of kidney | 0.00216 | CMIP,DAPK1,FMN1,GDNF,HIF1A,JAK2,MAGI2,MTSS1,PAX2,PCSK2,PSAP,SLC37A4,SLIT3,TCF7L2,TFAP2B,TGFB2 | 16 |
| Cell Death and Survival,Cellular Assembly and Organization,Cellular Development,Nervous System Development and Function,Tissue Development,Tissue Morphology | Regeneration of axons | 0.00217 | JAK2,let-7,MAG,MAP2K1,OPN4,SLC12A2,XYLT1 | 7 |
| Cellular Development,Cellular Growth and Proliferation,Embryonic Development,Hematological System Development and Function,Hematopoiesis,Humoral Immune Response,Lymphoid Tissue Structure and Development,Organ Development,Organismal Development,Tissue Development | Differentiation of B lymphocytes | 0.00218 | BCL11A,EBF1,FYN,HIF1A,KITLG,NKX2-3,PAX5,PIK3AP1,POU2AF1,PTPRC,STAT1,TNFSF13B,WNT3A | 13 |
| Cancer,Organismal Injury and Abnormalities,Respiratory Disease | Upper airway cancer | 0.00218 | AGBL1,AGO2,ARHGAP31,ARPP21,CAMTA1,CCSER1,CDH19,CEP350,CSMD3,CTNND2,DAPK1,DNAH7,EPHA2,GATA4,JCAD,JUP,KCTD15,KIF26A,let-7,MAG,MCOLN1,MROH2B,NKX2-5,NRG2,PAX5,PCDH17,PRKCQ,PSAP,RIMBP2,RIT2,SI,SLC12A2,STAG3,STXBP5L,TMEM132B,TPTE2,WDR73 | 37 |
| Renal and Urological System Development and Function | Morphology of urinary system | 0.0022 | CMIP,DAPK1,FMN1,GDNF,HIF1A,JAK2,MAGI2,MCOLN1,MTSS1,PAX2,PCSK2,PSAP,SLC37A4,SLIT3,TCF7L2,TFAP2B,TGFB2 | 17 |
| Organismal Injury and Abnormalities,Renal and Urological Disease | Formation of renal lesion | 0.0022 | AGBL1,ARID1B,ARMC12,C1orf105,CENPN,CHEK2,CSMD3,CXXC4,DAB2IP,DAPK1,DLST,DNAH7,DNAH8,E2F7,E2F8,ENPEP,F8,HIF1A,IL10RA,KDM2B,MAP2K1,mir-129,MITF,MR1,OCSTAMP,PARD3,PAX2,PCDH17,PHLPP1,PHYHD1,PKD1L2,PTPRZ1,RAD21L1,RCC2,RIMBP2,RNF168,RPH3AL,SLC12A2,SLC8A1,SLIT3,TGFBR3,TIMP2,TMEM132B,TNR,TRDN,TUBB6,VPS13A,ZNF519 | 48 |
| Cell-To-Cell Signaling and Interaction,Connective Tissue Development and Function | Adhesion of fibroblast cell lines | 0.00224 | ADNP,GAB1,IQGAP1,JUP,MAP2K1,NELL1 | 6 |
| Lymphoid Tissue Structure and Development,Tissue Morphology | Quantity of lymphatic system cells | 0.00225 | ARHGEF6,BANK1,BCL11A,BCL11B,CDH13,CIITA,CRH,CSF3,EBF1,FYN,HIF1A,IL10RA,ITPKB,JAK2,KITLG,KLF13,let-7,MAF,MAP2K1,MR1,NKX2-3,PAX5,PIK3AP1,POU2AF1,PRKCQ,PROS1,PSAP,PTPRC,RAPGEF2,SLC37A4,ST6GALNAC2,STAT1,TAP1,TNFSF13B,XCL1 | 35 |
| Developmental Disorder,Hereditary Disorder,Ophthalmic Disease,Organismal Injury and Abnormalities | Autosomal dominant congenital eye anomaly | 0.00225 | CRYAA/CRYAA2,EPHA2,MAF,PAX2,TMEM98 | 5 |
| Cellular Development,Cellular Growth and Proliferation,Embryonic Development,Hematological System Development and Function,Hematopoiesis,Humoral Immune Response,Lymphoid Tissue Structure and Development,Organ Development,Organismal Development,Tissue Development | Differentiation of pre-B lymphocytes | 0.00225 | EBF1,FYN,KITLG,PAX5,TNFSF13B | 5 |
| Organ Morphology,Reproductive System Development and Function,Tissue Morphology | Quantity of gonadal cells | 0.00227 | CHD5,FYN,GDNF,MAP2K1,MAP7,MSH5,PSAP,RAD21L1,SLC12A2,TGFB2,TGFBR3 | 11 |
| Cell Morphology,Nervous System Development and Function,Neurological Disease,Tissue Morphology | Abnormal morphology of sensory neurons | 0.00229 | GDNF,MCOLN1,OPN4,OTOF,PSAP,SLC12A2,SLITRK6 | 7 |
| Cellular Development,Cellular Growth and Proliferation,Embryonic Development,Hematological System Development and Function,Hematopoiesis,Lymphoid Tissue Structure and Development,Organ Development,Organismal Development,Tissue Development | Lymphopoiesis | 0.00231 | BCL11A,BCL11B,CBLB,CIITA,CSF3,EBF1,FYN,GATA4,HIF1A,IL10RA,ITPKB,KITLG,let-7,MAF,MAP2K1,MBD2,NKX2-3,PAX5,PHLPP1,PIK3AP1,POU2AF1,PRKCQ,PSAP,PTPRC,RORA,SEMA3E,STAT1,TMEM98,TNFSF13B,WNT3A | 30 |
| Cellular Development,Embryonic Development,Organismal Development | Differentiation of embryonic stem cells | 0.00232 | CSF3,GATA4,KDM2B,KITLG,LMX1A,MYOD1,NKX2-5,TGFB2 | 8 |
| Amino Acid Metabolism,Post-Translational Modification,Small Molecule Biochemistry | Phosphorylation of L-amino acid | 0.00233 | ADNP,BANK1,CHEK2,CSF3,FYN,GDNF,JAK2,KITLG,MAP2K1,MYO3B,PTPRC,PTPRZ1 | 12 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Auditory Disease,Hereditary Disorder,Neurological Disease,Organismal Injury and Abnormalities | Hereditary hearing loss | 0.00235 | ABCC1,GAB1,GRHL2,KITLG,LMX1A,MAF,MITF,OTOF,PSAP,SLC12A2,SLITRK6 | 11 |
| Cell Cycle,Gene Expression | Binding of DNA | 0.00236 | AGO2,CCKBR,CRH,CSF3,EBF1,GRHL2,HIF1A,JAK2,KITLG,KLF13,LTB4R2,MAP2K1,MBD2,MYOD1,NKX2-5,PRKCQ,PTPRC,SOAT1,STAT1,TCF7L2,TFAP2B,TGFB2,TNFSF13B,WNT3A | 24 |
| Cellular Movement | Invasion of tumor cell lines | 0.00238 | ABLIM1,AGO2,CARD10,CCKBR,CDH13,CSF3,EPHA2,FAM120A,GDNF,HAS2,HIF1A,IL20RA,IQGAP1,let-7,LTB4R2,MAP2K1,MAP3K21,MBD2,MITF,MUC13,MUC20,PARD3,PAX2,PAX5,PHLPP1,PPIC,PRKCQ,PTPRZ1,RORA,SLC12A2,STAT1,TCF7L2,TGFB2,TGFBR3,TIMP2,TMBIM6,TMPO,TRPS1,WNT3A | 39 |
| Cellular Movement | Migration of pancreatic cancer cell lines | 0.00239 | CBLB,GDNF,let-7,MUC13,MUC20,TMPO | 6 |
| Cell Death and Survival | Apoptosis of T lymphocytes | 0.00242 | BCL11B,CHEK2,CIITA,FYN,HIF1A,KLF13,MAP2K1,PERP,POU2AF1,PRKCQ,PTPRC,STAT1,TGFB2,TNFSF13B,XCL1 | 15 |
| Cellular Development,Cellular Growth and Proliferation | Development of bone marrow cell lines | 0.00244 | CSF3,JAK2,JUP,KITLG,let-7 | 5 |
| Cell-mediated Immune Response,Cellular Movement,Hematological System Development and Function,Immune Cell Trafficking | NK cell migration | 0.00244 | CX3CL1,KCNK5,PRKCQ,TERF2,XCL1 | 5 |
| Auditory Disease,Organismal Injury and Abnormalities | Abnormality of inner ear | 0.00247 | MAN2B1,MCOLN1,OTOF,PAX2,PSAP,SLC12A2,SLC6A4,SLITRK6,TGFB2 | 9 |
| Connective Tissue Development and Function,Connective Tissue Disorders,Organismal Injury and Abnormalities,Skeletal and Muscular Disorders,Skeletal and Muscular System Development and Function,Tissue Development,Tissue Morphology | Loss of bone tissue | 0.00247 | CSF3,HIF1A,KITLG | 3 |
| Embryonic Development,Nervous System Development and Function,Ophthalmic Disease,Organ Development,Organ Morphology,Organismal Development,Organismal Injury and Abnormalities,Tissue Development,Tissue Morphology,Visual System Development and Function | Abnormal morphology of corneal stroma | 0.00247 | MAN2B1,PSAP,TGFB2 | 3 |
| Cellular Movement,Hematopoiesis,Immune Cell Trafficking,Inflammatory Response | Cell movement of bone marrow cells | 0.00248 | CSF3,FYN,JAK2,KITLG | 4 |
| Cell-To-Cell Signaling and Interaction,Cellular Assembly and Organization,Cellular Development,Cellular Function and Maintenance,Cellular Growth and Proliferation,Nervous System Development and Function,Tissue Development | Maturation of synapse | 0.00248 | DISC1,IGSF21,NRG2,SLC12A2 | 4 |
| Hematological System Development and Function,Hematopoiesis | Development of hematopoietic system | 0.00249 | AGO2,BCL11B,CBLB,CSF3,EBF1,FYN,HIF1A,JAK2,KITLG,KLF1,let-7,MAP2K1,PAX5,PRKCQ,PTPRC,RORA,STAT1,TNFSF13B,WNT3A | 19 |
| Organismal Development,Organismal Injury and Abnormalities | Abnormal morphology of head | 0.00251 | ABCC6,AQP3,B3GLCT,BCL11B,BFSP2,BICD2,BRINP1,CRYAA/CRYAA2,CX3CL1,CYP51A1,DMRT2,EBF1,EIF4EBP2,FYN,MAF,MAN2B1,MAP2K1,MCOLN1,MITF,OPN4,OTOF,PACSIN1,PAX2,PRKCQ,PROS1,PRPF31,PSAP,RORA,SLC12A2,SLC6A4,SLITRK6,SOAT1,STAT1,TCF7L2,TGFB2,TNR,TRPS1 | 37 |
| Organ Morphology,Organismal Development,Organismal Injury and Abnormalities,Renal and Urological Disease,Renal and Urological System Development and Function | Abnormal morphology of renal tubule | 0.00255 | DAPK1,GDNF,MTSS1,PCSK2,PSAP,TFAP2B,TGFB2 | 7 |
| Cancer,Hematological Disease,Immunological Disease,Organismal Injury and Abnormalities | Non-M3 acute myeloid leukemia | 0.00257 | CHEK2,EPHA2,GATA4,GJB5,JAK2,KIF26A,let-7,RPL3,STAG3 | 9 |
| DNA Replication, Recombination, and Repair | Synthesis of DNA | 0.00259 | AFAP1L2,ARHGEF28,CCKBR,CHEK2,CSF3,FGF18,FYN,GAB1,GDNF,GINS2,IQGAP1,KITLG,MAF,MAP2K1,NRG2,PLCE1,PROS1,TGFB2,TGFBR3,TIMP2 | 20 |
| Cellular Development,Tissue Development | Differentiation of epithelial cells | 0.00259 | AQP3,CCKBR,E2F7,E2F8,EPHA2,FYN,GAB1,GATA4,GRHL2,KITLG,LMX1A,MAP2K1,MITF,RNF144B,SCEL,TYRP1,WNT3A | 17 |
| Cellular Function and Maintenance | Function of blood cells | 0.00267 | ABCC1,ARHGEF6,BANK1,CBLB,CIITA,CRH,CSF3,CX3CL1,FYN,IL10RA,KCNK5,MAP2K1,MCOLN1,POU2AF1,PRKCQ,PSAP,PTPRC,RAPGEF2,STAT1,TAP1,TGFB2,TNFSF13B,WNT3A | 23 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cardiovascular System Development and Function,Organismal Development | Sprouting angiogenesis | 0.00269 | ACVRL1,CDH13,E2F7,E2F8,JCAD,RNF213,SEMA3E | 7 |
| Cancer,Hematological Disease,Immunological Disease,Organismal Injury and Abnormalities | High-grade lymphoma | 0.00269 | ACVRL1,AFAP1L2,ARID1B,BCL11B,CAMTA1,CIITA,EPHA2,FYN,IQGAP1,JAK2,KDM2B,let-7,MR1,NKX2-3,NKX2-5,PAX5,PTPRC,SPEG,STXBP6,TUBB6 | 20 |
| Auditory and Vestibular System Development and Function,Auditory Disease,Organ Morphology,Organismal Development,Organismal Injury and Abnormalities | Abnormal morphology of cochlea | 0.00272 | MAN2B1,PAX2,PSAP,SLC12A2,SLITRK6,TGFB2 | 6 |
| Cardiovascular Disease,Cardiovascular System Development and Function | Abnormal morphology of cardiovascular system | 0.00274 | ABCC1,ACVRL1,ADCY5,AGO2,CIITA,CSF3,CYP51A1,GAB1,GATA4,GDNF,HAS2,HIF1A,IFT46,JUP,let-7,MAN2B1,MAP2K1,MCOLN1,MYOD1,NKX2-3,NKX2-5,PARD3,PLCE1,PROS1,PSAP,RBM20,SGCD,SLC6A4,SLC8A1,SPEG,TGFB2,TGFBR3,TIMP2,TMPO,XYLT1 | 35 |
| Gastrointestinal Disease,Organismal Injury and Abnormalities | Esophageal lesion | 0.00275 | AGBL1,AGO2,C6orf118,CA10,CARD10,CEP350,CHD5,CIITA,CSMD3,CTNND2,IQCF6,IRX6,JAK2,KIF13A,let-7,LRCH1,LRRC31,LSAMP,OPN4,PARD3,PTPRZ1,RIMBP2,RNF213,RNF6,SLC6A4,SLCO4C1,SLIT3,STXBP5L,TMEM132B,TNFSF13B,ZDHHC14 | 31 |
| Cellular Development,Connective Tissue Development and Function,Tissue Development | Differentiation of connective tissue cells | 0.00276 | ACVRL1,CIITA,EBF1,EPHA2,ERO1A,FGF18,FYN,GATA4,GDNF,GLO1,HAS2,HIF1A,IL20RA,JUP,KITLG,MAF,MAP2K1,MEDAG,MITF,MYOD1,NELL1,OCSTAMP,RORA,STAT1,TCF7L2,TGFB2,TGFBR3,TRPS1,WNT3A | 29 |
| Developmental Disorder,Hereditary Disorder,Immunological Disease,Metabolic Disease,Organismal Injury and Abnormalities | Severe combined immunodeficiency | 0.00277 | BCL11B,CIITA,PTPRC,TAP1 | 4 |
| Embryonic Development,Organismal Development,Tissue Development | Growth of embryonic tissue | 0.00281 | CSF3,CX3CL1,DISC1,DISP3,FGF18,HIF1A,KDM2B,KIF26A,KITLG,let-7,NKX2-5,ORC3,STAT1,TCF7L2,TIMP2,WNT3A | 16 |
| Cancer,Organismal Injury and Abnormalities,Renal and Urological Disease | Upper renal tract carcinoma | 0.00283 | AGBL1,ARID1B,ARMC12,C1orf105,CENPN,CHEK2,CSMD3,CXXC4,DAB2IP,DAPK1,DLST,DNAH7,DNAH8,E2F7,E2F8,ENPEP,F8,HIF1A,IL10RA,KDM2B,MAP2K1,mir-129,MITF,MR1,OCSTAMP,PAX2,PCDH17,PHLPP1,PHYHD1,PKD1L2,PTPRZ1,RAD21L1,RCC2,RIMBP2,RNF168,RPH3AL,SLC12A2,SLC8A1,SLIT3,TCF7L2,TGFBR3,TIMP2,TMEM132B,TNR,TRDN,TUBB6,VPS13A,ZNF519 | 48 |
| Cancer,Organismal Injury and Abnormalities,Tissue Morphology,Tumor Morphology | Morphology of malignant tumor | 0.00287 | EIF4EBP2,HINT1,IQGAP1,TGFB2,WNT3A | 5 |
| Cell Death and Survival | Cell death of lymphocytes | 0.00288 | BCL11A,BCL11B,CHEK2,CIITA,CSF3,FYN,HIF1A,KITLG,KLF13,MAP2K1,PERP,POU2AF1,PRKCQ,PTPRC,STAT1,TGFB2,TNFSF13B,WNT3A,XCL1 | 19 |

**Supplemental Table 4.** IPA top 500 disease and function annotations for genes differentially methylated between cannabis users and controls before abstinence. IPA disease and function annotations for genes associated with differentially methylated CpG sites between cannabis users and controls before an 11-week abstinence period.

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Organismal Injury and Abnormalities | Upper aero-digestive squamous cell carcinoma | 0.00000128 | ADGRF4,AKAP7,ATP10A,BMP4,CACNG2,CCSER1,CHD7,DPYD,EDIL3,EPHA2,FAM135B,FAM171B,GABRA6,GRIA4,HLA-A,HNRNPR,INTS6,ITGB5,KCTD14,KMT2A,LRRC4C,MEIS2,MPPED2,MTNR1A,NR2E1,NTNG1,PANX2,PCBP1,PFKP,PTPRD,RHBDF2,SLC4A1AP,SLCO2A1,SNTG1,TENM2,TMEM132C,TRAPPC9,TRPS1,USH2A,ZNF362 | 40 |
| Dermatological Diseases and Conditions,Organismal Injury and Abnormalities | Skin lesion | 0.00000165 | ACKR3,ACTL9,ADAMTS3,ADD2,ADGRF4,ANXA4,ATP10A,BCAR3,BTBD11,C8orf33,CACNG2,CAPRIN1,CCDC63,CCSER1,CDAN1,CDH12,CDK1,CEBPE,CHD1L,CHD7,CLNK,CPLX2,DPYD,DSEL,EDIL3,EPHA2,ERC2,EXD1,EYA4,FAM135B,FAM171B,FER,FYN,GABRA6,GLI3,GLO1,GPAT4,GRIA4,GRM8,GSE1,HK3,HLA-A,HNF4G,IGF1,ILVBL,INTS6,ITGB2,ITGB5,KCTD14,KHDRBS3,KLHL14,KMT2A,LMO4,LPP,LRRC4C,MATN1,MBL2,MEGF8,MEOX1,METTL25,MFNG,MPPED2,MPZL2,MPZL3,MTNR1A,NECTIN2,NME5,NR2E1,NR3C2,NTM,NTNG1,NTRK2,OCM,P2RX5,PANX2,PEX2,PFKP,PPP2R2B,PRRG4,PSENEN,PTK2B,PTPRD,RAPGEF3,RERG,RESF1,RHBDF2,RIN3,SEL1L,SGMS1,SGSM1,SLC1A4,SLC34A2,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SP6,SRD5A2,SSC5D,STK3,SUDS3,SYN3,TBC1D2B,TENM2,TMEM132C,TRAPPC9,TRMT1,TRPS1,TRPV3,TSPAN5,TSPAN8,USH2A,ZNF217,ZNF362,ZPLD1 | 115 |
| Cancer,Organismal Injury and Abnormalities | Head and neck squamous cell carcinoma | 0.00000359 | AKAP7,ATP10A,BMP4,CACNG2,CCSER1,CDH12,CHD7,DPYD,EDIL3,EPHA2,EPSTI1,FAM135B,FAM171B,GABRA6,GLI3,GRIA4,GRM8,GSE1,HLA-A,HNRNPR,INTS6,ITGB5,KCTD14,KMT2A,LRRC4C,MEIS2,MPPED2,MTNR1A,NR2E1,NTNG1,NTRK2,OGT,PANX2,PCBP1,PFKP,PTPRD,RIN3,SGSM1,SLC22A5,SLC4A1AP,SLCO2A1,SNTG1,SP6,SSC5D,TENM2,TMEM107,TMEM132C,TRAPPC9,TRPS1,TRPV3,USH2A,ZNF362,ZPLD1 | 53 |
| Cancer,Dermatological Diseases and Conditions,Organismal Injury and Abnormalities | Skin cancer | 0.00000479 | ACKR3,ACTL9,ADD2,ADGRF4,ANXA4,ATP10A,BCAR3,BTBD11,C8orf33,CACNG2,CAPRIN1,CCDC63,CCSER1,CDAN1,CDH12,CDK1,CEBPE,CHD1L,CHD7,CLNK,CPLX2,DPYD,DSEL,EDIL3,EPHA2,ERC2,EXD1,EYA4,FAM135B,FAM171B,FER,FYN,GABRA6,GLI3,GLO1,GPAT4,GRIA4,GRM8,GSE1,HK3,HLA-A,HNF4G,IGF1,ILVBL,INTS6,ITGB2,ITGB5,KCTD14,KHDRBS3,KLHL14,KMT2A,LMO4,LPP,LRRC4C,MATN1,MBL2,MEGF8,MEOX1,METTL25,MFNG,MPPED2,MPZL2,MPZL3,MTNR1A,NECTIN2,NME5,NR2E1,NR3C2,NTM,NTNG1,NTRK2,OCM,P2RX5,PANX2,PEX2,PFKP,PPP2R2B,PRRG4,PSENEN,PTK2B,PTPRD,RAPGEF3,RERG,RESF1,RHBDF2,RIN3,SEL1L,SGMS1,SGSM1,SLC1A4,SLC34A2,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SP6,SSC5D,STK3,SUDS3,SYN3,TBC1D2B,TENM2,TMEM132C,TRAPPC9,TRMT1,TRPS1,TRPV3,TSPAN5,TSPAN8,USH2A,ZNF217,ZNF362,ZPLD1 | 113 |
| Cancer,Organismal Injury and Abnormalities,Respiratory Disease | Lung adenocarcinoma | 0.00000584 | ADAMTS3,ADGRF4,ATP10A,CAPRIN1,CCDC63,CDH12,CDK1,CLNK,DPYD,EPHA2,EYA4,FAM135B,FAM171B,FER,GLI3,GPD2,GPX7,GRM8,HLA-A,IGF1,KMT2A,LPP,LRRC4C,NR2E1,NTM,NTNG1,NTRK2,PCBP1,PFKP,PTK2B,PTPRD,RIN3,SGSM1,SLITRK2,SNTG1,TENM2,TRAPPC9,TRPS1,TRPV3,USH2A,ZNF217,ZPLD1 | 42 |
| Nervous System Development and Function,Neurological Disease | Abnormal morphology of cranial nerve | 0.00000634 | BMP4,FYN,IGF1,LMO4,MEGF8,MEIS2,NTRK2 | 7 |
| Cancer,Organismal Injury and Abnormalities | Tumorigenesis of tissue | 0.00000717 | ACKR3,ACTL9,ADAMTS3,ADD2,ADGRF4,AKAP7,ANXA4,AP2M1,ARMC9,ATP10A,BCAR3,BMP4,BSX,BTBD11,C4orf36,C8orf33,CACNG2,CACNG8,CAPRIN1,CCDC63,CCSER1,CD3D,CDAN1,CDH12,CDK1,CEBPE,CHD1L,CHD7,CLNK,CPLX2,DPYD,DSEL,DUSP3,EDIL3,EPHA2,EPSTI1,ERC2,EXD1,EYA4,FAM135B,FAM171B,FAM180A,FER,FYN,GABRA6,GLI3,GLO1,GPAT4,GPD2,GPX7,GRIA4,GRM8,GSE1,HK3,HLA-A,HNF4G,HNRNPR,IGF1,ILVBL,INTS6,ITGB2,ITGB5,KCNS1,KCTD14,KHDRBS3,KLF9,KLHL14,KMT2A,LMO4,LPP,LRRC4C,MATN1,MBD3L2 (includes others),MEGF8,Meis1,MEIS2,MEOX1,METTL25,MFNG,MMD,MPLKIP,MPPED2,MPZL2,MPZL3,MTNR1A,NECTIN2,NME5,NPFFR1,NR2E1,NR3C2,NTM,NTNG1,NTRK2,OCM,OGT,P2RX5,PANX2,PCBP1,PEX2,PFKP,PPP2R2B,PRRG4,PTK2B,PTPRD,RAB2A,RAPGEF3,RERG,RESF1,RHBDF2,RHOV,RIN3,RNASEH1,SEL1L,SGMS1,SGSM1,SLC1A4,SLC22A5,SLC25A25,SLC34A2,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SP6,SRD5A2,SSC5D,ST3GAL1,STARD10,STK3,SUDS3,SYN3,TBC1D2B,TCP11X2,TENM2,TMEM106B,TMEM107,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,TSLP,TSPAN5,TSPAN8,USH2A,ZNF217,ZNF362,ZPLD1 | 149 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Large intestine adenocarcinoma | 0.00000745 | ACKR3,ACTL9,ADAMTS3,ADD2,ADGRF4,AKAP7,ANXA4,AP2M1,ARMC9,ATP10A,BCAR3,BMP4,BSX,BTBD11,C4orf36,CACNG2,CACNG8,CAPRIN1,CCDC63,CCSER1,CD3D,CDAN1,CDH12,CDK1,CEBPE,CHD1L,CHD7,CLNK,DPYD,DSEL,DUSP3,EDIL3,EPHA2,EPSTI1,ERC2,EYA4,FAM135B,FAM171B,FER,FYN,GABRA6,GLI3,GPD2,GPX7,GRIA4,GRM8,GSE1,HK3,HLA-A,HNF4G,HNRNPR,IGF1,ILVBL,INTS6,ITGB2,ITGB5,KCNS1,KHDRBS3,KLF9,KLHL14,KMT2A,LRRC4C,MATN1,MEGF8,MEIS2,MEOX1,METTL25,MFNG,MPLKIP,MPZL2,MTNR1A,NME5,NR2E1,NR3C2,NTM,NTNG1,NTRK2,OGT,P2RX5,PANX2,PCBP1,PFKP,PPP2R2B,PRRG4,PTK2B,PTPRD,RAPGEF3,RERG,RESF1,RHBDF2,RHOV,RIN3,SEL1L,SGSM1,SLC1A4,SLC25A25,SLC34A2,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SP6,SSC5D,ST3GAL1,SUDS3,SYN3,TBC1D2B,TENM2,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,TSPAN5,TSPAN8,USH2A,ZNF217,ZNF362,ZPLD1 | 120 |
| Cancer,Dermatological Diseases and Conditions,Organismal Injury and Abnormalities | Cutaneous melanoma | 0.00000771 | ACKR3,ACTL9,ADD2,ADGRF4,ANXA4,ATP10A,BCAR3,BTBD11,C8orf33,CACNG2,CAPRIN1,CCDC63,CCSER1,CDAN1,CDH12,CDK1,CEBPE,CHD1L,CHD7,CLNK,CPLX2,DPYD,DSEL,EDIL3,EPHA2,ERC2,EXD1,EYA4,FAM135B,FAM171B,FER,FYN,GABRA6,GLI3,GLO1,GPAT4,GRIA4,GRM8,GSE1,HK3,HNF4G,IGF1,ILVBL,INTS6,ITGB2,ITGB5,KCTD14,KHDRBS3,KLHL14,KMT2A,LPP,LRRC4C,MATN1,MBL2,MEGF8,MEOX1,METTL25,MFNG,MPPED2,MPZL2,MPZL3,MTNR1A,NME5,NR2E1,NR3C2,NTM,NTNG1,NTRK2,OCM,P2RX5,PANX2,PEX2,PFKP,PPP2R2B,PRRG4,PSENEN,PTK2B,PTPRD,RAPGEF3,RERG,RESF1,RHBDF2,RIN3,SEL1L,SGMS1,SGSM1,SLC1A4,SLC34A2,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SP6,SSC5D,STK3,SUDS3,SYN3,TBC1D2B,TENM2,TMEM132C,TRAPPC9,TRMT1,TRPS1,TRPV3,TSPAN5,TSPAN8,USH2A,ZNF217,ZNF362,ZPLD1 | 110 |
| Cancer,Neurological Disease,Organismal Injury and Abnormalities | High grade astrocytoma | 0.00000842 | ACKR3,ACTL9,ADAMTS3,ADGRF4,AP2M1,ARMC9,ATP10A,BTBD11,C8orf33,CDAN1,CEBPE,CHD1L,CHD7,CLNK,CPLX2,DPYD,DSEL,EPHA2,ERC2,EXD1,FAM135B,FAM171B,FER,FYN,GABRA6,GLI3,GPD2,GRIA4,GRM8,HK3,HLA-A,HNF4G,IGF1,INTS6,ITGB2,ITGB5,KCTD14,KHDRBS3,KLF9,KLHL14,KMT2A,LRRC4C,MATN1,MEGF8,MPPED2,NECTIN2,NR2E1,NR3C2,NTM,NTNG1,NTRK2,OGT,P2RX5,PANX2,PEX2,PFKP,PTK2B,PTPRD,RAB2A,RAPGEF3,RESF1,RHBDF2,RIN3,SEL1L,SGMS1,SGSM1,SLC22A5,SLC25A25,SLCO2A1,SLITRK2,SP6,SSC5D,STK3,TENM2,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,TSPAN8,USH2A | 82 |
