**Table 2 Differentially expressed genes highly correlated with PER score**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Symbol | Correlation | Symbol | Correlation | Symbol | Correlation | Symbol | Correlation | Symbol | Correlation | Symbol | Correlation | Symbol | Correlation | Symbol | Correlation |
| *KCTD11* | 0.964  | *RRBP1* | 0.979  | *CMTM6* | 0.990  | *HSPA4L* | -0.888  | *SEPTIN7* | -0.938  | *SORT1* | -0.953  | *RUSC2* | -0.987  | *SPTB* | -0.989  |
| *PLEK2* | 0.964  | *RBFOX3* | -0.958  | *CHRNA7* | -0.947  | *AI467606* | 0.874  | *FERMT3* | 0.992  | *DDX41* | 0.938  | *PCP4* | -0.895  | *DYNLL2* | -0.970  |
| *ALX1* | 0.964  | *BMP2K* | 0.973  | *BCAN* | -0.941  | *FAM110C* | 0.978  | *C1QB* | 0.991  | *TMEFF1* | -0.931  | *WDR93* | -0.868  | *GRM7* | -0.855  |
| *IL12B* | 0.964  | *RPS3A* | 0.977  | *TGIF1* | 0.989  | *LMNA* | 0.980  | *RAB3IL1* | 0.853  | *ACSL3* | -0.870  | *ESAM* | 0.936  | *CD38* | 0.855  |
| *PABPC4L* | -0.958  | *GBP7* | 0.887  | *SPRY1* | 0.936  | *PLA2G4A* | 0.975  | *ATP2B2* | -0.981  | *AC099450.1* | 0.980  | *EMP1* | 0.930  | *ICAM1* | 0.906  |
| *CHN2* | -0.957  | *GIMAP4* | 0.893  | *SPTBN1* | -0.985  | *RGD1307461* | -0.970  | *RBP1* | 0.993  | *USP1* | 0.956  | *WWC1* | -0.967  | *DNAJB11* | 0.979  |
| *MSMP* | 0.964  | *SHANK2* | -0.951  | *AKAP13* | 0.988  | *SLC1A3* | -0.968  | *EIF2S2* | 0.986  | *D5ERTD579E* | -0.986  | *FOXP1* | -0.920  | *ENC1* | -0.868  |
| *SCT* | 0.964  | *HSPH1* | 0.955  | *LRRTM4* | -0.973  | *MANF* | 0.992  | *CST3* | -0.934  | *ELK3* | 0.979  | *SLC44A4* | 0.950  | *GSAP* | 0.815  |
| *TYRP1* | 0.964  | *BTBD17* | -0.933  | *SOX8* | -0.974  | *ZYX* | 0.967  | *AHCTF1* | 0.902  | *SUSD6* | 0.939  | *MTHFD1L* | 0.994  | *S1PR2* | 0.971  |
| *RPH3A* | -0.967  | *ARHGEF26* | -0.988  | *TP53* | 0.966  | *NABP1* | 0.892  | *S1PR3* | 0.987  | *ATP8B2* | -0.990  | *SIPA1L1* | -0.972  | *CDC42EP4* | -0.904  |
| *ACSL6* | -0.961  | *NOS3* | 0.883  | *HMGB2L1* | 0.883  | *PES1* | 0.959  | *RGS7* | -0.932  | *PFKL* | 0.902  | *TBPL1* | -0.926  | *FNDC1* | -0.889  |
| *PTPRC* | 0.977  | *RASGRP2* | -0.957  | *SEC24D* | 0.971  | *PPP2R1B* | 0.950  | *CARD11* | 0.897  | *SDAD1* | 0.949  | *LRG1* | 0.954  | *SRGAP1* | 0.950  |
| *ANXA7* | 0.959  | *RELA* | 0.949  | *RGS1* | 0.974  | *NRAS* | 0.876  | *VIM* | 0.991  | *CADM4* | -0.915  | *CDK5R2* | -0.978  | *RASSF1* | 0.965  |
| *CSF2RB* | 0.966  | *AKNA* | 0.938  | *MOXD1* | -0.967  | *SLC27A1* | -0.977  | *ITGB2* | 0.978  | *TMEM120A* | 0.977  | *BRSK1* | -0.988  | *PLOD3* | 0.956  |
| *FNDC5* | -0.948  | *RPL10A* | 0.945  | *MYC* | 0.998  | *GABRA1* | -0.978  | *RPSA* | 0.981  | *EPYC* | -0.889  | *EGFL6* | -0.938  | *KCNJ4* | -0.980  |
