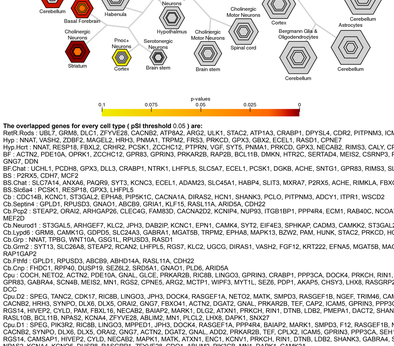
Of the inputed 951 genes,
740 genes exist in the brain cell type expression dataset, 211 genes do not, which are:
PGAP1,SYT1[L],ACTG1,EPB41L4B,GUCY1A2,LDLRAD4,HIPK4,TOMM70,NAA40,ADL1,CERS6,MAP10,C10ORF115,RXFP1,FSTL4,GRK5,DGCR5,SCN2A,ELAPOR1,LMBRD2,TMEM178A,FADS6,DRD5,BICDL1,DIAPH2,DLX6-
AS1,SIMC1,TDRD5,FAAP20,KLK2,SNU13,ATP8B3,CYP4X1,CEMIP2,ADCY5,KCNMB3,TLNRD1,TMEM241,HCN4,GLT1D1,SRSF12,PAAS,C11ORF87,NYAP1,SHISBP1,ZDDC8B0,172ID2,PANP,RNF212,FAM138,KIAA1217,MC4R,SPTSSB,ZNF169,MYG1,SRSF2,PCDHAC2,PCDHAC1,LINC00523,GRM4,MFSD4A,CDIN1,ATP5IF1,KLHL34,ARHGEF33,TINCR,EIPR1,DNAJC30,ASIC2,PCDHA10,PCDHA11,PHF24,PCDHA13,PTPN7,PCNX2,KCNH4,HACD2,ADGRB3,CEP170B,RBFOX1,MAPT2D2,HARS1,RIPOR2,LRATD1,TOMM20,EMC9,TMEM196,PNMA8A,SOGA3,GARS1,CBARP,TRERF1,C5ORF22,CVR1A,PPP6R1,TLE5,RFPL1,TENM2,TIGD3,UTP4,FABP3,CHAT,EID2B,CHMP3,BCAS4,PCDHA12,NIBAN2,CARNMT1,STRIP2,NLRP1,SLC10A4,SKIDA1,TMEM200B,AP2M1,NEURL1,C10ORF88,RAPGEFL1,SOCZ,RIMS4,ERICH5,ERICH3,RIMS1,ADGRB2,KIAA0513,SPATS2,RIMBP2,LRRC8B,OBSCN-
AS1,EIF4A3,ANKRD34C,KCNH6,CER1,AKR1B1,RBFOX2,FAXC,C2ORF27,LIRC3,LMO3,SOWAHA,BABAM1,BABAM2,FAM136A,MYL6B,TUBGCP4,CDC40,FOXO6,PCDHAG,SLC2A11,ANKH,PCDHA8,PRKN,FAM220A,NFYC,RTL10,ATP5F1B,GPR55,ATP5MC1,ATP5MC3,DRD1,MICU3,CRACDL,DIAPH1,RNF175,CIART,KAZN,SIAH3,YWHAH,GRIN2A,NRG1,C12ORF40,MPPE1,OGDHL,ABHD12B,ZNF540,UQCC1,SNURF,PIGL,CHRM2,PRKCG,DMTN,YARS1,FAM216A,SNRPN,EPHA10,LINC00242,ZNF804A,SHANK2,BMERB1,PCDHA2,PCDHA3,PCDHA1,PCDHA6,PCDHA7,PCDHA4,PCDHA5,DOP1B,PIP4P1,PCP4,DRD2,B3GLCT,OAZ1,CACNG8,NUDT11,MAP3K15,FAR2,PTPRO,RELCH,EIF4A2,CACNG4,ZNF467,GPF1,LZTS1

**Interpretation of CSEA results table:**
The first row lists the p5I thresholds, and the first column lists the brain cell types
The values in the tables are the Fisher's Exact p-values, followed by the Benjamini-Hochberg (BH) corrected values in parentheses.