| Cancer,Organismal Injury and Abnormalities | Abdominal adenocarcinoma | 0.00000846 | ACKR3,ACTL9,ADAMTS3,ADD2,ADGRF4,AKAP7,ANXA4,AP2M1,ARMC9,ATP10A,BCAR3,BMP4,BSX,BTBD11,C4orf36,C8orf33,CACNG2,CACNG8,CAPRIN1,CCDC63,CCSER1,CD3D,CDAN1,CDH12,CDK1,CEBPE,CHD1L,CHD7,CLNK,DPYD,DSEL,DUSP3,EDIL3,EPHA2,EPSTI1,ERC2,EXD1,EYA4,FAM135B,FAM171B,FAM180A,FER,FYN,GABRA6,GLI3,GPD2,GPX7,GRIA4,GRM8,GSE1,HK3,HLA-A,HNF4G,HNRNPR,IGF1,ILVBL,INTS6,ITGB2,ITGB5,KCNS1,KCTD14,KHDRBS3,KLF9,KLHL14,KMT2A,LPP,LRRC4C,MATN1,MBD3L2 (includes others),MEGF8,MEIS2,MEOX1,METTL25,MFNG,MMD,MPLKIP,MPPED2,MPZL2,MPZL3,MTNR1A,NME5,NR2E1,NR3C2,NTM,NTNG1,NTRK2,OGT,P2RX5,PANX2,PCBP1,PEX2,PFKP,PPP2R2B,PRRG4,PTK2B,PTPRD,RAPGEF3,RERG,RESF1,RHBDF2,RHOV,RIN3,RNASEH1,SEL1L,SGMS1,SGSM1,SLC1A4,SLC22A5,SLC25A25,SLC34A2,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SP6,SSC5D,ST3GAL1,STARD10,STK3,SUDS3,SYN3,TBC1D2B,TENM2,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,TSPAN5,TSPAN8,USH2A,ZNF217,ZNF362,ZPLD1 | 135 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Organismal Injury and Abnormalities | Nonhematologic malignant neoplasm | 0.00000916 | ACKR3,ACTL9,ADAMTS3,ADD2,ADGRF4,AKAP7,ANXA4,AP2M1,ARMC9,ATP10A,BCAR3,BMP4,BSX,BTBD11,C4orf36,C8orf33,CACNG2,CACNG8,CAPRIN1,CCDC63,CCSER1,CD3D,CDAN1,CDH12,CDK1,CEBPE,CHD1L,CHD7,CLNK,CPLX2,DPYD,DSEL,DUSP3,EDIL3,EPHA2,EPSTI1,ERC2,EXD1,EYA4,FAM135B,FAM171B,FAM180A,FER,FYN,GABRA6,GLI3,GLO1,GPAT4,GPD2,GPX7,GRIA4,GRM8,GSE1,HK3,HLA-A,HNF4G,HNRNPR,IGF1,ILVBL,INTS6,ITGB2,ITGB5,KCNS1,KCTD14,KHDRBS3,KLF9,KLHL14,KMT2A,LMO4,LPP,LRRC4C,MATN1,MBD3L2 (includes others),MBL2,MEGF8,MEIS2,MEOX1,METTL25,MFNG,MMD,MPLKIP,MPPED2,MPZL2,MPZL3,MTNR1A,NECTIN2,NME5,NPFFR1,NR2E1,NR3C2,NTM,NTNG1,NTRK2,OCM,OGT,P2RX5,PANX2,PCBP1,PEX2,PFKP,PPP2R2B,PRRG4,PSENEN,PTK2B,PTPRD,RAB2A,RAPGEF3,RERG,RESF1,RHBDF2,RHOV,RIN3,RNASEH1,SEL1L,SGMS1,SGSM1,SLC1A4,SLC22A5,SLC25A25,SLC34A2,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SP6,SRD5A2,SSC5D,ST3GAL1,STARD10,STK3,SUDS3,SYN3,TBC1D2B,TCP11X2,TENM2,TMEM106B,TMEM107,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,TSLP,TSPAN5,TSPAN8,USH2A,ZNF217,ZNF362,ZPLD1 | 150 |
| Cancer,Organismal Injury and Abnormalities | Head and neck tumor | 0.00000954 | ACKR3,ACTL9,ADAMTS3,ADD2,ADGRF4,AKAP7,AP2M1,ARMC9,ATP10A,BCAR3,BMP4,BSX,BTBD11,C8orf33,CACNG2,CACNG8,CAPRIN1,CCDC63,CCSER1,CDAN1,CDH12,CDK1,CEBPE,CHD1L,CHD7,CLNK,CPLX2,DPYD,DSEL,DUSP3,EDIL3,EPHA2,EPSTI1,ERC2,EXD1,EYA4,FAM135B,FAM171B,FER,FYN,GABRA6,GLI3,GPAT4,GPD2,GPX7,GRIA4,GRM8,GSE1,HK3,HLA-A,HNF4G,HNRNPR,IGF1,ILVBL,INTS6,ITGB2,ITGB5,KCNS1,KCTD14,KHDRBS3,KLF9,KLHL14,KMT2A,LMO4,LPP,LRRC4C,MATN1,MBD3L2 (includes others),MEGF8,MEIS2,MEOX1,METTL25,MMD,MPLKIP,MPPED2,MPZL2,MTNR1A,NECTIN2,NME5,NPFFR1,NR2E1,NR3C2,NTM,NTNG1,NTRK2,OGT,P2RX5,PANX2,PCBP1,PEX2,PFKP,PPP2R2B,PTK2B,PTPRD,RAB2A,RAPGEF3,RESF1,RHBDF2,RHOV,RIN3,RNASEH1,SEL1L,SGMS1,SGSM1,SLC1A4,SLC22A5,SLC25A25,SLC34A2,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SP6,SSC5D,ST3GAL1,STARD10,STK3,SUDS3,SYN3,TBC1D2B,TCP11X2,TENM2,TMEM106B,TMEM107,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,TSLP,TSPAN5,TSPAN8,USH2A,ZNF217,ZNF362,ZPLD1 | 137 |
| Behavior | Exploratory behavior | 0.0000127 | CPLX2,ERC2,GRIA4,GRM8,IGF1,KMT2A,P2RX5 | 7 |
| Embryonic Development,Organ Development,Organismal Development,Tissue Development | Development of sensory organ | 0.000013 | BCAR3,BMP4,CHD7,EPHA2,ERC2,EYA4,FYN,GLI3,HLA-A,IGF1,LMO4,Meis1,MEIS2,MTNR1A,NR2E1,NTRK2,TENM2,USH2A | 18 |
| Cancer,Organismal Injury and Abnormalities | Carcinoma | 0.0000138 | ACKR3,ACTL9,ADAMTS3,ADD2,ADGRF4,AKAP7,ANXA4,AP2M1,ARMC9,ATP10A,BCAR3,BMP4,BSX,BTBD11,C4orf36,C8orf33,CACNG2,CACNG8,CAPRIN1,CCDC63,CCSER1,CD3D,CDAN1,CDH12,CDK1,CEBPE,CHD1L,CHD7,CLNK,CPLX2,DPYD,DSEL,DUSP3,EDIL3,EPHA2,EPSTI1,ERC2,EXD1,EYA4,FAM135B,FAM171B,FAM180A,FER,FYN,GABRA6,GLI3,GLO1,GPAT4,GPD2,GPX7,GRIA4,GRM8,GSE1,HK3,HLA-A,HNF4G,HNRNPR,IGF1,ILVBL,INTS6,ITGB2,ITGB5,KCNS1,KCTD14,KHDRBS3,KLF9,KLHL14,KMT2A,LMO4,LPP,LRRC4C,MATN1,MBD3L2 (includes others),MEGF8,MEIS2,MEOX1,METTL25,MFNG,MMD,MPLKIP,MPPED2,MPZL2,MPZL3,MTNR1A,NECTIN2,NME5,NPFFR1,NR2E1,NR3C2,NTM,NTNG1,NTRK2,OCM,OGT,P2RX5,PANX2,PCBP1,PEX2,PFKP,PPP2R2B,PRRG4,PTK2B,PTPRD,RAB2A,RAPGEF3,RERG,RESF1,RHBDF2,RHOV,RIN3,RNASEH1,SEL1L,SGMS1,SGSM1,SLC1A4,SLC22A5,SLC25A25,SLC34A2,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SP6,SRD5A2,SSC5D,ST3GAL1,STARD10,STK3,SUDS3,SYN3,TBC1D2B,TCP11X2,TENM2,TMEM106B,TMEM107,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,TSLP,TSPAN5,TSPAN8,USH2A,ZNF217,ZNF362,ZPLD1 | 148 |
| Cancer,Organismal Injury and Abnormalities | Upper aerodigestive tract carcinoma | 0.000016 | ADGRF4,AKAP7,ATP10A,BMP4,CACNG2,CCSER1,CHD7,DPYD,EDIL3,EPHA2,FAM135B,FAM171B,GABRA6,GLI3,GRIA4,GSE1,HLA-A,HNRNPR,INTS6,ITGB5,KCTD14,KMT2A,LRRC4C,MEIS2,MPPED2,MTNR1A,NR2E1,NTNG1,NTRK2,PANX2,PCBP1,PFKP,PTPRD,RHBDF2,SGSM1,SLC4A1AP,SLCO2A1,SNTG1,TENM2,TMEM132C,TRAPPC9,TRPS1,USH2A,ZNF362 | 44 |
| Cell-To-Cell Signaling and Interaction,Nervous System Development and Function | Neurotransmission | 0.0000188 | AKAP7,CACNG2,CACNG8,CPLX2,ERC2,FYN,GRIA4,GRM8,IGF1,LRRC4C,NR3C2,NTNG1,NTRK2,P2RX5,PTK2B | 15 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Neurological Disease,Organismal Injury and Abnormalities | Central nervous system solid tumor | 0.0000206 | ACKR3,ACTL9,ADAMTS3,ADD2,ADGRF4,AP2M1,ARMC9,ATP10A,BTBD11,C8orf33,CACNG2,CDAN1,CDH12,CDK1,CEBPE,CHD1L,CHD7,CLNK,CPLX2,DPYD,DSEL,EPHA2,ERC2,EXD1,EYA4,FAM135B,FAM171B,FER,FYN,GABRA6,GLI3,GPD2,GRIA4,GRM8,GSE1,HK3,HLA-A,HNF4G,IGF1,ILVBL,INTS6,ITGB2,ITGB5,KCNS1,KCTD14,KHDRBS3,KLF9,KLHL14,KMT2A,LPP,LRRC4C,MATN1,MEGF8,METTL25,MPPED2,NECTIN2,NPFFR1,NR2E1,NR3C2,NTM,NTNG1,NTRK2,OGT,P2RX5,PANX2,PEX2,PFKP,PPP2R2B,PTK2B,PTPRD,RAB2A,RAPGEF3,RESF1,RHBDF2,RIN3,SEL1L,SGMS1,SGSM1,SLC1A4,SLC22A5,SLC25A25,SLC34A2,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SP6,SSC5D,ST3GAL1,STARD10,STK3,TBC1D2B,TENM2,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,TSPAN8,USH2A | 101 |
| Cancer,Organismal Injury and Abnormalities | Development of carcinoma | 0.0000247 | ACKR3,ADAMTS3,ADD2,ADGRF4,AKAP7,ANXA4,AP2M1,ARMC9,ATP10A,BCAR3,BMP4,BSX,BTBD11,CACNG2,CAPRIN1,CCDC63,CCSER1,CD3D,CDAN1,CDH12,CDK1,CEBPE,CHD1L,CHD7,CLNK,DPYD,DSEL,DUSP3,EDIL3,EPHA2,EPSTI1,ERC2,EXD1,EYA4,FAM135B,FAM171B,FER,FYN,GABRA6,GLI3,GPD2,GPX7,GRIA4,GRM8,GSE1,HLA-A,HNF4G,HNRNPR,IGF1,ILVBL,INTS6,ITGB2,ITGB5,KCNS1,KHDRBS3,KLHL14,KMT2A,LPP,LRRC4C,MATN1,MBD3L2 (includes others),MEGF8,MEIS2,MEOX1,METTL25,MPLKIP,MPPED2,MPZL3,MTNR1A,NR2E1,NR3C2,NTM,NTNG1,NTRK2,OCM,OGT,PANX2,PCBP1,PEX2,PFKP,PPP2R2B,PRRG4,PTK2B,PTPRD,RAPGEF3,RERG,RESF1,RHBDF2,RHOV,RIN3,RNASEH1,SEL1L,SGMS1,SGSM1,SLC1A4,SLC22A5,SLC34A2,SLC4A1AP,SLITRK2,SNTG1,SSC5D,ST3GAL1,STARD10,STK3,SUDS3,SYN3,TBC1D2B,TENM2,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,TSPAN5,USH2A,ZNF217,ZNF362,ZPLD1 | 119 |
| Embryonic Development,Nervous System Development and Function,Organ Development,Organismal Development,Tissue Development,Visual System Development and Function | Formation of eye | 0.0000281 | BCAR3,BMP4,CHD7,EPHA2,ERC2,FYN,GLI3,IGF1,Meis1,MEIS2,MTNR1A,NR2E1,NTRK2,TENM2,USH2A | 15 |
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Upper gastrointestinal carcinoma | 0.0000342 | ADAMTS3,ADGRF4,AKAP7,ARMC9,ATP10A,BCAR3,BMP4,BSX,BTBD11,CACNG2,CAPRIN1,CCDC63,CCSER1,CD3D,CDAN1,CDH12,CEBPE,CHD7,DPYD,DSEL,EDIL3,EPHA2,EPSTI1,EYA4,FAM135B,FAM171B,FER,GABRA6,GLI3,GPD2,GRIA4,GRM8,GSE1,HLA-A,HNRNPR,INTS6,ITGB5,KLHL14,KMT2A,LPP,MEGF8,MEIS2,METTL25,MPPED2,MTNR1A,NR2E1,NTNG1,NTRK2,OCM,PANX2,PCBP1,PFKP,PPP2R2B,PRRG4,PTK2B,PTPRD,RAPGEF3,RHBDF2,RIN3,SGSM1,SLC34A2,SLCO2A1,SNTG1,SSC5D,SUDS3,SYN3,TENM2,TMEM132C,TRAPPC9,TRPS1,USH2A,ZNF217,ZNF362,ZPLD1 | 74 |
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Gastrointestinal adenocarcinoma | 0.0000356 | ACKR3,ACTL9,ADAMTS3,ADD2,ADGRF4,AKAP7,ANXA4,AP2M1,ARMC9,ATP10A,BCAR3,BMP4,BSX,BTBD11,C4orf36,CACNG2,CACNG8,CAPRIN1,CCDC63,CCSER1,CD3D,CDAN1,CDH12,CDK1,CEBPE,CHD1L,CHD7,CLNK,DPYD,DSEL,DUSP3,EDIL3,EPHA2,EPSTI1,ERC2,EYA4,FAM135B,FAM171B,FER,FYN,GABRA6,GLI3,GPD2,GPX7,GRIA4,GRM8,GSE1,HK3,HLA-A,HNF4G,HNRNPR,IGF1,ILVBL,INTS6,ITGB2,ITGB5,KCNS1,KHDRBS3,KLF9,KLHL14,KMT2A,LRRC4C,MATN1,MEGF8,MEIS2,MEOX1,METTL25,MFNG,MPLKIP,MPPED2,MPZL2,MTNR1A,NME5,NR2E1,NR3C2,NTM,NTNG1,NTRK2,OGT,P2RX5,PANX2,PCBP1,PFKP,PPP2R2B,PRRG4,PTK2B,PTPRD,RAPGEF3,RERG,RESF1,RHBDF2,RHOV,RIN3,SEL1L,SGSM1,SLC1A4,SLC25A25,SLC34A2,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SP6,SSC5D,ST3GAL1,SUDS3,SYN3,TBC1D2B,TENM2,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,TSPAN5,TSPAN8,USH2A,ZNF217,ZNF362,ZPLD1 | 121 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Organismal Injury and Abnormalities | Cancer | 0.0000432 | ACKR3,ACTL9,ADAMTS3,ADD2,ADGRF4,AKAP7,ANXA4,AP2M1,ARMC9,ATP10A,BCAR3,BMP4,BSX,BTBD11,C4orf36,C8orf33,CACNG2,CACNG8,CAPRIN1,CCDC63,CCSER1,CD3D,CDAN1,CDH12,CDK1,CEBPE,CHD1L,CHD7,CLNK,CPLX2,DPYD,DSEL,DUSP3,EDIL3,EPHA2,EPSTI1,ERC2,EXD1,EYA4,FAM135B,FAM171B,FAM180A,FER,FYN,GABRA6,GLI3,GLO1,GPAT4,GPD2,GPX7,GRIA4,GRM8,GSE1,HK3,HLA-A,HNF4G,HNRNPR,IGF1,ILVBL,INTS6,ITGB2,ITGB5,KCNS1,KCTD14,KHDRBS3,KLF9,KLHL14,KMT2A,LMO4,LPP,LRRC4C,MATN1,MBD3L2 (includes others),MBL2,MEGF8,Meis1,MEIS2,MEOX1,METTL25,MFNG,MMD,MPLKIP,MPPED2,MPZL2,MPZL3,MTNR1A,NECTIN2,NME5,NPFFR1,NR2E1,NR3C2,NTM,NTNG1,NTRK2,OCM,OGT,P2RX5,PANX2,PCBP1,PEX2,PFKP,PPP2R2B,PRRG4,PSENEN,PTK2B,PTPRD,RAB2A,RAPGEF3,RERG,RESF1,RHBDF2,RHOV,RIN3,RNASEH1,SEL1L,SGMS1,SGSM1,SLC1A4,SLC22A5,SLC25A25,SLC34A2,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SP6,SRD5A2,SSC5D,ST3GAL1,STARD10,STK3,SUDS3,SYN3,TBC1D2B,TCP11X2,TENM2,TMEM106B,TMEM107,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,TSLP,TSPAN5,TSPAN8,USH2A,ZNF217,ZNF362,ZPLD1 | 151 |
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Development of digestive organ tumor | 0.0000449 | ACKR3,ADAMTS3,ADD2,AKAP7,ANXA4,AP2M1,ARMC9,ATP10A,BCAR3,BMP4,BSX,BTBD11,CACNG2,CAPRIN1,CCDC63,CCSER1,CD3D,CDAN1,CDH12,CEBPE,CHD1L,CHD7,DPYD,DSEL,DUSP3,EDIL3,EPHA2,EPSTI1,ERC2,EYA4,FAM135B,FAM171B,FER,FYN,GABRA6,GLI3,GPD2,GPX7,GRIA4,GRM8,GSE1,HLA-A,HNRNPR,IGF1,ILVBL,INTS6,ITGB2,ITGB5,KHDRBS3,KLHL14,KMT2A,LPP,MEGF8,MEIS2,METTL25,MPPED2,MTNR1A,NR2E1,NR3C2,NTM,NTNG1,NTRK2,OCM,PANX2,PCBP1,PFKP,PPP2R2B,PRRG4,PTK2B,PTPRD,RAPGEF3,RERG,RESF1,RHBDF2,RIN3,SEL1L,SGSM1,SLC1A4,SLC34A2,SLC4A1AP,SLITRK2,SNTG1,SSC5D,ST3GAL1,STK3,SUDS3,SYN3,TENM2,TMEM132C,TRAPPC9,TRPS1,USH2A,ZNF217,ZNF362,ZPLD1 | 95 |
| Cancer,Neurological Disease,Organismal Injury and Abnormalities | Grade 4 high grade glioma | 0.0000477 | ACKR3,ACTL9,ADAMTS3,ADGRF4,AP2M1,ARMC9,ATP10A,BTBD11,C8orf33,CDAN1,CEBPE,CHD1L,CHD7,CLNK,CPLX2,DPYD,DSEL,EPHA2,ERC2,EXD1,FAM135B,FAM171B,FER,FYN,GABRA6,GLI3,GPD2,GRIA4,GRM8,HK3,HLA-A,HNF4G,INTS6,ITGB2,KCTD14,KHDRBS3,KLF9,KLHL14,KMT2A,LRRC4C,MATN1,MEGF8,MPPED2,NECTIN2,NR2E1,NR3C2,NTM,NTNG1,NTRK2,OGT,P2RX5,PANX2,PEX2,PFKP,PTK2B,RAB2A,RAPGEF3,RESF1,RHBDF2,RIN3,SEL1L,SGMS1,SGSM1,SLC25A25,SLCO2A1,SLITRK2,SP6,SSC5D,STK3,TENM2,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,USH2A | 77 |
| Cancer,Neurological Disease,Organismal Injury and Abnormalities | Grade 4 malignant glioma | 0.0000477 | ACKR3,ACTL9,ADAMTS3,ADGRF4,AP2M1,ARMC9,ATP10A,BTBD11,C8orf33,CDAN1,CEBPE,CHD1L,CHD7,CLNK,CPLX2,DPYD,DSEL,EPHA2,ERC2,EXD1,FAM135B,FAM171B,FER,FYN,GABRA6,GLI3,GPD2,GRIA4,GRM8,HK3,HLA-A,HNF4G,INTS6,ITGB2,KCTD14,KHDRBS3,KLF9,KLHL14,KMT2A,LRRC4C,MATN1,MEGF8,MPPED2,NECTIN2,NR2E1,NR3C2,NTM,NTNG1,NTRK2,OGT,P2RX5,PANX2,PEX2,PFKP,PTK2B,RAB2A,RAPGEF3,RESF1,RHBDF2,RIN3,SEL1L,SGMS1,SGSM1,SLC25A25,SLCO2A1,SLITRK2,SP6,SSC5D,STK3,TENM2,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,USH2A | 77 |
| Cancer,Neurological Disease,Organismal Injury and Abnormalities | Grade 4 astrocytoma | 0.0000477 | ACKR3,ACTL9,ADAMTS3,ADGRF4,AP2M1,ARMC9,ATP10A,BTBD11,C8orf33,CDAN1,CEBPE,CHD1L,CHD7,CLNK,CPLX2,DPYD,DSEL,EPHA2,ERC2,EXD1,FAM135B,FAM171B,FER,FYN,GABRA6,GLI3,GPD2,GRIA4,GRM8,HK3,HLA-A,HNF4G,INTS6,ITGB2,KCTD14,KHDRBS3,KLF9,KLHL14,KMT2A,LRRC4C,MATN1,MEGF8,MPPED2,NECTIN2,NR2E1,NR3C2,NTM,NTNG1,NTRK2,OGT,P2RX5,PANX2,PEX2,PFKP,PTK2B,RAB2A,RAPGEF3,RESF1,RHBDF2,RIN3,SEL1L,SGMS1,SGSM1,SLC25A25,SLCO2A1,SLITRK2,SP6,SSC5D,STK3,TENM2,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,USH2A | 77 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Organismal Injury and Abnormalities | Formation of solid tumor | 0.0000483 | ACKR3,ACTL9,ADAMTS3,ADD2,ADGRF4,AKAP7,ANXA4,AP2M1,ARMC9,ATP10A,BCAR3,BMP4,BSX,BTBD11,C8orf33,CACNG2,CAPRIN1,CCDC63,CCSER1,CD3D,CDAN1,CDH12,CDK1,CEBPE,CHD1L,CHD7,CLNK,CPLX2,DPYD,DSEL,DUSP3,EDIL3,EPHA2,EPSTI1,ERC2,EXD1,EYA4,FAM135B,FAM171B,FER,FYN,GABRA6,GLI3,GPD2,GPX7,GRIA4,GRM8,GSE1,HK3,HLA-A,HNF4G,HNRNPR,IGF1,ILVBL,INTS6,ITGB2,ITGB5,KCNS1,KCTD14,KHDRBS3,KLF9,KLHL14,KMT2A,LPP,LRRC4C,MATN1,MBD3L2 (includes others),MEGF8,MEIS2,MEOX1,METTL25,MPLKIP,MPPED2,MPZL3,MTNR1A,NECTIN2,NPFFR1,NR2E1,NR3C2,NTM,NTNG1,NTRK2,OCM,OGT,P2RX5,PANX2,PCBP1,PEX2,PFKP,PPP2R2B,PRRG4,PTK2B,PTPRD,RAB2A,RAPGEF3,RERG,RESF1,RHBDF2,RHOV,RIN3,RNASEH1,SEL1L,SGMS1,SGSM1,SLC1A4,SLC22A5,SLC25A25,SLC34A2,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SP6,SSC5D,ST3GAL1,STARD10,STK3,SUDS3,SYN3,TBC1D2B,TENM2,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,TSPAN5,TSPAN8,USH2A,ZNF217,ZNF362,ZPLD1 | 133 |
| Cancer,Neurological Disease,Organismal Injury and Abnormalities | Brain astrocytoma | 0.0000512 | ACKR3,ACTL9,ADAMTS3,ADGRF4,AP2M1,ARMC9,ATP10A,BTBD11,C8orf33,CDAN1,CEBPE,CHD1L,CHD7,CLNK,CPLX2,DPYD,DSEL,EPHA2,ERC2,EXD1,FAM135B,FAM171B,FER,FYN,GABRA6,GLI3,GPD2,GRIA4,GRM8,HK3,HLA-A,HNF4G,INTS6,ITGB2,KCTD14,KHDRBS3,KLF9,KLHL14,KMT2A,LRRC4C,MATN1,MEGF8,MPPED2,NECTIN2,NR2E1,NR3C2,NTM,NTNG1,NTRK2,OGT,P2RX5,PANX2,PEX2,PFKP,PTK2B,RAB2A,RAPGEF3,RESF1,RHBDF2,RIN3,SEL1L,SGMS1,SGSM1,SLC25A25,SLCO2A1,SLITRK2,SP6,SSC5D,STK3,TENM2,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,USH2A | 77 |
| Cancer,Organismal Injury and Abnormalities,Respiratory Disease,Tumor Morphology | Progressive ROS1 rearrangement positive non-small cell lung cancer | 0.0000536 | FER,NTRK2,PTK2B | 3 |
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Upper gastrointestinal tract tumor | 0.0000548 | ADAMTS3,ADGRF4,AKAP7,ARMC9,ATP10A,BCAR3,BMP4,BSX,BTBD11,CACNG2,CAPRIN1,CCDC63,CCSER1,CD3D,CDAN1,CDH12,CEBPE,CHD7,DPYD,DSEL,EDIL3,EPHA2,EPSTI1,EYA4,FAM135B,FAM171B,FER,GABRA6,GLI3,GPD2,GPX7,GRIA4,GRM8,GSE1,HLA-A,HNRNPR,INTS6,ITGB5,KLHL14,KMT2A,LPP,MEGF8,MEIS2,METTL25,MPPED2,MTNR1A,NR2E1,NTNG1,NTRK2,OCM,PANX2,PCBP1,PFKP,PPP2R2B,PRRG4,PTK2B,PTPRD,RAPGEF3,RHBDF2,RIN3,SGSM1,SLC34A2,SLCO2A1,SNTG1,SSC5D,SUDS3,SYN3,TENM2,TMEM132C,TRAPPC9,TRPS1,USH2A,ZNF217,ZNF362,ZPLD1 | 75 |
| Cancer,Organismal Injury and Abnormalities | Melanoma | 0.0000621 | ACKR3,ACTL9,ADAMTS3,ADD2,ADGRF4,ANXA4,ATP10A,BCAR3,BTBD11,C8orf33,CACNG2,CAPRIN1,CCDC63,CCSER1,CDAN1,CDH12,CDK1,CEBPE,CHD1L,CHD7,CLNK,CPLX2,DPYD,DSEL,EDIL3,EPHA2,ERC2,EXD1,EYA4,FAM135B,FAM171B,FER,FYN,GABRA6,GLI3,GLO1,GPAT4,GRIA4,GRM8,GSE1,HK3,HLA-A,HNF4G,IGF1,ILVBL,INTS6,ITGB2,ITGB5,KCTD14,KHDRBS3,KLHL14,KMT2A,LPP,LRRC4C,MATN1,MBL2,MEGF8,MEOX1,METTL25,MFNG,MPPED2,MPZL2,MPZL3,MTNR1A,NECTIN2,NME5,NPFFR1,NR2E1,NR3C2,NTM,NTNG1,NTRK2,OCM,OGT,P2RX5,PANX2,PEX2,PFKP,PPP2R2B,PRRG4,PSENEN,PTK2B,PTPRD,RAPGEF3,RERG,RESF1,RHBDF2,RIN3,SEL1L,SGMS1,SGSM1,SLC1A4,SLC34A2,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SP6,SSC5D,STK3,SUDS3,SYN3,TBC1D2B,TENM2,TMEM132C,TRAPPC9,TRMT1,TRPS1,TRPV3,TSPAN5,TSPAN8,USH2A,ZNF217,ZNF362,ZPLD1 | 115 |
| Cancer,Neurological Disease,Organismal Injury and Abnormalities | Glioma | 0.0000628 | ACKR3,ACTL9,ADAMTS3,ADD2,ADGRF4,AP2M1,ARMC9,ATP10A,BTBD11,C8orf33,CACNG2,CDAN1,CDH12,CDK1,CEBPE,CHD1L,CHD7,CLNK,CPLX2,DPYD,DSEL,EPHA2,ERC2,EXD1,FAM135B,FAM171B,FER,FYN,GABRA6,GLI3,GPD2,GRIA4,GRM8,HK3,HLA-A,HNF4G,IGF1,ILVBL,INTS6,ITGB2,ITGB5,KCNS1,KCTD14,KHDRBS3,KLF9,KLHL14,KMT2A,LPP,LRRC4C,MATN1,MEGF8,METTL25,MPPED2,NECTIN2,NPFFR1,NR2E1,NR3C2,NTM,NTNG1,NTRK2,OGT,P2RX5,PANX2,PEX2,PFKP,PPP2R2B,PTK2B,PTPRD,RAB2A,RAPGEF3,RESF1,RHBDF2,RIN3,SEL1L,SGMS1,SGSM1,SLC1A4,SLC22A5,SLC25A25,SLC34A2,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SP6,SSC5D,ST3GAL1,STK3,TBC1D2B,TENM2,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,TSPAN8,USH2A | 98 |
| Behavior | Cognition | 0.0000644 | ADD2,CHD7,CPLX2,FYN,GRIA4,IGF1,KLF9,KMT2A,LMO4,MEIS2,NR3C2,NTRK2,OGT,PTK2B,RAPGEF3,SLC1A4 | 16 |
| Behavior | Spatial learning | 0.0000664 | ADD2,CPLX2,FYN,IGF1,KMT2A,LMO4,MEIS2,NTRK2,RAPGEF3 | 9 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Large intestine neoplasm | 0.0000679 | ACKR3,ACTL9,ADAMTS3,ADD2,ADGRF4,AKAP7,ANXA4,AP2M1,ARMC9,ATP10A,BCAR3,BMP4,BSX,BTBD11,C4orf36,CACNG2,CACNG8,CAPRIN1,CCDC63,CCSER1,CD3D,CDAN1,CDH12,CDK1,CEBPE,CHD1L,CHD7,CLNK,DPYD,DSEL,DUSP3,EDIL3,EPHA2,EPSTI1,ERC2,EYA4,FAM135B,FAM171B,FER,FYN,GABRA6,GLI3,GPD2,GPX7,GRIA4,GRM8,GSE1,HK3,HLA-A,HNF4G,HNRNPR,IGF1,ILVBL,INTS6,ITGB2,ITGB5,KCNS1,KHDRBS3,KLF9,KLHL14,KMT2A,LRRC4C,MATN1,MEGF8,MEIS2,MEOX1,METTL25,MFNG,MPLKIP,MPZL2,MTNR1A,NME5,NR2E1,NR3C2,NTM,NTNG1,NTRK2,OGT,P2RX5,PANX2,PCBP1,PFKP,PPP2R2B,PRRG4,PTK2B,PTPRD,RAPGEF3,RERG,RESF1,RHBDF2,RHOV,RIN3,SEL1L,SGSM1,SLC1A4,SLC22A5,SLC25A25,SLC34A2,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SP6,SSC5D,ST3GAL1,SUDS3,SYN3,TBC1D2B,TENM2,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,TSLP,TSPAN5,TSPAN8,USH2A,ZNF217,ZNF362,ZPLD1 | 122 |
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Gastro-esophageal carcinoma | 0.0000681 | ADAMTS3,ADGRF4,AKAP7,ARMC9,ATP10A,BCAR3,BSX,BTBD11,CAPRIN1,CCDC63,CCSER1,CD3D,CDAN1,CDH12,CEBPE,CHD7,DPYD,DSEL,EDIL3,EPHA2,EPSTI1,EYA4,FAM135B,FAM171B,FER,GABRA6,GLI3,GPD2,GRM8,GSE1,HLA-A,INTS6,KLHL14,KMT2A,LPP,MEGF8,MEIS2,METTL25,MPPED2,MTNR1A,NTRK2,OCM,PANX2,PFKP,PPP2R2B,PRRG4,PTK2B,PTPRD,RAPGEF3,RHBDF2,RIN3,SGSM1,SLC34A2,SNTG1,SSC5D,SUDS3,SYN3,TENM2,TMEM132C,TRAPPC9,TRPS1,USH2A,ZNF217,ZPLD1 | 64 |
| Cancer,Organismal Injury and Abnormalities | Extrapulmonary squamous cell carcinoma | 0.0000688 | ADGRF4,AKAP7,ATP10A,BMP4,CACNG2,CCSER1,CDH12,CHD7,DPYD,EDIL3,EPHA2,EPSTI1,FAM135B,FAM171B,FYN,GABRA6,GLI3,GRIA4,GRM8,GSE1,HLA-A,HNF4G,HNRNPR,INTS6,ITGB5,KCTD14,KMT2A,LMO4,LRRC4C,MEGF8,MEIS2,MPPED2,MTNR1A,NR2E1,NTNG1,NTRK2,OGT,PANX2,PCBP1,PFKP,PTPRD,RHBDF2,RIN3,SGSM1,SLC22A5,SLC4A1AP,SLCO2A1,SNTG1,SP6,SSC5D,TENM2,TMEM107,TMEM132C,TRAPPC9,TRPS1,TRPV3,USH2A,ZNF362,ZPLD1 | 59 |
| Cancer,Organismal Injury and Abnormalities | Abdominal carcinoma | 0.0000719 | ACKR3,ACTL9,ADAMTS3,ADD2,ADGRF4,AKAP7,ANXA4,AP2M1,ARMC9,ATP10A,BCAR3,BMP4,BSX,BTBD11,C4orf36,C8orf33,CACNG2,CACNG8,CAPRIN1,CCDC63,CCSER1,CD3D,CDAN1,CDH12,CDK1,CEBPE,CHD1L,CHD7,CLNK,DPYD,DSEL,DUSP3,EDIL3,EPHA2,EPSTI1,ERC2,EXD1,EYA4,FAM135B,FAM171B,FAM180A,FER,FYN,GABRA6,GLI3,GLO1,GPD2,GPX7,GRIA4,GRM8,GSE1,HK3,HLA-A,HNF4G,HNRNPR,IGF1,ILVBL,INTS6,ITGB2,ITGB5,KCNS1,KCTD14,KHDRBS3,KLF9,KLHL14,KMT2A,LPP,LRRC4C,MATN1,MBD3L2 (includes others),MEGF8,MEIS2,MEOX1,METTL25,MFNG,MMD,MPLKIP,MPPED2,MPZL2,MPZL3,MTNR1A,NME5,NR2E1,NR3C2,NTM,NTNG1,NTRK2,OCM,OGT,P2RX5,PANX2,PCBP1,PEX2,PFKP,PPP2R2B,PRRG4,PTK2B,PTPRD,RAPGEF3,RERG,RESF1,RHBDF2,RHOV,RIN3,RNASEH1,SEL1L,SGMS1,SGSM1,SLC1A4,SLC22A5,SLC25A25,SLC34A2,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SP6,SRD5A2,SSC5D,ST3GAL1,STARD10,STK3,SUDS3,SYN3,TBC1D2B,TENM2,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,TSPAN5,TSPAN8,USH2A,ZNF217,ZNF362,ZPLD1 | 138 |
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Non-colon gastrointestinal cancer | 0.0000757 | ADAMTS3,ADGRF4,AKAP7,ARMC9,ATP10A,BCAR3,BMP4,BSX,BTBD11,CACNG2,CAPRIN1,CCDC63,CCSER1,CD3D,CDAN1,CDH12,CEBPE,CHD7,DPYD,DSEL,EDIL3,EPHA2,EPSTI1,ERC2,EYA4,FAM135B,FAM171B,FER,GABRA6,GLI3,GPD2,GRIA4,GRM8,GSE1,HLA-A,HNRNPR,INTS6,ITGB5,KLHL14,KMT2A,LPP,MEGF8,MEIS2,METTL25,MPPED2,MTNR1A,NR2E1,NTNG1,NTRK2,OCM,PANX2,PCBP1,PFKP,PPP2R2B,PRRG4,PTK2B,PTPRD,RAPGEF3,RESF1,RHBDF2,RIN3,SGSM1,SLC34A2,SLCO2A1,SNTG1,SSC5D,ST3GAL1,SUDS3,SYN3,TENM2,TMEM132C,TRAPPC9,TRPS1,USH2A,ZNF217,ZNF362,ZPLD1 | 77 |
