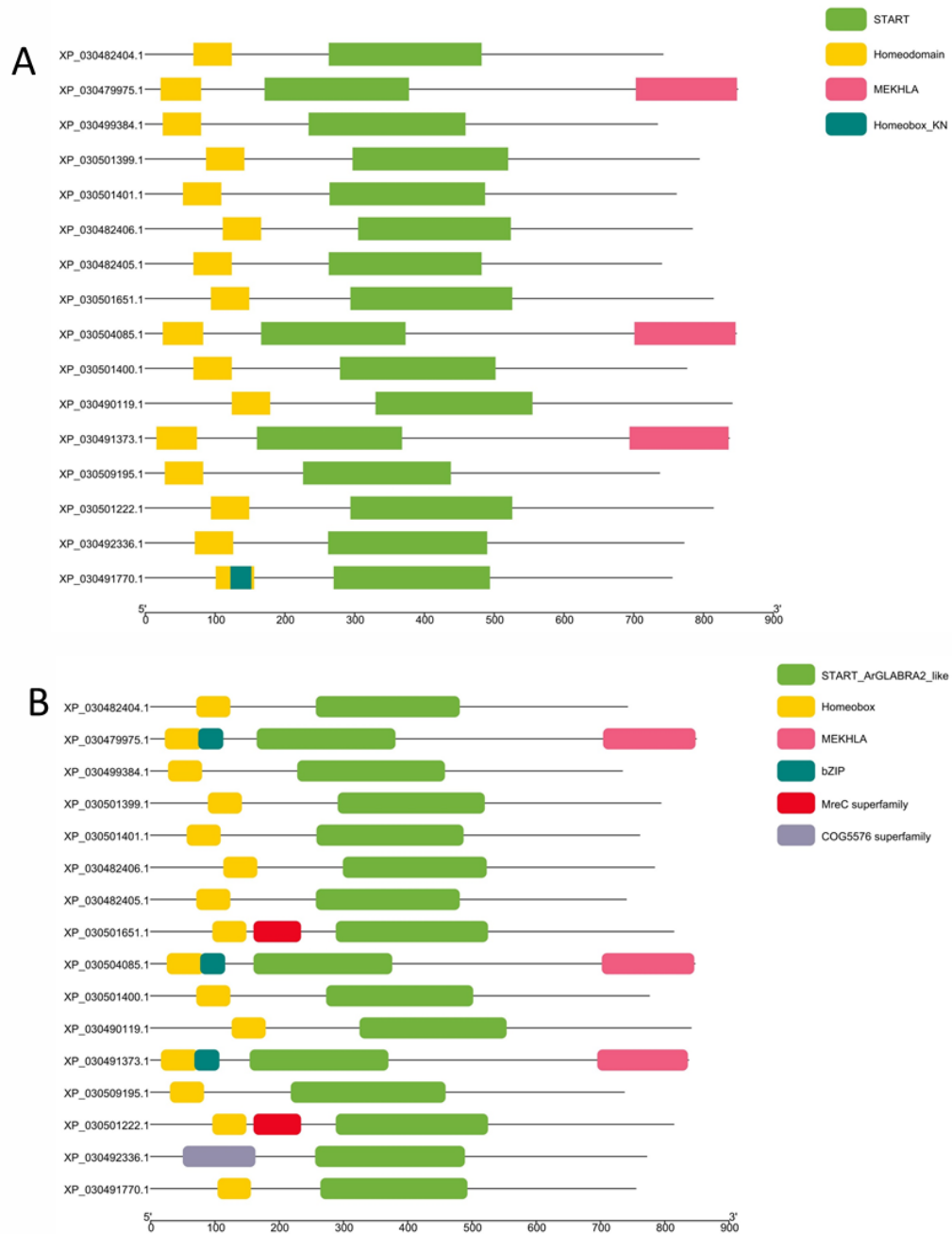




**Figure S1.** Schematic representation of conserved motifs in Cannabis HDZ IV proteins by Pfam database (A) and Conserved Domain Database (B),