Click the linked p-values to see the overlapped genes for the corresponding brain cell types and thresholds.

| Brain Cell Types and P-Values | 0.05 | | 0.01 | | 0.001 | | 0.0001 | |
|---|---|---|---|---|---|---|---|---|
| RetR.Rods | 0.999 | ( 1.000) | 1.000 | ( 1.000) | 0.996 | ( 1.000) | 1.000 | ( 1.000) |
| Hyp | 0.472 | ( 0.787) | 0.851 | ( 1.000) | 0.758 | ( 1.000) | 1.000 | ( 1.000) |
| Hyp.Hcrt | 0.093 | ( 0.217) | 0.041 | ( 0.204) | 0.461 | ( 1.000) | 0.426 | ( 1.000) |
| BF | 2.636e-05 | ( 1.004e-04) | 0.223 | ( 0.547) | 1.000 | ( 1.000) | 1.000 | ( 1.000) |
| BF.Chat | 0.002 | ( 0.006) | 0.001 | ( 0.009) | 0.007 | ( 0.057) | 9.593e-04 | ( 0.017) |
| BS | 1.000 | ( 1.000) | 1.000 | ( 1.000) | 1.000 | ( 1.000) | 1.000 | ( 1.000) |
| BS.Chat | 0.655 | ( 1.000) | 0.911 | ( 1.000) | 0.981 | ( 1.000) | 1.000 | ( 1.000) |
| BS.Slc6a4 | 0.907 | ( 1.000) | 0.822 | ( 1.000) | 1.000 | ( 1.000) | 1.000 | ( 1.000) |
| Cb | 0.999 | ( 1.000) | 0.999 | ( 1.000) | 1.000 | ( 1.000) | 1.000 | ( 1.000) |
| Cb.Septin4 | 1.000 | ( 1.000) | 1.000 | ( 1.000) | 0.998 | ( 1.000) | 1.000 | ( 1.000) |
| Cb.Pcp2 | 0.108 | ( 0.237) | 0.227 | ( 0.547) | 0.944 | ( 1.000) | 0.865 | ( 1.000) |
| Cb.Neurod1 | 0.369 | ( 0.679) | 0.982 | ( 1.000) | 1.000 | ( 1.000) | 1.000 | ( 1.000) |
| Cb.Lypd6 | 0.011 | ( 0.030) | 0.120 | ( 0.396) | 0.526 | ( 1.000) | 0.878 | ( 1.000) |
| Cb.Grp | 0.985 | ( 1.000) | 0.697 | ( 1.000) | 0.365 | ( 1.000) | 0.713 | ( 1.000) |
| Cb.Grm2 | 0.002 | ( 0.006) | 0.134 | ( 0.396) | 0.863 | ( 1.000) | 1.000 | ( 1.000) |
| Cb.Fthfd | 1.000 | ( 1.000) | 1.000 | ( 1.000) | 0.990 | ( 1.000) | 1.000 | ( 1.000) |
| Cb.Crip | 1.000 | ( 1.000) | 1.000 | ( 1.000) | 1.000 | ( 1.000) | 1.000 | ( 1.000) |
| Cpu | 1.377e-20 | ( 1.606e-19) | 3.445e-06 | ( 4.019e-05) | 0.365 | ( 1.000) | 1.000 | ( 1.000) |
| Cpu.D2 | 2.767e-30 | ( 9.683e-29) | 2.068e-13 | ( 3.619e-12) | 5.163e-08 | ( 1.807e-06) | 5.872e-08 | ( 2.055e-06) |
| Cpu.D1 | 5.075e-27 | ( 8.881e-26) | 6.296e-19 | ( 2.204e-17) | 6.595e-06 | ( 1.154e-04) | 0.040 | ( 0.323) |