| Cancer,Organismal Injury and Abnormalities | Squamous cell tumor | 0.0000759 | ACTL9,ADGRF4,AKAP7,ATP10A,BMP4,CACNG2,CCSER1,CDH12,CDK1,CHD7,DPYD,EDIL3,EPHA2,EPSTI1,FAM135B,FAM171B,FER,FYN,GABRA6,GLI3,GRIA4,GRM8,GSE1,HLA-A,HNF4G,HNRNPR,IGF1,INTS6,ITGB5,KCTD14,KMT2A,LMO4,LRRC4C,MEGF8,MEIS2,MPPED2,MTNR1A,NR2E1,NTNG1,NTRK2,OGT,PANX2,PCBP1,PFKP,PTK2B,PTPRD,RHBDF2,RIN3,SGSM1,SLC22A5,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SP6,SSC5D,TENM2,TMEM107,TMEM132C,TRAPPC9,TRPS1,TRPV3,USH2A,ZNF362,ZPLD1 | 65 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Organismal Injury and Abnormalities | Cancer of secretory structure | 0.000076 | ACKR3,ACTL9,ADAMTS3,ADD2,AKAP7,AP2M1,ARMC9,ATP10A,BCAR3,BMP4,BSX,BTBD11,C8orf33,CACNG8,CAPRIN1,CCDC63,CCSER1,CDAN1,CDH12,CDK1,CEBPE,CHD1L,CHD7,CLNK,CPLX2,DPYD,DSEL,DUSP3,EDIL3,EPHA2,EPSTI1,ERC2,EXD1,FAM135B,FAM171B,FAM180A,FER,FYN,GABRA6,GLI3,GPAT4,GPD2,GRIA4,GRM8,GSE1,HK3,HLA-A,HNF4G,HNRNPR,IGF1,INTS6,ITGB2,ITGB5,KCNS1,KCTD14,KLF9,KLHL14,KMT2A,LMO4,LPP,LRRC4C,MATN1,MBD3L2 (includes others),MEGF8,MEIS2,MEOX1,METTL25,MMD,MPLKIP,MPPED2,MPZL2,MTNR1A,NECTIN2,NME5,NPFFR1,NR2E1,NTM,NTNG1,NTRK2,OGT,P2RX5,PANX2,PEX2,PFKP,PPP2R2B,PTK2B,PTPRD,RAB2A,RAPGEF3,RESF1,RHBDF2,RHOV,RIN3,RNASEH1,SEL1L,SGMS1,SGSM1,SLC1A4,SLC22A5,SLC25A25,SLC34A2,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SP6,SRD5A2,SSC5D,STARD10,STK3,SUDS3,SYN3,TBC1D2B,TCP11X2,TENM2,TMEM106B,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,TSLP,TSPAN5,TSPAN8,USH2A,ZNF217,ZNF362,ZPLD1 | 129 |
| Cancer,Organismal Injury and Abnormalities | Pelvic tumor | 0.0000793 | ACTL9,ADAMTS3,ADD2,ADGRF4,AKAP7,ARMC9,ATP10A,BCAR3,BTBD11,CCDC63,CDH12,CDK1,CHD7,CLNK,DPYD,DSEL,EDIL3,EPHA2,EPSTI1,ERC2,EXD1,EYA4,FAM135B,FAM171B,FAM180A,FER,FYN,GABRA6,GLI3,GLO1,GPD2,GRIA4,GRM8,GSE1,HK3,HLA-A,HNF4G,HNRNPR,IGF1,ILVBL,ITGB2,ITGB5,KCNS1,KCTD14,KLF9,KMT2A,LPP,LRRC4C,MATN1,MBD3L2 (includes others),MEGF8,MEIS2,MEOX1,METTL25,MMD,MPPED2,MTNR1A,NME5,NR2E1,NR3C2,NTM,NTNG1,NTRK2,OGT,PCBP1,PEX2,PFKP,PPP2R2B,PTK2B,PTPRD,RAPGEF3,RESF1,RHBDF2,RHOV,RIN3,RNASEH1,SEL1L,SGMS1,SGSM1,SLC1A4,SLC22A5,SLC25A25,SLC34A2,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SRD5A2,SSC5D,ST3GAL1,STARD10,STK3,SYN3,TBC1D2B,TENM2,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,TSPAN5,USH2A,ZNF217,ZNF362,ZPLD1 | 106 |
| Cancer,Organismal Injury and Abnormalities | Incidence of tumor | 0.0000802 | ACKR3,ADAMTS3,ADD2,ADGRF4,AKAP7,ANXA4,AP2M1,ARMC9,ATP10A,BCAR3,BMP4,BSX,BTBD11,CACNG2,CAPRIN1,CCDC63,CCSER1,CD3D,CDAN1,CDH12,CDK1,CEBPE,CHD1L,CHD7,CLNK,DPYD,DSEL,DUSP3,EDIL3,EPHA2,EPSTI1,ERC2,EXD1,EYA4,FAM135B,FAM171B,FER,FYN,GABRA6,GLI3,GPD2,GPX7,GRIA4,GRM8,GSE1,HLA-A,HNF4G,HNRNPR,IGF1,ILVBL,INTS6,ITGB2,ITGB5,KCNS1,KHDRBS3,KLF9,KLHL14,KMT2A,LPP,LRRC4C,MATN1,MBD3L2 (includes others),MEGF8,MEIS2,MEOX1,METTL25,MPLKIP,MPPED2,MPZL3,MTNR1A,NR2E1,NR3C2,NTM,NTNG1,NTRK2,OCM,OGT,PANX2,PCBP1,PEX2,PFKP,PPP2R2B,PRRG4,PTK2B,PTPRD,RAPGEF3,RERG,RESF1,RHBDF2,RHOV,RIN3,RNASEH1,SEL1L,SGMS1,SGSM1,SLC1A4,SLC22A5,SLC34A2,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SSC5D,ST3GAL1,STARD10,STK3,SUDS3,SYN3,TBC1D2B,TENM2,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,TSPAN5,USH2A,ZNF217,ZNF362,ZPLD1 | 121 |
| Cancer,Organismal Injury and Abnormalities,Reproductive System Disease | Genital tract cancer | 0.0000805 | ACTL9,ADAMTS3,ADD2,ADGRF4,AKAP7,ARMC9,ATP10A,BCAR3,BTBD11,CCDC63,CDH12,CDK1,CHD7,CLNK,DPYD,DSEL,EDIL3,EPHA2,EPSTI1,ERC2,EXD1,EYA4,FAM135B,FAM171B,FAM180A,FER,FYN,GABRA6,GLI3,GPD2,GRIA4,GRM8,GSE1,HK3,HLA-A,HNF4G,HNRNPR,IGF1,ILVBL,ITGB2,ITGB5,KCNS1,KCTD14,KLF9,KMT2A,LPP,LRRC4C,MATN1,MBD3L2 (includes others),MEGF8,MEIS2,MEOX1,METTL25,MMD,MPPED2,MTNR1A,NME5,NR2E1,NR3C2,NTM,NTNG1,NTRK2,OGT,PCBP1,PEX2,PFKP,PPP2R2B,PTK2B,PTPRD,RHBDF2,RHOV,RIN3,RNASEH1,SEL1L,SGMS1,SGSM1,SLC1A4,SLC22A5,SLC34A2,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SRD5A2,SSC5D,STARD10,STK3,SYN3,TBC1D2B,TENM2,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,TSPAN5,USH2A,ZNF217,ZNF362,ZPLD1 | 101 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Organismal Injury and Abnormalities,Reproductive System Disease | Genital tumor | 0.0000808 | ACTL9,ADAMTS3,ADD2,ADGRF4,AKAP7,ARMC9,ATP10A,BCAR3,BTBD11,CCDC63,CDH12,CDK1,CHD7,CLNK,DPYD,DSEL,EDIL3,EPHA2,EPSTI1,ERC2,EXD1,EYA4,FAM135B,FAM171B,FAM180A,FER,FYN,GABRA6,GLI3,GPD2,GRIA4,GRM8,GSE1,HK3,HLA-A,HNF4G,HNRNPR,IGF1,ILVBL,ITGB2,ITGB5,KCNS1,KCTD14,KLF9,KMT2A,LPP,LRRC4C,MATN1,MBD3L2 (includes others),MEGF8,MEIS2,MEOX1,METTL25,MMD,MPPED2,MTNR1A,NME5,NR2E1,NR3C2,NTM,NTNG1,NTRK2,OGT,PCBP1,PEX2,PFKP,PPP2R2B,PTK2B,PTPRD,RAPGEF3,RHBDF2,RHOV,RIN3,RNASEH1,SEL1L,SGMS1,SGSM1,SLC1A4,SLC22A5,SLC34A2,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SRD5A2,SSC5D,STARD10,STK3,SYN3,TBC1D2B,TENM2,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,TSPAN5,USH2A,ZNF217,ZNF362,ZPLD1 | 102 |
| Cancer,Organismal Injury and Abnormalities | Pelvic cancer | 0.0000823 | ACTL9,ADAMTS3,ADD2,ADGRF4,AKAP7,ARMC9,ATP10A,BCAR3,BTBD11,CCDC63,CDH12,CDK1,CHD7,CLNK,DPYD,DSEL,EDIL3,EPHA2,EPSTI1,ERC2,EXD1,EYA4,FAM135B,FAM171B,FAM180A,FER,FYN,GABRA6,GLI3,GLO1,GPD2,GRIA4,GRM8,GSE1,HK3,HLA-A,HNF4G,HNRNPR,IGF1,ILVBL,ITGB2,ITGB5,KCNS1,KCTD14,KLF9,KMT2A,LPP,LRRC4C,MATN1,MBD3L2 (includes others),MEGF8,MEIS2,MEOX1,METTL25,MMD,MPPED2,MTNR1A,NME5,NR2E1,NR3C2,NTM,NTNG1,NTRK2,OGT,PCBP1,PEX2,PFKP,PPP2R2B,PTK2B,PTPRD,RESF1,RHBDF2,RHOV,RIN3,RNASEH1,SEL1L,SGMS1,SGSM1,SLC1A4,SLC22A5,SLC25A25,SLC34A2,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SRD5A2,SSC5D,ST3GAL1,STARD10,STK3,SYN3,TBC1D2B,TENM2,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,TSPAN5,USH2A,ZNF217,ZNF362,ZPLD1 | 105 |
| Embryonic Development,Nervous System Development and Function,Organ Development,Organismal Development,Tissue Development,Visual System Development and Function | Formation of lens | 0.0000917 | BCAR3,BMP4,FYN,Meis1 | 4 |
| Cancer,Organismal Injury and Abnormalities,Tumor Morphology | Metastatic progressive ROS1 translocation positive solid tumor | 0.0000919 | FER,NTRK2,PTK2B | 3 |
| Developmental Disorder,Organismal Injury and Abnormalities,Skeletal and Muscular Disorders | Preaxial polydactyly | 0.0000919 | GLI3,MEGF8,TMEM107 | 3 |
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Malignant neoplasm of large intestine | 0.000108 | ACKR3,ACTL9,ADAMTS3,ADD2,ADGRF4,AKAP7,ANXA4,AP2M1,ARMC9,ATP10A,BCAR3,BMP4,BSX,BTBD11,C4orf36,CACNG2,CACNG8,CAPRIN1,CCDC63,CCSER1,CD3D,CDAN1,CDH12,CDK1,CEBPE,CHD1L,CHD7,CLNK,DPYD,DSEL,DUSP3,EDIL3,EPHA2,EPSTI1,ERC2,EYA4,FAM135B,FAM171B,FER,FYN,GABRA6,GLI3,GPD2,GPX7,GRIA4,GRM8,GSE1,HK3,HLA-A,HNF4G,HNRNPR,IGF1,ILVBL,INTS6,ITGB2,ITGB5,KCNS1,KHDRBS3,KLF9,KLHL14,KMT2A,LRRC4C,MATN1,MEGF8,MEIS2,MEOX1,METTL25,MFNG,MPLKIP,MPZL2,MTNR1A,NME5,NR2E1,NR3C2,NTM,NTNG1,NTRK2,OGT,P2RX5,PANX2,PCBP1,PFKP,PPP2R2B,PRRG4,PTK2B,PTPRD,RAPGEF3,RERG,RESF1,RHBDF2,RHOV,RIN3,SEL1L,SGSM1,SLC1A4,SLC25A25,SLC34A2,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SP6,SSC5D,ST3GAL1,SUDS3,SYN3,TBC1D2B,TENM2,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,TSLP,TSPAN5,TSPAN8,USH2A,ZNF217,ZNF362,ZPLD1 | 121 |
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Gastric carcinoma | 0.000116 | ADAMTS3,AKAP7,ARMC9,ATP10A,BCAR3,BSX,BTBD11,CAPRIN1,CCDC63,CCSER1,CD3D,CDAN1,CDH12,CEBPE,CHD7,DPYD,DSEL,EDIL3,EPHA2,EPSTI1,EYA4,FAM135B,FAM171B,FER,GABRA6,GLI3,GPD2,GRM8,GSE1,INTS6,KLHL14,KMT2A,LPP,MEGF8,MEIS2,METTL25,MPPED2,MTNR1A,NTRK2,OCM,PANX2,PFKP,PPP2R2B,PRRG4,PTK2B,PTPRD,RAPGEF3,RIN3,SLC34A2,SNTG1,SSC5D,SUDS3,SYN3,TENM2,TMEM132C,TRAPPC9,TRPS1,USH2A,ZNF217,ZPLD1 | 60 |
| Embryonic Development,Nervous System Development and Function,Organ Development | Patterning of forebrain | 0.000116 | BMP4,GLI3,NR2E1 | 3 |
| Carbohydrate Metabolism,Lipid Metabolism,Small Molecule Biochemistry | Binding of phosphoinositide | 0.000116 | AP2M1,IGF1,USH2A | 3 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Organismal Injury and Abnormalities | Neoplasia of cells | 0.000122 | ACTL9,ADAMTS3,ADD2,ADGRF4,AKAP7,ANXA4,ARMC9,ATP10A,BMP4,CACNG2,CCSER1,CD3D,CDH12,CDK1,CHD7,DPYD,DSEL,EDIL3,EPHA2,EPSTI1,ERC2,FAM135B,FAM171B,FER,FYN,GABRA6,GLI3,GPX7,GRIA4,GRM8,GSE1,HK3,HLA-A,HNF4G,HNRNPR,IGF1,INTS6,ITGB2,ITGB5,KCNS1,KCTD14,KLHL14,KMT2A,LMO4,LPP,LRRC4C,MEGF8,Meis1,MEIS2,MFNG,MPPED2,MTNR1A,NR2E1,NTNG1,NTRK2,OGT,PANX2,PCBP1,PFKP,PPP2R2B,PTK2B,PTPRD,RERG,RESF1,RHBDF2,RHOV,RIN3,SGMS1,SGSM1,SLC22A5,SLC34A2,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SP6,SSC5D,TENM2,TMEM107,TMEM132C,TRAPPC9,TRPS1,TRPV3,TSPAN8,USH2A,ZNF217,ZNF362,ZPLD1 | 88 |
| Embryonic Development,Nervous System Development and Function,Organ Development,Organ Morphology,Organismal Development,Tissue Development,Visual System Development and Function | Morphology of eye | 0.000123 | BCAR3,BMP4,ERC2,IGF1,Meis1,MEIS2,MTNR1A,NR2E1,NTRK2,TENM2,USH2A | 11 |
| Cell-To-Cell Signaling and Interaction,Cellular Compromise,Tumor Morphology | Adhesion of cancer cells | 0.000128 | BMP4,EPHA2,IGF1,ITGB2 | 4 |
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Oral tumor | 0.000135 | AKAP7,ATP10A,BMP4,CACNG2,CHD7,EDIL3,EPHA2,FAM171B,GPX7,GRIA4,HNRNPR,ITGB5,MEIS2,MPPED2,MTNR1A,NR2E1,NTNG1,NTRK2,PCBP1,PFKP,PTPRD,SLCO2A1,SNTG1,TENM2,TRPS1,USH2A,ZNF362 | 27 |
| Cancer,Organismal Injury and Abnormalities | Anogenital cancer | 0.000137 | ACTL9,ADAMTS3,ADD2,ADGRF4,AKAP7,ARMC9,ATP10A,BCAR3,BMP4,BTBD11,CCDC63,CCSER1,CDH12,CDK1,CHD7,CLNK,DPYD,DSEL,EDIL3,EPHA2,EPSTI1,ERC2,EXD1,EYA4,FAM135B,FAM171B,FAM180A,FER,FYN,GABRA6,GLI3,GLO1,GPAT4,GPD2,GPX7,GRIA4,GRM8,GSE1,HK3,HLA-A,HNF4G,HNRNPR,IGF1,ILVBL,ITGB2,ITGB5,KCNS1,KCTD14,KLF9,KMT2A,LPP,LRRC4C,MATN1,MBD3L2 (includes others),MEGF8,MEIS2,MEOX1,METTL25,MMD,MPPED2,MTNR1A,NECTIN2,NME5,NR2E1,NR3C2,NTM,NTNG1,NTRK2,OGT,PCBP1,PEX2,PFKP,PPP2R2B,PTK2B,PTPRD,RHBDF2,RHOV,RIN3,RNASEH1,SEL1L,SGMS1,SGSM1,SLC1A4,SLC22A5,SLC34A2,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SRD5A2,SSC5D,STARD10,STK3,SYN3,TBC1D2B,TENM2,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,TSPAN5,TSPAN8,USH2A,ZNF217,ZNF362,ZPLD1 | 108 |
| Connective Tissue Development and Function,Connective Tissue Disorders,Organismal Injury and Abnormalities,Skeletal and Muscular Disorders,Skeletal and Muscular System Development and Function,Tissue Development | Abnormal morphology of bone | 0.00014 | BMP4,CHD7,EYA4,IGF1,ITGB2,KMT2A,LMO4,MATN1,MEGF8,MTNR1A,NME5,PEX2,TRPS1 | 13 |
| Cell-To-Cell Signaling and Interaction,Nervous System Development and Function | Synaptic transmission | 0.000143 | AKAP7,CACNG2,CACNG8,ERC2,FYN,GRIA4,GRM8,IGF1,LRRC4C,NR3C2,NTNG1,PTK2B | 12 |
| Cancer,Organismal Injury and Abnormalities | Squamous-cell carcinoma | 0.000145 | ACTL9,ADGRF4,AKAP7,ATP10A,BMP4,CACNG2,CCSER1,CDH12,CDK1,CHD7,DPYD,EDIL3,EPHA2,EPSTI1,FAM135B,FAM171B,FER,FYN,GABRA6,GLI3,GRIA4,GRM8,GSE1,HLA-A,HNF4G,HNRNPR,INTS6,ITGB5,KCTD14,KMT2A,LMO4,LRRC4C,MEGF8,MEIS2,MPPED2,MTNR1A,NR2E1,NTNG1,NTRK2,OGT,PANX2,PCBP1,PFKP,PTK2B,PTPRD,RHBDF2,RIN3,SGSM1,SLC22A5,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SP6,SSC5D,TENM2,TMEM107,TMEM132C,TRAPPC9,TRPS1,TRPV3,USH2A,ZNF362,ZPLD1 | 64 |
| Cardiovascular Disease,Inflammatory Response,Organismal Injury and Abnormalities | Inflammation of atherosclerotic lesion | 0.000146 | IGF1,NR3C2 | 2 |
| Dermatological Diseases and Conditions,Inflammatory Disease,Organismal Injury and Abnormalities | Postadolescent acne | 0.000146 | IGF1,NR3C2 | 2 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Organismal Injury and Abnormalities | Extracranial solid tumor | 0.000163 | ACKR3,ACTL9,ADAMTS3,ADD2,ADGRF4,AKAP7,ANXA4,AP2M1,ARMC9,ATP10A,BCAR3,BMP4,BSX,BTBD11,C4orf36,C8orf33,CACNG2,CACNG8,CAPRIN1,CCDC63,CCSER1,CD3D,CDAN1,CDH12,CDK1,CEBPE,CHD1L,CHD7,CLNK,CPLX2,DPYD,DSEL,DUSP3,EDIL3,EPHA2,EPSTI1,ERC2,EXD1,EYA4,FAM135B,FAM171B,FAM180A,FER,FYN,GABRA6,GLI3,GLO1,GPAT4,GPD2,GPX7,GRIA4,GRM8,GSE1,HK3,HLA-A,HNF4G,HNRNPR,IGF1,ILVBL,INTS6,ITGB2,ITGB5,KCNS1,KCTD14,KHDRBS3,KLF9,KLHL14,KMT2A,LMO4,LPP,LRRC4C,MATN1,MBD3L2 (includes others),MBL2,MEGF8,MEIS2,MEOX1,METTL25,MFNG,MMD,MPLKIP,MPPED2,MPZL2,MPZL3,MTNR1A,NECTIN2,NME5,NPFFR1,NR2E1,NR3C2,NTM,NTNG1,NTRK2,OCM,OGT,P2RX5,PANX2,PCBP1,PEX2,PFKP,PPP2R2B,PRRG4,PSENEN,PTK2B,PTPRD,RAB2A,RAPGEF3,RERG,RESF1,RHBDF2,RHOV,RIN3,RNASEH1,SEL1L,SGMS1,SGSM1,SLC1A4,SLC22A5,SLC25A25,SLC34A2,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SP6,SRD5A2,SSC5D,ST3GAL1,STARD10,STK3,SUDS3,SYN3,TBC1D2B,TCP11X2,TENM2,TMEM106B,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,TSLP,TSPAN5,TSPAN8,USH2A,ZNF217,ZNF362,ZPLD1 | 149 |
| Auditory Disease,Organismal Injury and Abnormalities | Abnormality of inner ear | 0.000168 | BMP4,CHD7,EYA4,IGF1,NTRK2,OCM,USH2A | 7 |
| Cancer,Organismal Injury and Abnormalities | Head and neck cancer | 0.000175 | ADAMTS3,ADD2,AKAP7,AP2M1,ARMC9,ATP10A,BCAR3,BMP4,BSX,BTBD11,C8orf33,CACNG2,CACNG8,CAPRIN1,CCDC63,CCSER1,CDAN1,CDH12,CDK1,CEBPE,CHD1L,CHD7,CLNK,CPLX2,DPYD,DSEL,DUSP3,EDIL3,EPHA2,EPSTI1,ERC2,EXD1,EYA4,FAM135B,FAM171B,FER,GABRA6,GLI3,GPAT4,GPD2,GRIA4,GRM8,GSE1,HLA-A,HNF4G,HNRNPR,IGF1,INTS6,ITGB2,ITGB5,KCNS1,KCTD14,KHDRBS3,KLHL14,KMT2A,LMO4,LPP,LRRC4C,MATN1,MBD3L2 (includes others),MEGF8,MEIS2,MEOX1,METTL25,MMD,MPLKIP,MPPED2,MPZL2,MTNR1A,NECTIN2,NME5,NPFFR1,NR2E1,NR3C2,NTNG1,NTRK2,OGT,P2RX5,PANX2,PCBP1,PEX2,PFKP,PPP2R2B,PTK2B,PTPRD,RAB2A,RAPGEF3,RESF1,RHBDF2,RHOV,RIN3,RNASEH1,SEL1L,SGMS1,SGSM1,SLC1A4,SLC22A5,SLC25A25,SLC34A2,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SP6,SSC5D,ST3GAL1,STARD10,STK3,SUDS3,SYN3,TBC1D2B,TCP11X2,TENM2,TMEM106B,TMEM107,TMEM132C,TMEM164,TRAPPC9,TRPS1,TRPV3,TSLP,TSPAN5,TSPAN8,USH2A,ZNF217,ZNF362,ZPLD1 | 127 |
| Cancer,Organismal Injury and Abnormalities | Advanced ROS1 rearrangement positive solid tumor | 0.000177 | FER,NTRK2,PTK2B | 3 |
| Cell Cycle,Cellular Development,Connective Tissue Development and Function | Oncogene-induced senescence of fibroblast cell lines | 0.000177 | CHD7,NR2E1,OGT | 3 |
| Cancer,Organismal Injury and Abnormalities,Respiratory Disease | Advanced ROS1 rearrangement positive non-small cell lung cancer | 0.000177 | FER,NTRK2,PTK2B | 3 |
| Cancer,Organismal Injury and Abnormalities,Respiratory Disease | Metastatic ROS1 rearrangement positive non-small cell lung cancer | 0.000177 | FER,NTRK2,PTK2B | 3 |
| Cancer,Organismal Injury and Abnormalities | Advanced ROS1 inversion positive malignant solid tumor | 0.000177 | FER,NTRK2,PTK2B | 3 |
| Cancer,Organismal Injury and Abnormalities,Respiratory Disease | Metastatic ROS1 translocation positive lung adenocarcinoma | 0.000177 | FER,NTRK2,PTK2B | 3 |
| Cancer,Organismal Injury and Abnormalities | Advanced ROS1 translocation positive malignant solid tumor | 0.000177 | FER,NTRK2,PTK2B | 3 |
| Cancer,Organismal Injury and Abnormalities | ROS1 rearrangement positive extracranial solid tumor | 0.000177 | FER,NTRK2,PTK2B | 3 |
| Embryonic Development,Organismal Development | Development of head | 0.000182 | BCAR3,BMP4,CHD7,EPHA2,ERC2,EYA4,FYN,GABRA6,GLI3,HLA-A,IGF1,LMO4,Meis1,MEIS2,MTNR1A,NME5,NR2E1,NTRK2,PEX2,RAPGEF3,SP6,TENM2,TRAPPC9,USH2A | 24 |
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Gastrointestinal carcinoma | 0.000183 | ACKR3,ACTL9,ADAMTS3,ADD2,ADGRF4,AKAP7,ANXA4,AP2M1,ARMC9,ATP10A,BCAR3,BMP4,BSX,BTBD11,C4orf36,CACNG2,CACNG8,CAPRIN1,CCDC63,CCSER1,CD3D,CDAN1,CDH12,CDK1,CEBPE,CHD1L,CHD7,CLNK,DPYD,DSEL,DUSP3,EDIL3,EPHA2,EPSTI1,ERC2,EYA4,FAM135B,FAM171B,FER,FYN,GABRA6,GLI3,GPD2,GPX7,GRIA4,GRM8,GSE1,HK3,HLA-A,HNF4G,HNRNPR,IGF1,ILVBL,INTS6,ITGB2,ITGB5,KCNS1,KHDRBS3,KLF9,KLHL14,KMT2A,LPP,LRRC4C,MATN1,MEGF8,MEIS2,MEOX1,METTL25,MFNG,MPLKIP,MPPED2,MPZL2,MTNR1A,NME5,NR2E1,NR3C2,NTM,NTNG1,NTRK2,OCM,OGT,P2RX5,PANX2,PCBP1,PFKP,PPP2R2B,PRRG4,PTK2B,PTPRD,RAPGEF3,RERG,RESF1,RHBDF2,RHOV,RIN3,SEL1L,SGSM1,SLC1A4,SLC25A25,SLC34A2,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SP6,SSC5D,ST3GAL1,SUDS3,SYN3,TBC1D2B,TENM2,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,TSPAN5,TSPAN8,USH2A,ZNF217,ZNF362,ZPLD1 | 123 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cell-To-Cell Signaling and Interaction,Nervous System Development and Function | Long-term potentiation | 0.000185 | ADD2,CACNG8,CPLX2,FYN,GRIA4,LMO4,NR2E1,NTRK2,PTK2B,RAPGEF3 | 10 |
| Cancer,Neurological Disease,Organismal Injury and Abnormalities | Central nervous system cancer | 0.000186 | ACKR3,ACTL9,ADAMTS3,ADD2,ADGRF4,AP2M1,ARMC9,ATP10A,BTBD11,C8orf33,CDAN1,CEBPE,CHD1L,CHD7,CLNK,CPLX2,DPYD,DSEL,EPHA2,ERC2,EXD1,EYA4,FAM135B,FAM171B,FER,FYN,GABRA6,GLI3,GPD2,GRIA4,GRM8,HK3,HLA-A,HNF4G,IGF1,ILVBL,INTS6,ITGB2,ITGB5,KCNS1,KCTD14,KHDRBS3,KLF9,KLHL14,KMT2A,LPP,LRRC4C,MATN1,MEGF8,METTL25,MPPED2,NECTIN2,NPFFR1,NR2E1,NR3C2,NTM,NTNG1,NTRK2,OGT,P2RX5,PANX2,PEX2,PFKP,PPP2R2B,PTK2B,PTPRD,RAB2A,RAPGEF3,RESF1,RHBDF2,RIN3,SEL1L,SGMS1,SGSM1,SLC22A5,SLC25A25,SLC34A2,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SP6,SSC5D,ST3GAL1,STARD10,STK3,TBC1D2B,TENM2,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,TSPAN8,USH2A | 96 |
| Embryonic Development,Organismal Development | Development of body axis | 0.000193 | BCAR3,BMP4,CHD7,EPHA2,ERC2,EYA4,FYN,GABRA6,GLI3,HLA-A,IGF1,KMT2A,LMO4,Meis1,MEIS2,MTNR1A,NME5,NR2E1,NTRK2,PEX2,RAPGEF3,SP6,TENM2,TRAPPC9,USH2A | 25 |
| Connective Tissue Development and Function,Skeletal and Muscular System Development and Function | Bone mineral density of femur | 0.000193 | CDK1,IGF1,ITGB2,PTK2B | 4 |
| Neurological Disease,Organismal Injury and Abnormalities | Brain lesion | 0.000196 | ACKR3,ACTL9,ADAMTS3,ADD2,ADGRF4,AP2M1,ARMC9,ATP10A,BTBD11,C8orf33,CDAN1,CDH12,CDK1,CEBPE,CHD1L,CHD7,CLNK,CPLX2,DPYD,DSEL,EPHA2,ERC2,EXD1,EYA4,FAM135B,FAM171B,FER,FYN,GABRA6,GLI3,GPD2,GRIA4,GRM8,HK3,HLA-A,HNF4G,IGF1,ILVBL,INTS6,ITGB2,KCNS1,KCTD14,KHDRBS3,KLF9,KLHL14,KMT2A,LMO4,LPP,LRRC4C,MATN1,MEGF8,METTL25,MPPED2,NECTIN2,NPFFR1,NR2E1,NR3C2,NTM,NTNG1,NTRK2,OGT,P2RX5,PANX2,PEX2,PFKP,PPP2R2B,PTK2B,RAB2A,RAPGEF3,RESF1,RHBDF2,RIN3,SEL1L,SGMS1,SGSM1,SLC1A4,SLC25A25,SLC34A2,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SP6,SSC5D,ST3GAL1,STK3,TBC1D2B,TENM2,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,USH2A | 95 |
| Cancer,Organismal Injury and Abnormalities | Genitourinary adenocarcinoma | 0.000216 | ACTL9,ADD2,ADGRF4,AKAP7,ARMC9,ATP10A,BCAR3,BMP4,BTBD11,CCDC63,CCSER1,CDH12,CDK1,CHD7,CLNK,DSEL,EDIL3,EPHA2,EPSTI1,ERC2,EXD1,EYA4,FAM135B,FAM180A,FER,FYN,GABRA6,GLI3,GPD2,GPX7,GRIA4,GRM8,GSE1,HK3,HLA-A,HNF4G,HNRNPR,IGF1,ILVBL,ITGB5,KCTD14,KMT2A,LPP,LRRC4C,MATN1,MBD3L2 (includes others),MEGF8,MEIS2,MEOX1,METTL25,MMD,MPLKIP,MPPED2,MPZL3,MTNR1A,NME5,NR3C2,NTM,NTNG1,NTRK2,OGT,PCBP1,PEX2,PFKP,PPP2R2B,PTK2B,PTPRD,RHBDF2,RHOV,RIN3,RNASEH1,SEL1L,SGMS1,SLC1A4,SLC22A5,SLC34A2,SLC4A1AP,SLITRK2,SNTG1,SSC5D,STARD10,STK3,SYN3,TBC1D2B,TENM2,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,TSPAN5,TSPAN8,USH2A,ZNF217,ZNF362,ZPLD1 | 97 |
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Oral cavity carcinoma | 0.000222 | AKAP7,ATP10A,BMP4,CACNG2,CHD7,EDIL3,EPHA2,FAM171B,GRIA4,HNRNPR,ITGB5,MEIS2,MPPED2,MTNR1A,NR2E1,NTNG1,NTRK2,PCBP1,PFKP,PTPRD,SLCO2A1,SNTG1,TENM2,TRPS1,USH2A,ZNF362 | 26 |
| Cellular Development,Cellular Growth and Proliferation,Nervous System Development and Function,Tissue Development | Development of neurons | 0.000232 | ADAMTS3,ADD2,BMP4,CACNG2,CAPRIN1,ERC2,FER,FYN,GLI3,IGF1,ITGB2,KLF9,LRRC4C,NR2E1,NTNG1,NTRK2,OGT,PTK2B,RAPGEF3,SLITRK2,TMEM106B | 21 |