| *MCOLN3* | 0.916  | *VASP* | 0.962  | *ARHGAP8* | 0.865  | *SLC2A13* | -0.932  | *IL1RN* | 0.980  | *SLC66A3* | 0.937  | *GGTA1* | 0.850  | *USF3* | -0.951  |
| *MMP12* | 0.965  | *ECM1* | 0.926  | *IMPDH2* | 0.998  | *PPP1R15B* | 0.942  | *NECTIN1* | -0.964  | *LOX* | 0.924  | *S100A11* | 0.988  | *SLC30A3* | -0.987  |
| *SPN* | 0.954  | *PTX3* | 0.836  | *ACSBG1* | -0.961  | *DGKB* | -0.983  | *SLFN13* | 0.986  | *PRSS35* | 0.970  | *JAK3* | 0.916  | *PLAUR* | 0.920  |
| *MLPH* | 0.982  | *BAG1* | 0.873  | *ADAMTS1* | 0.989  | *TGFB1* | 0.973  | *TIMP1* | 0.963  | *COL7A1* | 0.878  | *PLAU* | 0.974  | *OMG* | -0.973  |
| *ERBIN* | 0.975  | *SLC8A3* | -0.925  | *MMP19* | 0.996  | *DLG1* | -0.854  | *LCP1* | 0.962  | *RPS25* | 0.887  | *RET* | 0.981  | *SNRPD3* | 0.911  |
| *ZFP316* | -0.948  | *ITPKC* | 0.968  | *NETO1* | -0.958  | *ZFP523* | -0.984  | *TAX1BP3* | 0.991  | *WHRN* | -0.969  | *ITGAX* | 0.842  | *TOP3A* | 0.888  |
| *DENND5A* | -0.967  | *SH3RF1* | -0.914  | *PDYN* | -0.923  | *KRCC1* | 0.901  | *NES* | 0.951  | *C3AR1* | 0.996  | *GRIA3* | -0.968  | *RPL27* | 0.946  |
| *FMNL1* | -0.971  | *SS18* | 0.938  | *PAFAH1B3* | 0.978  | *CSF3R* | 0.933  | *ENPP3* | 0.993  | *DGLUCY* | -0.910  | *PDE1B* | -0.985  | *SKAP2* | 0.973  |
| *GPATCH4* | 0.943  | *FBXO34* | -0.928  | *SEC11A* | 0.976  | *BTBD3* | -0.981  | *ACER2* | 0.950  | *R3HDM2* | -0.876  | *FAM167A* | 0.858  | *IMP4* | 0.944  |
| *CXCL1* | 0.957  | *FREM2* | -0.981  | *DPY19L3* | -0.955  | *RAP1B* | 0.990  | *NSMCE2* | 0.965  | *SEC61G* | 0.982  | *RBFOX1* | -0.982  | *ALDH1A1* | -0.920  |
| *TJP2* | 0.955  | *PYGB* | -0.952  | *DNAJC2* | 0.921  | *SCD3* | -0.855  | *TRIL* | -0.969  | *PPAN* | 0.951  | *HMOX1* | 0.929  | *ASH1L* | -0.929  |
| *ADAMTS7* | 0.986  | *HPCA* | -0.931  | *PALLDL1* | 0.989  | *RND2* | -0.851  | *LYN* | 0.957  | *NMT2* | -0.965  | *TRAPPC1* | -0.943  | *MYBBP1A* | 0.908  |
| *DDX21* | 0.981  | *GMNN* | 0.994  | *URB1* | 0.961  | *IL1B* | 0.922  | *GLS2* | -0.936  | *LCP2* | 0.853  | *ZMYND15* | 0.937  | *SCAP* | -0.987  |
| *SEPTIN2* | 0.960  | *BST1* | 0.996  | *UPP1* | 0.983  | *MAX* | 0.893  | *TRH* | 0.938  | *S100A3* | 0.977  | *ERAP1* | 0.890  | *ZFP382* | -0.922  |
| *LRRFIP1* | 0.987  | *CMTM3* | 0.831  | *RPN2* | 0.930  | *SLCO2B1* | -0.880  | *RPS24* | 0.911  | *PITPNM2* | -0.976  | *GSPT2* | -0.915  | *RRP12* | 0.954  |
| *MGLL* | -0.956  | *SLC26A1* | -0.975  | *CD163* | 0.943  | *NACC2* | -0.972  | *ILDR2* | -0.974  | *CXCL14* | -0.956  | *AK4* | -0.928  | *PCM1* | -0.952  |
| *ART4* | -0.949  | *MCAM* | 0.997  | *NEK6* | 0.886  | *LYSMD2* | -0.904  | *RHOC* | 0.994  | *TYW1* | 0.948  | *ASF1B* | 0.946  | *NDUFB4* | -0.952  |
| *SDS* | -0.949  | *LRRC73* | -0.990  | *SF1* | 0.963  | *CHN1* | -0.984  | *TMBIM1* | 0.964  | *PTGER2* | 0.959  | *IVD* | -0.963  | *PPIC* | 0.979  |
