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| **Genes identified as ‘cerebellum, Purkinje cell enhanced’ in Allen Brain Atlas ‘fine structure’ search**Supplementary Table 1.  |
| **Rank** | **Gene** |
| 1 | *Calb1**calbindin 1* |
| 2 | *Cacna1g**calcium channel, voltage-dependent, T type, alpha 1G subunit* |
| 3 | *Grid2**glutamate receptor, ionotropic, delta 2* |
| 4 | *Kcnc3**potassium voltage gated channel, Shaw-related subfamily, member 3* |
| 5 | *Id2**inhibitor of DNA binding 2* |
| 6 | *Rgs8**regulator of G-protein signaling 8* |
| 7 | *Cpne2**copine II* |
| 8 | *Ppp1r17**protein phosphatase 1, regulatory subunit 17* |
| 9 | *Fam107b**family with sequence similarity 107, member B* |
| 10 | *Pcsk6**proprotein convertase subtilisin/kexin type 6* |
| 11 | *Lancl1**LanC (bacterial lantibiotic synthetase component C)-like 1* |
| 12 | *0610007P14Rik**RIKEN cDNA 0610007P14 gene* |
| 13 | *Erp29**endoplasmic reticulum protein 29* |
| 14 | *Inpp5a**inositol polyphosphate-5-phosphatase A* |
| 15 | *Abhd3**abhydrolase domain containing 3* |
| 16 | *Grid2ip**glutamate receptor, ionotropic, delta 2 (Grid2) interacting protein 1* |
| 17 | *Hpcal1**hippocalcin-like 1* |
| 18 | *Dbi**diazepam binding inhibitor* |
| 19 | *Arhgap26**Rho GTPase activating protein 26* |
| 20 | *Dpp10**dipeptidylpeptidase 10* |
| 21 | *Cst3**cystatin C* |
| 22 | *Ryr1**ryanodine receptor 1, skeletal muscle* |
| 23 | *Steap2**six transmembrane epithelial antigen of prostate 2* |
| 24 | *Gabbr2**gamma-aminobutyric acid (GABA) B receptor, 2* |
| 25 | *Cerk**ceramide kinase* |
| 26 | *Lrrn2**leucine rich repeat protein 2, neuronal* |
| 27 | *Gng13**guanine nucleotide binding protein (G protein), gamma 13* |
| 28 | *Ppap2b**phosphatidic acid phosphatase type 2B* |
| 29 | *Not listed* |
| 30 | *Itpr1**inositol 1,4,5-trisphosphate receptor 1* |
| 31 | *Nefh**neurofilament, heavy polypeptide* |
| 32 | *Atp2a2**ATPase, Ca++ transporting, cardiac muscle, slow twitch 2* |
| 33 | *Tm6sf1**transmembrane 6 superfamily member 1* |
| 34 | *Nell2**NEL-like 2* |
| 35 | *Baiap2**brain-specific angiogenesis inhibitor 1-associated protein 2* |
| 36 | *Cacna2d2**calcium channel, voltage-dependent, alpha 2/delta subunit 2* |
| 37 | *Ptpn4**protein tyrosine phosphatase, non-receptor type 4* |
| 38 | *Cds1**CDP-diacylglycerol synthase 1* |
| 39 | *Hapln4**hyaluronan and proteoglycan link protein 4* |
| 40 | *Hpca**hippocalcin* |
| 41 | *Dgkh**diacylglycerol kinase, eta* |
| 42 | *SetD7* *SET domain containing (lysine methyltransferase)* |
| 43 | *Tex261**testis expressed gene 261* |
| 44 | *Prkcg**protein kinase C, gamma* |
| 45 | *Plcb4**phospholipase C, beta 4* |
| 46 | *Sbk1**SH3-binding kinase 1* |
| 47 | *Grik1**glutamate receptor, ionotropic, kainate 1* |
| 48 | *Creg1**cellular repressor of E1A-stimulated genes 1* |
| 49 | *Lrp8**low density lipoprotein receptor-related protein 8, apolipoprotein e receptor* |
| 50 | *LOC270764**similar to E2a-Pbx1-associated protein; amyloid-beta precursor protein intracellular domain associated protein 1; cajalin 2* |
| 51 | *Myo10**myosin X* |
| 52 | *Tnfrsf21**tumor necrosis factor receptor superfamily, member 21* |
| 53 | *Not listed* |
| 54 | *Clmn**calmin* |
| 55 | *Gm1399**gene model 1399, (NCBI)* |
| 56 | *Bai3**brain-specific angiogenesis inhibitor 3* |

Supplementary Table 2.