| Cancer,Organismal Injury and Abnormalities | Metastatic ALK translocation positive malignant solid tumor | 0.000256 | FER,NTRK2,PTK2B | 3 |
| Cancer,Organismal Injury and Abnormalities,Respiratory Disease | Advanced ALK rearrangement positive lung adenocarcinoma | 0.000256 | FER,NTRK2,PTK2B | 3 |
| Cancer,Organismal Injury and Abnormalities,Respiratory Disease,Tumor Morphology | Progressive ALK rearrangement positive large cell lung carcinoma | 0.000256 | FER,NTRK2,PTK2B | 3 |
| Cancer,Organismal Injury and Abnormalities,Respiratory Disease,Tumor Morphology | Progressive ALK rearrangement positive lung adenocarcinoma | 0.000256 | FER,NTRK2,PTK2B | 3 |
| Cancer,Organismal Injury and Abnormalities,Respiratory Disease | Metastatic ALK rearrangement positive large cell lung carcinoma | 0.000256 | FER,NTRK2,PTK2B | 3 |
| Cancer,Organismal Injury and Abnormalities,Tumor Morphology | Progressive ALK rearrangement positive large cell carcinoma | 0.000256 | FER,NTRK2,PTK2B | 3 |
| Cancer,Organismal Injury and Abnormalities,Respiratory Disease | Advanced ALK rearrangement positive large cell lung carcinoma | 0.000256 | FER,NTRK2,PTK2B | 3 |
| Cancer,Organismal Injury and Abnormalities | Advanced ALK rearrangement positive large cell carcinoma | 0.000256 | FER,NTRK2,PTK2B | 3 |
| Cancer,Organismal Injury and Abnormalities,Respiratory Disease | Advanced ALK fusion positive squamous cell carcinoma of the lung | 0.000256 | FER,NTRK2,PTK2B | 3 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Organismal Injury and Abnormalities | Advanced ALK translocation positive malignant solid tumor | 0.000256 | FER,NTRK2,PTK2B | 3 |
| Cancer,Organismal Injury and Abnormalities,Respiratory Disease,Tumor Morphology | Metastatic progressive ALK fusion positive squamous cell carcinoma of the lung | 0.000256 | FER,NTRK2,PTK2B | 3 |
| Cancer,Organismal Injury and Abnormalities | Metastatic ALK rearrangement positive large cell carcinoma | 0.000256 | FER,NTRK2,PTK2B | 3 |
| Cancer,Organismal Injury and Abnormalities,Respiratory Disease | Metastatic ALK rearrangement positive lung adenocarcinoma | 0.000256 | FER,NTRK2,PTK2B | 3 |
| Cancer,Organismal Injury and Abnormalities,Tumor Morphology | Metastatic progressive ALK translocation positive solid tumor | 0.000256 | FER,NTRK2,PTK2B | 3 |
| Cancer,Organismal Injury and Abnormalities,Respiratory Disease,Tumor Morphology | Metastatic progressive ALK rearrangement positive non-small cell lung cancer | 0.000256 | FER,NTRK2,PTK2B | 3 |
| Cancer,Neurological Disease,Organismal Injury and Abnormalities | Brain tumor | 0.000256 | ACKR3,ACTL9,ADAMTS3,ADD2,ADGRF4,AP2M1,ARMC9,ATP10A,BTBD11,C8orf33,CDAN1,CDH12,CDK1,CEBPE,CHD1L,CHD7,CLNK,CPLX2,DPYD,DSEL,EPHA2,ERC2,EXD1,EYA4,FAM135B,FAM171B,FER,FYN,GABRA6,GLI3,GPD2,GRIA4,GRM8,HK3,HLA-A,HNF4G,IGF1,ILVBL,INTS6,ITGB2,KCNS1,KCTD14,KHDRBS3,KLF9,KLHL14,KMT2A,LPP,LRRC4C,MATN1,MEGF8,METTL25,MPPED2,NECTIN2,NPFFR1,NR2E1,NR3C2,NTM,NTNG1,NTRK2,OGT,P2RX5,PANX2,PEX2,PFKP,PPP2R2B,PTK2B,RAB2A,RAPGEF3,RESF1,RHBDF2,RIN3,SEL1L,SGMS1,SGSM1,SLC1A4,SLC25A25,SLC34A2,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SP6,SSC5D,ST3GAL1,STK3,TBC1D2B,TENM2,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,USH2A | 94 |
| Cancer,Neurological Disease,Organismal Injury and Abnormalities | Grade 3-4 glioma cancer | 0.000266 | ACKR3,ACTL9,ADAMTS3,ADD2,ADGRF4,AP2M1,ARMC9,ATP10A,BTBD11,C8orf33,CDAN1,CEBPE,CHD1L,CHD7,CLNK,CPLX2,DPYD,DSEL,EPHA2,ERC2,EXD1,FAM135B,FAM171B,FER,FYN,GABRA6,GLI3,GPD2,GRIA4,GRM8,HK3,HLA-A,HNF4G,ILVBL,INTS6,ITGB2,KCNS1,KCTD14,KHDRBS3,KLF9,KLHL14,KMT2A,LPP,LRRC4C,MATN1,MEGF8,MPPED2,NECTIN2,NPFFR1,NR2E1,NR3C2,NTM,NTNG1,NTRK2,OGT,P2RX5,PANX2,PEX2,PFKP,PTK2B,RAB2A,RAPGEF3,RESF1,RHBDF2,RIN3,SEL1L,SGMS1,SGSM1,SLC25A25,SLCO2A1,SLITRK2,SP6,SSC5D,STK3,TENM2,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,USH2A | 82 |
| Behavior | Learning | 0.000277 | ADD2,CPLX2,FYN,GRIA4,IGF1,KLF9,KMT2A,LMO4,MEIS2,NR3C2,NTRK2,OGT,PTK2B,RAPGEF3 | 14 |
| Connective Tissue Development and Function,Skeletal and Muscular System Development and Function,Tissue Development | Ossification of endochondral bone | 0.000277 | BMP4,GLI3,IGF1,TRPS1 | 4 |
| Cancer,Organismal Injury and Abnormalities | Cancer of cells | 0.000283 | ACTL9,ADD2,ADGRF4,AKAP7,ANXA4,ARMC9,ATP10A,BMP4,CACNG2,CCSER1,CD3D,CDH12,CDK1,CHD7,DPYD,DSEL,EDIL3,EPHA2,EPSTI1,ERC2,FAM135B,FAM171B,FER,FYN,GABRA6,GLI3,GPX7,GRIA4,GRM8,GSE1,HLA-A,HNF4G,HNRNPR,IGF1,INTS6,ITGB2,ITGB5,KCTD14,KLHL14,KMT2A,LMO4,LPP,LRRC4C,MEGF8,MEIS2,MPPED2,MTNR1A,NR2E1,NTNG1,NTRK2,OGT,PANX2,PCBP1,PFKP,PTK2B,PTPRD,RESF1,RHBDF2,RHOV,RIN3,SGMS1,SGSM1,SLC22A5,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SP6,SSC5D,TENM2,TMEM107,TMEM132C,TRAPPC9,TRPS1,TRPV3,USH2A,ZNF217,ZNF362,ZPLD1 | 79 |
| Cell Morphology,Cellular Assembly and Organization,Cellular Development,Cellular Function and Maintenance,Cellular Growth and Proliferation,Nervous System Development and Function,Organismal Development,Tissue Development | Branching of nerve ending | 0.000291 | FYN,IGF1 | 2 |
| Cell Morphology,Cellular Assembly and Organization,Nervous System Development and Function | Elongation of dendrites | 0.000291 | ADAMTS3,NTRK2 | 2 |
| Cell-To-Cell Signaling and Interaction,Nervous System Development and Function | Long-term potentiation of excitatory synapses | 0.000291 | FYN,NTRK2 | 2 |
| Cancer,Organismal Injury and Abnormalities,Respiratory Disease | Non-small cell lung carcinoma | 0.000294 | ACTL9,ADAMTS3,ADGRF4,ATP10A,CAPRIN1,CCDC63,CDH12,CDK1,CLNK,DPYD,EPHA2,EYA4,FAM135B,FAM171B,FER,GABRA6,GLI3,GPD2,GPX7,GRM8,HLA-A,IGF1,ITGB5,KMT2A,LPP,LRRC4C,NR2E1,NTM,NTNG1,NTRK2,PCBP1,PFKP,PTK2B,PTPRD,RIN3,SGSM1,SLITRK2,SNTG1,TENM2,TMEM132C,TRAPPC9,TRPS1,TRPV3,USH2A,ZNF217,ZPLD1 | 46 |
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Oral squamous cell carcinoma | 0.000299 | AKAP7,ATP10A,BMP4,CACNG2,CHD7,EDIL3,EPHA2,FAM171B,GRIA4,HNRNPR,ITGB5,MEIS2,MPPED2,MTNR1A,NR2E1,NTNG1,PCBP1,PFKP,PTPRD,SLCO2A1,SNTG1,TENM2,TRPS1,USH2A,ZNF362 | 25 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Neurological Disease,Organismal Injury and Abnormalities | Glioma cancer | 0.000305 | ACKR3,ACTL9,ADAMTS3,ADD2,ADGRF4,AP2M1,ARMC9,ATP10A,BTBD11,C8orf33,CDAN1,CEBPE,CHD1L,CHD7,CLNK,CPLX2,DPYD,DSEL,EPHA2,ERC2,EXD1,FAM135B,FAM171B,FER,FYN,GABRA6,GLI3,GPD2,GRIA4,GRM8,HK3,HLA-A,HNF4G,IGF1,ILVBL,INTS6,ITGB2,ITGB5,KCNS1,KCTD14,KHDRBS3,KLF9,KLHL14,KMT2A,LPP,LRRC4C,MATN1,MEGF8,METTL25,MPPED2,NECTIN2,NPFFR1,NR2E1,NR3C2,NTM,NTNG1,NTRK2,OGT,P2RX5,PANX2,PEX2,PFKP,PPP2R2B,PTK2B,PTPRD,RAB2A,RAPGEF3,RESF1,RHBDF2,RIN3,SEL1L,SGMS1,SGSM1,SLC22A5,SLC25A25,SLC34A2,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SP6,SSC5D,ST3GAL1,STK3,TBC1D2B,TENM2,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,TSPAN8,USH2A | 94 |
| Cancer,Organismal Injury and Abnormalities | Genitourinary carcinoma | 0.000322 | ACTL9,ADAMTS3,ADD2,ADGRF4,AKAP7,ARMC9,ATP10A,BCAR3,BMP4,BTBD11,CCDC63,CCSER1,CDH12,CDK1,CHD7,CLNK,DPYD,DSEL,EDIL3,EPHA2,EPSTI1,ERC2,EXD1,EYA4,FAM135B,FAM171B,FAM180A,FER,FYN,GABRA6,GLI3,GLO1,GPD2,GPX7,GRIA4,GRM8,GSE1,HK3,HLA-A,HNF4G,HNRNPR,IGF1,ILVBL,ITGB2,ITGB5,KCNS1,KCTD14,KMT2A,LPP,LRRC4C,MATN1,MBD3L2 (includes others),MEGF8,MEIS2,MEOX1,METTL25,MMD,MPLKIP,MPPED2,MPZL3,MTNR1A,NME5,NR2E1,NR3C2,NTM,NTNG1,NTRK2,OGT,PCBP1,PEX2,PFKP,PPP2R2B,PTK2B,PTPRD,RHBDF2,RHOV,RIN3,RNASEH1,SEL1L,SGMS1,SGSM1,SLC1A4,SLC22A5,SLC25A25,SLC34A2,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SSC5D,STARD10,STK3,SYN3,TBC1D2B,TENM2,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,TSPAN5,TSPAN8,USH2A,ZNF217,ZNF362,ZPLD1 | 107 |
| Developmental Disorder | Autism spectrum disorder or intellectual disability | 0.000324 | CACNG2,CHD1L,CPLX2,GABRA6,GLI3,GLO1,GRIA4,KCNS1,KMT2A,MEIS2,MPLKIP,MTNR1A,NR3C2,OGT,SLC1A4,TRAPPC9,TRMT1 | 17 |
| Organismal Development,Organismal Injury and Abnormalities | Abnormal morphology of head | 0.000327 | BCAR3,BMP4,CACNG8,CHD7,ERC2,EYA4,FYN,GLI3,IGF1,LMO4,MEIS2,MTNR1A,NME5,NTRK2,PEX2,SLC1A4,SP6,TENM2,TMEM107,TRPS1,USH2A | 21 |
| Nervous System Development and Function | Development of cranial nerve | 0.000328 | CHD7,FYN,GLI3,LMO4 | 4 |
| Psychological Disorders | Severe psychological disorder | 0.000342 | ADAMTS3,ADGRF4,CACNG2,CPLX2,DPYD,FYN,GABRA6,INTS6,ITGB5,LMO4,MMD,MTNR1A,MTSS2,NR2E1,NR3C2,NTRK2,SLC1A4,SYN3 | 18 |
| Cancer,Organismal Injury and Abnormalities | Abdominal cancer | 0.000345 | ACKR3,ACTL9,ADAMTS3,ADD2,ADGRF4,AKAP7,ANXA4,AP2M1,ARMC9,ATP10A,BCAR3,BMP4,BSX,BTBD11,C4orf36,C8orf33,CACNG2,CACNG8,CAPRIN1,CCDC63,CCSER1,CD3D,CDAN1,CDH12,CDK1,CEBPE,CHD1L,CHD7,CLNK,DPYD,DSEL,DUSP3,EDIL3,EPHA2,EPSTI1,ERC2,EXD1,EYA4,FAM135B,FAM171B,FAM180A,FER,FYN,GABRA6,GLI3,GLO1,GPD2,GPX7,GRIA4,GRM8,GSE1,HK3,HLA-A,HNF4G,HNRNPR,IGF1,ILVBL,INTS6,ITGB2,ITGB5,KCNS1,KCTD14,KHDRBS3,KLF9,KLHL14,KMT2A,LPP,LRRC4C,MATN1,MBD3L2 (includes others),MEGF8,MEIS2,MEOX1,METTL25,MFNG,MMD,MPLKIP,MPPED2,MPZL2,MPZL3,MTNR1A,NME5,NR2E1,NR3C2,NTM,NTNG1,NTRK2,OCM,OGT,P2RX5,PANX2,PCBP1,PEX2,PFKP,PPP2R2B,PRRG4,PTK2B,PTPRD,RAPGEF3,RERG,RESF1,RHBDF2,RHOV,RIN3,RNASEH1,SEL1L,SGMS1,SGSM1,SLC1A4,SLC22A5,SLC25A25,SLC34A2,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SP6,SRD5A2,SSC5D,ST3GAL1,STARD10,STK3,SUDS3,SYN3,TBC1D2B,TENM2,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,TSLP,TSPAN5,TSPAN8,USH2A,ZNF217,ZNF362,ZPLD1 | 139 |
| Organismal Development | Morphology of head | 0.000351 | BCAR3,BMP4,CACNG8,CHD7,ERC2,EYA4,FYN,GLI3,IGF1,LMO4,Meis1,MEIS2,MTNR1A,NME5,NR2E1,NTRK2,PEX2,SLC1A4,SP6,TENM2,TMEM107,TRPS1,USH2A | 23 |
| Cell-To-Cell Signaling and Interaction,Cellular Growth and Proliferation,Hematological System Development and Function,Hematopoiesis | Stimulation of hematopoietic progenitor cells | 0.000353 | FYN,IGF1,TSLP | 3 |
| Cell-To-Cell Signaling and Interaction | Interaction of cancer cells | 0.000356 | BMP4,EPHA2,IGF1,ITGB2 | 4 |
| Gene Expression | Activation of DNA endogenous promoter | 0.000358 | ANXA4,BMP4,BSX,CD3D,CEBPE,CHD7,GLI3,GLO1,HNF4G,IGF1,KLF9,KMT2A,LMO4,Meis1,MEIS2,MEOX1,NR2E1,OGT,PCBP1,PEX2,RAPGEF3,SGSM1,SP6,SUDS3,TRPS1,ZNF217 | 26 |
| Embryonic Development,Nervous System Development and Function,Organ Development,Organ Morphology,Organismal Development,Tissue Development,Visual System Development and Function | Morphogenesis of eye | 0.00039 | BMP4,CHD7,FYN,GLI3,NR2E1 | 5 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cell Morphology,Cellular Assembly and Organization,Cellular Development,Cellular Function and Maintenance,Cellular Growth and Proliferation,Nervous System Development and Function,Organismal Development,Tissue Development | Neuritogenesis | 0.000394 | ADAMTS3,BMP4,CAPRIN1,ERC2,FER,FYN,IGF1,KLF9,LRRC4C,NR2E1,NTNG1,NTRK2,OGT,PTK2B,RAPGEF3,SLITRK2,TMEM106B | 17 |
| Connective Tissue Development and Function,Skeletal and Muscular System Development and Function,Tissue Development | Morphology of bone | 0.000431 | BMP4,CDK1,CHD7,EYA4,IGF1,ITGB2,KMT2A,LMO4,MATN1,MEGF8,MTNR1A,NME5,PEX2,PTK2B,TRPS1 | 15 |
| Visual System Development and Function | Vision | 0.000434 | ERC2,EYA4,GRM8,NR2E1,NTRK2,TENM2 | 6 |
| Cell Signaling | Cell surface receptor linked signal transduction | 0.000442 | AKAP7,ARMC9,Ccr2,CLNK,FER,FYN,GLI3,ITGB2,ITGB5,PTK2B,PTPRD,TRPS1 | 12 |
| Cancer,Organismal Injury and Abnormalities | Locally advanced malignant solid tumor | 0.000451 | DPYD,EPHA2,FER,MTNR1A,NTRK2,PTK2B | 6 |
| Cancer,Organismal Injury and Abnormalities | Malignant genitourinary solid tumor | 0.000466 | ACTL9,ADAMTS3,ADD2,ADGRF4,AKAP7,ARMC9,ATP10A,BCAR3,BMP4,BTBD11,CCDC63,CCSER1,CDH12,CDK1,CHD7,CLNK,DPYD,DSEL,EDIL3,EPHA2,EPSTI1,ERC2,EXD1,EYA4,FAM135B,FAM171B,FAM180A,FER,FYN,GABRA6,GLI3,GLO1,GPAT4,GPD2,GPX7,GRIA4,GRM8,GSE1,HK3,HLA-A,HNF4G,HNRNPR,IGF1,ILVBL,ITGB2,ITGB5,KCNS1,KCTD14,KLF9,KMT2A,LPP,LRRC4C,MATN1,MBD3L2 (includes others),MEGF8,MEIS2,MEOX1,METTL25,MMD,MPLKIP,MPPED2,MPZL3,MTNR1A,NECTIN2,NME5,NR2E1,NR3C2,NTM,NTNG1,NTRK2,OGT,PCBP1,PEX2,PFKP,PPP2R2B,PTK2B,PTPRD,RHBDF2,RHOV,RIN3,RNASEH1,SEL1L,SGMS1,SGSM1,SLC1A4,SLC22A5,SLC25A25,SLC34A2,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SRD5A2,SSC5D,STARD10,STK3,SYN3,TBC1D2B,TENM2,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,TSPAN5,TSPAN8,USH2A,ZNF217,ZNF362,ZPLD1 | 111 |
| Embryonic Development,Tissue Morphology | Quantity of neuronal progenitor cells | 0.000472 | BMP4,GLI3,NR2E1 | 3 |
| Cancer,Organismal Injury and Abnormalities | Head and neck carcinoma | 0.000475 | ADAMTS3,ADD2,AKAP7,AP2M1,ARMC9,ATP10A,BCAR3,BMP4,BSX,BTBD11,C8orf33,CACNG2,CACNG8,CAPRIN1,CCDC63,CCSER1,CDAN1,CDH12,CDK1,CEBPE,CHD1L,CHD7,CPLX2,DPYD,DSEL,DUSP3,EDIL3,EPHA2,EPSTI1,ERC2,EXD1,FAM135B,FAM171B,FER,GABRA6,GLI3,GPAT4,GPD2,GRIA4,GRM8,GSE1,HLA-A,HNF4G,HNRNPR,IGF1,INTS6,ITGB2,ITGB5,KCNS1,KCTD14,KLHL14,KMT2A,LMO4,LPP,LRRC4C,MATN1,MBD3L2 (includes others),MEGF8,MEIS2,MEOX1,METTL25,MMD,MPLKIP,MPPED2,MPZL2,MTNR1A,NECTIN2,NME5,NPFFR1,NR2E1,NTNG1,NTRK2,OGT,P2RX5,PANX2,PCBP1,PEX2,PFKP,PPP2R2B,PTK2B,PTPRD,RAB2A,RAPGEF3,RESF1,RHBDF2,RHOV,RIN3,RNASEH1,SEL1L,SGMS1,SGSM1,SLC1A4,SLC22A5,SLC25A25,SLC34A2,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SP6,SSC5D,STARD10,STK3,SUDS3,SYN3,TBC1D2B,TCP11X2,TENM2,TMEM106B,TMEM107,TMEM132C,TMEM164,TRAPPC9,TRPS1,TRPV3,TSLP,TSPAN5,TSPAN8,USH2A,ZNF217,ZNF362,ZPLD1 | 122 |
| Hematological System Development and Function,Tissue Morphology | Quantity of blood cells | 0.000479 | ACKR3,ADD2,BMP4,CD3D,CEBPE,CHD7,DUSP3,FYN,GLI3,HLA-A,IGF1,ITGB2,ITGB5,KMT2A,LMO4,MBL2,Meis1,MFNG,MPZL2,NR3C2,P2RX5,ST3GAL1,STK3,TSLP | 24 |
| Cellular Development,Cellular Growth and Proliferation,Hematological System Development and Function,Hematopoiesis,Tissue Development | Colony formation of hematopoietic progenitor cells | 0.000479 | ACKR3,BMP4,IGF1,KMT2A,TSLP | 5 |
| Cancer,Neurological Disease,Organismal Injury and Abnormalities | Brain glioma | 0.00052 | ACKR3,ACTL9,ADAMTS3,ADD2,ADGRF4,AP2M1,ARMC9,ATP10A,BTBD11,C8orf33,CDAN1,CDH12,CDK1,CEBPE,CHD1L,CHD7,CLNK,CPLX2,DPYD,DSEL,EPHA2,ERC2,EXD1,FAM135B,FAM171B,FER,FYN,GABRA6,GLI3,GPD2,GRIA4,GRM8,HK3,HLA-A,HNF4G,ILVBL,INTS6,ITGB2,KCNS1,KCTD14,KHDRBS3,KLF9,KLHL14,KMT2A,LPP,LRRC4C,MATN1,MEGF8,METTL25,MPPED2,NECTIN2,NPFFR1,NR2E1,NR3C2,NTM,NTNG1,NTRK2,OGT,P2RX5,PANX2,PEX2,PFKP,PPP2R2B,PTK2B,RAB2A,RAPGEF3,RESF1,RHBDF2,RIN3,SEL1L,SGMS1,SGSM1,SLC1A4,SLC25A25,SLC34A2,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SP6,SSC5D,ST3GAL1,STK3,TBC1D2B,TENM2,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,USH2A | 92 |
| Cell Morphology,Cellular Movement,Nervous System Development and Function | Innervation of sensory neurons | 0.000522 | BMP4,IGF1,NTRK2,TENM2 | 4 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Organismal Injury and Abnormalities,Reproductive System Disease | Prostate cancer | 0.000533 | ACTL9,ADAMTS3,ADD2,BCAR3,BTBD11,CCDC63,CDH12,DPYD,DSEL,EDIL3,EPHA2,EPSTI1,FAM135B,FAM180A,FER,FYN,GLI3,GPD2,GRIA4,GRM8,HK3,HLA-A,HNRNPR,IGF1,ITGB2,ITGB5,KCTD14,KMT2A,LRRC4C,MBD3L2 (includes others),MEGF8,MEIS2,METTL25,MMD,MPPED2,MTNR1A,NME5,NR2E1,NTNG1,NTRK2,OGT,PTK2B,PTPRD,RIN3,SEL1L,SGMS1,SLC1A4,SLC22A5,SLC4A1AP,SNTG1,SRD5A2,SSC5D,STARD10,TENM2,TMEM132C,TRAPPC9,TRMT1,TSPAN5,USH2A | 59 |
| Nervous System Development and Function,Neurological Disease | Abnormal morphology of trigeminal nerve | 0.000541 | LMO4,MEGF8,MEIS2 | 3 |
| Cancer,Organismal Injury and Abnormalities | Genitourinary tumor | 0.000547 | ACTL9,ADAMTS3,ADD2,ADGRF4,AKAP7,ARMC9,ATP10A,BCAR3,BMP4,BTBD11,CCDC63,CCSER1,CDH12,CDK1,CHD7,CLNK,DPYD,DSEL,EDIL3,EPHA2,EPSTI1,ERC2,EXD1,EYA4,FAM135B,FAM171B,FAM180A,FER,FYN,GABRA6,GLI3,GLO1,GPAT4,GPD2,GPX7,GRIA4,GRM8,GSE1,HK3,HLA-A,HNF4G,HNRNPR,IGF1,ILVBL,ITGB2,ITGB5,KCNS1,KCTD14,KLF9,KMT2A,LPP,LRRC4C,MATN1,MBD3L2 (includes others),MEGF8,MEIS2,MEOX1,METTL25,MMD,MPLKIP,MPPED2,MPZL3,MTNR1A,NECTIN2,NME5,NR2E1,NR3C2,NTM,NTNG1,NTRK2,OGT,PCBP1,PEX2,PFKP,PPP2R2B,PTK2B,PTPRD,RAPGEF3,RHBDF2,RHOV,RIN3,RNASEH1,SEL1L,SGMS1,SGSM1,SLC1A4,SLC22A5,SLC25A25,SLC34A2,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SRD5A2,SSC5D,STARD10,STK3,SYN3,TBC1D2B,TENM2,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,TSPAN5,TSPAN8,USH2A,ZNF217,ZNF362,ZPLD1 | 112 |
| Embryonic Development,Nervous System Development and Function,Organ Development,Organ Morphology,Organismal Development,Tissue Development,Visual System Development and Function | Morphology of retina | 0.000554 | BMP4,ERC2,IGF1,MTNR1A,NR2E1,NTRK2,TENM2,USH2A | 8 |
| Embryonic Development,Nervous System Development and Function,Ophthalmic Disease,Organ Development,Organ Morphology,Organismal Development,Organismal Injury and Abnormalities,Tissue Development,Visual System Development and Function | Abnormal morphology of eye | 0.000554 | BCAR3,BMP4,ERC2,IGF1,MEIS2,MTNR1A,NTRK2,TENM2,USH2A | 9 |
| Embryonic Development,Organismal Development | Development of body trunk | 0.000555 | ACKR3,ANXA4,BMP4,BSX,CD3D,CDK1,CHD7,FYN,GLI3,GPAT4,HNF4G,IGF1,KMT2A,LMO4,MEGF8,Meis1,MEOX1,NR3C2,NTRK2,OGT,RAPGEF3,SLC22A5,SP6,STK3,TRPS1,TSLP | 26 |
| Cell-To-Cell Signaling and Interaction,Nervous System Development and Function | Evoked potential | 0.000555 | BMP4,EYA4,IGF1,OCM,TENM2 | 5 |
| Cell Death and Survival | Neuronal cell death | 0.000559 | BMP4,CACNG8,CAPRIN1,CDK1,FER,FYN,GLI3,GRM8,HLA-A,IGF1,LMO4,NTRK2,OGT,PPP2R2B,PTK2B,RAPGEF3,SEL1L,TMEM106B | 18 |
| Hematological System Development and Function,Tissue Morphology | Quantity of mononuclear leukocytes | 0.000561 | ACKR3,CD3D,CEBPE,CHD7,FYN,GLI3,HLA-A,IGF1,ITGB2,ITGB5,LMO4,MBL2,Meis1,MFNG,MPZL2,NR3C2,P2RX5,ST3GAL1,TSLP | 19 |
| Cancer,Cardiovascular Disease,Organismal Injury and Abnormalities | Hemangioma | 0.000596 | ACKR3,BMP4,CDK1,DPYD,HLA-A,KMT2A,NTRK2,PTPRD | 8 |
| Cancer,Hematological Disease,Immunological Disease,Organismal Injury and Abnormalities | Philadelphia chromosome-negative acute lymphoblastic leukemia | 0.000601 | CD3D,EPHA2,FYN,KMT2A | 4 |
| Cancer,Hematological Disease,Immunological Disease,Organismal Injury and Abnormalities | B-lymphoblastic leukemia/lymphoma with recurrent genetic abnormalities | 0.000611 | CD3D,EPHA2,FYN,KMT2A,PTK2B | 5 |
| Cell Morphology,Embryonic Development,Nervous System Development and Function,Ophthalmic Disease,Organ Development,Organ Morphology,Organismal Development,Organismal Injury and Abnormalities,Tissue Development,Tissue Morphology,Visual System Development and Function | Abnormal morphology of photoreceptors | 0.000611 | ERC2,IGF1,MTNR1A,NTRK2,USH2A | 5 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Colorectal carcinoma | 0.000617 | ACKR3,ADAMTS3,ADD2,AKAP7,ANXA4,AP2M1,ATP10A,BMP4,BTBD11,CACNG2,CAPRIN1,CCDC63,CCSER1,CDH12,CHD1L,CHD7,DPYD,DSEL,DUSP3,EDIL3,EPHA2,EPSTI1,ERC2,EYA4,FAM135B,FAM171B,FYN,GLI3,GRIA4,GRM8,GSE1,HLA-A,HNRNPR,IGF1,ILVBL,INTS6,ITGB2,ITGB5,KHDRBS3,KLHL14,KMT2A,MEGF8,MTNR1A,NR2E1,NR3C2,NTM,NTNG1,NTRK2,PCBP1,PFKP,PPP2R2B,PRRG4,PTK2B,PTPRD,RAPGEF3,RERG,RESF1,RHBDF2,RIN3,SEL1L,SGSM1,SLC1A4,SLC4A1AP,SLITRK2,SNTG1,ST3GAL1,SUDS3,SYN3,TENM2,TMEM132C,TRAPPC9,TRPS1,USH2A,ZNF362 | 74 |