**Figure S2.** Sequence logos corresponding to the conserved motifs present over cannabis HDZ IV proteins.

**Table S1.** Primers

| Gene name                    | qPCR forward primer      | qPCR reverse primer    |
|------------------------------|--------------------------|------------------------|
| HDG5                         | ACTGCATGACTCCGAGATTTAG   | GTGCCTAGAGTAGATGCTGATG |
| ANTHOCYANINLESS 2 isoform X1 | TTACCGGCCATTATTGAGTTCC   | GTTATTCTGCAGTGTGGTC    |
| GLABRA 2                     | CGGTATGAATAATGGTCCTAAGAG | TCCTTCCATTGATTCACATCCA |
| HDG11                        | GTTCTTCGAGCTTTCAACACC    | GGCAGTACACCACCATTGAC   |
| ANTHOCYANINLESS 2 isoform X2 | TGGCTATTCCAAGGTTACGTG    | CAAGTACTCGCATTGTCTTTGG |
| HDG5-like                    | CTTCAATATCAACCTTCACTTCCC | TTCAACCCATGTGACACTTGAG |
| HDG2                         | GGCAGTTGTTGATGTTTCTC     | CCATGTACCTTAGAGTATCCA  |
| ROC8-like                    | AATCAGAGTGTGAGTTCGTAAGG  | AGAACATCCCACTGGAGTCTG  |
| PROTODERMAL FACTOR 2         | TATAGCCAATGGGCGTGAT      | CAACTGGTGCATAAATCACA   |
| Ubiquitin                    | GCCAGGATGGCAATGAAGTA     | GCTATAGAGTTGAACTCCACAG |

**Table S2.** Putative targets of HDZ IV transcription factors.

| Gene           | Number of 5'-<br>GCATTAAATGC-3'motif | Gene Annotation                                                                                               |
|----------------|--------------------------------------|---------------------------------------------------------------------------------------------------------------|
| XM_030622497.1 | 1                                    | <u>PREDICTED: Cannabis sativa proline-rich protein 36 (LOC115695434), mRNA</u>                                |
| XM_030622779.1 | 1                                    | <u>PREDICTED: Cannabis sativa uncharacterized LOC115695708 (LOC115695708), mRNA</u>                           |
| XM_030623013.1 | 1                                    | <u>PREDICTED: Cannabis sativa transcription termination factor MTEF18, mitochondrial (LOC115695917), mRNA</u> |
| XM_030623245.1 | 1                                    | <u>PREDICTED: Cannabis sativa uncharacterized LOC115696341 (LOC115696341), mRNA</u>                           |
| XM_030623347.1 | 1                                    | <u>PREDICTED: Cannabis sativa uncharacterized LOC115696446 (LOC115696446), mRNA</u>                           |
| XM_030623509.1 | 1                                    | <u>PREDICTED: Cannabis sativa uncharacterized LOC115696614 (LOC115696614), mRNA</u>                           |
| XM_030623927.1 | 1                                    | <u>PREDICTED: Cannabis sativa AMP deaminase (LOC115697031), transcript variant X2, mRNA</u>                   |
| XM_030624933.1 | 1                                    | <u>PREDICTED: Cannabis sativa DNA replication complex GINS protein SLD5 (LOC115697802), mRNA</u>              |
| XM_030624994.1 | 1                                    | <u>PREDICTED: Cannabis sativa farnesylcysteine lyase (LOC115697848), mRNA</u>                                 |

|                |   |                                                                                                                  |
|----------------|---|------------------------------------------------------------------------------------------------------------------|
| XM_030625176.1 | 1 | <u>PREDICTED: Cannabis sativa putative F-box/LRR-repeat protein 23 (LOC115698001), mRNA</u>                      |
| XM_030625390.1 | 1 | <u>PREDICTED: Cannabis sativa U-box domain-containing protein 1 (LOC115698200), mRNA</u>                         |
| XM_030625492.1 | 1 | <u>PREDICTED: Cannabis sativa gamma-interferon-responsive lysosomal thiol protein (LOC115698280), mRNA</u>       |
| XM_030625813.1 | 1 | <u>PREDICTED: Cannabis sativa cellulose synthase-like protein H1 (LOC115698677), transcript variant X1, mRNA</u> |
| XM_030626179.1 | 1 | <u>PREDICTED: Cannabis sativa F-box protein SNE (LOC115698964), mRNA</u>                                         |
| XM_030626921.1 | 1 | <u>PREDICTED: Cannabis sativa putative DNA (cytosine-5)-methyltransferase CMT1 (LOC115699482), mRNA</u>          |
| XM_030627406.1 | 1 | <u>PREDICTED: Cannabis sativa uncharacterized LOC115699863 (LOC115699863), mRNA</u>                              |
| XM_030628894.1 | 1 | <u>PREDICTED: Cannabis sativa tubulin-folding cofactor B (LOC115701175), mRNA</u>                                |
| XM_030629883.1 | 1 | <u>PREDICTED: Cannabis sativa nodulation-signaling pathway 2 protein (LOC115702418), mRNA</u>                    |