| Cpu.Chat | 1.071e-06 | ( 6.250e-06) | 4.434e-05 | ( 3.880e-04) | 6.628e-04 | ( 0.008) | 0.002 | ( 0.018) |
| Ctx | 9.008e-09 | ( 6.305e-08) | 0.051 | ( 0.223) | 1.000 | ( 1.000) | 1.000 | ( 1.000) |
| Ctx.Pdgfrajs340 | 1.000 | ( 1.000) | 1.000 | ( 1.000) | 0.997 | ( 1.000) | 1.000 | ( 1.000) |
| Ctx.Etv1_ts88 | 2.869e-05 | ( 1.004e-04) | 0.991 | ( 1.000) | 0.975 | ( 1.000) | 1.000 | ( 1.000) |
| Ctx.Pnoc | 0.037 | ( 0.094) | 0.288 | ( 0.593) | 0.613 | ( 1.000) | 1.000 | ( 1.000) |
| Ctx.Nbir | 5.476e-06 | ( 2.738e-05) | 0.288 | ( 0.593) | 0.522 | ( 1.000) | 1.000 | ( 1.000) |
| Ctx.Glt25d2 | 4.252e-13 | ( 3.721e-12) | 0.003 | ( 0.020) | 0.159 | ( 1.000) | 1.000 | ( 1.000) |
| Ctx.Fthfd | 1.000 | ( 1.000) | 1.000 | ( 1.000) | 0.997 | ( 1.000) | 0.971 | ( 1.000) |
| Ctx.Cort | 2.568e-05 | ( 1.004e-04) | 0.087 | ( 0.337) | 0.240 | ( 1.000) | 0.288 | ( 1.000) |
| Ctx.Crip | 1.000 | ( 1.000) | 1.000 | ( 1.000) | 1.000 | ( 1.000) | 1.000 | ( 1.000) |
| Epi | 0.178 | ( 0.368) | 0.136 | ( 0.396) | 0.284 | ( 1.000) | 0.046 | ( 0.323) |
| Epi.Chat | 0.350 | ( 0.679) | 0.235 | ( 0.547) | 0.524 | ( 1.000) | 0.188 | ( 1.000) |
| Spc | 1.000 | ( 1.000) | 0.999 | ( 1.000) | 1.000 | ( 1.000) | 1.000 | ( 1.000) |
| Spc.Chat | 0.432 | ( 0.758) | 0.925 | ( 1.000) | 0.984 | ( 1.000) | 0.871 | ( 1.000) |
| RetC.Cones | 0.982 | ( 1.000) | 0.984 | ( 1.000) | 0.980 | ( 1.000) | 0.851 | ( 1.000) |




**The overlapped genes for every cell type ( p5I threshold** 0.05 **) are:**
RetR.Rods : UBL7, GRM8, DLC1, ZFYVE28, CACNB2, ATP8A2, ARG2, ULK1, STAC2, ATP1A3, CRABP1, DPYSL4, CDR2, PITPNM3, ICMT, IMPG1
Hyp : NNAT, VASH2, ZDBF2, MAGEL2, HRH3, PNMA1, TRPM2, FRS3, PRKCD, GPX3, GBX2, ECEL1, RASD1, CPNE7
Hyp.Hcrt : NNAT, RESP18, FBXL2, CRHR2, PCSK1, ZCCHC12, PTPRN, VGF, SYT5, PNMA1, PRKCD, GPX3, NECAB2, RIMS3, CALY, CPNE7, ACHE, NELL1, RABZ7B, LONRF2
BF : ACTN2, PDE10A, OPRK1, ZCCHC12, GPR83, GPRIN3, PRKAR2B, RAP2B, BCL11B, DMKN, HTR2C, SERTAD4, MEIS2, CSRNP3, RASD1, PCDH8, GPR149, GAD2, WIPF3, AKAP5, SLMAP, LHX8, RGS2, ZDBF2, SYNPO, DLX6, FRAS1, GNG7, DDN