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Gastrointestinal tumor | 0.000621 | ACKR3,ACTL9,ADAMTS3,ADD2,ADGRF4,AKAP7,ANXA4,AP2M1,ARMC9,ATP10A,BCAR3,BMP4,BSX,BTBD11,C4orf36,CACNG2,CACNG8,CAPRIN1,CCDC63,CCSER1,CD3D,CDAN1,CDH12,CDK1,CEBPE,CHD1L,CHD7,CLNK,DPYD,DSEL,DUSP3,EDIL3,EPHA2,EPSTI1,ERC2,EYA4,FAM135B,FAM171B,FER,FYN,GABRA6,GLI3,GPD2,GPX7,GRIA4,GRM8,GSE1,HK3,HLA-A,HNF4G,HNRNPR,IGF1,ILVBL,INTS6,ITGB2,ITGB5,KCNS1,KHDRBS3,KLF9,KLHL14,KMT2A,LPP,LRRC4C,MATN1,MEGF8,MEIS2,MEOX1,METTL25,MFNG,MPLKIP,MPPED2,MPZL2,MTNR1A,NME5,NR2E1,NR3C2,NTM,NTNG1,NTRK2,OCM,OGT,P2RX5,PANX2,PCBP1,PFKP,PPP2R2B,PRRG4,PTK2B,PTPRD,RAPGEF3,RERG,RESF1,RHBDF2,RHOV,RIN3,SEL1L,SGSM1,SLC1A4,SLC22A5,SLC25A25,SLC34A2,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SP6,SSC5D,ST3GAL1,SUDS3,SYN3,TBC1D2B,TENM2,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,TSLP,TSPAN5,TSPAN8,USH2A,ZNF217,ZNF362,ZPLD1 | 125 |
| Cancer,Hematological Disease,Immunological Disease,Organismal Injury and Abnormalities | Acute leukemia | 0.000626 | ADAMTS3,ADD2,ADGRF4,ATP10A,CD3D,CDH12,CDK1,DSEL,EPHA2,ERC2,FAM135B,FER,FYN,GABRA6,GLI3,HK3,HLA-A,HNF4G,ITGB2,KMT2A,LPP,Meis1,NTRK2,PPP2R2B,PTK2B,PTPRD,RERG,RHOV,SLC34A2,SLITRK2,TENM2,TMEM132C,TRPV3,TSPAN8,USH2A,ZNF217 | 36 |
| Cancer,Organismal Injury and Abnormalities | Cancer of head | 0.000649 | ADAMTS3,ADD2,AKAP7,ARMC9,ATP10A,BMP4,CACNG2,CHD7,CLNK,DPYD,EDIL3,EPHA2,EYA4,FAM135B,FAM171B,GLI3,GPD2,GRIA4,HNRNPR,IGF1,INTS6,ITGB2,ITGB5,KHDRBS3,KMT2A,LRRC4C,MEGF8,MEIS2,METTL25,MPPED2,MTNR1A,NR2E1,NR3C2,NTNG1,NTRK2,PANX2,PCBP1,PFKP,PPP2R2B,PTPRD,RAPGEF3,RIN3,SGSM1,SLC34A2,SLC4A1AP,SLCO2A1,SNTG1,ST3GAL1,TBC1D2B,TENM2,TMEM132C,TRAPPC9,TRPS1,USH2A,ZNF362 | 55 |
| Cancer,Organismal Injury and Abnormalities,Reproductive System Disease | Male genital neoplasm | 0.000675 | ACTL9,ADAMTS3,ADD2,BCAR3,BTBD11,CCDC63,CDH12,DPYD,DSEL,EDIL3,EPHA2,EPSTI1,FAM135B,FAM180A,FER,FYN,GLI3,GPD2,GRIA4,GRM8,HK3,HLA-A,HNRNPR,IGF1,ITGB2,ITGB5,KCTD14,KLF9,KMT2A,LRRC4C,MBD3L2 (includes others),MEGF8,MEIS2,METTL25,MMD,MPPED2,MTNR1A,NME5,NR2E1,NTNG1,NTRK2,OGT,PTK2B,PTPRD,RIN3,SEL1L,SGMS1,SLC1A4,SLC22A5,SLC4A1AP,SNTG1,SRD5A2,SSC5D,STARD10,TENM2,TMEM132C,TRAPPC9,TRMT1,TSPAN5,USH2A | 60 |
| Cancer,Hematological Disease,Immunological Disease,Organismal Injury and Abnormalities | Precursor B-cell acute lymphoblastic leukemia | 0.000684 | ADD2,ADGRF4,ATP10A,CD3D,DSEL,EPHA2,ERC2,FAM135B,FYN,ITGB2,KMT2A,NTRK2,PTK2B,PTPRD,TRPV3,ZNF217 | 16 |
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Colon carcinoma | 0.000687 | ACKR3,ADAMTS3,ADD2,AKAP7,ANXA4,AP2M1,ATP10A,BMP4,BTBD11,CACNG2,CAPRIN1,CCDC63,CCSER1,CDH12,CHD1L,CHD7,DPYD,DSEL,DUSP3,EDIL3,EPHA2,EPSTI1,ERC2,EYA4,FAM135B,FAM171B,FYN,GLI3,GRIA4,GRM8,GSE1,HLA-A,HNRNPR,ILVBL,INTS6,ITGB2,ITGB5,KHDRBS3,KLHL14,KMT2A,MEGF8,MTNR1A,NR2E1,NR3C2,NTM,NTNG1,NTRK2,PCBP1,PFKP,PPP2R2B,PRRG4,PTK2B,PTPRD,RAPGEF3,RERG,RESF1,RHBDF2,RIN3,SEL1L,SLC1A4,SLC4A1AP,SLITRK2,SNTG1,SUDS3,SYN3,TENM2,TMEM132C,TRAPPC9,TRPS1,USH2A,ZNF362 | 71 |
| Embryonic Development,Nervous System Development and Function,Organ Development,Organ Morphology,Organismal Development,Tissue Development,Visual System Development and Function | Morphogenesis of camera-type eye | 0.000689 | BMP4,CHD7,GLI3,NR2E1 | 4 |
| Nervous System Development and Function,Neurological Disease,Ophthalmic Disease | Abnormal morphology of optic nerve | 0.000695 | BMP4,FYN,NTRK2 | 3 |
| Auditory Disease,Organismal Injury and Abnormalities | Abnormal function of inner ear | 0.000695 | EYA4,OCM,USH2A | 3 |
| Behavior,Nervous System Development and Function | Spatial memory | 0.000698 | CPLX2,GRIA4,IGF1,KMT2A,MEIS2,NR3C2 | 6 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Embryonic Development,Nervous System Development and Function,Ophthalmic Disease,Organ Development,Organ Morphology,Organismal Development,Organismal Injury and Abnormalities,Tissue Development,Visual System Development and Function | Abnormal morphology of ocular posterior segment | 0.00072 | BCAR3,BMP4 | 2 |
| Cellular Development,Connective Tissue Development and Function,Tissue Development | Differentiation of tenocyte | 0.00072 | BMP4,IGF1 | 2 |
| Cellular Development,Cellular Growth and Proliferation | Delay in development of cells | 0.00072 | FYN,IGF1 | 2 |
| Auditory and Vestibular System Development and Function,Auditory Disease,Nervous System Development and Function,Neurological Disease,Organ Morphology,Organismal Development,Organismal Injury and Abnormalities | Abnormal morphology of small spiral ganglion | 0.00072 | IGF1,NTRK2 | 2 |
| Cancer,Organismal Injury and Abnormalities | Development of adenocarcinoma | 0.000727 | ADAMTS3,ADD2,ADGRF4,AKAP7,ARMC9,ATP10A,BTBD11,CAPRIN1,CCDC63,CDH12,CDK1,CHD7,CLNK,DPYD,DSEL,EDIL3,EPHA2,ERC2,EXD1,EYA4,FAM135B,FAM171B,FER,GABRA6,GLI3,GPD2,GPX7,GRIA4,GRM8,GSE1,HLA-A,HNF4G,IGF1,ILVBL,ITGB5,KMT2A,LPP,LRRC4C,MATN1,MBD3L2 (includes others),MEGF8,MEIS2,MEOX1,MPLKIP,MPZL3,NR2E1,NR3C2,NTM,NTNG1,NTRK2,OGT,PCBP1,PEX2,PFKP,PPP2R2B,PTK2B,PTPRD,RHBDF2,RHOV,RIN3,RNASEH1,SEL1L,SGMS1,SGSM1,SLC1A4,SLC22A5,SLC34A2,SLITRK2,SNTG1,SSC5D,STARD10,STK3,SYN3,TBC1D2B,TENM2,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,TSPAN5,USH2A,ZNF217,ZNF362,ZPLD1 | 86 |
| Metabolic Disease,Organismal Injury and Abnormalities | Glucose metabolism disorder | 0.000729 | ATP10A,BMP4,CACNG2,CD3D,CPLX2,EDIL3,FYN,GABRA6,GPD2,GRIA4,GRM8,HLA-A,IGF1,ITGB2,ITGB5,MEIS2,MPPED2,MPZL2,MTNR1A,NR3C2,NTNG1,NTRK2,OGT,PPP2R2B,RAPGEF3,SEL1L,SGMS1,SLC1A4,SRD5A2,TSPAN5,TSPAN8 | 31 |
| Organismal Development | Size of head | 0.000741 | BMP4,FYN,GLI3,IGF1,Meis1,NR2E1,NTRK2,PEX2 | 8 |
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Colon adenocarcinoma | 0.000748 | ACKR3,ADAMTS3,ADD2,AKAP7,AP2M1,ATP10A,BMP4,BTBD11,CACNG2,CAPRIN1,CCDC63,CCSER1,CDH12,CHD1L,CHD7,DPYD,DSEL,DUSP3,EDIL3,EPHA2,EPSTI1,ERC2,EYA4,FAM135B,FAM171B,FYN,GLI3,GRIA4,GRM8,GSE1,HLA-A,HNRNPR,ILVBL,INTS6,ITGB2,ITGB5,KHDRBS3,KLHL14,KMT2A,MEGF8,MTNR1A,NR2E1,NR3C2,NTM,NTNG1,NTRK2,PCBP1,PFKP,PPP2R2B,PRRG4,PTK2B,PTPRD,RAPGEF3,RERG,RESF1,RHBDF2,RIN3,SEL1L,SLC1A4,SLC4A1AP,SLITRK2,SNTG1,SUDS3,SYN3,TENM2,TMEM132C,TRAPPC9,TRPS1,USH2A,ZNF362 | 70 |
| Cancer,Organismal Injury and Abnormalities,Respiratory Disease | Refractory non-small cell lung cancer | 0.000781 | FER,NTRK2,PTK2B | 3 |
| Auditory and Vestibular System Development and Function,Embryonic Development,Organ Development,Organismal Development,Tissue Development | Development of ear | 0.000804 | BMP4,CHD7,EYA4,GLI3,HLA-A,IGF1,LMO4 | 7 |
| Lymphoid Tissue Structure and Development,Tissue Morphology | Quantity of lymphatic system cells | 0.000824 | ACKR3,CD3D,CEBPE,CHD7,FYN,GLI3,HLA-A,IGF1,ITGB2,KMT2A,LMO4,MBL2,Meis1,MFNG,MPZL2,NR3C2,P2RX5,ST3GAL1,TSLP | 19 |
| Cell Morphology,Embryonic Development,Nervous System Development and Function,Organ Development,Organ Morphology,Organismal Development,Tissue Development,Visual System Development and Function | Morphology of eye cells | 0.000856 | BCAR3,ERC2,IGF1,MTNR1A,NTRK2,USH2A | 6 |
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Colorectal adenocarcinoma | 0.000867 | ACKR3,ADAMTS3,ADD2,AKAP7,AP2M1,ATP10A,BMP4,BTBD11,CACNG2,CAPRIN1,CCDC63,CCSER1,CDH12,CHD1L,CHD7,DPYD,DSEL,DUSP3,EDIL3,EPHA2,EPSTI1,ERC2,EYA4,FAM135B,FAM171B,FYN,GLI3,GRIA4,GRM8,GSE1,HLA-A,HNRNPR,ILVBL,INTS6,ITGB2,ITGB5,KHDRBS3,KLHL14,KMT2A,MEGF8,MTNR1A,NR2E1,NR3C2,NTM,NTNG1,NTRK2,PCBP1,PFKP,PPP2R2B,PRRG4,PTK2B,PTPRD,RAPGEF3,RERG,RESF1,RHBDF2,RIN3,SEL1L,SGSM1,SLC1A4,SLC4A1AP,SLITRK2,SNTG1,ST3GAL1,SUDS3,SYN3,TENM2,TMEM132C,TRAPPC9,TRPS1,USH2A,ZNF362 | 72 |
| Connective Tissue Development and Function,Embryonic Development,Organismal Development,Skeletal and Muscular System Development and Function,Tissue Development | Formation of cranium | 0.000875 | BMP4,CHD7,GLI3 | 3 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Hematological System Development and Function,Lymphoid Tissue Structure and Development,Tissue Morphology | Quantity of lymphocytes | 0.000879 | ACKR3,CD3D,CEBPE,CHD7,FYN,GLI3,HLA-A,IGF1,ITGB2,LMO4,MBL2,Meis1,MFNG,MPZL2,NR3C2,P2RX5,ST3GAL1,TSLP | 18 |
| Neurological Disease,Organismal Injury and Abnormalities | Cognitive impairment | 0.000888 | ADD2,CACNG2,CHD1L,CPLX2,FYN,GABRA6,GLI3,GRIA4,IGF1,KMT2A,MEIS2,MPLKIP,MTNR1A,NR3C2,OGT,SLC1A4,TRAPPC9,TRMT1 | 18 |
| Cancer,Hematological Disease,Immunological Disease,Organismal Injury and Abnormalities | Lymphoblastic B-cell lymphoma | 0.000891 | CD3D,EPHA2,FYN,KMT2A | 4 |
| Cancer,Organismal Injury and Abnormalities,Tumor Morphology | Metastatic progressive malignant solid tumor | 0.000891 | EPHA2,FER,NTRK2,PTK2B | 4 |
| Cell Death and Survival | Cell death of T lymphocytes | 0.000926 | BMP4,CDK1,FYN,GLI3,IGF1,OGT,PPP2R2B,PTK2B,ST3GAL1,TSLP | 10 |
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Gastrointestinal tract cancer | 0.000926 | ACKR3,ACTL9,ADAMTS3,ADD2,ADGRF4,AKAP7,ANXA4,AP2M1,ARMC9,ATP10A,BCAR3,BMP4,BSX,BTBD11,C4orf36,CACNG2,CACNG8,CAPRIN1,CCDC63,CCSER1,CD3D,CDAN1,CDH12,CDK1,CEBPE,CHD1L,CHD7,CLNK,DPYD,DSEL,DUSP3,EDIL3,EPHA2,EPSTI1,ERC2,EYA4,FAM135B,FAM171B,FER,FYN,GABRA6,GLI3,GPD2,GPX7,GRIA4,GRM8,GSE1,HK3,HLA-A,HNF4G,HNRNPR,IGF1,ILVBL,INTS6,ITGB2,ITGB5,KCNS1,KHDRBS3,KLF9,KLHL14,KMT2A,LPP,LRRC4C,MATN1,MEGF8,MEIS2,MEOX1,METTL25,MFNG,MPLKIP,MPPED2,MPZL2,MTNR1A,NME5,NR2E1,NR3C2,NTM,NTNG1,NTRK2,OCM,OGT,P2RX5,PANX2,PCBP1,PFKP,PPP2R2B,PRRG4,PTK2B,PTPRD,RAPGEF3,RERG,RESF1,RHBDF2,RHOV,RIN3,SEL1L,SGSM1,SLC1A4,SLC25A25,SLC34A2,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SP6,SSC5D,ST3GAL1,SUDS3,SYN3,TBC1D2B,TENM2,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,TSLP,TSPAN5,TSPAN8,USH2A,ZNF217,ZNF362,ZPLD1 | 124 |
| Cancer,Cardiovascular Disease,Organismal Injury and Abnormalities | Hemangioblastoma | 0.000944 | CDK1,DPYD,HLA-A,KMT2A,NTRK2,PTPRD | 6 |
| Cell Death and Survival | Cell death of lymphatic system cells | 0.000945 | BMP4,CDK1,FYN,GLI3,IGF1,KMT2A,Meis1,OGT,PPP2R2B,PTK2B,ST3GAL1,TSLP | 12 |
| Nervous System Development and Function,Organ Morphology,Organismal Development | Morphology of telencephalon | 0.00097 | FYN,GLI3,IGF1,NR2E1,NTRK2,SLC1A4,TENM2 | 7 |
| Embryonic Development,Nervous System Development and Function,Organ Development,Organismal Development,Tissue Development | Formation of subventricular zone | 0.000975 | EPHA2,GLI3,NR2E1 | 3 |
| Cell-To-Cell Signaling and Interaction | Attachment of cells | 0.000975 | BMP4,FYN,ITGB2,ITGB5,MBL2,PTK2B | 6 |
| Cancer,Organismal Injury and Abnormalities | Neck neoplasm | 0.000979 | ADAMTS3,ADD2,AKAP7,AP2M1,ARMC9,ATP10A,BCAR3,BMP4,BSX,BTBD11,C8orf33,CACNG8,CAPRIN1,CCDC63,CCSER1,CDAN1,CDH12,CDK1,CEBPE,CHD1L,CHD7,CPLX2,DPYD,DSEL,DUSP3,EDIL3,EPHA2,EPSTI1,ERC2,EXD1,FAM135B,FAM171B,FER,GABRA6,GLI3,GPAT4,GPD2,GRIA4,GSE1,HLA-A,HNF4G,HNRNPR,IGF1,INTS6,ITGB2,ITGB5,KCNS1,KCTD14,KLHL14,KMT2A,LMO4,LPP,LRRC4C,MATN1,MBD3L2 (includes others),MEGF8,MEIS2,MEOX1,METTL25,MMD,MPLKIP,MPZL2,NECTIN2,NME5,NPFFR1,NR2E1,NR3C2,NTNG1,NTRK2,OGT,P2RX5,PANX2,PEX2,PFKP,PPP2R2B,PTK2B,PTPRD,RAB2A,RAPGEF3,RESF1,RHBDF2,RHOV,RIN3,RNASEH1,SEL1L,SGMS1,SGSM1,SLC1A4,SLC22A5,SLC25A25,SLC34A2,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SP6,SSC5D,STARD10,STK3,SUDS3,SYN3,TBC1D2B,TCP11X2,TENM2,TMEM106B,TMEM132C,TMEM164,TRAPPC9,TRPS1,TRPV3,TSLP,TSPAN5,TSPAN8,USH2A,ZNF217,ZNF362,ZPLD1 | 117 |
| Cellular Function and Maintenance | Incorporation of cells | 0.001 | EPHA2,IGF1 | 2 |
| Cell Morphology,Hematological System Development and Function,Immunological Disease,Inflammatory Response | Abnormal morphology of neutrophils | 0.001 | CEBPE,ITGB2 | 2 |
| Embryonic Development,Tissue Morphology | Quantity of somites | 0.001 | CHD7,IGF1 | 2 |
| Ophthalmic Disease,Organismal Injury and Abnormalities | Adhesions of iris | 0.001 | BCAR3,BMP4 | 2 |
| Embryonic Development,Organ Development,Organismal Development,Respiratory System Development and Function,Tissue Development | Development of nose | 0.00108 | BMP4,CHD7,GLI3 | 3 |
| Connective Tissue Development and Function,Skeletal and Muscular System Development and Function,Tissue Development | Ossification of bone | 0.00111 | BMP4,GLI3,IGF1,ITGB2,MEGF8,TRPS1 | 6 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cell Signaling,DNA Replication, Recombination, and Repair,Nucleic Acid Metabolism,Small Molecule Biochemistry | Hydrolysis of GTP | 0.00113 | CDK1,PTK2B,RAB2A,RERG | 4 |
| Cancer,Organismal Injury and Abnormalities,Respiratory Disease | Adenocarcinoma in right upper lobe of lung | 0.00114 | ADAMTS3,CDH12,DPYD,EYA4,GLI3,GPD2,HLA-A,LPP,NTNG1,NTRK2,SGSM1,TRPV3,USH2A | 13 |
| Cell Morphology,Nervous System Development and Function | Innervation | 0.00118 | BMP4,CHD7,IGF1,NTRK2,OGT,TENM2 | 6 |
| Psychological Disorders | Schizophrenia spectrum disorder | 0.00119 | ADAMTS3,ADGRF4,CACNG2,CPLX2,DPYD,GABRA6,GLO1,INTS6,LMO4,MMD,MTNR1A,NTRK2,SYN3 | 13 |
| Embryonic Development,Nervous System Development and Function,Ophthalmic Disease,Organ Development,Organ Morphology,Organismal Development,Organismal Injury and Abnormalities,Tissue Development,Visual System Development and Function | Abnormal morphology of retina | 0.00119 | BMP4,ERC2,IGF1,MTNR1A,NTRK2,TENM2,USH2A | 7 |
| Nervous System Development and Function,Neurological Disease | Abnormal morphology of vestibulocochlear nerve | 0.0012 | IGF1,MEIS2,NTRK2 | 3 |
| Cellular Movement | Cell movement of cerebral cortex cells | 0.0012 | BMP4,LMO4,NTRK2,STK3 | 4 |
| Cell-To-Cell Signaling and Interaction,Cellular Assembly and Organization,Cellular Development,Cellular Function and Maintenance,Cellular Growth and Proliferation,Nervous System Development and Function,Tissue Development | Developmental process of synapse | 0.00121 | ADD2,CACNG2,CAPRIN1,FYN,IGF1,ITGB2,NTRK2,SLITRK2 | 8 |
| Cancer,Organismal Injury and Abnormalities | Pelvic carcinoma | 0.00122 | ACTL9,ADD2,ADGRF4,AKAP7,ARMC9,ATP10A,BCAR3,BTBD11,CCDC63,CDH12,CHD7,CLNK,DPYD,DSEL,EDIL3,EPHA2,EPSTI1,ERC2,EXD1,EYA4,FAM135B,FAM171B,FAM180A,FER,GABRA6,GLI3,GLO1,GPD2,GRIA4,GRM8,GSE1,HK3,HLA-A,HNF4G,HNRNPR,IGF1,ILVBL,ITGB2,ITGB5,KCNS1,KCTD14,KMT2A,LPP,LRRC4C,MATN1,MBD3L2 (includes others),MEGF8,MEIS2,MEOX1,METTL25,MMD,MPPED2,MTNR1A,NME5,NR3C2,NTM,NTNG1,NTRK2,OGT,PCBP1,PEX2,PFKP,PPP2R2B,PTK2B,PTPRD,RESF1,RHBDF2,RHOV,RIN3,RNASEH1,SEL1L,SGMS1,SGSM1,SLC1A4,SLC22A5,SLC25A25,SLC34A2,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SSC5D,ST3GAL1,STARD10,STK3,SYN3,TBC1D2B,TENM2,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,USH2A,ZNF362,ZPLD1 | 97 |
| Cell-To-Cell Signaling and Interaction,Nervous System Development and Function | Excitatory postsynaptic potential | 0.00125 | CACNG8,CAPRIN1,CPLX2,GRIA4,NTRK2,PTK2B | 6 |
| Cell Death and Survival,Cellular Function and Maintenance | Self-renewal of cells | 0.00125 | BMP4,EPHA2,GLI3,Meis1,PTK2B,SEL1L | 6 |
| Cancer,Organismal Injury and Abnormalities | Advanced squamous cell cancer | 0.00126 | DPYD,FER,MTNR1A,NTRK2,PTK2B | 5 |
| Cellular Development,Cellular Growth and Proliferation | Cell proliferation of breast cancer cell lines | 0.00127 | ACKR3,BCAR3,CDK1,EPHA2,IGF1,ITGB5,LMO4,MEOX1,OGT,PFKP,PPP2R2B,PTK2B,SEL1L,TRPS1 | 14 |
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Colon cancer | 0.00129 | ACKR3,ADAMTS3,ADD2,AKAP7,ANXA4,AP2M1,ATP10A,BMP4,BTBD11,CACNG2,CAPRIN1,CCDC63,CCSER1,CDH12,CHD1L,CHD7,DPYD,DSEL,DUSP3,EDIL3,EPHA2,EPSTI1,ERC2,EYA4,FAM135B,FAM171B,FYN,GLI3,GRIA4,GRM8,GSE1,HLA-A,HNRNPR,IGF1,ILVBL,INTS6,ITGB2,ITGB5,KHDRBS3,KLHL14,KMT2A,MEGF8,MTNR1A,NR2E1,NR3C2,NTM,NTNG1,NTRK2,PCBP1,PFKP,PPP2R2B,PRRG4,PTK2B,PTPRD,RAPGEF3,RERG,RESF1,RHBDF2,RIN3,SEL1L,SLC1A4,SLC4A1AP,SLITRK2,SNTG1,SUDS3,SYN3,TENM2,TMEM132C,TRAPPC9,TRPS1,USH2A,ZNF362 | 72 |
| Cell Death and Survival | Apoptosis of T lymphocytes | 0.00131 | BMP4,FYN,GLI3,IGF1,OGT,PPP2R2B,PTK2B,ST3GAL1,TSLP | 9 |
| Cardiovascular System Development and Function,Organismal Development | Vascularization of blood vessel | 0.00133 | EPHA2,STK3 | 2 |
| Carbohydrate Metabolism,Lipid Metabolism,Small Molecule Biochemistry | Binding of phosphatidylinositol 4,5-diphosphate | 0.00133 | AP2M1,USH2A | 2 |
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Major salivary gland adenoid cystic carcinoma | 0.00133 | NTRK2,PTPRD | 2 |
| Neurological Disease,Organismal Injury and Abnormalities | Hypothalamus dysfunction | 0.00133 | GLI3,NR3C2 | 2 |
| Cell Death and Survival | Apoptosis of neural stem cells | 0.00133 | KLF9,SEL1L | 2 |
| Nervous System Development and Function,Neurological Disease,Organ Morphology,Organismal Development,Organismal Injury and Abnormalities | Abnormal morphology of superior colliculus | 0.00133 | GLI3,TENM2 | 2 |
| Psychological Disorders | Mood Disorders | 0.00136 | FYN,GABRA6,IGF1,ITGB5,MTNR1A,MTSS2,NR2E1,NR3C2,NTRK2,SLC1A4,SYN3,TRPV3 | 12 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Hematological System Development and Function,Tissue Morphology | Quantity of leukocytes | 0.00137 | ACKR3,CD3D,CEBPE,CHD7,DUSP3,FYN,GLI3,HLA-A,IGF1,ITGB2,ITGB5,LMO4,MBL2,Meis1,MFNG,MPZL2,NR3C2,P2RX5,ST3GAL1,STK3,TSLP | 21 |
| Cancer,Endocrine System Disorders,Organismal Injury and Abnormalities | Thyroid carcinoma | 0.00141 | ADAMTS3,ADD2,AKAP7,AP2M1,ARMC9,ATP10A,BCAR3,BMP4,BSX,BTBD11,C8orf33,CACNG8,CAPRIN1,CCDC63,CCSER1,CDAN1,CDH12,CDK1,CEBPE,CHD1L,CHD7,CPLX2,DPYD,DSEL,DUSP3,EDIL3,EPHA2,EPSTI1,ERC2,EXD1,FAM135B,FAM171B,FER,GABRA6,GLI3,GPAT4,GPD2,GRIA4,GSE1,HLA-A,HNF4G,HNRNPR,IGF1,INTS6,ITGB2,ITGB5,KCNS1,KCTD14,KLHL14,KMT2A,LMO4,LPP,MATN1,MBD3L2 (includes others),MEGF8,MEIS2,MEOX1,METTL25,MMD,MPLKIP,MPZL2,NECTIN2,NME5,NPFFR1,NR2E1,NTNG1,NTRK2,OGT,P2RX5,PANX2,PEX2,PFKP,PPP2R2B,PTK2B,PTPRD,RAB2A,RAPGEF3,RESF1,RHBDF2,RHOV,RIN3,RNASEH1,SEL1L,SGMS1,SGSM1,SLC1A4,SLC22A5,SLC25A25,SLC34A2,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SP6,SSC5D,STARD10,STK3,SUDS3,SYN3,TBC1D2B,TCP11X2,TENM2,TMEM106B,TMEM132C,TMEM164,TRAPPC9,TRPS1,TRPV3,TSLP,TSPAN5,TSPAN8,USH2A,ZNF217,ZNF362,ZPLD1 | 115 |
| Nutritional Disease | Weight gain | 0.00141 | GABRA6,GPD2,GRM8,HLA-A,HNF4G,IGF1,NR3C2,NTRK2,RAPGEF3,SLC25A25 | 10 |
| Cancer,Organismal Injury and Abnormalities | Locally advanced carcinoma | 0.00142 | DPYD,FER,MTNR1A,NTRK2,PTK2B | 5 |
| Dermatological Diseases and Conditions,Hair and Skin Development and Function,Organ Morphology,Organismal Injury and Abnormalities | Abnormal morphology of vibrissae | 0.00145 | SP6,TRPS1,TRPV3 | 3 |
| Cellular Movement | Positioning of cells | 0.00145 | FYN,NECTIN2,STK3 | 3 |
| Connective Tissue Development and Function,Connective Tissue Disorders,Organismal Development,Organismal Injury and Abnormalities,Skeletal and Muscular Disorders,Skeletal and Muscular System Development and Function,Tissue Development | Abnormal morphology of skull | 0.00149 | BMP4,CHD7,EYA4,LMO4,MTNR1A,NME5,PEX2 | 7 |
| Endocrine System Disorders,Gastrointestinal Disease,Metabolic Disease,Organismal Injury and Abnormalities | Non-insulin-dependent diabetes mellitus | 0.00154 | ATP10A,CACNG2,CPLX2,FYN,GPD2,GRIA4,IGF1,ITGB5,NR3C2,NTRK2,TSPAN5,TSPAN8 | 12 |
| Cell Death and Survival | Cell death of myeloma cell lines | 0.00159 | BMP4,CDK1,IGF1,KLF9,PTK2B | 5 |
| Cellular Development,Cellular Growth and Proliferation,Nervous System Development and Function,Tissue Development | Outgrowth of axons | 0.00165 | IGF1,LRRC4C,MEGF8,OGT,SYN3 | 5 |