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| **SFARI - High confidence genes** |
| 1 | [*ADNP*](https://gene.sfari.org/database/human-gene/ADNP) |
| 2 | [*ANK2*](https://gene.sfari.org/database/human-gene/ANK2#HG) |
| 3 | [*ARID1B*](https://gene.sfari.org/database/human-gene/ARID1B#HG) |
| 4 | [*ASH1L*](https://gene.sfari.org/database/human-gene/ASH1L#HG) |
| 5 | [*ASXL3*](https://gene.sfari.org/database/human-gene/ASXL3#HG) |
| 6 | [*CHD2*](https://gene.sfari.org/database/human-gene/CHD2#HG) |
| 7 | [*CHD8*](https://gene.sfari.org/database/human-gene/CHD8#HG) |
| 8 | [*CUL3*](https://gene.sfari.org/database/human-gene/CUL3#HG) |
| 9 | [*DSCAM*](https://gene.sfari.org/database/human-gene/DSCAM#HG) |
| 10 | [*DYRK1A*](https://gene.sfari.org/database/human-gene/DYRK1A#HG) |
| 11 | [*GRIN2B*](https://gene.sfari.org/database/human-gene/GRIN2B#HG) |
| 12 | [*KATNAL2*](https://gene.sfari.org/database/human-gene/KATNAL2#HG) |
| 13 | [*KMT2A*](https://gene.sfari.org/database/human-gene/KMT2A) |
| 14 | [*KMT5B*](https://gene.sfari.org/database/human-gene/KMT5B) |
| 15 | [*MYT1L*](https://gene.sfari.org/database/human-gene/MYT1L#HG) |
| 16 | [*NAA15*](https://gene.sfari.org/database/human-gene/NAA15) |
| 17 | [*POGZ*](https://gene.sfari.org/database/human-gene/POGZ#HG) |
| 18 | [*PTEN*](https://gene.sfari.org/database/human-gene/PTEN#HG) |
| 19 | [*RELN*](https://gene.sfari.org/database/human-gene/RELN#HG) |
| 20 | [*SCN2A*](https://gene.sfari.org/database/human-gene/SCN2A#HG) |
| 21 | [*SETD5*](https://gene.sfari.org/database/human-gene/SETD5#GS) |
| 22 | [*SHANK3*](https://gene.sfari.org/database/human-gene/SHANK3#HG) |
| 23 | [*SYNGAP1*](https://gene.sfari.org/database/human-gene/SYNGAP1#HG) |
| 24 | [*TBR1*](https://gene.sfari.org/database/human-gene/TBR1#HG) |
| 25 | [*TRIP12*](https://gene.sfari.org/database/human-gene/TRIP12) |
| **SFARI - Strong candidate genes** |
| 26 | [*ANKRD11*](https://gene.sfari.org/database/human-gene/ANKRD11) |
| 27 | [*BAZ2B*](https://gene.sfari.org/database/human-gene/BAZ2B) |
| 28 | [*BCKDK*](https://gene.sfari.org/database/human-gene/BCKDK#GS) |
| 29 | [*BCL11A*](https://gene.sfari.org/database/human-gene/BCL11A#HG) |
| 30 | [*CACNA1D*](https://gene.sfari.org/database/human-gene/CACNA1D) |
| 31 | [*CACNA1H*](https://gene.sfari.org/database/human-gene/CACNA1H#HG) |
| 32 | [*CACNA2D3*](https://gene.sfari.org/database/human-gene/CACNA2D3#HG) |
| 33 | [*CIC*](https://gene.sfari.org/database/human-gene/CIC) |
| 34 | *CNOT3* |
| 35 | [*CNTN4*](https://gene.sfari.org/database/human-gene/CNTN4) |
| 36 | [*CNTNAP2*](https://gene.sfari.org/database/human-gene/CNTNAP2#HG) |
| 37 | [*CTNND2*](https://gene.sfari.org/database/human-gene/CTNND2#HG) |
| 38 | *CUX1* |
| 39 | [*DDX3X*](https://gene.sfari.org/database/human-gene/DDX3X) |
| 40 | [*DEAF1*](https://gene.sfari.org/database/human-gene/DEAF1#HG) |
| 41 | [*DIP2C*](https://gene.sfari.org/database/human-gene/DIP2C) |
| 42 | [*ERBIN*](https://gene.sfari.org/database/human-gene/ERBIN) |
| 43 | [*FOXP1*](https://gene.sfari.org/database/human-gene/FOXP1#HG) |