| *KCNQ5* | -0.964  | *TNPO1* | 0.903  | *FOSL1* | 0.920  | *AFG3L1* | 0.922  | *MAST3* | -0.979  | *KCNC3* | -0.873  | *SIPA1* | 0.985  | *ELF4* | 0.960  |
| *ZFHX2* | -0.974  | *DAP* | 0.971  | *LDHB* | -0.935  | *CDC42SE2* | -0.962  | *PC* | -0.943  | *TMEM196* | -0.907  | *MTMR11* | 0.968  | *FGF14* | -0.949  |
| *NAPSA* | 0.991  | *ASB11* | -0.956  | *EFCAB2* | -0.932  | *RASSF4* | 0.905  | *FBXW7* | -0.978  | *PABPC4* | 0.949  | *LRP4* | -0.935  | *MTMR2* | 0.968  |
| *CYP4F18* | 0.917  | *CCDC102A* | 0.918  | *SLC25A29* | -0.935  | *PTPN2* | 0.983  | *ATP10D* | 0.958  | *SASH1* | -0.969  | *NOP56* | 0.980  | *FSTL1* | 0.893  |
| *QRICH2* | 0.917  | *ANXA3* | 0.889  | *COL4A2* | 0.953  | *RGS8* | -0.882  | *PPM1B* | -0.955  | *ERMN* | -0.897  | *RPL22* | 0.871  | *RPL29* | 0.957  |
| *GATAD2A* | 0.978  | *ARID5A* | 0.987  | *APOE* | -0.933  | *TOM1L1* | -0.972  | *CNN3* | 0.957  | *CEP83* | -0.953  | *FAM107A* | -0.966  | *PIAS1* | -0.971  |
| *CAMK4* | -0.958  | *RSAD2* | 0.884  | *OSMR* | 0.928  | *SEC61B* | 0.967  | *E2F5* | 0.983  | *PLCL2* | -0.976  | *APOL3* | 0.976  | *NTSR2* | -0.880  |
| *GPNMB* | 0.939  | *GPX1* | 0.889  | *MT2A* | 0.961  | *TMEM44* | -0.937  | *LCN2* | 0.947  | *PNKD* | -0.922  | *RPL5* | 0.956  | *COL16A1* | 0.907  |
| *HCLS1* | 0.925  | *EMILIN1* | 0.966  | *MYBL2* | 0.831  | *PTRH1* | 0.905  | *A3GALT2* | 0.945  | *LIMD1* | 0.918  | *PSMB9* | 0.881  | *CAMK1D* | -0.871  |
| *SPP1* | 0.881  | *HNRNPF* | 0.994  | *ARPC1B* | 0.981  | *SLC38A3* | -0.946  | *S100A6* | 0.966  | *OSBPL8* | -0.869  | *ANP32B* | 0.985  | *F2RL1* | 0.939  |
| *ALDOC* | -0.970  | *NQO2* | 0.911  | *TRIM47* | 0.931  | *CASP4* | 0.856  | *RAD54L* | 0.941  | *YBX1* | 0.980  | *EHD2* | 0.978  | *ITGB1* | 0.976  |
| *CALCA* | 0.983  | *PICALM* | 0.944  | *SGSM2* | -0.962  | *PLEKHF1* | 0.746  | *S100A10* | 0.976  | *RTN4R* | -0.992  | *OPALIN* | -0.914  | *ZMAT1* | -0.972  |
| *DGKZ* | -0.956  | *0610040J01RIK* | -0.918  | *PSME1* | 0.910  | *MYOF* | 0.891  | *DIPK1C* | -0.967  | *PLCB1* | -0.968  | *SMARCD2* | 0.978  | *CA13* | 0.859  |
| *MVP* | 0.989  | *FXYD5* | 0.963  | *ITGAM* | 0.975  | *VAMP3* | 0.888  | *RIPK1* | 0.955  | *RPL34* | 0.974  | *TRPC3* | -0.957  | *PRRX1* | 0.983  |
| *S100A4* | 0.959  | *STMN1* | -0.971  | *TGM1* | 0.910  | *BMPR1B* | -0.956  | *DNTTIP2* | 0.949  | *CHRNB4* | 0.859  | *FBN1* | 0.959  | *NCF4* | 0.967  |
| *SCG3* | -0.976  | *1700028K03RIK* | -0.866  | *ARHGDIB* | 0.951  | *IL13RA1* | 0.947  | *TNFAIP6* | 0.992  | *LYNX1* | -0.957  | *MYO6* | -0.961  | *FBXL17* | -0.980  |
| *EIF4EBP1* | 0.982  | *PLEC* | 0.982  | *SLA2* | -0.871  | *MMP15* | -0.986  | *KIRREL3* | -0.979  | *TM4SF1* | 0.978  | *ITPR1* | -0.891  | *HIPK3* | -0.958  |