| Cell Death and Survival | Cell death of stem cells | 0.00169 | BMP4,FYN,GLI3,IGF1,KLF9,KMT2A,Meis1,SEL1L,TSLP | 9 |
| Cell-To-Cell Signaling and Interaction,Cellular Assembly and Organization | Formation of intercellular junctions | 0.00169 | ADD2,CACNG2,CAPRIN1,FYN,IGF1,ITGB2,NTRK2,PTK2B,SLITRK2 | 9 |
| Cellular Movement,Hematological System Development and Function,Hypersensitivity Response,Immune Cell Trafficking,Inflammatory Response | Migration of bone marrow-derived mast cells | 0.0017 | FER,FYN | 2 |
| Developmental Disorder,Hereditary Disorder,Organismal Injury and Abnormalities | Cornelia de Lange syndrome | 0.0017 | KMT2A,TRPS1 | 2 |
| Developmental Disorder,Organismal Injury and Abnormalities,Skeletal and Muscular Disorders | Polysyndactyly | 0.0017 | GLI3,MEGF8 | 2 |
| Cancer,Organismal Injury and Abnormalities | Pelvic adenocarcinoma | 0.00176 | ACTL9,ADD2,ADGRF4,AKAP7,ARMC9,ATP10A,BCAR3,BTBD11,CCDC63,CDH12,CHD7,CLNK,DSEL,EDIL3,EPHA2,EPSTI1,ERC2,EXD1,EYA4,FAM135B,FAM180A,FER,GABRA6,GLI3,GPD2,GRIA4,GRM8,GSE1,HK3,HLA-A,HNF4G,HNRNPR,IGF1,ILVBL,ITGB5,KCTD14,KMT2A,LPP,LRRC4C,MATN1,MBD3L2 (includes others),MEGF8,MEIS2,MEOX1,METTL25,MMD,MPPED2,MTNR1A,NME5,NR3C2,NTM,NTNG1,NTRK2,OGT,PCBP1,PEX2,PFKP,PPP2R2B,PTK2B,PTPRD,RHBDF2,RHOV,RIN3,RNASEH1,SEL1L,SGMS1,SLC1A4,SLC22A5,SLC34A2,SLC4A1AP,SLITRK2,SNTG1,SSC5D,STARD10,STK3,SYN3,TBC1D2B,TENM2,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,USH2A,ZNF362,ZPLD1 | 87 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Endocrine System Disorders,Organismal Injury and Abnormalities | Nonpituitary endocrine tumor | 0.00177 | ADAMTS3,ADD2,AKAP7,AP2M1,ARMC9,ATP10A,BCAR3,BMP4,BSX,BTBD11,C8orf33,CACNG8,CAPRIN1,CCDC63,CCSER1,CDAN1,CDH12,CDK1,CEBPE,CHD1L,CHD7,CPLX2,DPYD,DSEL,DUSP3,EDIL3,EPHA2,EPSTI1,ERC2,EXD1,FAM135B,FAM171B,FER,GABRA6,GLI3,GPAT4,GPD2,GRIA4,GSE1,HLA-A,HNF4G,HNRNPR,IGF1,INTS6,ITGB2,ITGB5,KCNS1,KCTD14,KLHL14,KMT2A,LMO4,LPP,MATN1,MBD3L2 (includes others),MEGF8,MEIS2,MEOX1,METTL25,MMD,MPLKIP,MPZL2,NECTIN2,NME5,NPFFR1,NR2E1,NR3C2,NTNG1,NTRK2,OGT,P2RX5,PANX2,PEX2,PFKP,PPP2R2B,PTK2B,PTPRD,RAB2A,RAPGEF3,RESF1,RHBDF2,RHOV,RIN3,RNASEH1,SEL1L,SGMS1,SGSM1,SLC1A4,SLC22A5,SLC25A25,SLC34A2,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SP6,SSC5D,STARD10,STK3,SUDS3,SYN3,TBC1D2B,TCP11X2,TENM2,TMEM106B,TMEM132C,TMEM164,TRAPPC9,TRPS1,TRPV3,TSLP,TSPAN5,TSPAN8,USH2A,ZNF217,ZNF362,ZPLD1 | 116 |
| Endocrine System Disorders,Gastrointestinal Disease,Metabolic Disease,Organismal Injury and Abnormalities | Diabetes mellitus | 0.00177 | ATP10A,BMP4,CACNG2,CD3D,CPLX2,EDIL3,FYN,GABRA6,GPD2,GRIA4,HLA-A,IGF1,ITGB2,ITGB5,MEIS2,MPPED2,MPZL2,MTNR1A,NR3C2,NTNG1,NTRK2,PPP2R2B,SLC1A4,SRD5A2,TSPAN5,TSPAN8 | 26 |
| Cellular Development,Nervous System Development and Function | Differentiation of neuroglia | 0.00179 | BMP4,CDK1,GLI3,IGF1,NR2E1,NTRK2,RAPGEF3 | 7 |
| Cell Death and Survival,Nervous System Development and Function | Cell viability of neurons | 0.0018 | BMP4,CDK1,GLI3,HLA-A,IGF1,LMO4,NTRK2,TMEM106B | 8 |
| Cellular Development,Cellular Growth and Proliferation | Proliferation of leukemia cell lines | 0.00187 | BMP4,CEBPE,FYN,GLI3,IGF1,KMT2A,SGMS1,TSLP | 8 |
| Cancer,Organismal Injury and Abnormalities | ALK rearrangement positive extracranial solid tumor | 0.00188 | FER,NTRK2,PTK2B | 3 |
| Cellular Movement | Migration of muscle cell lines | 0.00188 | IGF1,ITGB5,LPP | 3 |
| Cancer,Organismal Injury and Abnormalities | ALK inversion positive malignant neoplasm | 0.00188 | FER,NTRK2,PTK2B | 3 |
| Cancer,Organismal Injury and Abnormalities | Intraabdominal organ tumor | 0.00192 | ACKR3,ACTL9,ADAMTS3,ADD2,ADGRF4,AKAP7,ANXA4,AP2M1,ARMC9,ATP10A,BCAR3,BMP4,BSX,BTBD11,C4orf36,C8orf33,CACNG2,CACNG8,CAPRIN1,CCDC63,CCSER1,CD3D,CDAN1,CDH12,CDK1,CEBPE,CHD1L,CHD7,CLNK,DPYD,DSEL,DUSP3,EDIL3,EPHA2,EPSTI1,ERC2,EXD1,EYA4,FAM135B,FAM171B,FER,FYN,GABRA6,GLI3,GLO1,GPD2,GPX7,GRIA4,GRM8,GSE1,HK3,HLA-A,HNF4G,HNRNPR,IGF1,ILVBL,INTS6,ITGB2,ITGB5,KCNS1,KHDRBS3,KLF9,KLHL14,KMT2A,LPP,LRRC4C,MATN1,MBD3L2 (includes others),MEGF8,MEIS2,MEOX1,METTL25,MFNG,MPLKIP,MPPED2,MPZL2,MPZL3,MTNR1A,NME5,NR2E1,NR3C2,NTM,NTNG1,NTRK2,OCM,OGT,P2RX5,PANX2,PCBP1,PEX2,PFKP,PPP2R2B,PRRG4,PTK2B,PTPRD,RAPGEF3,RERG,RESF1,RHBDF2,RHOV,RIN3,RNASEH1,SEL1L,SGMS1,SGSM1,SLC1A4,SLC22A5,SLC25A25,SLC34A2,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SP6,SRD5A2,SSC5D,ST3GAL1,STARD10,STK3,SUDS3,SYN3,TBC1D2B,TENM2,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,TSLP,TSPAN5,TSPAN8,USH2A,ZNF217,ZNF362,ZPLD1 | 136 |
| Cellular Function and Maintenance,Cellular Growth and Proliferation | Production of cells | 0.00198 | BMP4,FYN,Meis1,NR2E1,PTK2B,RNASEH1 | 6 |
| Cancer,Hematological Disease,Organismal Injury and Abnormalities | Hematologic cancer | 0.00199 | ADAMTS3,ADD2,ADGRF4,ANXA4,ARMC9,ATP10A,CCSER1,CD3D,CDH12,CDK1,DPYD,DSEL,EPHA2,EPSTI1,ERC2,FAM135B,FAM171B,FER,FYN,GABRA6,GLI3,GPX7,GSE1,HK3,HLA-A,HNF4G,IGF1,ITGB2,KCNS1,KLHL14,KMT2A,LPP,Meis1,MEIS2,NTRK2,PCBP1,PPP2R2B,PTK2B,PTPRD,RERG,RESF1,RHOV,RIN3,SGMS1,SLC22A5,SLC34A2,SLITRK2,TENM2,TMEM132C,TRAPPC9,TRPV3,TSPAN8,USH2A,ZNF217 | 54 |
| Cancer,Organismal Injury and Abnormalities,Reproductive System Disease | Breast or gynecological cancer | 0.00201 | ADAMTS3,ADD2,ADGRF4,AKAP7,ARMC9,ATP10A,BCAR3,BMP4,BTBD11,CCDC63,CCSER1,CDH12,CDK1,CHD7,CLNK,DPYD,DSEL,EDIL3,EPHA2,EPSTI1,ERC2,EXD1,EYA4,FAM135B,FAM171B,FER,FYN,GABRA6,GLI3,GLO1,GPAT4,GPX7,GRIA4,GRM8,GSE1,HLA-A,HNF4G,IGF1,ILVBL,ITGB5,KCNS1,KLF9,KMT2A,LPP,MATN1,MBD3L2 (includes others),MEGF8,MEIS2,MEOX1,METTL25,NECTIN2,NR2E1,NR3C2,NTM,NTNG1,NTRK2,OGT,PCBP1,PEX2,PFKP,PPP2R2B,PTPRD,RHBDF2,RHOV,RIN3,RNASEH1,SEL1L,SGMS1,SGSM1,SLC22A5,SLC34A2,SLCO2A1,SLITRK2,SNTG1,SSC5D,STARD10,STK3,SYN3,TBC1D2B,TENM2,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,TSPAN8,USH2A,ZNF217,ZNF362,ZPLD1 | 91 |
| Cell-To-Cell Signaling and Interaction,Nervous System Development and Function | Synaptic transmission of cells | 0.00202 | CACNG2,ERC2,IGF1,PTK2B | 4 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Esophageal carcinoma | 0.00202 | ADGRF4,DPYD,FAM135B,FAM171B,GABRA6,GLI3,GSE1,HLA-A,KMT2A,NTRK2,PANX2,RHBDF2,SGSM1,TMEM132C,USH2A | 15 |
| Cellular Movement | Cell movement of brain cells | 0.00204 | BMP4,LMO4,NR2E1,NTRK2,STK3 | 5 |
| Cellular Development,Cellular Growth and Proliferation,Nervous System Development and Function,Tissue Development | Development of central nervous system cells | 0.00204 | EPHA2,IGF1,NR2E1,NTRK2,RAPGEF3 | 5 |
| Embryonic Development,Organismal Development,Tissue Development | Branching morphogenesis of epithelial tubule | 0.00204 | BMP4,GLI3,IGF1 | 3 |
| Embryonic Development,Organ Development,Organismal Development,Reproductive System Development and Function,Tissue Development | Formation of mammary gland | 0.00206 | BMP4,BSX,FYN,GLI3,GPAT4,IGF1,LMO4 | 7 |
| Cellular Development,Cellular Growth and Proliferation,Hematological System Development and Function,Lymphoid Tissue Structure and Development | Proliferation of activated T lymphocytes | 0.00212 | FYN,IGF1,ITGB2,TSLP | 4 |
| Cancer,Hematological Disease,Immunological Disease,Organismal Injury and Abnormalities | Imatinib resistant chronic myeloid leukemia in myeloid blast crisis | 0.00212 | EPHA2,FYN | 2 |
| Cancer,Hematological Disease,Immunological Disease,Organismal Injury and Abnormalities | Imatinib resistant chronic myeloid leukemia in lymphoid blast crisis | 0.00212 | EPHA2,FYN | 2 |
| Dermatological Diseases and Conditions,Hereditary Disorder,Organismal Injury and Abnormalities | Focal or diffuse nonepidermolytic palmoplantar keratoderma | 0.00212 | RHBDF2,TRPV3 | 2 |
| Embryonic Development,Nervous System Development and Function,Organ Development,Organismal Development,Tissue Development | Formation of cortical lamina | 0.00212 | NR2E1,NTRK2 | 2 |
| Cell Death and Survival | Cell death of myeloid progenitor cells | 0.00212 | KMT2A,Meis1 | 2 |
| Cell Morphology,Embryonic Development,Nervous System Development and Function,Ophthalmic Disease,Organ Development,Organ Morphology,Organismal Development,Organismal Injury and Abnormalities,Tissue Development,Tissue Morphology,Visual System Development and Function | Abnormal morphology of short photoreceptor inner segments | 0.00212 | MTNR1A,USH2A | 2 |
| Cellular Function and Maintenance | Homeostasis of water | 0.00212 | IGF1,NR3C2 | 2 |
| Neurological Disease,Psychological Disorders | Schizophrenia | 0.00214 | ADAMTS3,ADGRF4,CACNG2,CPLX2,DPYD,GABRA6,INTS6,LMO4,MMD,MTNR1A,NTRK2,SYN3 | 12 |
| Cancer,Endocrine System Disorders,Organismal Injury and Abnormalities | Endocrine carcinoma | 0.00215 | ADAMTS3,ADD2,AKAP7,AP2M1,ARMC9,ATP10A,BCAR3,BMP4,BSX,BTBD11,C8orf33,CACNG8,CAPRIN1,CCDC63,CCSER1,CDAN1,CDH12,CDK1,CEBPE,CHD1L,CHD7,CPLX2,DPYD,DSEL,DUSP3,EDIL3,EPHA2,EPSTI1,ERC2,EXD1,FAM135B,FAM171B,FER,GABRA6,GLI3,GPAT4,GPD2,GRIA4,GRM8,GSE1,HLA-A,HNF4G,HNRNPR,IGF1,INTS6,ITGB2,ITGB5,KCNS1,KCTD14,KLHL14,KMT2A,LMO4,LPP,MATN1,MBD3L2 (includes others),MEGF8,MEIS2,MEOX1,METTL25,MMD,MPLKIP,MPZL2,MTNR1A,NECTIN2,NME5,NPFFR1,NR2E1,NR3C2,NTNG1,NTRK2,OGT,P2RX5,PANX2,PEX2,PFKP,PPP2R2B,PTK2B,PTPRD,RAB2A,RAPGEF3,RESF1,RHBDF2,RHOV,RIN3,RNASEH1,SEL1L,SGMS1,SGSM1,SLC1A4,SLC22A5,SLC25A25,SLC34A2,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SP6,SSC5D,STARD10,STK3,SUDS3,SYN3,TBC1D2B,TCP11X2,TENM2,TMEM106B,TMEM132C,TMEM164,TRAPPC9,TRPS1,TRPV3,TSLP,TSPAN5,TSPAN8,USH2A,ZNF217,ZNF362,ZPLD1 | 118 |
| Cancer,Hematological Disease,Organismal Injury and Abnormalities | Myeloid or lymphoid neoplasm | 0.00216 | ADAMTS3,ADD2,ADGRF4,ANXA4,ARMC9,ATP10A,CCSER1,CD3D,CDH12,CDK1,DPYD,DSEL,EPHA2,EPSTI1,ERC2,FAM135B,FAM171B,FER,FYN,GABRA6,GLI3,GPX7,GSE1,HK3,HLA-A,HNF4G,IGF1,ITGB2,KCNS1,KLHL14,KMT2A,LPP,Meis1,MEIS2,NTRK2,PCBP1,PPP2R2B,PTK2B,PTPRD,RERG,RESF1,RHOV,RIN3,SGMS1,SLC22A5,SLC34A2,SLITRK2,TENM2,TMEM132C,TRAPPC9,TRPV3,TSPAN8,USH2A,ZNF217 | 54 |
| Cancer,Hematological Disease,Organismal Injury and Abnormalities | Myelodysplastic syndrome or leukemia | 0.00216 | ADAMTS3,ADD2,ADGRF4,ATP10A,CD3D,CDH12,CDK1,DSEL,EPHA2,ERC2,FAM135B,FER,FYN,GABRA6,GLI3,GPX7,HK3,HLA-A,HNF4G,ITGB2,KCNS1,KMT2A,LPP,Meis1,NTRK2,PPP2R2B,PTK2B,PTPRD,RERG,RHOV,SLC22A5,SLC34A2,SLITRK2,TENM2,TMEM132C,TRAPPC9,TRPV3,TSPAN8,USH2A,ZNF217 | 40 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cellular Development,Connective Tissue Development and Function,Skeletal and Muscular System Development and Function,Tissue Development | Differentiation of chondrocytes | 0.00218 | BMP4,GLI3,IGF1,MATN1,TRPS1 | 5 |
| Cellular Development | Differentiation of nervous system | 0.0022 | BMP4,CDK1,EPHA2,GLI3,IGF1,KLF9,Meis1,MMD,NR2E1,NTRK2,PANX2,RAPGEF3,TRAPPC9 | 13 |
| Cancer,Cell-To-Cell Signaling and Interaction,Organismal Injury and Abnormalities | Binding of cancer cells | 0.00221 | BMP4,IGF1,ITGB2 | 3 |
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Rectal adenocarcinoma | 0.00229 | CHD7,DPYD,EPHA2,ERC2,FAM171B,GSE1,KMT2A,PCBP1,RESF1,RIN3,SGSM1,SNTG1,ST3GAL1,SYN3,TENM2 | 15 |
| Cancer,Organismal Injury and Abnormalities | Stage IV solid tumor | 0.00232 | DPYD,EPHA2,FER,MTNR1A,NTRK2,PTK2B | 6 |
| Embryonic Development | Quantity of embryo | 0.00232 | BMP4,CHD7,GLI3,IGF1,NR2E1,TSLP | 6 |
| Nervous System Development and Function,Tissue Morphology | Quantity of sensory neurons | 0.00233 | BCAR3,MTNR1A,NTRK2,USH2A | 4 |
| Cell Signaling | Enzyme linked receptor protein signaling pathway | 0.00244 | AKAP7,CLNK,PTPRD,TRPS1 | 4 |
| Behavior,Nervous System Development and Function | Memory | 0.00245 | CPLX2,FYN,GRIA4,IGF1,KMT2A,MEIS2,NR3C2,NTRK2,OGT | 9 |
| Cancer,Hematological Disease,Immunological Disease,Organismal Injury and Abnormalities | Acute lymphoblastic leukemia | 0.00248 | ADD2,ADGRF4,ATP10A,CD3D,DSEL,EPHA2,ERC2,FAM135B,FYN,ITGB2,KMT2A,NTRK2,PTK2B,PTPRD,RHOV,TRPV3,ZNF217 | 17 |
| Cellular Development,Nervous System Development and Function | Differentiation of oligodendrocytes | 0.00257 | BMP4,GLI3,IGF1,NTRK2,RAPGEF3 | 5 |
| Cancer,Organismal Injury and Abnormalities | Stage IV epithelial cancer | 0.00257 | EPHA2,FER,MTNR1A,NTRK2,PTK2B | 5 |
| Cancer,Hematological Disease,Immunological Disease,Organismal Injury and Abnormalities | T-lymphoblastic leukemia/lymphoma | 0.00257 | CCSER1,EPHA2,FYN,GLI3,KMT2A,MEIS2,RHOV,TENM2,ZNF217 | 9 |
| Embryonic Development,Nervous System Development and Function,Organ Development,Organismal Development,Tissue Development | Patterning of telencephalon | 0.00258 | BMP4,NR2E1 | 2 |
| Embryonic Development,Nervous System Development and Function,Ophthalmic Disease,Organ Development,Organ Morphology,Organismal Development,Organismal Injury and Abnormalities,Tissue Development,Visual System Development and Function | Abnormal morphology of photoreceptor layer | 0.00258 | BMP4,USH2A | 2 |
| Cancer,Organismal Injury and Abnormalities,Tumor Morphology | Progressive PDGFRA D842V mutation-positive gastrointestinal stromal tumor | 0.00258 | EPHA2,FYN | 2 |
| Cellular Development,Embryonic Development,Organ Development,Organismal Development,Reproductive System Development and Function,Tissue Development | Differentiation of mammary epithelial cells | 0.00258 | FYN,LMO4 | 2 |
| Cell Morphology,Hair and Skin Development and Function,Nervous System Development and Function | Innervation of skin | 0.00258 | BMP4,OGT | 2 |
| Cell Morphology,Embryonic Development,Nervous System Development and Function,Ophthalmic Disease,Organ Development,Organ Morphology,Organismal Development,Organismal Injury and Abnormalities,Tissue Development,Tissue Morphology,Visual System Development and Function | Abnormal morphology of retinal rods | 0.00258 | ERC2,IGF1 | 2 |
| Cell-To-Cell Signaling and Interaction,Cellular Growth and Proliferation,Hematological System Development and Function,Hematopoiesis | Stimulation of red blood cells | 0.00258 | BMP4,IGF1 | 2 |
| Cell Morphology,Cellular Assembly and Organization,Nervous System Development and Function | Elongation of neurites | 0.00266 | ADAMTS3,IGF1,NTRK2,RAPGEF3 | 4 |
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Gastric adenocarcinoma | 0.00272 | AKAP7,ATP10A,BTBD11,CCDC63,CDAN1,CDH12,CEBPE,CHD7,DPYD,DSEL,EPHA2,EPSTI1,EYA4,FAM135B,FAM171B,GABRA6,GLI3,GPD2,GRM8,GSE1,KLHL14,KMT2A,MPPED2,MTNR1A,NTRK2,PFKP,PPP2R2B,PTK2B,SLC34A2,SNTG1,SYN3,TENM2,TRAPPC9,TRPS1,USH2A,ZNF217 | 36 |
| Embryonic Development,Organismal Development,Tissue Development | Branching of metanephric bud | 0.00276 | BMP4,GLI3,TRPS1 | 3 |
| Gastrointestinal Disease,Organismal Injury and Abnormalities | Esophageal lesion | 0.00277 | ADGRF4,DPYD,FAM135B,FAM171B,GABRA6,GLI3,GSE1,HLA-A,KMT2A,NTRK2,PANX2,RHBDF2,SGSM1,TMEM132C,TSLP,USH2A | 16 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cell Death and Survival | Cell viability of cerebral cortex cells | 0.00278 | IGF1,LMO4,NTRK2,TMEM106B | 4 |
| Cell Death and Survival,Nervous System Development and Function | Survival of cephalic neurons | 0.00278 | IGF1,LMO4,NTRK2,TMEM106B | 4 |
| Cell Death and Survival | Apoptosis of stem cells | 0.00282 | BMP4,FYN,GLI3,IGF1,KLF9,KMT2A,SEL1L,TSLP | 8 |
| Cancer,Organismal Injury and Abnormalities | Refractory malignant tumor | 0.0029 | CD3D,EPHA2,FER,FYN,GABRA6,NTRK2,PTK2B | 7 |
| Cellular Development,Nervous System Development and Function,Tissue Development | Differentiation of neurons | 0.00297 | BMP4,EPHA2,GLI3,IGF1,KLF9,Meis1,MMD,NR2E1,NTRK2,PANX2,TRAPPC9 | 11 |
| Skeletal and Muscular System Development and Function | Mineralization of bone | 0.00299 | BMP4,IGF1,ITGB2,MATN1,PEX2,PTK2B | 6 |
| Tissue Morphology | Quantity of cells | 0.00303 | ACKR3,ADD2,BCAR3,BMP4,CD3D,CDK1,CEBPE,CHD7,DUSP3,ERC2,FER,FYN,GLI3,HLA-A,IGF1,ITGB2,ITGB5,KMT2A,LMO4,MBL2,Meis1,MFNG,MPZL2,MTNR1A,NR2E1,NR3C2,NTRK2,P2RX5,PTK2B,RAPGEF3,ST3GAL1,STK3,TSLP,USH2A | 34 |
| Cancer,Organismal Injury and Abnormalities,Reproductive System Disease | Female genital tract cancer | 0.00303 | ADD2,ADGRF4,AKAP7,ARMC9,ATP10A,BTBD11,CCDC63,CDH12,CDK1,CHD7,CLNK,DPYD,DSEL,EDIL3,EPHA2,ERC2,EXD1,EYA4,FAM135B,FAM171B,FER,GABRA6,GLI3,GRIA4,GRM8,GSE1,HLA-A,HNF4G,IGF1,ILVBL,ITGB5,KCNS1,KLF9,KMT2A,LPP,MATN1,MBD3L2 (includes others),MEGF8,MEIS2,MEOX1,NR3C2,NTM,NTNG1,NTRK2,OGT,PCBP1,PEX2,PFKP,PPP2R2B,PTPRD,RHBDF2,RHOV,RIN3,RNASEH1,SEL1L,SGMS1,SGSM1,SLC22A5,SLC34A2,SLCO2A1,SLITRK2,SNTG1,SSC5D,STARD10,STK3,SYN3,TBC1D2B,TENM2,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,USH2A,ZNF217,ZNF362,ZPLD1 | 78 |
| Cell Morphology | Polarization of lymphocytes | 0.00303 | BCAR3,FYN,ITGB2,TSLP | 4 |
| Cell-To-Cell Signaling and Interaction,Cellular Growth and Proliferation,Nervous System Development and Function | Stimulation of sensory neurons | 0.00308 | KCNS1,TSLP | 2 |
| Cancer,Hematological Disease,Immunological Disease,Organismal Injury and Abnormalities | Imatinib-resistant chronic phase chronic myeloid leukemia | 0.00308 | EPHA2,FYN | 2 |
| Endocrine System Disorders,Organismal Injury and Abnormalities,Reproductive System Disease | Diminished ovarian reserve | 0.00308 | MTNR1A,NR3C2 | 2 |
| Cancer,Hematological Disease,Immunological Disease,Organismal Injury and Abnormalities | Imatinib resistant accelerated phase chronic myelogenous leukemia | 0.00308 | EPHA2,FYN | 2 |
| Cellular Development,Cellular Growth and Proliferation,Embryonic Development,Nervous System Development and Function,Organ Development,Organismal Development,Tissue Development | Neurogenesis of brain cells | 0.00308 | EPHA2,IGF1 | 2 |
| Cell Morphology | Polarization of Th2 cells | 0.00308 | FYN,TSLP | 2 |
| Auditory and Vestibular System Development and Function,Organ Morphology,Organismal Development | Size of inner ear | 0.00308 | BMP4,IGF1 | 2 |
| Cellular Development,Nervous System Development and Function,Tissue Development | Differentiation of cholinergic neurons | 0.00308 | BMP4,IGF1 | 2 |
| Nervous System Development and Function,Neurological Disease | Abnormal morphology of small trigeminal ganglion | 0.00308 | MEIS2,NTRK2 | 2 |
| Carbohydrate Metabolism,Small Molecule Biochemistry | Metabolism of fructose-6-phosphate | 0.00308 | HK3,PFKP | 2 |
| Cellular Development,Cellular Growth and Proliferation,Embryonic Development,Hematological System Development and Function,Hematopoiesis,Humoral Immune Response,Lymphoid Tissue Structure and Development,Organ Development,Organismal Development,Tissue Development | Differentiation of marginal-zone B lymphocytes | 0.00308 | MFNG,PTK2B | 2 |
| Cancer,Hematological Disease,Immunological Disease,Organismal Injury and Abnormalities | B-cell leukemia | 0.00311 | ADD2,ADGRF4,ATP10A,CD3D,CDK1,DSEL,EPHA2,ERC2,FAM135B,FYN,ITGB2,KMT2A,NTRK2,PTK2B,PTPRD,TRPV3,ZNF217 | 17 |
| Behavior | Abnormal posture | 0.00317 | CAPRIN1,CPLX2,PEX2,TRPS1 | 4 |
| Cancer,Organismal Injury and Abnormalities | Recurrent carcinoma | 0.0032 | DPYD,EPHA2,FER,NTRK2,PTK2B | 5 |