BF.Chat : UCHL1, PCDH8, GPX3, DLL3, CRABP1, NTRK1, LHFPL5, SLC5A7, ECEL1, PCSK1, DGKB, ACHE, SNTG1, GPR83, RIMS3, SLC7A14, ISL1, LHX8, RESP18, GBX2, RPS27, YJEFN3
BS : P2RX5, CDH7, MCF2
BS.Chat : SLC7A14, ANXA6, PAQR9, SYT3, KCNC3, ECEL1, ADAM23, SLC45A1, HABP4, SLIT3, MXRA7, P2RX5, ACHE, RIMKLA, FBXO31, SLC5A7
BS.Slc6a4 : PCSK1, RESP18, GPX3, LHFPL5
Cb : CDC14B, KCNC1, ST3GAL2, EPHA8, PIP5K1C, CACNA1A, DIRAS2, HCN1, SHANK3, PCLO, PITPNM3, ADCY1, ITPR1, WSCD2
Cb.Septin4 : GPLD1, RPUSD3, GNAO1, ABCB9, GRIA1, KLF15, RASL11A, ARIDS4, CDH22
Cb.Pcp2 : STEAP2, ORA2, ARHGAP26, CLEC4G, FAM83D, CACNA2D2, KCNIP4, NUP93, ITGB1BP1, PPP4R4, ECM1, RAB40C, NCOA7, ICMT, KCNIP1, UBASH3B, SLC12A8, DUSP2, CDR2, ITPR1, NPTX1, FAM174B, DAGLA, TFG, DGKZ, MEF2D
Cb.Neurod1 : ST3GAL5, ARHGEF7, KLC2, JPH3, DABZIP, KCNC1, EPN1, CAMK4, SYT2, EIF4E3, SPHKAP, CADM3, CAMKK2, ST3GAL2, KCNH3, ADCY1, ANKRD34A, WSCD2, FGF14, TFG, DPYSL4, DIRAS2
Cb.Lypd6 : GRM8, CAMK1G, GDPD5, SLC24A3, GABRA1, MGAT5B, TRPM2, EPHA8, MAPK13, BDKRB2, CAB39L, CAMTA1, CNTN4, STEAP2, SCRCS3
Cb.Grp : NNAT, TPBG, WNT10A, GSG1L, RPUSD3, RASD1
Cb.Grm2 : SYT13, SLC26A8, STEAP2, RCAN2, LHFPL5, RGS7, KLC2, UGCG, DIRAS1, VASH2, FGF12, KRT222, EFNA5, MGAT5B, MAGEL2, GAD1, KCNH3, CPLX3, PTPRN2, MXRA7, PLCL2, RASGRP2, GDPD5, NCS1, CLVS1, PAM, RAP1GAP2
Cb.Fthfd : GPLD1, RPUSD3, ABCB9, ABHD14A, RASL11A, CDH22
Cb.Crip : FHDC1, RPP40, DUSP19, SEZ6L2, SRD5A1, GNAO1, PLD6, ARIDS4
Cpu : COCH, NETO2, ACTN2, PDE10A, GNAL, GLCE, PRKAR2B, RIC8B, LINGO3, GPRIN3, CRABP1, PPP3CA, DOCK4, PRKCH, RIN1, BCL11B, DMKN, KCNA4, FBXL16, BAIAP2, PTPN5, KCNQ5, RAP2B, SERTAD4, DDIT4L, NGEF, ABLIM2, GPR83, GABRA4, SCN4B, MEIS2, MN1, RGS2, CPNE5, ARG2, MCTP1, WIPF3, MYT1L, SEZ6, PDP1, AKAP5, CHSY3, LHX8, RASGRP2, SH3RF2, SH2D5, DBN1, FGF14, RUNX11, KCNS2, SYNPO, FOXP1, DLX6, FRAS1, GNG7, DDN, EGR1, DCC