| *FJX1* | -0.968  | *NINJ1* | 0.993  | *SLC7A10* | -0.972  | *CHD7* | 0.985  | *SELP* | 0.890  | *PRKCB* | -0.865  | *PNPLA7* | -0.971  | *CGA* | 0.930  |
| *ADORA2A* | -0.944  | *ALCAM* | -0.884  | *MPP3* | -0.902  | *RUVBL2* | 0.994  | *IRF1* | 0.975  | *HAPLN1* | -0.990  | *LAMC1* | 0.964  | *MPPED1* | -0.988  |
| *HK3* | 0.925  | *CYP1B1* | 0.953  | *AXL* | 0.955  | *PLK5* | -0.941  | *FRMPD1* | 0.981  | *ADAM9* | 0.993  | *PFN1* | 0.974  | *THY1* | -0.950  |
| *FCER1G* | 0.969  | *EFNA1* | 0.988  | *STT3A* | 0.938  | *PLAAT5* | 0.926  | *TAGLN2* | 0.977  | *TSPO* | 0.937  | *RPL23A* | 0.928  | *AGT* | -0.984  |
| *CMBL* | -0.943  | *NUP205* | 0.984  | *ITM2A* | -0.977  | *PCDH20* | -0.974  | *EIF1A* | 0.987  | *CDH15* | -0.977  | *FKBP10* | 0.966  | *KCNG4* | -0.996  |
| *MSR1* | 0.972  | *CKAP2* | 0.866  | *TTC7A* | 0.966  | *NEFL* | -0.886  | *AMPD3* | 0.965  | *ABAT* | -0.965  | *CWF19L2* | -0.926  | *LPAR6* | 0.934  |
| *PRDX1* | 0.987  | *MXI1* | -0.966  | *TEX10* | 0.951  | *SLC3A2* | 0.970  | *SERPINE1* | 0.928  | *MEIS1* | -0.888  | *SGTB* | -0.955  | *IQGAP1* | 0.952  |
| *LITAF* | 0.967  | *XIRP1* | 0.885  | *B2M* | 0.952  | *AABR07054578.1* | -0.952  | *OSBP2* | -0.948  | *CTSB* | 0.980  | *IFI30* | 0.931  | *PFKFB4* | 0.823  |
| *TP53BP2* | -0.937  | *TRIB3* | 0.959  | *SCIMP* | 0.945  | *GAL* | 0.897  | *TTYH1* | -0.985  | *MCF2L* | -0.951  | *TAGLN* | 0.865  | *PDCD11* | 0.975  |
| *RIMS1* | -0.959  | *RGD1559896* | -0.975  | *SERPINB11* | 0.945  | *MMP8* | 0.922  | *USH2A* | -0.933  | *HCN2* | -0.971  | *FCGR1A* | 0.887  | *EPHX4* | -0.981  |
| *MYO19* | 0.990  | *TMEM100* | 0.952  | *FGL2* | 0.971  | *MLIP* | -0.978  | *SIGIRR* | 0.934  | *BSN* | -0.997  | *GNAI3* | 0.979  | *PPP1R21* | -0.920  |
| *WDFY4* | 0.918  | *GPM6B* | -0.916  | *MCM4* | 0.883  | *ILRUN* | -0.915  | *PDE10A* | -0.960  | *ARHGEF4* | -0.958  | *MCM10* | 0.765  | *ARNT2* | -0.990  |
| *RGS9* | -0.939  | *SFXN5* | -0.926  | *SLC1A2* | -0.987  | *LARGE1* | -0.898  | *KCNH7* | -0.944  | *SERTAD1* | 0.984  | *AABR07034648.1* | 0.965  | *OSBPL6* | -0.928  |
| *CLIC1* | 0.997  | *HHATL* | -0.987  | *SALL1* | -0.916  | *MBD2* | 0.947  | *XKR5* | 0.944  | *RPS5* | 0.975  | *RBBP9* | -0.994  | *IL10RB* | 0.966  |
| *RPS27L* | 0.946  | *LILRA5* | 0.945  | *LPP* | 0.905  | *DLG4* | -0.968  | *RPS27A-PS1* | 0.973  | *MKI67* | 0.835  | *CAPG* | 0.842  | *CAD* | 0.961  |
| *MAP4* | 0.957  | *EMP3* | 0.984  | *SLC16A1* | 0.943  | *CDH12* | -0.987  | *ARHGAP5* | -0.964  | *MGST3* | -0.939  | *GPR182* | 0.796  | *FAM102A* | -0.849  |
| *NRGN* | -0.943  | *MLC1* | -0.921  | *GPX8* | 0.926  | *PPP3CA* | -0.967  | *TARS1* | 0.928  | *PTPN12* | 0.991  | *SNRNP48* | 0.905  | *LZTS1* | -0.996  |