| Cell-To-Cell Signaling and Interaction,Nervous System Development and Function | Long-term potentiation of hippocampus | 0.0032 | FYN,LMO4,NTRK2,PTK2B,RAPGEF3 | 5 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Organismal Injury and Abnormalities | Ductal carcinoma | 0.00321 | ACKR3,ADAMTS3,ARMC9,ATP10A,BCAR3,BMP4,C8orf33,CCSER1,CDAN1,CDH12,CDK1,CLNK,EPHA2,ERC2,EYA4,FYN,GABRA6,GLI3,HK3,HLA-A,HNF4G,IGF1,KLHL14,KMT2A,LPP,MEGF8,METTL25,MPPED2,NTM,NTNG1,NTRK2,PFKP,PTPRD,RESF1,RHBDF2,RIN3,SEL1L,SLCO2A1,STK3,SUDS3,SYN3,TENM2,TRAPPC9,TRPV3,TSPAN8,USH2A,ZNF217 | 47 |
| Developmental Disorder,Organismal Injury and Abnormalities,Skeletal and Muscular Disorders | Polydactyly | 0.0033 | BMP4,GLI3,MEGF8,TMEM107 | 4 |
| Cancer,Organismal Injury and Abnormalities,Reproductive System Disease | Tumorigenesis of reproductive tract | 0.00333 | ADD2,ADGRF4,AKAP7,ARMC9,ATP10A,BTBD11,CCDC63,CDH12,CDK1,CHD7,CLNK,DPYD,DSEL,EDIL3,EPHA2,ERC2,EXD1,EYA4,FAM135B,FAM171B,FER,GABRA6,GLI3,GRIA4,GRM8,GSE1,HLA-A,HNF4G,IGF1,ILVBL,ITGB5,KCNS1,KLF9,KMT2A,LPP,MATN1,MBD3L2 (includes others),MEGF8,MEIS2,MEOX1,NR3C2,NTM,NTNG1,NTRK2,OGT,PCBP1,PEX2,PFKP,PPP2R2B,PTPRD,RAPGEF3,RHBDF2,RHOV,RIN3,RNASEH1,SEL1L,SGMS1,SGSM1,SLC22A5,SLC34A2,SLCO2A1,SLITRK2,SNTG1,SSC5D,STARD10,STK3,SYN3,TBC1D2B,TENM2,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,USH2A,ZNF217,ZNF362,ZPLD1 | 79 |
| Tissue Morphology | Remodeling of blood vessel | 0.00344 | CHD7,EDIL3,IGF1,NR3C2 | 4 |
| Cancer,Organismal Injury and Abnormalities,Reproductive System Disease | Female genital neoplasm | 0.00346 | ADD2,ADGRF4,AKAP7,ARMC9,ATP10A,BTBD11,CCDC63,CDH12,CDK1,CHD7,CLNK,DPYD,DSEL,EDIL3,EPHA2,ERC2,EXD1,EYA4,FAM135B,FAM171B,FER,GABRA6,GLI3,GRIA4,GRM8,GSE1,HLA-A,HNF4G,IGF1,ILVBL,ITGB5,KCNS1,KLF9,KMT2A,LPP,MATN1,MBD3L2 (includes others),MEGF8,MEIS2,MEOX1,NR3C2,NTM,NTNG1,NTRK2,OGT,PCBP1,PEX2,PFKP,PPP2R2B,PTPRD,RAPGEF3,RHBDF2,RHOV,RIN3,RNASEH1,SEL1L,SGMS1,SGSM1,SLC22A5,SLC34A2,SLCO2A1,SLITRK2,SNTG1,SSC5D,STARD10,STK3,SYN3,TBC1D2B,TENM2,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,USH2A,ZNF217,ZNF362,ZPLD1 | 79 |
| Cancer,Organismal Injury and Abnormalities,Reproductive System Disease | Prostatic adenocarcinoma | 0.00349 | ACTL9,ADD2,BCAR3,CCDC63,CDH12,DSEL,EDIL3,EPHA2,EPSTI1,FAM135B,FAM180A,FER,GLI3,GPD2,GRIA4,GRM8,HK3,HLA-A,HNRNPR,ITGB5,KCTD14,KMT2A,LRRC4C,MBD3L2 (includes others),MEGF8,MEIS2,METTL25,MMD,MPPED2,MTNR1A,NME5,NTNG1,NTRK2,OGT,PTK2B,PTPRD,RIN3,SGMS1,SLC1A4,SLC4A1AP,SNTG1,SSC5D,STARD10,TENM2,TMEM132C,TRAPPC9,TRMT1,USH2A | 48 |
| Cellular Development,Embryonic Development,Organismal Development,Tissue Development | Differentiation of mesenchymal stem cells | 0.00358 | BMP4,CDK1,IGF1,PTK2B | 4 |
| Cell-To-Cell Signaling and Interaction,Nervous System Development and Function | Auditory evoked potential | 0.00358 | BMP4,EYA4,IGF1,OCM | 4 |
| Cell Death and Survival | Apoptosis of lymphatic system cells | 0.00362 | BMP4,FYN,GLI3,IGF1,KMT2A,OGT,PPP2R2B,PTK2B,ST3GAL1,TSLP | 10 |
| Lymphoid Tissue Structure and Development,Tissue Morphology | Quantity of type 3 innate lymphoid cells | 0.00362 | LMO4,TSLP | 2 |
| Dermatological Diseases and Conditions,Hair and Skin Development and Function,Organ Morphology,Organismal Injury and Abnormalities | Lack of vibrissae | 0.00362 | SP6,TRPS1 | 2 |
| Tissue Morphology | Thickening of basement membrane | 0.00362 | BMP4,IGF1 | 2 |
| Auditory and Vestibular System Development and Function,Embryonic Development,Organ Development,Organismal Development,Tissue Development | Formation of cochlear duct | 0.00362 | IGF1,LMO4 | 2 |
| Cancer,Hematological Disease,Immunological Disease,Organismal Injury and Abnormalities | Chemotherapy refractory Philadelphia-positive acute lymphoblastic leukemia | 0.00362 | EPHA2,FYN | 2 |
| Auditory and Vestibular System Development and Function,Connective Tissue Development and Function,Embryonic Development,Organ Development,Organismal Development,Skeletal and Muscular System Development and Function,Tissue Development | Formation of semicircular canal | 0.00362 | CHD7,GLI3 | 2 |
| Cellular Function and Maintenance,Molecular Transport | Reabsorption of Na+ | 0.00362 | IGF1,NR3C2 | 2 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cell-To-Cell Signaling and Interaction,Hematological System Development and Function,Immune Cell Trafficking,Inflammatory Response | Activation of alveolar macrophages | 0.00362 | IGF1,RAPGEF3 | 2 |
| Behavior | Bobbing | 0.00362 | CACNG2,CHD7 | 2 |
| Cancer,Organismal Injury and Abnormalities | Hyperplasia of mucosa | 0.00362 | GPX7,IGF1 | 2 |
| Nervous System Development and Function,Organ Morphology,Organismal Development | Size of brain | 0.00363 | FYN,GLI3,IGF1,NR2E1,NTRK2,PEX2 | 6 |
| Cellular Movement | Cell movement of cortical neurons | 0.00363 | LMO4,NTRK2,STK3 | 3 |
| Cancer,Organismal Injury and Abnormalities,Reproductive System Disease | Prostatic carcinoma | 0.00363 | ACTL9,ADD2,BCAR3,CCDC63,CDH12,DSEL,EDIL3,EPHA2,EPSTI1,FAM135B,FAM180A,FER,GLI3,GPD2,GRIA4,GRM8,HK3,HLA-A,HNRNPR,IGF1,ITGB5,KCTD14,KMT2A,LRRC4C,MBD3L2 (includes others),MEGF8,MEIS2,METTL25,MMD,MPPED2,MTNR1A,NME5,NTNG1,NTRK2,OGT,PTK2B,PTPRD,RIN3,SGMS1,SLC1A4,SLC22A5,SLC4A1AP,SNTG1,SSC5D,STARD10,TENM2,TMEM132C,TRAPPC9,TRMT1,USH2A | 50 |
| Cell Morphology,Cellular Assembly and Organization,Cellular Function and Maintenance | Formation of cellular protrusions | 0.00373 | ADAMTS3,BMP4,CAPRIN1,EPHA2,ERC2,FER,FYN,IGF1,KLF9,LRRC4C,NME5,NR2E1,NTNG1,NTRK2,OGT,PTK2B,RAPGEF3,SLITRK2,TMEM106B,TMEM107 | 20 |
| Cancer,Hematological Disease,Immunological Disease,Organismal Injury and Abnormalities | Leukemia | 0.00376 | ADAMTS3,ADD2,ADGRF4,ATP10A,CD3D,CDH12,CDK1,DSEL,EPHA2,ERC2,FAM135B,FER,FYN,GABRA6,GLI3,GPX7,HK3,HLA-A,HNF4G,ITGB2,KMT2A,LPP,Meis1,NTRK2,PPP2R2B,PTK2B,PTPRD,RERG,RHOV,SLC34A2,SLITRK2,TENM2,TMEM132C,TRAPPC9,TRPV3,TSPAN8,USH2A,ZNF217 | 38 |
| Cancer,Organismal Injury and Abnormalities,Respiratory Disease | Laryngeal cancer | 0.00376 | FAM135B,GABRA6,INTS6,KCTD14,KMT2A,LRRC4C,NTRK2,PTPRD,SLC4A1AP,SNTG1,TMEM132C,TRAPPC9,USH2A | 13 |
| Developmental Disorder | Autism or intellectual disability | 0.00384 | CACNG2,CHD1L,GABRA6,GLI3,GLO1,GRIA4,KMT2A,MEIS2,MPLKIP,OGT,SLC1A4,TRAPPC9,TRMT1 | 13 |
| Developmental Disorder,Organismal Injury and Abnormalities,Renal and Urological Disease | Congenital anomalies of kidney and urinary tract | 0.00385 | ARMC9,CHD1L,GLI3,IGF1,MEIS2,NR3C2,RAPGEF3,SRD5A2,TMEM107 | 9 |
| Psychological Disorders | Major affective disorder | 0.00387 | FYN,GABRA6,ITGB5,MTNR1A,MTSS2,NR2E1,NR3C2,NTRK2,SLC1A4,SYN3 | 10 |
| Endocrine System Disorders,Gastrointestinal Disease,Inflammatory Disease,Inflammatory Response,Organismal Injury and Abnormalities | Insulitis | 0.00387 | IGF1,ITGB2,RAPGEF3 | 3 |
| Cell Morphology,Nervous System Development and Function,Neurological Disease,Organ Morphology,Organismal Development,Organismal Injury and Abnormalities,Tissue Morphology | Abnormal morphology of pyramidal neurons | 0.00387 | CACNG8,FYN,NTRK2 | 3 |
| Embryonic Development,Organ Development,Organ Morphology,Organismal Development,Reproductive System Development and Function,Tissue Development | Morphogenesis of genital organ | 0.00387 | BMP4,NECTIN2,SRD5A2 | 3 |
| Nervous System Development and Function | Myelination of central nervous system | 0.00387 | FYN,IGF1,NTRK2 | 3 |
| Cell Death and Survival | Necrosis | 0.00392 | ACKR3,ADAMTS3,AKAP7,AP2M1,BMP4,CACNG8,CAPRIN1,CDK1,DPYD,EDIL3,EPHA2,EYA4,FER,FYN,GABRA6,GLI3,GLO1,GPX7,GRM8,H2AB3 (includes others),HLA-A,IGF1,ITGB2,KLF9,KMT2A,LMO4,Meis1,MEIS2,MTNR1A,NECTIN2,NR3C2,NTRK2,OGT,PPP2R2B,PTK2B,RAPGEF3,SEL1L,SGMS1,ST3GAL1,STK3,SUDS3,TMEM106B,TMEM107,TRPS1,TSLP | 45 |
| Embryonic Development,Nervous System Development and Function,Organ Development,Organismal Development,Tissue Development | Development of cerebral cortex | 0.00407 | FYN,GLI3,IGF1,NR2E1,NTRK2,TRAPPC9 | 6 |
| Cancer,Hematological Disease,Immunological Disease,Organismal Injury and Abnormalities | E2A-PBX1 positive B-cell acute lymphoblastic leukemia | 0.00412 | CD3D,EPHA2,FYN | 3 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Digestive system cancer | 0.00415 | ACKR3,ACTL9,ADAMTS3,ADD2,ADGRF4,AKAP7,ANXA4,AP2M1,ARMC9,ATP10A,BCAR3,BMP4,BSX,BTBD11,C4orf36,C8orf33,CACNG2,CACNG8,CAPRIN1,CCDC63,CCSER1,CD3D,CDAN1,CDH12,CDK1,CEBPE,CHD1L,CHD7,CLNK,DPYD,DSEL,DUSP3,EDIL3,EPHA2,EPSTI1,ERC2,EYA4,FAM135B,FAM171B,FER,FYN,GABRA6,GLI3,GPD2,GPX7,GRIA4,GRM8,GSE1,HK3,HLA-A,HNF4G,HNRNPR,IGF1,ILVBL,INTS6,ITGB2,ITGB5,KCNS1,KHDRBS3,KLF9,KLHL14,KMT2A,LPP,LRRC4C,MATN1,MEGF8,MEIS2,MEOX1,METTL25,MFNG,MPLKIP,MPPED2,MPZL2,MPZL3,MTNR1A,NME5,NR2E1,NR3C2,NTM,NTNG1,NTRK2,OCM,OGT,P2RX5,PANX2,PCBP1,PFKP,PPP2R2B,PRRG4,PTK2B,PTPRD,RAPGEF3,RERG,RESF1,RHBDF2,RHOV,RIN3,SEL1L,SGMS1,SGSM1,SLC1A4,SLC25A25,SLC34A2,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SP6,SRD5A2,SSC5D,ST3GAL1,STK3,SUDS3,SYN3,TBC1D2B,TENM2,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,TSLP,TSPAN5,TSPAN8,USH2A,ZNF217,ZNF362,ZPLD1 | 129 |
| Cellular Development,Embryonic Development,Hair and Skin Development and Function,Organ Development,Organismal Development,Tissue Development | Differentiation of epidermal cells | 0.00416 | BMP4,CDK1,EPHA2,FYN,IGF1,ITGB5 | 6 |
| Cancer,Hematological Disease,Organismal Injury and Abnormalities | Neoplasia of blood cells | 0.00419 | ADAMTS3,ADD2,ADGRF4,ANXA4,ARMC9,ATP10A,CD3D,CDH12,CDK1,DPYD,DSEL,EPHA2,EPSTI1,ERC2,FAM135B,FAM171B,FER,FYN,GABRA6,GLI3,GPX7,GSE1,HK3,HLA-A,HNF4G,IGF1,ITGB2,KCNS1,KLHL14,KMT2A,LPP,Meis1,NTRK2,PCBP1,PPP2R2B,PTK2B,PTPRD,RERG,RESF1,RHOV,RIN3,SGMS1,SLC22A5,SLC34A2,SLITRK2,TENM2,TMEM132C,TRAPPC9,TRPV3,TSPAN8,USH2A,ZNF217 | 52 |
| Embryonic Development,Organismal Development,Skeletal and Muscular System Development and Function | Morphogenesis of embryonic limb | 0.00419 | BMP4,CHD7,GLI3,MEGF8 | 4 |
| Organismal Injury and Abnormalities,Renal and Urological Disease | Proximal tubular toxicity | 0.00419 | BMP4,IGF1,SLC22A5,SLC34A2 | 4 |
| Cell Cycle,Hair and Skin Development and Function | Mitogenesis of epithelial cell lines | 0.00421 | FYN,IGF1 | 2 |
| Cell-To-Cell Signaling and Interaction,Cellular Assembly and Organization,Cellular Function and Maintenance,Tissue Development | Formation of fibronectin matrix | 0.00421 | FYN,NR2E1 | 2 |
| Cancer,Organismal Injury and Abnormalities,Reproductive System Disease | Development of genital tumor | 0.00426 | ADD2,ADGRF4,AKAP7,ARMC9,ATP10A,BTBD11,CCDC63,CDH12,CHD7,CLNK,DPYD,DSEL,EDIL3,EPHA2,ERC2,EXD1,EYA4,FAM135B,FAM171B,FER,GABRA6,GLI3,GRIA4,GRM8,GSE1,HLA-A,HNF4G,IGF1,ILVBL,ITGB5,KCNS1,KLF9,KMT2A,LPP,MATN1,MBD3L2 (includes others),MEGF8,MEIS2,MEOX1,NR3C2,NTM,NTNG1,NTRK2,OGT,PCBP1,PEX2,PFKP,PPP2R2B,PTPRD,RAPGEF3,RHBDF2,RHOV,RIN3,RNASEH1,SEL1L,SGMS1,SGSM1,SLC22A5,SLC34A2,SLCO2A1,SLITRK2,SNTG1,SSC5D,STARD10,STK3,SYN3,TBC1D2B,TENM2,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,USH2A,ZNF362,ZPLD1 | 77 |
| Cell Morphology | Polarization of leukocytes | 0.00429 | BCAR3,FYN,ITGB2,PTK2B,TSLP | 5 |
| Cancer,Hematological Disease,Immunological Disease,Organismal Injury and Abnormalities | Philadelphia-like B-cell acute lymphoblastic leukemia | 0.00438 | EPHA2,FYN,PTK2B | 3 |
| Cancer,Hematological Disease,Immunological Disease,Organismal Injury and Abnormalities | B cell cancer | 0.0044 | ADD2,ADGRF4,ANXA4,ARMC9,ATP10A,CD3D,CDK1,DPYD,DSEL,EPHA2,EPSTI1,ERC2,FAM135B,FAM171B,FYN,GSE1,HLA-A,IGF1,ITGB2,KLHL14,KMT2A,LPP,NTRK2,PCBP1,PTK2B,PTPRD,RESF1,RIN3,TRPV3,USH2A,ZNF217 | 31 |
| Developmental Disorder,Hereditary Disorder,Organismal Injury and Abnormalities,Renal and Urological Disease | Familial congenital anomalies of the kidney and urinary tract | 0.0044 | ARMC9,CHD1L,IGF1,MEIS2,NR3C2,RAPGEF3,SRD5A2,TMEM107 | 8 |
| Cellular Assembly and Organization,Cellular Function and Maintenance | Microtubule dynamics | 0.00445 | ADAMTS3,BMP4,CAPRIN1,CDK1,EPHA2,ERC2,FER,FYN,IGF1,ITGB5,KLF9,LRRC4C,NME5,NR2E1,NTNG1,NTRK2,OCM,OGT,PTK2B,RAB2A,RAPGEF3,SLITRK2,TMEM106B,TMEM107 | 24 |
| Cell Morphology,Cellular Function and Maintenance | Length of cells | 0.00453 | BMP4,FER,FYN,IGF1,NTRK2 | 5 |
| Cellular Development,Cellular Growth and Proliferation,Nervous System Development and Function,Tissue Development | Myelination of neurons | 0.00464 | IGF1,NTRK2,OGT | 3 |
| Cell-To-Cell Signaling and Interaction,Cellular Assembly and Organization,Nervous System Development and Function,Tissue Morphology | Density of synapse | 0.00464 | HLA-A,NTRK2,SLITRK2 | 3 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Hematological Disease,Immunological Disease,Organismal Injury and Abnormalities | KMT2A rearrangement positive B-lymphoblastic leukemia/lymphoma | 0.00464 | CD3D,EPHA2,FYN | 3 |
| Cell Death and Survival,Nervous System Development and Function | Cell viability of motor neurons | 0.00464 | BMP4,HLA-A,IGF1 | 3 |
| Cellular Development,Cellular Growth and Proliferation,Lymphoid Tissue Structure and Development,Tissue Development | Proliferation of bone marrow cells | 0.00466 | BMP4,FYN,IGF1,KMT2A,Meis1 | 5 |
| Cancer,Organismal Injury and Abnormalities | Unresectable malignant solid tumor | 0.00466 | DPYD,EPHA2,FER,NTRK2,PTK2B | 5 |
| Lipid Metabolism,Small Molecule Biochemistry | Binding of lipid | 0.00469 | AP2M1,IGF1,NR3C2,USH2A | 4 |
| Cancer,Organismal Injury and Abnormalities,Tumor Morphology | Progressive metastatic adenocarcinoma | 0.00469 | EPHA2,FER,NTRK2,PTK2B | 4 |
| Post-Translational Modification | Processing of protein fragment | 0.00469 | ADAMTS3,GLI3,OGT,PSENEN | 4 |
| Cell Death and Survival | Apoptosis of neurons | 0.0047 | CAPRIN1,CDK1,FYN,GLI3,IGF1,NTRK2,OGT,PPP2R2B,PTK2B,RAPGEF3,SEL1L | 11 |
| Cellular Development,Tissue Development | Differentiation of epithelial cells | 0.00472 | BMP4,CDK1,EPHA2,FYN,GLI3,IGF1,ITGB5,LMO4,SP6 | 9 |
| Connective Tissue Development and Function,Skeletal and Muscular System Development and Function | Bone mineral density | 0.00476 | CDK1,IGF1,ITGB2,PEX2,PTK2B,TRPS1 | 6 |
| Cancer,Organismal Injury and Abnormalities | Stage IV malignant tumor | 0.00476 | DPYD,EPHA2,FER,MTNR1A,NTRK2,PTK2B | 6 |
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Colorectal tumor | 0.00476 | ACKR3,ADAMTS3,ADD2,AKAP7,ANXA4,AP2M1,ATP10A,BMP4,BTBD11,CACNG2,CAPRIN1,CCDC63,CCSER1,CDH12,CDK1,CHD1L,CHD7,DPYD,DSEL,DUSP3,EDIL3,EPHA2,EPSTI1,ERC2,EYA4,FAM135B,FAM171B,FYN,GLI3,GRIA4,GRM8,GSE1,HLA-A,HNRNPR,IGF1,ILVBL,INTS6,ITGB2,ITGB5,KHDRBS3,KLHL14,KMT2A,MEGF8,MTNR1A,NR2E1,NR3C2,NTM,NTNG1,NTRK2,PCBP1,PFKP,PPP2R2B,PRRG4,PTK2B,PTPRD,RAPGEF3,RERG,RESF1,RHBDF2,RIN3,SEL1L,SGSM1,SLC1A4,SLC22A5,SLC4A1AP,SLITRK2,SNTG1,ST3GAL1,SUDS3,SYN3,TENM2,TMEM132C,TRAPPC9,TRPS1,TSLP,TSPAN8,USH2A,ZNF362 | 78 |
| Cell Death and Survival,Cell Morphology,Nervous System Development and Function,Neurological Disease,Tissue Morphology | Loss of ganglion cells | 0.00483 | IGF1,NTRK2 | 2 |
| Cell Signaling | Transmembrane receptor protein serine/threonine kinase signaling pathway | 0.00483 | AKAP7,TRPS1 | 2 |
| Dermatological Diseases and Conditions,Organismal Injury and Abnormalities | Excessive hair growth | 0.00483 | SRD5A2,TRPS1 | 2 |
| Organ Morphology,Respiratory System Development and Function,Tissue Morphology | Quantity of type II pneumocytes | 0.00483 | IGF1,STK3 | 2 |
| Nervous System Development and Function | Sensation | 0.00485 | BMP4,CHD7,EYA4,FYN,GRIA4,GRM8,OCM,TRPV3,USH2A | 9 |
| Auditory Disease,Organismal Injury and Abnormalities | Abnormality of cochlea | 0.00487 | BMP4,IGF1,NTRK2,OCM | 4 |
| Respiratory Disease | Sleep apnea syndrome | 0.00487 | GABRA6,MTNR1A,NR3C2,SRD5A2 | 4 |
| Cellular Development,Cellular Growth and Proliferation,Nervous System Development and Function,Tissue Development | Outgrowth of neurites | 0.00489 | BMP4,CDK1,EPHA2,IGF1,LRRC4C,MEGF8,NTRK2,OGT,PTK2B,SYN3 | 10 |
| Cancer,Organismal Injury and Abnormalities,Reproductive System Disease | Endometrial cancer | 0.0049 | ADD2,ADGRF4,AKAP7,ATP10A,BTBD11,CCDC63,CDH12,CHD7,CLNK,DPYD,DSEL,EDIL3,ERC2,EXD1,EYA4,FAM135B,FAM171B,FER,GABRA6,GLI3,GRIA4,GRM8,GSE1,HNF4G,IGF1,ILVBL,ITGB5,KCNS1,KLF9,KMT2A,LPP,MATN1,MBD3L2 (includes others),MEGF8,MEIS2,NR3C2,NTNG1,NTRK2,OGT,PCBP1,PEX2,PFKP,PPP2R2B,PTPRD,RHBDF2,RIN3,RNASEH1,SEL1L,SGMS1,SLC22A5,SLC34A2,SLITRK2,SSC5D,STARD10,STK3,SYN3,TENM2,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,USH2A,ZNF362 | 65 |
| Cell Death and Survival | Cell viability of stem cells | 0.00492 | ACKR3,BMP4,IGF1,OGT,PTK2B | 5 |
| Connective Tissue Development and Function,Embryonic Development,Organ Development,Organismal Development,Skeletal and Muscular System Development and Function,Tissue Development | Formation of vertebrae | 0.00492 | CDK1,LMO4,MEOX1 | 3 |
| Cardiovascular Disease,Developmental Disorder,Organismal Injury and Abnormalities | Atrial septal defect | 0.00492 | ACKR3,CHD7,MEGF8 | 3 |
| Cell Morphology,Nervous System Development and Function | Morphology of central nervous system cells | 0.00507 | BMP4,CACNG8,FYN,IGF1,NTRK2,PEX2 | 6 |
| Cellular Movement | Invasion of pancreatic cancer cell lines | 0.00521 | EPHA2,IGF1,SEL1L | 3 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Hematological Disease,Immunological Disease,Organismal Injury and Abnormalities | Accelerated phase chronic myelogenous leukemia | 0.00521 | EPHA2,FYN,GABRA6 | 3 |
| Cancer,Organismal Injury and Abnormalities | Stage IV squamous-cell carcinoma | 0.00523 | FER,MTNR1A,NTRK2,PTK2B | 4 |
| Cancer,Organismal Injury and Abnormalities,Reproductive System Disease | Uterine cancer | 0.00524 | ADD2,ADGRF4,AKAP7,ATP10A,BTBD11,CCDC63,CDH12,CHD7,CLNK,DPYD,DSEL,EDIL3,ERC2,EXD1,EYA4,FAM135B,FAM171B,FER,GABRA6,GLI3,GRIA4,GRM8,GSE1,HLA-A,HNF4G,IGF1,ILVBL,ITGB5,KCNS1,KLF9,KMT2A,LPP,MATN1,MBD3L2 (includes others),MEGF8,MEIS2,NR3C2,NTNG1,NTRK2,OGT,PCBP1,PEX2,PFKP,PPP2R2B,PTPRD,RHBDF2,RIN3,RNASEH1,SEL1L,SGMS1,SGSM1,SLC22A5,SLC34A2,SLCO2A1,SLITRK2,SSC5D,STARD10,STK3,SYN3,TENM2,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,USH2A,ZNF362 | 68 |
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Gastroesophageal adenocarcinoma | 0.00525 | AKAP7,ATP10A,BTBD11,CCDC63,CDAN1,CDH12,CEBPE,CHD7,DPYD,DSEL,EPHA2,EPSTI1,EYA4,FAM135B,FAM171B,GABRA6,GLI3,GPD2,GRM8,GSE1,KLHL14,KMT2A,MPPED2,MTNR1A,NTRK2,PFKP,PPP2R2B,PTK2B,SGSM1,SLC34A2,SNTG1,SYN3,TENM2,TMEM132C,TRAPPC9,TRPS1,USH2A,ZNF217 | 38 |
| Gastrointestinal Disease,Inflammatory Disease | Crohn disease | 0.00532 | GABRA6,GPX7,GRM8,HNF4G,IGF1,NTRK2,PPP2R2B,SLC22A5 | 8 |
| Lipid Metabolism,Molecular Transport,Small Molecule Biochemistry | Abnormal quantity of lipid | 0.00533 | NTRK2,PEX2,SLC34A2,SLCO2A1,STARD10 | 5 |
| Embryonic Development,Organismal Development,Skeletal and Muscular System Development and Function | Morphogenesis of limb | 0.00547 | BMP4,CHD7,GLI3,MEGF8,TMEM107 | 5 |
| Cell Cycle,Connective Tissue Development and Function | Mitogenesis of fibroblasts | 0.0055 | IGF1,NTRK2 | 2 |
| Embryonic Development,Nervous System Development and Function,Ophthalmic Disease,Organ Development,Organ Morphology,Organismal Development,Organismal Injury and Abnormalities,Tissue Development,Visual System Development and Function | Abnormal morphology of iris | 0.0055 | BCAR3,BMP4 | 2 |