Cpu.D2 : SPEG, TANC2, CDK17, RIC8B, LINGO3, JPH3, DOCK4, RASGEF1A, NETO2, MATK, SMPD3, RASGEF1B, NGEF, TRIM46, CAMKK2, MEIS2, AFF3, WIPF3, MYT1L, AKAP5, CCM2, DOCK3, EXTL1, SH3RF2, SH2D5, CACNA2D3, CACNB2, HRH3, SYNPO, DLX6, DLX5, ORA2, GNG7, FBXO41, ACTN2, DGAT2, GNAL, PRKAR2B, TEF, CALN1, ACTN2, DGAT2, GNAL, PRKAR2B, TEF, CALN1, CPNE5, GPR85, MCTP1, ITPR1, RGS14, HIVEP2, CYLD, PAM, FBXL16, NECAB2, BAIAP2, MARK1, DLG2, ATXN1, PRKCH, RIN1, DTNB, LDB2, PMEPA1, DACT2, SHANK3, SCN4B, GPR149, ARG2, COCH, RASGRP2, CRTC1, RUNX11, FOXP1, DDN, PDE10A, SLITRK5, RASL10B, BCL11B, NPAS2, KCNA4, ZFYVE28, ABLIM2, MN1, PLCL2, LHX8, DAPK1, SNX27
Cpu.D1 : SPEG, PKK2R2, RIC8B, LINGO3, MPPED1, JPH3, DOCK4, RASGEF1A, PPP4R4, BAIAP2, MARK1, SMPD3, F12, RASGEF1B, NGEF, DGKB, TRIM46, CAMKK2, MEIS2, WIPF3, MYT1L, AKAP5, DOCK3, EXTL1, SH3RF2, SH2D5, HRH3, CACNB2, SYNPO, DLX6, DLX5, ORA2, GNG7, ACTN2, DGAT2, GNAL, ADD2, PRKAR2B, TEF, CPLX2, CAMTA1, GPR83, GPR149, PPP3CA, SERTAD4, DDIT4L, RPRML, CALN1, CPNE5, RAB15, MCTP1, SEZ6, ITPR1, RGS14, CAMSAP1, HIVEP2, CYLD, NECAB2, MAPK1, MATK, ATXN1, ENC1, KCNV1, PRKCH, RIN1, DTNB, LDB2, SHANK3, GABRA4, SCN4B, ARG2, COCH, ISL1, RASGRP2, CRTC1, FOXP1, DDN, PDE10A, SLITRK5, RASL10B, BCL11B, NPAS2, KCNA4, KCND2, DUSP8, RASGRP1, ZFYVE28, CDC1, ABLIM2, PIK3CB, MN1, DAPK1, CAMK2A
Cpu.Chat : PBX3, RCAN2, PCSK1, GPX3, SNTG1, CRABP1, DIRAS1, NTRK1, FGF12, VAMP2, DLL3, LHFPL5, CPNE7, ACHE, MGAT5B, SLC5A7, GPR83, RIMS3, MCTP1, VSTM2L, ACTL6B, MXRA7, UCHL1, SLC7A14, ISL1, LHX8, MAP1LC3A, CACNB3, GSG1L, ECEL1, TRPC7, DLX6, GBX2, CDK5R2
Ctx : ENC1, TANC2, MPPED1, PGM2L1, OPCML, UNC5D, KCNV1, RAP2B, RASGEF1A, LDB2, SIPA1L1, PSD3, STX1A, KCNQ5, DDIT4L, CSRNP3, NGEF, EFNA5, MAL2, PCLO, CAMKK2, WIPF3, LINGO1, DLGAP1, KCNH1, SYT16, EXTL1, DCLK1, LRRC4, GSG1L, GPRIN1, SYNPO, CAMK2A, EGR1, DDN
Ctx.Pdgfrajs340 : CDO1, PLEKHA2
Ctx.Etv1_ts88 : SLC7A8, DLGAP2, SLITRK3, ADD2, UNC5A, ICAM5, CACNA1A, MPPED1, DPYSL4, CX3CL1, KCNV1, RIN1, CRMP1, SLIT3, SLC8A2, STX1A, BAIAP2, KCNQ5, SYT5, DDIT4L, RASGRP1, NGEF, ENC1, CPNE7, RGS14, TRIM46, AP3B2, ALCAM, ANXA6, GRIN1, L1CAM, CAMK1G, DLG3, LINGO1, DRP2, KCNH1, CDO1, PITPNM3, DOCK3, KCNN3, NPTX1, CCKBR, SLC7A14, PAM, EPHA4, ATP1A3, CAMK2A, SORCS3, GPRIN1
Ctx.Pnoc : KCNIP1, DLGAP2, TMEM130, THY1, BASP1, PARM1, SYT1, CPLX3, GAD2, UGCG, CRABP1, CORT, YJEFN3, SLMAP