| *TMED5* | 0.953  | *SMPD3* | -0.964  | *MYH9* | 0.945  | *ENG* | 0.902  | *S100A9* | 0.958  | *FN1* | 0.929  | *ADM* | 0.896  | *MYO9B* | 0.955  |
| *CD44* | 0.975  | *RALGPS1* | -0.956  | *RAPH1* | -0.946  | *RPL6* | 0.918  | *NDRG2* | -0.972  | *RALGDS* | 0.986  | *SPOCK3* | -0.975  | *KALRN* | -0.989  |
| *CCDC184* | -0.939  | *ID4* | -0.923  | *PPP1R14B* | 0.930  | *IFITM2* | 0.938  | *STON2* | -0.985  | *IL2RG* | 0.907  | *TBX4* | 0.957  | *RPLP1* | 0.970  |
| *ARHGEF2* | -0.958  | *KCNQ3* | -0.920  | *CAST* | 0.977  | *RGD1306746* | -0.974  | *CRELD2* | 0.975  | *NOTUM* | -0.897  | *DTNA* | -0.971  | *NFE2L2* | 0.925  |
| *SYNDIG1* | -0.943  | *PLCE1* | 0.906  | *PLXND1* | -0.966  | *FAM205A* | 0.857  | *EIF3A* | 0.971  | *TALDO1* | 0.978  | *BIRC3* | 0.942  | *P2RX2* | -0.915  |
| *HEATR5A* | 0.983  | *OTULINL* | 0.858  | *AABR07052519.1* | 0.992  | *HES2* | 0.857  | *HCAR2* | 0.914  | *FAM110D* | 0.882  | *PENK* | -0.966  | *FTL1* | 0.983  |
| *CCN6* | -0.949  | *ALYREF* | 0.990  | *NGEF* | -0.979  | *PADI4* | 0.857  | *GCA* | -0.933  | *SALL2* | -0.956  | *SYNE1* | -0.986  | *PRKCA* | -0.948  |
| *MEIG1* | -0.949  | *SERPINH1* | 0.981  | *SECTM1B* | 0.796  | *THBS1* | 0.901  | *ITGAL* | 0.950  | *UNC13A* | -0.909  | *MTMR7* | -0.895  | *TRIM54* | -0.918  |
| *ADHFE1* | -0.973  | *CHD9* | -0.970  | *GM6377* | 0.993  | *CX3CL1* | -0.999  | *CCL2* | 0.927  | *FHL3* | 0.973  | *ARF4* | 0.944  | *PIH1D2* | 0.951  |
| *PDPN* | 0.978  | *PLEK* | 0.821  | *MED21* | 0.936  | *MFNG* | 0.920  | *TUBB6* | 0.985  | *TEX21* | 0.902  | *RPS20* | 0.976  | *AMOTL1* | 0.835  |
| *LGALS3* | 0.998  | *DIS3* | 0.967  | *TMEM123* | 0.970  | *ARHGAP30* | 0.888  | *C1QTNF1* | 0.892  | *MELTF* | -0.951  | *FADS6* | -0.945  | *MMD2* | -0.986  |
| *SLC1A5* | 0.994  | *SEC62* | -0.946  | *GPSM3* | 0.895  | *KCNH4* | -0.891  | *YBX3* | 0.989  | *MSANTD3* | 0.993  | *OTUB2* | -0.965  | *RNH1* | 0.943  |
| *RIPK3* | 0.955  | *BAK1* | 0.972  | *AIFM3* | -0.961  | *CACNA2D2* | -0.969  | *PACSIN3* | 0.971  | *ANKRD23* | -0.867  | *SYNCRIP* | 0.983  | *SNRPEL1* | 0.869  |
| *CCNI* | -0.945  | *EIF3J* | 0.946  | *COL4A1* | 0.944  | *TWF1* | 0.972  | *ASPG* | 0.958  | *JPT2* | 0.984  | *SNX18* | 0.998  | *IQSEC3* | -0.871  |
| *PIP4K2C* | -0.976  | *ARHGEF25* | -0.983  | *NOP14* | 0.989  | *IMPG2* | -0.905  | *TK1* | 0.940  | *U2AF1* | 0.965  | *CD86* | 0.752  | *ST3GAL2* | -0.997  |
| *NEFM* | -0.936  | *TRHDE* | -0.981  | *CTTNBP2NL* | 0.991  | *FBXO30* | 0.978  | *TXNRD1* | 0.992  | *LHPP* | -0.952  | *OLFM1* | -0.991  | *CACNB4* | -0.924  |
| *CLEC5A* | 0.982  | *DNAJC3* | 0.975  | *OAS1K* | 0.970  | *AKR1B10* | 0.747  | *ODC1* | 0.993  | *DDX18* | 0.911  | *CHD1* | 0.997  | *SLC6A11* | -0.978  |
| *IFNAR2* | 0.943  | *N4BP1* | 0.914  | *INTS13* | 0.895  | *MAOA* | 0.911  | *PHACTR1* | -0.939  | *MCF2* | -0.867  | *CAMK2A* | -0.995  | *FAM210B* | -0.867  |