|                |   |                                                                                                            |
|----------------|---|------------------------------------------------------------------------------------------------------------|
| XM_030630414.1 | 1 | <u>PREDICTED: Cannabis sativa protein UPSTREAM OF FLC (LOC115702942), transcript variant X1, mRNA</u>      |
| XM_030631028.1 | 1 | <u>PREDICTED: Cannabis sativa O-fucosyltransferase 28-like (LOC115703794), mRNA</u>                        |
| XM_030631124.1 | 1 | <u>PREDICTED: Cannabis sativa uncharacterized LOC115703887 (LOC115703887), mRNA</u>                        |
| XM_030631839.1 | 1 | <u>PREDICTED: Cannabis sativa wall-associated receptor kinase-like 3 (LOC115704637), mRNA</u>              |
| XM_030632507.1 | 1 | <u>PREDICTED: Cannabis sativa uncharacterized LOC115705235 (LOC115705235), transcript variant X1, mRNA</u> |
| XM_030633407.1 | 1 | <u>PREDICTED: Cannabis sativa peptidyl-tRNA hydrolase 2, mitochondrial (LOC115705927), mRNA</u>            |
| XM_030633517.1 | 2 | <u>PREDICTED: Cannabis sativa G-protein coupled receptor 1 (LOC115706017), mRNA</u>                        |
| XM_030633774.1 | 1 | <u>PREDICTED: Cannabis sativa uncharacterized LOC115706204 (LOC115706204), mRNA</u>                        |
| XM_030634242.1 | 1 | <u>PREDICTED: Cannabis sativa uncharacterized LOC115706553 (LOC115706553), mRNA</u>                        |

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|----------------|---|----------------------------------------------------------------------------------------------------------------------|
| XM_030634601.1 | 1 | <u>PREDICTED: Cannabis sativa cytochrome P450 711A1 (LOC115706844), mRNA</u>                                         |
| XM_030635119.1 | 1 | <u>PREDICTED: Cannabis sativa MADS-box protein FBP24-like (LOC115707234), transcript variant X1, mRNA</u>            |
| XM_030636562.1 | 1 | <u>PREDICTED: Cannabis sativa probable glycosyltransferase At3g07620 (LOC115708322), transcript variant X1, mRNA</u> |
| XM_030637341.1 | 1 | <u>PREDICTED: Cannabis sativa DNAJ protein JJJ1 homolog (LOC115709278), transcript variant X1, mRNA</u>              |
| XM_030637534.1 | 1 | <u>PREDICTED: Cannabis sativa transcription factor BIM1 (LOC115709430), transcript variant X1, mRNA</u>              |
| XM_030637765.1 | 1 | <u>PREDICTED: Cannabis sativa protein QUIRKY (LOC115709623), mRNA</u>                                                |
| XM_030638081.1 | 1 | <u>PREDICTED: Cannabis sativa probable inactive receptor kinase At5g67200 (LOC115709841), mRNA</u>                   |
| XM_030638567.1 | 1 | <u>PREDICTED: Cannabis sativa WD repeat and HMG-box DNA-binding protein 1 (LOC115710221), mRNA</u>                   |