Ctx.Nbir : NRXN3, DLGAP2, GABRG2, UNC5A, SLC6A11, PRKCE, ICAM5, CHSY3, CPNE4, OPCML, KCNV1, RIN1, SLIT3, SLC8A2, STX1A, CACNA1A, RTN4R1, RASGRP1, NELL1, CDHR1, PCDH8, GRIN1, MCTP1, CPLX3, LINGO1, SYT16, SV2B, NPTX1, GRIA3, SLC8A1, EPHA4, FRAS1, SORCS3
Ctx.Glt25d2 : OPA1, SLC6A7, SLITRK3, DGAT2, ADD2, UNC5A, SLC6A17, CAP2, ICAM5, MPPED1, DPYSL4, GPRIN1, KCNV1, IGSF3, PLD3, LONRF2, CAMK1G, SLIT3, NPAS2, DACT2, SLC8A2, UNC13A, MATK, PARM1, SYT1, SYT5, RASGRP1, RIN1, ENC1, DLGAP2, PARG, NELL1, PNMA1, LDB2, DLG3, FAM131A, LINGO1, COCH, AKAP5, SV2B, EXTL1, GRIA3, CCKBR, SLC7A4, PAM, CX3CL1, ATP6V1H, MAPK1, CAMK2A, SORCS3, ATP8A1
Ctx.Fthfd : ARIDS4, DDIT4L, KLF15
Ctx.Cort : DLGAP2, RCAN2, SLC4A10, KLC2, ICAM5, DLL3, CORT, KCNV1, WNT10A, EPN1, CAMK4, KCNQ5, PCLO, GRIA3, HECW1, KCNH3, DLGAP1, PITPNM3, DACT2, CCKBR, EPHA4, GPD1L, FRAS1, REPS2, MEF2D, GPRIN1
Ctx.Crip : FHDC1, SEZ6L2, PLEKHA2, GNAO1, SRD5A1, FAM83D, TMOD1, ATP8A1
Epi : FHDC1, DMKN, VASH2, GABRA4, GPR151, KCNS2, ZCCHC12, RASD1, HTR2C, MCF2, PRKCD, GBX2, CPNE4, UBL7, RASL11A, CIT, CPNE7, PDP1, CDH8, PRKCH
Epi.Chat : KCTD8, PAQR9, CPNE4, ANKRD34A, PRKCH, UBL7, KCNS2, CDAP11L1, RTN4R1L1, RASGEF1B, DPP6, SLC5A7, KCNIP1, ADAM11, GPR151, CNNM2, RASSF7, VSTM2L, NNAT, GDPD5, CACNB3, NECAB2, CDH8, YJEFN3
Spc : GPLD1, SCN4B, STEAP2, HECW1, GABRA5, SLC8A1, MCF2, HTR2C, P2RX5, ATP8A1
Spc.Chat : CDHR1, RIMKLA, SLIT3, KCNH2, ATP8A2, P2RX5, MXRA7, SYT3, SYT2, ECEL1, CHGA, ADAM23, SLC45A1, GRIK4, LHFPL5, STMN2, CDR2, SLC7A14, CNTN4, SEMA3A, SLC5A7
RetC.Cones : OPA1, PBX3, STEAP2, SESN3, UGCG, TEF, LINGO3, RGMB, SLK, WDR47, HYOU1, NDFIP1, UNC13A, SLC8A3, ZFAND5, SYT1, BEND4, ADARB1, SPHKAP, PREPL, CDHR1, CPLX3, HCN1, MXRA7, ARHGAP32, GPR162, ISL1, SLMAP, CACNA1D, SV2B, DBN1, CACNA2D3, SRPRB, EPHA8, CCKBR

**The overlapped genes for every cell type ( p5I threshold** 0.01 **) are:**
RetR.Rods : DPYSL4, IMPG1, UBL7
Hyp : RASD1, MAGEL2
Hyp.Hcrt : NNAT, RESP18, CRHR2, PCSK1, ZCCHC12, PTPRN, VGF, SYT5, PNMA1, GPX3, RIMS3, CPNE7
BF : LHX8, GPRK1, HTR2C, GAD2