| 44 | [*GABRB3*](https://gene.sfari.org/database/human-gene/GABRB3) |
| 45 | [*GIGYF2*](https://gene.sfari.org/database/human-gene/GIGYF2) |
| 46 | [*GRIA1*](https://gene.sfari.org/database/human-gene/GRIA1) |
| 47 | [*GRIP1*](https://gene.sfari.org/database/human-gene/GRIP1#HG) |
| 48 | [*ILF2*](https://gene.sfari.org/database/human-gene/ILF2) |
| 49 | [*INTS6*](https://gene.sfari.org/database/human-gene/INTS6) |
| 50 | [*IRF2BPL*](https://gene.sfari.org/database/human-gene/IRF2BPL) |
| 51 | [*KAT2B*](https://gene.sfari.org/database/human-gene/KAT2B) |
| 52 | [*KDM5B*](https://gene.sfari.org/database/human-gene/KDM5B#HG) |
| 53 | [*KDM6A*](https://gene.sfari.org/database/human-gene/KDM6A) |
| 54 | [*KMT2C*](https://gene.sfari.org/database/human-gene/KMT2C#HG) |
| 55 | *LEO1* |
| 56 | [*MAGEL2*](https://gene.sfari.org/database/human-gene/MAGEL2#HG) |
| 57 | [*MBOAT7*](https://gene.sfari.org/database/human-gene/MBOAT7) |
| 58 | [*MECP2*](https://gene.sfari.org/database/human-gene/MECP2) |
| 59 | [*MED13*](https://gene.sfari.org/database/human-gene/MED13) |
| 60 | [*MED13L*](https://gene.sfari.org/database/human-gene/MED13L#HG) |
| 61 | [*MET*](https://gene.sfari.org/database/human-gene/MET#HG) |
| 62 | [*MSNP1AS*](https://gene.sfari.org/database/human-gene/MSNP1AS#HG) |
| 63 | [*NCKAP1*](https://gene.sfari.org/database/human-gene/NCKAP1) |
| 64 | [*NLGN3*](https://gene.sfari.org/database/human-gene/NLGN3) |
| 65 | [*NRXN1*](https://gene.sfari.org/database/human-gene/NRXN1#HG) |
| 66 | [*PHF3*](https://gene.sfari.org/database/human-gene/PHF3) |
| 67 | [*PTCHD1*](https://gene.sfari.org/database/human-gene/PTCHD1#HG) |
| 68 | [*RANBP17*](https://gene.sfari.org/database/human-gene/RANBP17) |
| 69 | [*RIMS1*](https://gene.sfari.org/database/human-gene/RIMS1) |
| 70 | [*SCN9A*](https://gene.sfari.org/database/human-gene/SCN9A) |
| 71 | [*SHANK2*](https://gene.sfari.org/database/human-gene/SHANK2#HG) |
| 72 | [*SLC6A1*](https://gene.sfari.org/database/human-gene/SLC6A1) |
| 73 | [*SMARCC2*](https://gene.sfari.org/database/human-gene/SMARCC2) |
| 74 | [*SPAST*](https://gene.sfari.org/database/human-gene/SPAST) |
| 75 | [*SRCAP*](https://gene.sfari.org/database/human-gene/SRCAP) |
| 76 | [*SRSF11*](https://gene.sfari.org/database/human-gene/SRSF11) |
| 77 | [*TAOK2*](https://gene.sfari.org/database/human-gene/TAOK2) |
| 78 | [*TBL1XR1*](https://gene.sfari.org/database/human-gene/TBL1XR1) |
| 79 | [*TCF20*](https://gene.sfari.org/database/human-gene/TCF20) |
| 80 | [*TNRC6B*](https://gene.sfari.org/database/human-gene/TNRC6B) |
| 81 | [*TRIO*](https://gene.sfari.org/database/human-gene/TRIO) |
| 82 | [*UBN2*](https://gene.sfari.org/database/human-gene/UBN2) |
| 83 | [*UPF3B*](https://gene.sfari.org/database/human-gene/UPF3B) |
| 84 | [*USP15*](https://gene.sfari.org/database/human-gene/USP15) |
| 85 | [*USP7*](https://gene.sfari.org/database/human-gene/USP7) |
| 86 | [*WAC*](https://gene.sfari.org/database/human-gene/WAC) |
| 87 | [*WDFY3*](https://gene.sfari.org/database/human-gene/WDFY3) |