| Nervous System Development and Function,Visual System Development and Function | Photoresponse of retina | 0.0055 | IGF1,ITGB5 | 2 |
| Cell Cycle,Hematopoiesis | Mitosis of hematopoietic progenitor cells | 0.0055 | IGF1,TSLP | 2 |
| Cellular Development,Embryonic Development,Organismal Development | Differentiation of embryoid body cells | 0.0055 | BMP4,GLI3 | 2 |
| Cellular Movement | Diapedesis | 0.0055 | FER,ITGB2 | 2 |
| Cell Death and Survival,Nervous System Development and Function | Cell viability of cortical neurons | 0.00551 | IGF1,LMO4,TMEM106B | 3 |
| Embryonic Development,Nervous System Development and Function,Organ Development,Organ Morphology,Organismal Development,Tissue Development,Visual System Development and Function | Morphology of lens | 0.00551 | BCAR3,BMP4,Meis1 | 3 |
| Dermatological Diseases and Conditions,Organismal Injury and Abnormalities | Disorder of hair | 0.00555 | BMP4,ITGB2,MPLKIP,SP6,SRD5A2,TRPS1,TRPV3 | 7 |
| Molecular Transport,Protein Trafficking | Secretion of protein | 0.00561 | IGF1,RAPGEF3,RHBDF2,SEL1L,SGMS1 | 5 |
| Cancer,Hematological Disease,Immunological Disease,Organismal Injury and Abnormalities | B-cell non-Hodgkin lymphoma | 0.0057 | ANXA4,ARMC9,ATP10A,CD3D,CDK1,DPYD,DSEL,EPHA2,FYN,GSE1,KLHL14,KMT2A,LPP,PCBP1,PTK2B,PTPRD,RESF1,RIN3,USH2A | 19 |
| Cancer,Hematological Disease,Immunological Disease,Organismal Injury and Abnormalities | Philadelphia-positive B-cell acute lymphoblastic leukemia | 0.00582 | CD3D,EPHA2,FYN | 3 |
| Cancer,Organismal Injury and Abnormalities,Reproductive System Disease | Uterine tumor | 0.00582 | ADD2,ADGRF4,AKAP7,ATP10A,BTBD11,CCDC63,CDH12,CHD7,CLNK,DPYD,DSEL,EDIL3,ERC2,EXD1,EYA4,FAM135B,FAM171B,FER,GABRA6,GLI3,GRIA4,GRM8,GSE1,HLA-A,HNF4G,IGF1,ILVBL,ITGB5,KCNS1,KLF9,KMT2A,LPP,MATN1,MBD3L2 (includes others),MEGF8,MEIS2,NR3C2,NTNG1,NTRK2,OGT,PCBP1,PEX2,PFKP,PPP2R2B,PTPRD,RAPGEF3,RHBDF2,RIN3,RNASEH1,SEL1L,SGMS1,SGSM1,SLC22A5,SLC34A2,SLCO2A1,SLITRK2,SSC5D,STARD10,STK3,SYN3,TENM2,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,USH2A,ZNF362 | 69 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Organismal Injury and Abnormalities | Breast or pancreatic cancer | 0.00592 | ACKR3,ADAMTS3,ADD2,ARMC9,ATP10A,BCAR3,BMP4,BTBD11,C8orf33,CCSER1,CDAN1,CDH12,CDK1,CLNK,DPYD,EDIL3,EPHA2,EPSTI1,ERC2,EYA4,FER,FYN,GABRA6,GLI3,GLO1,GPAT4,GPX7,GRIA4,GRM8,HK3,HLA-A,IGF1,KLF9,KLHL14,KMT2A,LPP,MEGF8,MEOX1,METTL25,MPPED2,NECTIN2,NR2E1,NR3C2,NTM,NTNG1,NTRK2,PFKP,PTPRD,RESF1,RHBDF2,RHOV,RIN3,SGSM1,SLC34A2,SLITRK2,SNTG1,SSC5D,STK3,SUDS3,SYN3,TBC1D2B,TENM2,TMEM132C,TRAPPC9,TRPS1,TRPV3,TSPAN8,USH2A,ZNF217,ZNF362,ZPLD1 | 71 |
| Developmental Disorder,Neurological Disease,Organismal Injury and Abnormalities | Mental retardation | 0.00607 | CACNG2,CHD1L,GABRA6,GLI3,GRIA4,KMT2A,MEIS2,MPLKIP,OGT,SLC1A4,TRAPPC9,TRMT1 | 12 |
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Digestive organ tumor | 0.00614 | ACKR3,ACTL9,ADAMTS3,ADD2,ADGRF4,AKAP7,ANXA4,AP2M1,ARMC9,ATP10A,BCAR3,BMP4,BSX,BTBD11,C4orf36,C8orf33,CACNG2,CACNG8,CAPRIN1,CCDC63,CCSER1,CD3D,CDAN1,CDH12,CDK1,CEBPE,CHD1L,CHD7,CLNK,DPYD,DSEL,DUSP3,EDIL3,EPHA2,EPSTI1,ERC2,EYA4,FAM135B,FAM171B,FER,FYN,GABRA6,GLI3,GPD2,GPX7,GRIA4,GRM8,GSE1,HK3,HLA-A,HNF4G,HNRNPR,IGF1,ILVBL,INTS6,ITGB2,ITGB5,KCNS1,KHDRBS3,KLF9,KLHL14,KMT2A,LPP,LRRC4C,MATN1,MEGF8,MEIS2,MEOX1,METTL25,MFNG,MPLKIP,MPPED2,MPZL2,MPZL3,MTNR1A,NME5,NR2E1,NR3C2,NTM,NTNG1,NTRK2,OCM,OGT,P2RX5,PANX2,PCBP1,PFKP,PPP2R2B,PRRG4,PTK2B,PTPRD,RAPGEF3,RERG,RESF1,RHBDF2,RHOV,RIN3,SEL1L,SGMS1,SGSM1,SLC1A4,SLC22A5,SLC25A25,SLC34A2,SLC4A1AP,SLCO2A1,SLITRK2,SNTG1,SP6,SRD5A2,SSC5D,ST3GAL1,STK3,SUDS3,SYN3,TBC1D2B,TENM2,TMEM132C,TMEM164,TRAPPC9,TRMT1,TRPS1,TRPV3,TSLP,TSPAN5,TSPAN8,USH2A,ZNF217,ZNF362,ZPLD1 | 130 |
| Cell Death and Survival | Cell death of hematopoietic progenitor cells | 0.00616 | BMP4,FYN,GLI3,IGF1,KMT2A,Meis1,TSLP | 7 |
| Cell-mediated Immune Response,Cellular Development,Cellular Function and Maintenance,Cellular Growth and Proliferation,Embryonic Development,Hematological System Development and Function,Hematopoiesis,Lymphoid Tissue Structure and Development,Organ Development,Organismal Development,Tissue Development | Arrest in development of T lymphocytes | 0.0062 | CD3D,FYN | 2 |
| Cell-To-Cell Signaling and Interaction,Hematological System Development and Function,Hematopoiesis | Binding of thymocytes | 0.0062 | ITGB2,MFNG | 2 |
| Cellular Development | Differentiation of stromal cell lines | 0.0062 | CDK1,IGF1 | 2 |
| Cell Cycle | G1 phase of pancreatic cancer cell lines | 0.0062 | IGF1,SEL1L | 2 |
| Connective Tissue Disorders,Organismal Injury and Abnormalities,Skeletal and Muscular Disorders | Abnormality of rib cage | 0.00622 | KMT2A,MEGF8,MEOX1,TRPS1 | 4 |
| Cell Death and Survival | Apoptosis of myeloma cell lines | 0.00622 | BMP4,IGF1,KLF9,PTK2B | 4 |
| Embryonic Development,Organismal Development | Morphogenesis of embryo | 0.00627 | BMP4,CHD7,EPHA2,GLI3,MEGF8,MEOX1,TMEM107 | 7 |
| Developmental Disorder,Hereditary Disorder,Metabolic Disease,Organismal Injury and Abnormalities | Autosomal recessive inborn error of metabolism | 0.00637 | CD3D,DPYD,IGF1,MBL2,SLC22A5 | 5 |
| Auditory and Vestibular System Development and Function,Auditory Disease,Organ Morphology,Organismal Development,Organismal Injury and Abnormalities | Abnormal morphology of ear | 0.00637 | BMP4,CHD7,EYA4,IGF1,NTRK2 | 5 |
| Cellular Development,Cellular Growth and Proliferation,Nervous System Development and Function,Tissue Development | Growth of axons | 0.00638 | IGF1,LRRC4C,MEGF8,NTRK2,OGT,SYN3 | 6 |
| Psychological Disorders | Depressive disorder | 0.00638 | GABRA6,IGF1,ITGB5,MTNR1A,MTSS2,NR3C2,SLC1A4,TRPV3 | 8 |
| Nervous System Development and Function | Myelination of nervous system | 0.00643 | FYN,IGF1,NTRK2,OGT | 4 |
| Cancer,Hematological Disease,Immunological Disease,Organismal Injury and Abnormalities | B-cell acute lymphoblastic lymphoma | 0.00646 | CD3D,EPHA2,FYN | 3 |
| Free Radical Scavenging,Molecular Transport | Release of reactive oxygen species | 0.00646 | GPD2,IGF1,ITGB2 | 3 |
| Cell Death and Survival,Neurological Disease,Organismal Injury and Abnormalities | Apoptosis of granule cells | 0.00646 | CDK1,IGF1,NTRK2 | 3 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cancer,Endocrine System Disorders,Gastrointestinal Disease,Organismal Injury and Abnormalities | Pancreatic carcinoma | 0.00646 | ACKR3,ADAMTS3,ARMC9,ATP10A,BCAR3,BTBD11,C8orf33,CDAN1,CDH12,CLNK,EDIL3,EPHA2,ERC2,GABRA6,GLI3,HK3,KLF9,KLHL14,KMT2A,LPP,MEGF8,MPPED2,NTM,NTNG1,NTRK2,PFKP,PTPRD,RESF1,RHBDF2,RIN3,SUDS3,SYN3,TENM2,TRAPPC9,TRPV3,USH2A | 36 |
| Cellular Development | Maturation of cells | 0.00654 | BMP4,CDK1,CEBPE,FYN,GPAT4,IGF1,ITGB2,KLF9,PTK2B,TRPS1,TSLP | 11 |
| Cancer,Organismal Injury and Abnormalities | Recurrent cancer | 0.00659 | CD3D,DPYD,EPHA2,FER,FYN,NTRK2,PTK2B | 7 |
| Cancer,Hematological Disease,Immunological Disease,Organismal Injury and Abnormalities | Newly diagnosed leukemia | 0.00665 | CD3D,EPHA2,FYN,KMT2A | 4 |
| Cell Death and Survival,Neurological Disease,Organismal Injury and Abnormalities | Apoptosis of cortical neurons | 0.00665 | CDK1,IGF1,NTRK2,RAPGEF3 | 4 |
| Organismal Survival | Organismal death | 0.0067 | ACKR3,ADAMTS3,AP2M1,BMP4,CAPRIN1,Ccr2,CDK1,CEBPE,DPYD,EYA4,FYN,GPD2,GPX7,GSE1,IGF1,ITGB2,KLF9,KMT2A,LMO4,MEGF8,MEIS2,NR3C2,NTRK2,PEX2,PSENEN,PTK2B,RHBDF2,RNASEH1,SEL1L,SGMS1,SLC22A5,SLC34A2,SLCO2A1,SP6,STK3,SUDS3,TMEM107,TRPS1,TSLP | 39 |
| Cellular Development,Cellular Growth and Proliferation | Cell proliferation of cervical cancer cell lines | 0.00671 | GLI3,H2AB3 (includes others),IGF1,PTK2B,SGMS1,STK3,SUDS3 | 7 |
| Embryonic Development,Nervous System Development and Function,Organ Development,Organismal Development,Tissue Development | Formation of brain | 0.00679 | BMP4,CHD7,EPHA2,FYN,GLI3,IGF1,NME5,NR2E1,NTRK2,PEX2,RAPGEF3,TRAPPC9 | 12 |
| Hair and Skin Development and Function,Organ Development | Growth of hair | 0.0068 | BMP4,IGF1,SRD5A2 | 3 |
| Cancer,Organismal Injury and Abnormalities | Metastatic squamous cell carcinoma | 0.00687 | DPYD,FER,NTRK2,PTK2B | 4 |
| Cell Death and Survival,Hematological System Development and Function | Cell viability of hematopoietic progenitor cells | 0.00687 | ACKR3,BMP4,IGF1,PTK2B | 4 |
| Cancer,Hematological Disease,Immunological Disease,Organismal Injury and Abnormalities | Imatinib resistant Philadelphia positive chronic myeloid leukemia | 0.00695 | EPHA2,FYN | 2 |
| Dermatological Diseases and Conditions,Hereditary Disorder,Organismal Injury and Abnormalities | Autosomal dominant palmoplantar keratoderma | 0.00695 | RHBDF2,TRPV3 | 2 |
| Embryonic Development,Tissue Morphology | Stimulation of embryonic tissue | 0.00695 | BMP4,TSLP | 2 |
| Cell Morphology,Cellular Development | Branching of central nervous system cells | 0.00695 | BMP4,NTRK2 | 2 |
| Cell Cycle | Arrest in S phase of ovarian cancer cell lines | 0.00701 | CDK1 | 1 |
| Cell Morphology,Cellular Assembly and Organization,Cellular Development,Cellular Function and Maintenance,Cellular Growth and Proliferation,Nervous System Development and Function,Organ Morphology,Organismal Development,Tissue Development | Arborization of pyramidal neurons | 0.00701 | NTRK2 | 1 |
| Cell Morphology,Cellular Assembly and Organization,Cellular Development,Cellular Function and Maintenance,Cellular Growth and Proliferation,Nervous System Development and Function,Organismal Development,Tissue Development | Branching of axon terminals | 0.00701 | FYN | 1 |
| Organ Development,Organ Morphology,Organismal Development,Skeletal and Muscular System Development and Function | Area of gracilis posterior muscle | 0.00701 | IGF1 | 1 |
| Auditory Disease,Hereditary Disorder,Neurological Disease,Organismal Injury and Abnormalities | Autosomal dominant 10 deafness | 0.00701 | EYA4 | 1 |
| Cell Morphology,Organ Morphology,Skeletal and Muscular System Development and Function,Tissue Morphology | Area of junctional folds | 0.00701 | IGF1 | 1 |
| Cell Death and Survival,Embryonic Development | Apoptosis of limb bud cells | 0.00701 | BMP4 | 1 |
| Cell-To-Cell Signaling and Interaction,Skeletal and Muscular System Development and Function | Attachment of bone cell lines | 0.00701 | BMP4 | 1 |
| Organ Development,Organ Morphology,Organismal Development,Skeletal and Muscular System Development and Function | Area of gracilis anterior muscle | 0.00701 | IGF1 | 1 |
| Cellular Assembly and Organization | Association of centromeric region | 0.00701 | SUDS3 | 1 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Hereditary Disorder,Neurological Disease,Ophthalmic Disease,Organismal Functions,Organismal Injury and Abnormalities,Skeletal and Muscular Disorders | Autosomal recessive progressive external ophthalmoplegia with mitochondrial DNA deletions type 2 | 0.00701 | RNASEH1 | 1 |
| Cardiovascular Disease,Hereditary Disorder,Organismal Injury and Abnormalities | Autosomal dominant early-onset hypertension with exacerbation in pregnancy | 0.00701 | NR3C2 | 1 |
| Cell Cycle | Cell division of neuronal hybrid cells | 0.00701 | SGSM1 | 1 |
| Ophthalmic Disease,Organismal Injury and Abnormalities | Chronic central serous chorioretinopathy | 0.00701 | NR3C2 | 1 |
| Connective Tissue Development and Function,Skeletal and Muscular System Development and Function | Bone mineral content of diaphysis | 0.00701 | IGF1 | 1 |
| Cell-To-Cell Signaling and Interaction | Activation of bone cell lines | 0.00701 | IGF1 | 1 |
| Cell Morphology,Cellular Function and Maintenance | Autophagosome clearance | 0.00701 | RAB2A | 1 |
| Auditory and Vestibular System Development and Function,Auditory Disease,Organ Morphology,Organismal Development,Organismal Injury and Abnormalities | Abnormal morphology of eustachian tube | 0.00701 | EYA4 | 1 |
| Connective Tissue Development and Function,Skeletal and Muscular System Development and Function | Bone mineral content of trabecular layer | 0.00701 | IGF1 | 1 |
| Tissue Morphology | Breakdown of blood vessel | 0.00701 | EDIL3 | 1 |
| Cell-To-Cell Signaling and Interaction,Cellular Assembly and Organization,Nervous System Development and Function | Binding of presynaptic membrane | 0.00701 | AP2M1 | 1 |
| Developmental Disorder,Hereditary Disorder,Organismal Injury and Abnormalities,Skeletal and Muscular Disorders | Autosomal dominant trichorhinophalangeal dysplasia type I | 0.00701 | TRPS1 | 1 |
| Cardiovascular System Development and Function,Organismal Development | Angiogenesis of pulmonary vein | 0.00701 | PTK2B | 1 |
| Cell Morphology,Cellular Movement | Cell spreading of bone marrow cell lines | 0.00701 | PTK2B | 1 |
| Cell Cycle,Gene Expression | Binding of negative regulatory domain promoter element | 0.00701 | CDK1 | 1 |
| Cancer,Cell-To-Cell Signaling and Interaction,Cellular Compromise,Organismal Injury and Abnormalities,Tumor Morphology | Adhesion of multiple myeloma cells | 0.00701 | IGF1 | 1 |
| Developmental Disorder,Hereditary Disorder,Metabolic Disease,Organismal Injury and Abnormalities,Renal and Urological Disease | Autosomal recessive primary systemic carnitine deficiency | 0.00701 | SLC22A5 | 1 |
| Cell Cycle | Arrest in G1/S phase transition of myeloid progenitor cells | 0.00701 | KMT2A | 1 |
| Developmental Disorder,Hereditary Disorder,Metabolic Disease,Neurological Disease,Organismal Injury and Abnormalities | Autosomal recessive dihydropyrimidine dehydrogenase deficiency | 0.00701 | DPYD | 1 |
| Connective Tissue Disorders,Developmental Disorder,Hereditary Disorder,Neurological Disease,Organismal Injury and Abnormalities,Skeletal and Muscular Disorders | Autosomal recessive mental retardation type 13 | 0.00701 | TRAPPC9 | 1 |
| Cellular Development,Cellular Growth and Proliferation,Connective Tissue Development and Function,Skeletal and Muscular System Development and Function,Tissue Development | Chondrogenesis of chondroprogenitor cells | 0.00701 | BMP4 | 1 |
| Cell Morphology,Cellular Movement | Cell spreading of osteoclast precursor cells | 0.00701 | PTK2B | 1 |
| Carbohydrate Metabolism | Accumulation of N-acetylglucosamine | 0.00701 | OGT | 1 |
| Cell-To-Cell Signaling and Interaction,Cellular Compromise,Tumor Morphology | Adhesion of prostate cancer cells | 0.00701 | EPHA2 | 1 |
| Cell-To-Cell Signaling and Interaction,Nervous System Development and Function | Afterhyperpolarization of CA3 neurons | 0.00701 | LMO4 | 1 |
| Cell-To-Cell Signaling and Interaction,Nervous System Development and Function | Activation of ON bipolar cell | 0.00701 | ERC2 | 1 |
| Connective Tissue Development and Function,Skeletal and Muscular System Development and Function | Bone mineral content of metaphysis | 0.00701 | IGF1 | 1 |
| Nervous System Development and Function,Tissue Development | Accumulation of lutenizing hormone-releasing hormone neurons | 0.00701 | ACKR3 | 1 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Connective Tissue Disorders,Developmental Disorder,Hereditary Disorder,Organismal Injury and Abnormalities,Skeletal and Muscular Disorders | Carpenter syndrome type 2 | 0.00701 | MEGF8 | 1 |
| Connective Tissue Disorders,Dermatological Diseases and Conditions,Hereditary Disorder,Organismal Injury and Abnormalities,Skeletal and Muscular Disorders | Autosomal recessive primary hypertrophic osteoarthropathy type 2 | 0.00701 | SLCO2A1 | 1 |
| Developmental Disorder,Hereditary Disorder,Neurological Disease,Organismal Injury and Abnormalities | Autosomal dominant mental retardation type 10 | 0.00701 | CACNG2 | 1 |
| Cell-To-Cell Signaling and Interaction,Cellular Assembly and Organization,Hair and Skin Development and Function | Cell-cell adhesion of skin cell lines | 0.00701 | OGT | 1 |
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Adenoid cystic carcinoma of the oral cavity | 0.00701 | PTPRD | 1 |
| Developmental Disorder,Hereditary Disorder,Neurological Disease,Organismal Injury and Abnormalities | Autosomal recessive intellectual developmental disorder 68 | 0.00701 | TRMT1 | 1 |
| Cancer,Gastrointestinal Disease,Organismal Injury and Abnormalities | Adenoid cystic carcinoma in submandibular gland | 0.00701 | PTPRD | 1 |
| Cell Cycle,Cellular Assembly and Organization,DNA Replication, Recombination, and Repair | Assembly of chromosomes | 0.00701 | CDK1 | 1 |
| Digestive System Development and Function,Organ Morphology,Organismal Development | Architecture of islets of Langerhans | 0.00701 | RAPGEF3 | 1 |
| Cardiovascular Disease,Cardiovascular System Development and Function,Organ Morphology,Organismal Development,Organismal Injury and Abnormalities | Abdominal aortic constriction-induced cardiac hypertrophy | 0.00701 | NR3C2 | 1 |
| Cell-To-Cell Signaling and Interaction,Connective Tissue Development and Function,Skeletal and Muscular System Development and Function | Attachment of osteoclast precursor cells | 0.00701 | PTK2B | 1 |
| Embryonic Development,Nervous System Development and Function,Ophthalmic Disease,Organ Development,Organ Morphology,Organismal Development,Organismal Injury and Abnormalities,Tissue Development,Visual System Development and Function | Abnormal morphology of line of schwalbe | 0.00701 | BMP4 | 1 |
| Cell-To-Cell Signaling and Interaction | Attachment of hematopoietic progenitor cells | 0.00701 | BMP4 | 1 |
| Nervous System Development and Function,Neurological Disease,Organ Morphology,Organismal Development,Organismal Injury and Abnormalities | Abnormal morphology of enlarged tectum mesencephali | 0.00701 | GLI3 | 1 |
| Ophthalmic Disease,Organismal Injury and Abnormalities | Age-related cortical cataract | 0.00701 | EPHA2 | 1 |
| Cell Morphology,Dermatological Diseases and Conditions,Hair and Skin Development and Function,Organ Morphology,Organismal Injury and Abnormalities,Tissue Morphology | Abnormal morphology of disorganized inner root sheath cell | 0.00701 | SP6 | 1 |
| Connective Tissue Development and Function,Skeletal and Muscular System Development and Function | Bone mineral density of diaphysis | 0.00701 | IGF1 | 1 |
| Lipid Metabolism,Small Molecule Biochemistry | Binding of aldosterone | 0.00701 | NR3C2 | 1 |
| Cell Cycle | Cell division of breast cancer cell lines | 0.00701 | IGF1 | 1 |
| Digestive System Development and Function,Gastrointestinal Disease,Organismal Development,Organismal Injury and Abnormalities | Abnormal morphology of arched palate | 0.00701 | TRPS1 | 1 |
| DNA Replication, Recombination, and Repair,Nucleic Acid Metabolism,Small Molecule Biochemistry | Catabolism of thymidine | 0.00701 | DPYD | 1 |
| Developmental Disorder,Endocrine System Disorders,Hereditary Disorder,Metabolic Disease,Organismal Injury and Abnormalities,Renal and Urological Disease,Reproductive System Disease | 3-oxo-5 alpha-steroid delta 4-dehydrogenase deficiency | 0.00701 | SRD5A2 | 1 |

| Categories | Diseases or Functions Annotation | p-value | Molecules | # Molecules |
|---|---|---|---|---|
| Cell Cycle | Aneuploidy of somatic cells | 0.00701 | SUDS3 | 1 |
| Infectious Diseases | Attachment of Influenza A virus | 0.00701 | MBL2 | 1 |