BF.Chat : LHX8, ACHE, NTRK1, SLC5A7, RIMS3, DLL3, GPX3, GBX2, ECEL1, CRABP1, SLC7A14, ISL1, RPS27
BS : none
BS.Chat : P2RX5, ACHE, SYT3, ECEL1, SLC7A14
BS.Slc6a4 : PCSK1, GPX3
Cb : ADCY1
Cb.Septin4 : RASL11A, ARIDS4
Cb.Pcp2 : KCNIP1, DUSP2, STEAP2, FAM174B, DAGLA, SLC12A8, CLEC4G, ECM1, FAM83D, ITPR1, DGKZ, ITGB1BP1, ICMT
Cb.Neurod1 : KLC2, SYT2, WSCD2
Cb.Lypd6 : MAPK13, CNTN4, TRPM2, EPHA8, PRKCD, HCN1, CABP1, MGAT5B, SORCS3
Cb.Grm2 : RASGRP2, SLC26A8, CLVS1, LHFPL5, KCNH3, KLC2, MXRA7, EFNA5
Cb.Fthfd : ABCB9, RPUSD3
Cb.Crip : FHDC1, SRD5A1, PLD6
Cpu : BCL11B, DMKN, SH3RF2, SCN4B, ACTN2, PDE10A, GNAL, MEIS2, FOXP1, WIPF3, NGEF, GPRIN3, GNG7, AKAP5
Cpu.D2 : ACTN2, DGAT2, ICAM5, GPRIN3, PRKCH, RIN1, BCL11B, SMPD3, CRTC1, SIPA1L1, NPAS2, KCNA4, PDE10A, PTPN5, DUSP8, SERTAD4, GPR149, RASGEF1A, SHANK3, ABLIM2, CAMKK2, SCN4B, MEIS2, MN1, CPNE5, ARG2, WIPF3, AKAP5, SH3RF2, HRH3, CYLD, FOXP1, DLX6, DLX5, RASL10B, GNG7, DDN
Cpu.D1 : ACTN2, ATXN1, TEF, RASL10B, GPRIN3, DOCK4, PRKCH, RASGEF1A, BCL11B, DMKN, NPAS2, PPP4R4, KCNA4, MATK, PTPN5, SMPD3, F12, RASGEF1B, NGEF, RPRML, SERTAD4, SCN4B, MEIS2, MN1, CPNE5, RGS14, MCTP1, WIPF3, PDE10A, COCH, AKAP5, ITPR1, DOCK3, RIN1, SH3RF2, SH2D5, CRTC1, CYLD, SLITRK5, FOXP1, DLX6, DLX5, GNG7, HRH3, DDN
Cpu.Chat : LHX8, GPR83, ACHE, SLC5A7, SLC7A14, CACNB3, RIMS3, MXRA7, DLL3, VSTM2L, RCAN2, SNTG1, ECEL1, CRABP1, NTRK1, ISL1, GBX2
Ctx : SYT16, EGR1, SYNPO, CAMK2A, MPPED1
Ctx.Pdgfrajs340 : CDO1, PLEKHA2
Ctx.Etv1_ts88 : ADD2, LINGO1, KCNV1
Ctx.Pnoc : GAD2, CPLX3, CORT, YJEFN3, SYT1
Ctx.Nbir : CDHR1, GRIA3, ICAM5, CHSY3, EPHA4
Ctx.Glt25d2 : SV2B, SLITRK3, UNC13A, CCKBR, SLC7A4, GPRIN1, ICAM5, MPPED1, KCNV1, SORCS3
Ctx.Fthfd : ARIDS4
Ctx.Cort : WNT10A, DLGAP2, CCKBR, DLL3, KCNH3, CORT
Ctx.Crip : SRD5A1, GNAO1, FAM83D
Epi : VASH2, CIT, GPR151, HTR2C, PRKCD, GBX2, RASD1, CPNE7, PRKCH
Epi.Chat : NNAT, GPR151, KCTD8, KCNIP1, CACNB3, YJEFN3, VSTM2L, NECAB2, CPNE4, CNNM2, CDH8, PRKCH
Spc : P2RX5, MCF2
Spc.Chat : P2RX5, SLC45A1, RIMKLA, SEMA3A, SLC5A7
RetC.Cones : CDHR1, HYOU1, PREPL, SLC8A3, ZFAND5, EPHA8, CCKBR, TEF, SYT1, CPLX3, SESN3, SLK, RGMB, SPHKAP, ISL1, SLMAP