| *MDN1* | 0.941  | *CBARP* | -0.956  | *RIMS2* | -0.971  | *MYO7A* | 0.855  | *BCL3* | 0.938  | *MS4A6A* | 0.896  | *IL1R2* | 0.946  | *CRTAPL1* | 0.871  |
| *LTBR* | 0.943  | *TBCCD1* | 0.847  | *NME6* | 0.890  | *BAZ1A* | 0.976  | *TTLL7* | -0.950  | *STAT4* | 0.858  | *FGF13* | -0.967  | *KCNV1* | -0.955  |
| *SHC3* | -0.939  | *FZD6* | 0.943  | *RUFY4* | 0.988  | *HSPA2* | 0.887  | *ZFAND2A* | 0.912  | *PHLPP1* | -0.875  | *ITGB3* | 0.932  | *SRSF2* | 0.969  |
| *SPTSSB* | -0.958  | *CAMTA2* | -0.984  | *RIN3* | 0.991  | *PYCARD* | 0.922  | *ATP1A2* | -0.975  | *PRODH1* | -0.953  | *TLN1* | 0.972  | *RPL23* | 0.964  |
| *CD14* | 0.984  | *PODXL* | 0.942  | *SPAG9* | -0.972  | *MATK* | -0.979  | *PDE7B* | -0.941  | *CCT4* | 0.938  | *EEF1B2* | 0.935  | *PARP3* | 0.940  |
| *LSP1* | 0.979  | *USP43* | -0.890  | *DRD1* | -0.918  | *BTAF1* | 0.989  | *SOX7* | 0.954  | *MED22* | 0.868  | *TNFSF18* | 0.998  | *TBC1D16* | -0.975  |
| *PUS7* | 0.974  | *HAS1* | 0.928  | *ESM1* | 0.882  | *PKDCC* | 0.866  | *PDE8B* | -0.986  | *GNAI2* | 0.882  | *TRIP6* | 0.882  | *NPPC* | -0.826  |
| *ANO6* | 0.998  | *BID* | 0.912  | *CA14* | -0.941  | *NIBAN2* | 0.963  | *CNN2* | 0.971  | *KCNK2* | -0.914  | *AMOT* | -0.941  | *C1S* | 0.931  |
| *RPL36A* | 0.951  | *SEPTIN8* | -0.991  | *TIGD2* | 0.923  | *IL4R* | 0.912  | *DRAM1* | 0.987  | *PSMB8* | 0.976  | *CARMIL1* | -0.991  | *COQ2* | -0.910  |
| *KNG1* | 0.982  | *SLC2A1* | 0.990  | *HHIP* | -0.902  | *ACSF2* | -0.947  | *PLOD1* | 0.977  | *CHCHD10* | -0.989  | *MFAP3L* | -0.886  | *RMDN1* | -0.969  |
| *SBNO2* | 0.982  | *PLA2G4E* | -0.911  | *ITPKA* | -0.989  | *LACTB* | 0.952  | *IFITM3* | 0.931  | *PLAC8* | 0.973  | *GJA4* | 0.871  | *HSF1* | 0.909  |
| *LPCAT4* | -0.965  | *SH3GLB1* | 0.934  | *MYL12A* | 0.991  | *PLPP3* | -0.951  | *CNTFR* | -0.967  | *SPHK1* | 0.935  | *PFKFB3* | 0.990  | *DDC* | -0.970  |
| *PPP1R1B* | -0.936  | *SYT2* | -0.883  | *RASSF8* | 0.970  | *RPS15* | 0.970  | *NTNG2* | -0.929  | *GPRC5B* | -0.897  | *AGAP2* | -0.932  | *PDLIM7* | 0.981  |
| *CEBPD* | 0.995  | *NIP7* | 0.981  | *SCN4B* | -0.906  | *LRCH1* | 0.990  | *CD276* | 0.934  | *XYLB* | 0.863  | *MAP3K10* | -0.977  | *RBL1* | 0.844  |
| *SYNDIG1L* | -0.925  | *WDR1* | 0.946  | *ACOT11* | -0.916  | *ERI1* | 0.983  | *TMEM43* | 0.944  | *RPL9* | 0.971  | *TGM2* | 0.923  | *IFIT3* | 0.904  |
| *RPS17* | 0.966  | *LSM3* | 0.912  | *MTSS2* | -0.989  | *GH1* | -0.777  | *CAP2* | -0.948  | *RPS4X* | 0.937  | *RPL26* | 0.966  | *HCK* | 0.929  |
| *LINGO1* | -0.932  | *GLI3* | -0.952  | *RPL11* | 0.951  | *KLHL5* | -0.971  | *SLC24A2* | -0.983  | *KCNJ9* | -0.960  | *ANK1* | -0.882  | *STK3* | 0.847  |