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|----------------|---|------------------------------------------------------------------------------------------------------------------------------|
| XM_030639218.1 | 1 | <u>PREDICTED: Cannabis sativa dynamin-related protein 1E (LOC115710860), mRNA</u>                                            |
| XM_030639782.1 | 1 | <u>PREDICTED: Cannabis sativa alpha carbonic anhydrase 7-like (LOC115711440), mRNA</u>                                       |
| XM_030639993.1 | 1 | <u>PREDICTED: Cannabis sativa carotenoid 9,10(9',10')-cleavage dioxygenase 1 (LOC115711621), transcript variant X1, mRNA</u> |
| XM_030640064.1 | 1 | <u>PREDICTED: Cannabis sativa ankyrin repeat domain-containing protein 1 (LOC115711685), mRNA</u>                            |
| XM_030640451.1 | 1 | <u>PREDICTED: Cannabis sativa uncharacterized LOC115712201 (LOC115712201), mRNA</u>                                          |
| XM_030641975.1 | 1 | <u>PREDICTED: Cannabis sativa uncharacterized LOC115713490 (LOC115713490), mRNA</u>                                          |
| XM_030642294.1 | 1 | <u>PREDICTED: Cannabis sativa U-box domain-containing protein 15 (LOC115713809), mRNA</u>                                    |
| XM_030643475.1 | 1 | <u>PREDICTED: Cannabis sativa transcription factor bHLH63 (LOC115714717), transcript variant X1, mRNA</u>                    |
| XM_030643671.1 | 1 | <u>PREDICTED: Cannabis sativa glutathione S-transferase U17 (LOC115714913), mRNA</u>                                         |

|                |   |                                                                                                                                                    |
|----------------|---|----------------------------------------------------------------------------------------------------------------------------------------------------|
| XM_030644486.1 | 1 | <u>PREDICTED: Cannabis sativa zinc finger protein ZAT4 (LOC115715815), mRNA</u>                                                                    |
| XM_030645201.1 | 3 | <u>PREDICTED: Cannabis sativa uncharacterized protein At3g49140 (LOC115716414), mRNA</u>                                                           |
| XM_030645594.1 | 1 | <u>PREDICTED: Cannabis sativa uncharacterized LOC115716718 (LOC115716718), mRNA</u>                                                                |
| XM_030646233.1 | 1 | <u>PREDICTED: Cannabis sativa V-type proton ATPase subunit F (LOC115717265), mRNA</u>                                                              |
| XM_030647270.1 | 1 | <u>PREDICTED: Cannabis sativa pentatricopeptide repeat-containing protein At1g53600, mitochondrial (LOC115718481), transcript variant X1, mRNA</u> |
| XM_030647841.1 | 1 | <u>PREDICTED: Cannabis sativa regulator of nonsense transcripts UPF3 (LOC115718999), transcript variant X1, mRNA</u>                               |
| XM_030648752.1 | 1 | <u>PREDICTED: Cannabis sativa DDT domain-containing protein PTM (LOC115719637), transcript variant X3, mRNA</u>                                    |
| XM_030649189.1 | 1 | <u>PREDICTED: Cannabis sativa zinc finger BED domain-containing protein RICESLEEPER 2-like (LOC115720022), mRNA</u>                                |

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|----------------|---|-------------------------------------------------------------------------------------------------------------------------------------|
| XM_030649300.1 | 1 | <u>PREDICTED: Cannabis sativa uncharacterized LOC115720141 (LOC115720141), mRNA</u>                                                 |
| XM_030649628.1 | 1 | <u>PREDICTED: Cannabis sativa cytochrome P450 714C2 (LOC115720479), mRNA</u>                                                        |
| XM_030649781.1 | 1 | <u>PREDICTED: Cannabis sativa heavy metal-associated isoprenylated plant protein 35 (LOC115720619), transcript variant X1, mRNA</u> |
| XM_030650042.1 | 1 | <u>PREDICTED: Cannabis sativa respiratory burst oxidase homolog protein B (LOC115720858), mRNA</u>                                  |
| XM_030650068.1 | 1 | <u>PREDICTED: Cannabis sativa uncharacterized LOC115720870 (LOC115720870), mRNA</u>                                                 |
| XM_030653123.1 | 1 | <u>PREDICTED: Cannabis sativa uncharacterized LOC115723638 (LOC115723638), mRNA</u>                                                 |
| XM_030654934.1 | 2 | <u>PREDICTED: Cannabis sativa uncharacterized LOC115725414 (LOC115725414), mRNA</u>                                                 |