**The overlapped genes for every cell type ( p5I threshold** 0.001 **) are:**
RetR.Rods : IMPG1
Hyp : MAGEL2
Hyp.Hcrt : NNAT, PCSK1, GPX3, RIMS3
BF : none
BF.Chat : LHX8, ECEL1, GBX2, CRABP1, NTRK1, ISL1, SLC5A7
BS : none
BS.Chat : P2RX5
BS.Slc6a4 : none
Cb : none
Cb.Septin4 : RASL11A
Cb.Pcp2 : SLC12A8, CLEC4G, ECM1
Cb.Neurod1 : none
Cb.Lypd6 : CABP1, PRKCD, MAPK13
Cb.Grp : WNT10A, TPBG, NNAT
Cb.Grm2 : CLVS1
Cb.Fthfd : RPUSD3
Cb.Crip : none
Cpu : GPRIN3
Cpu.D2 : BCL11B, SH3RF2, SCN4B, ACTN2, PDE10A, MN1, HRH3, ARG2, SMPD3, FOXP1, WIPF3, RASL10B, GPRIN3, DLX5, GNG7, RIN1, DDN
Cpu.D1 : BCL11B, DMKN, SH3RF2, NPAS2, ACTN2, PDE10A, MN1, SERTAD4, FOXP1, AKAP5, PRKCH, RIN1, DOCK3
Cpu.Chat : LHX8, NTRK1, SLC7A14, SNTG1, DLL3, VSTM2L, ECEL1, ACHE, SLC5A7
Ctx : none
Ctx.Pdgfrajs340 : CDO1
Ctx.Etv1_ts88 : LINGO1
Ctx.Pnoc : CORT, YJEFN3
Ctx.Nbir : CHSY3
Ctx.Glt25d2 : SLC7A4, MPPED1
Ctx.Fthfd : ARIDS4
Ctx.Cort : KCNH3, CORT
Ctx.Crip : SRD5A1
Epi : RASD1, PRKCD, GPR151, GBX2
Epi.Chat : KCNIP1, GPR151, CNNM2, CACNB3, KCTD8, NECAB2
Spc : none
Spc.Chat : P2RX5
RetC.Cones : CDHR1, ZFAND5, SLC8A3, CCKBR, SYT1, CPLX3

**The overlapped genes for every cell type ( p5I threshold** 0.0001 **) are:**
RetR.Rods : none
Hyp : none
Hyp.Hcrt : PCSK1, GPX3, NNAT
BF : none
BF.Chat : LHX8, ECEL1, CRABP1, NTRK1, ISL1, SLC5A7
BS : none
BS.Chat : none
BS.Slc6a4 : none
Cb : none
Cb.Septin4 : none
Cb.Pcp2 : SLC12A8, CLEC4G, ECM1
Cb.Neurod1 : none
Cb.Lypd6 : MAPK13
Cb.Grp : NNAT
Cb.Grm2 : none
Cb.Fthfd : none
Cb.Crip : none
Cpu : none
Cpu.D2 : BCL11B, SH3RF2, SCN4B, ACTN2, PDE10A, MN1, HRH3, ARG2, FOXP1, GPRIN3, GNG7, RIN1
Cpu.D1 : DMKN, SH3RF2, PRKCH, MN1
Cpu.Chat : LHX8, SLC7A14, ECEL1, VSTM2L, ACHE, NTRK1, SNTG1
Ctx : none
Ctx.Pdgfrajs340 : none
Ctx.Etv1_ts88 : none
Ctx.Pnoc : none
Ctx.Nbir : none
Ctx.Glt25d2 : none
Ctx.Fthfd : ARIDS4
Ctx.Cort : CORT
Ctx.Crip : none
Epi : RASD1, PRKCD, GPR151
Epi.Chat : KCNIP1, KCTD8, CNNM2, CACNB3, NECAB2, GPR151
Spc : none
Spc.Chat : P2RX5
RetC.Cones : CDHR1, CPLX3, SLC8A3, CCKBR, SYT1