| *MICAL2* | -0.918  | *CDH6* | -0.884  | *AABR07008904.1* | 0.900  | *CAPN2* | 0.922  | *S100A8* | 0.963  | *PPRC1* | 0.983  | *DRD2* | -0.912  | *KDSR* | 0.959  |
| *SMAP2* | -0.970  | *TNFSF13* | -0.984  | *CAMKK2* | -0.988  | *TBXAS1* | 0.965  | *ARPP21* | -0.943  | *GJA5* | 0.984  | *LGMN* | 0.966  | *ORC2* | 0.910  |
| *SH3KBP1* | -0.977  | *IRF9* | 0.801  | *CDC42BPG* | -0.960  | *SCART1* | 0.731  | *CCL3* | 0.966  | *ARHGAP6* | -0.934  | *APC* | -0.907  | *CYBA* | 0.989  |
| *MMP9* | 0.971  | *SRSF9* | 0.951  | *MAMSTR* | -0.951  | *DENND2C* | 0.927  | *ARHGAP17* | 0.979  | *UTP4* | 0.955  | *SPI1* | 0.974  | *AC128848.1* | 0.866  |
| *SP140* | 0.961  | *ANXA1* | 0.870  | *TXN1* | 0.990  | *RASD2* | -0.891  | *NECTIN2* | 0.975  | *SLC12A2* | 0.963  | *PDLIM4* | 0.910  | *FEN1* | 0.937  |
| *MYD88* | 0.960  | *MAFF* | 0.955  | *APRT* | 0.954  | *ANKRD34B* | -0.912  | *LRIF1* | -0.937  | *CP* | 0.900  | *CPLX2* | -0.989  | *AABR07063279.1* | 0.828  |
| *MME* | -0.961  | *GBP2* | 0.905  | *ABHD3* | -0.912  | *VIPR2* | -0.881  | *TPM4* | 0.987  | *MSLN* | 0.853  | *COL6A3* | 0.987  | *TNNC2* | -0.838  |
| *SEPTIN5* | -0.939  | *KIFC1* | 0.897  | *ZFAND2B* | -0.936  | *FGFR1* | 0.985  | *CD63* | 0.974  | *TTBK1* | -0.909  | *SHANK1* | -0.974  | *PA2G4* | 0.885  |
| *FLNC* | 0.992  | *FCGR2B* | 0.970  | *PLEKHG2* | 0.987  | *RGS16* | 0.973  | *TFCP2L1* | -0.950  | *MOB3A* | 0.944  | *CLEC10A* | 0.781  | *SYDE1* | 0.910  |
| *AI593442* | -0.951  | *RPL31* | 0.972  | *PPP4R1* | 0.979  | *SGCA* | -0.944  | *BAG3* | 0.991  | *NPAS2* | -0.972  | *GNAO1* | -0.935  | *NAT8L* | -0.959  |
| *P2RY12* | -0.910  | *TACC3* | 0.967  | *SCD2* | -0.926  | *NUP58* | 0.920  | *DLGAP3* | -0.982  | *CD9* | 0.977  | *ANXA2* | 0.913  | *CCDC88C* | 0.962  |
| *ETV5* | -0.938  | *PCYT2* | 0.956  | *FBXW4* | 0.919  | *PDS5A* | 0.987  | *GRIN2A* | -0.973  | *MCEMP1* | 0.749  | *PTN* | -0.924  | *NKIRAS1* | -0.931  |
| *GOLM1* | -0.962  | *LIF* | 0.817  | *ANGPT2* | 0.954  | *RHOJ* | 0.887  | *ZFP385B* | -0.976  | *MAP1A* | -0.985  | *CUX1* | -0.948  | *FAM174B* | -0.951  |
| *NTRK2* | -0.947  | *MYO1C* | 0.957  | *FGR* | 0.978  | *MTHFD2* | 0.952  | *FBXL19* | -0.967  | *NFKB1* | 0.975  | *RAB11FIP4* | -0.968  | *TMEM229B* | -0.920  |
| *STAT3* | 0.974  | *RGS6* | -0.873  | *MARK2* | -0.933  | *TMOD3* | 0.976  | *SLFN2* | 0.982  | *LRRC55* | -0.874  | *SLC50A1* | 0.970  | *CEMIP2* | 0.982  |
| *ADCY5* | -0.957  | *TREM1* | 0.817  | *CD164* | 0.980  | *RHOBTB2* | -0.978  | *IL11* | 0.821  | *GABRG1* | -0.984  | *MACROD1* | -0.895  | *PARD6A* | -0.872  |
| *DIXDC1* | -0.920  | *NDNF* | -0.892  | *KRT2* | -0.896  | *PAK1IP1* | 0.976  | *LYRM9* | -0.971  | *FBLN2* | 0.850  | *GFAP* | 0.808  | *KIF1A* | -0.977  |
| *SH3PXD2B* | 0.969  | *SCP2* | -0.952  | *TNFRSF12A* | 0.973  | *GSTK1* | -0.883  | *EPB41L3* | -0.962  | *RAC2* | 0.933  | *ANGPTL4* | 0.878  | *MAP3K6* | 0.880  |
| *TTL* | -0.966  | *CDO1* | 0.979  | *PPFIA3* | -0.954  | *PIP5K1B* | -0.918  | *NMNAT1* | 0.941  | *ZFP462* | -0.950  | *SEC23B* | 0.993  | *PLPPR5* | -0.996  |
| *DSE* | 0.976  | *CDT1* | 0.949  | *FBL* | 0.967  | *MT1* | 0.925  | *CCL4* | 0.870  | *SLC6A13* | -0.905  | *DOCK8* | 0.888  | *PRICKLE1* | -0.867  |
| *MN1* | -0.972  | *PLIN2* | 0.872  | *RRAS* | 0.959  | *NFKB2* | 0.959  | *DUSP16* | 0.971  | *PKIB* | -0.839  | *RPS27A* | 0.929  | *CDK6* | 0.817  |
| *STARD8* | -0.986  | *ALDH1L2* | 0.956  | *MAGI2* | -0.948  | *ABCA2* | -0.915  | *MIDEAS* | 0.975  | *OASL* | 0.962  | *NOP58* | 0.981  | *HNMT* | -0.925  |
| *SLC25A18* | -0.941  | *RPL28* | 0.970  | *PDLIM1* | 0.940  | *EIF3M* | 0.914  | *MCMBP* | 0.940  | *CYP4F1* | -0.860  | *MPC1* | -0.923  | *RBM3* | 0.847  |
| *SLPI* | 0.934  | *APPL2* | -0.912  | *ADAMTS9* | 0.924  | *PVR* | 0.930  | *IDH2* | -0.933  | *SRPK2* | -0.870  | *EPS15* | -0.962  | *NR3C1* | -0.978  |
| *RPS12* | 0.970  | *SAT2* | -0.978  | *PAK1* | -0.959  | *NLGN2* | -0.967  | *PTBP1* | 0.992  | *FNDC3B* | 0.948  | *HSPB8* | 0.984  | *FNIP2* | 0.992  |
| *MARK3* | 0.984  | *IL6R* | 0.916  | *SEMA5A* | -0.913  | *MCM2* | 0.914  | *NPM1* | 0.961  | *CLDN10* | -0.991  | *RPLP0* | 0.971  | *MINK1* | -0.966  |
| *TNFRSF1A* | 0.992  | *SHMT2* | 0.973  | *SLC22A6* | -0.966  | *WDHD1* | 0.929  | *ATF7* | 0.982  | *SLC6A1* | -0.995  | *GLIPR1* | 0.985  | *VSNL1* | -0.965  |
| *MSN* | 0.993  | *LBP* | 0.782  | *ETL4* | -0.937  | *PAWR* | 0.966  | *C1QC* | 0.993  | *FGF12* | -0.892  | *PARPBP* | 0.739  | *GAL3ST3* | -0.964  |
| *HSPB1* | 0.887  | *BCL2A1* | 0.948  | *HS3ST5* | -0.892  | *DPAGT1* | 0.843  | *CNTN4* | -0.912  | *TYROBP* | 0.978  | *FEZ1* | -0.903  | *COQ8B* | 0.947  |
| *STK40* | 0.948  | *PADI2* | -0.951  | *CTSZ* | 0.978  | *ACO2* | -0.942  | *CXCL16* | 0.934  | *CHUK* | 0.947  | *CALU* | 0.966  | *MAPKAPK3* | 0.977  |
| *RORB* | -0.937  | *CRACDL* | -0.987  | *SLC25A24* | 0.950  | *ADRB1* | -0.910  | *SNPH* | -0.967  | *GSTM1* | -0.875  | *ZDHHC8* | -0.987  | *LUZP2* | -0.898  |
| *ATP13A4* | -0.922  | *FAXC* | -0.915  | *GRIP2* | -0.909  | *MYO1F* | 0.949  | *ZFP672* | 0.935  | *OLFM3* | -0.906  | *RPS27* | 0.948  | *ARL3* | -0.889  |
| *IFI27L2B* | 0.961  | *LRR1* | 0.752  | *GRN* | 0.985  | *TTLL1* | -0.923  | *GLIPR2* | 0.817  | *FMN1* | -0.922  | *OLFML2B* | 0.947  | *MIB1* | -0.967  |
| *CARHSP1* | 0.957  | *NETO2* | -0.932  | *CCL7* | 0.895  | *PKN2* | 0.957  | *PLPP1* | 0.943  | *PSMA6* | 0.943  | *IFT80* | -0.938  | *DAGLB* | -0.973  |
| *CADPS2* | -0.983  | *MGC105649* | 0.953  | *ABTB1* | -0.929  | *CHSY1* | 0.960  | *GNL3* | 0.928  | *SPATA5* | 0.974  |  |  |  |  |