**Supplementary Table 4 Total enriched KEGG terms of differentially expressed mRNAs in ischemic stroke**

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| --- | --- | --- | --- | --- |
| **ID** | **Term** | **Count** | **FDR** | **MRNAs** |
| Kegg:00230 | Purine metabolism | 28 | 1.79E-09 | NUDT2,POLR2F,POLR2H,PRPS1,NT5C,APRT,POLR1C,POLR3K,GART,AK1,POLR2L,PDE4D,PPAT,ENTPD6,AK2,PDE6B,ADCY4,ADA,NT5C2,NME6,PDE7A,IMPDH2,NME3,NT5C3,DGUOK,PAICS,POLR1E,POLR2I |
| Kegg:00240 | Pyrimidine metabolism | 18 | 1.08E-06 | NUDT2,POLR2F,POLR2H,NT5C,POLR1C,POLR3K,POLR2L,UCK2,ENTPD6,NT5C2,NME6,DPYD,NME3,NT5C3,POLR1E,DCTD,POLR2I,DUT |
| Kegg:05016 | Huntington's disease | 25 | 1.40E-06 | NDUFA8,ATP5G1,POLR2F,POLR2H,NDUFS8,ATP5D,POLR2L,NDUFB7,COX5B,NDUFB11,NDUFV1,NDUFA12,AP2A2,SLC25A4,TBP,COX8A,UQCR10,NDUFA13,IFT57,CREBBP,NDUFB2,NDUFA11,NDUFS3,POLR2I,NDUFS7 |
| Kegg:05012 | Parkinson's disease | 20 | 3.39E-06 | NDUFA8,ATP5G1,NDUFS8,ATP5D,NDUFB7,COX5B,NDUFB11,NDUFV1,NDUFA12,UBE2G2,LRRK2,SLC25A4,COX8A,UQCR10,NDUFA13,UBE2L3,NDUFB2,NDUFA11,NDUFS3,NDUFS7 |
| Kegg:03008 | Ribosome biogenesis in eukaryotes | 15 | 3.89E-06 | NOB1,NOP56,RCL1,IMP4,POP7,CSNK2A2,DKC1,POP5,HEATR1,NHP2,UTP14C,NHP2L1,IMP3,NVL,RPP25 |
| Kegg:03013 | RNA transport | 20 | 1.98E-05 | NUPL2,GEMIN4,EIF3F,EIF4G3,SEH1L,KPNB1,THOC6,POP7,EIF4B,EIF3G,POP5,EIF1B,NUP85,EIF3I,NUP210,XPO5,RANGAP1,ELAC1,GEMIN8,RPP25 |
| Kegg:05010 | Alzheimer's disease | 21 | 2.82E-05 | GSK3B,NDUFA8,ATP5G1,ITPR3,NDUFS8,ATP5D,NDUFB7,COX5B,NDUFB11,PPP3CC,NDUFV1,NDUFA12,PPP3R1,COX8A,UQCR10,NDUFA13,MME,NDUFB2,NDUFA11,NDUFS3,NDUFS7 |
| Kegg:00190 | Oxidative phosphorylation | 18 | 5.07E-05 | COX11,NDUFA8,ATP5G1,NDUFS8,ATP5D,NDUFB7,COX5B,NDUFB11,NDUFV1,NDUFA12,ATP6V0E2,COX8A,UQCR10,NDUFA13,NDUFB2,NDUFA11,NDUFS3,NDUFS7 |
| Kegg:05162 | Measles | 17 | 0.000189 | CDK6,GSK3B,TLR2,CCND2,CDK4,CD3D,STAT3,MYD88,FASLG,CSNK2A2,CDK2,IKBKE,FYN,TNFSF10,TNFRSF10A,STAT5A,SLAMF1 |
| Kegg:04210 | Apoptosis | 13 | 0.000404 | TRAF2,BIRC2,PPP3CC,MYD88,FASLG,PPP3R1,IL1RAP,IRAK3,DFFB,PRKX,ENDOG,TNFSF10,TNFRSF10A |
| Kegg:05340 | Primary immunodeficiency | 8 | 0.000407 | IL7R,CD79A,CD3D,ADA,ICOS,CD40LG,CD19,UNG |
| Kegg:04662 | B cell receptor signaling pathway | 12 | 0.000424 | GSK3B,CD81,FOS,PLCG2,CD72,CD79A,CARD11,PPP3CC,LILRB3,PPP3R1,CD79B,CD19 |
| Kegg:04520 | Adherens junction | 11 | 0.000918 | LEF1,ACTN1,CTNNA1,WAS,ACTB,CSNK2A2,VCL,IQGAP1,SMAD3,FYN,CREBBP |
| Kegg:04640 | Hematopoietic cell lineage | 12 | 0.000936 | IL7R,CD55,IL1R2,CD7,ITGAM,CD3D,ANPEP,ITGA2B,CD19,MME,CD2,FLT3LG |
| Kegg:03020 | RNA polymerase | 7 | 0.000988 | POLR2F,POLR2H,POLR1C,POLR3K,POLR2L,POLR1E,POLR2I |
| Kegg:04660 | T cell receptor signaling pathway | 13 | 0.002535 | GSK3B,FOS,CARD11,CDK4,CD3D,PPP3CC,ITK,CD247,PPP3R1,PAK1,ICOS,CD40LG,FYN |
| Kegg:05200 | Pathways in cancer | 26 | 0.003296 | CDK6,MMP9,GSK3B,NCOA4,FGF9,LEF1,AXIN2,FOS,CTNNA1,TRAF2,BIRC2,PLCG2,CDK4,STAT3,PTEN,ITGA2B,FASLG,RALBP1,CDK2,RASSF1,SMAD3,CREBBP,RARA,FLT3LG,STAT5A,PTGS2 |
| Kegg:00052 | Galactose metabolism | 6 | 0.004824 | GAA,G6PC,PFKP,MGAM,AKR1B1,B4GALT1 |
| Kegg:00510 | N-Glycan biosynthesis | 8 | 0.004893 | DOLPP1,MAN2A2,STT3A,MAN1B1,MAN1A1,ALG13,DPM3,B4GALT1 |
| Kegg:04146 | Peroxisome | 10 | 0.005701 | ACSL1,PMVK,PEX1,ECH1,MPV17,MLYCD,PEX11B,EPHX2,PEX5,FAR2 |
| Kegg:03018 | RNA degradation | 9 | 0.007446 | DCPS,LSM7,LSM4,EXOSC1,EDC3,RQCD1,EXOSC5,EXOSC7,EXOSC2 |
| Kegg:04110 | Cell cycle | 13 | 0.007535 | CDK6,GSK3B,GADD45A,MCM7,CCND2,CDK4,E2F5,CDC25B,MCM3,CDK2,STAG2,SMAD3,CREBBP |
| Kegg:04010 | MAPK signaling pathway | 21 | 0.009146 | FGF9,GADD45A,FOS,DAXX,CACNA1E,IL1R2,TRAF2,DUSP1,PPM1A,PPP3CC,CACNA1B,FASLG,CDC25B,PPP3R1,PAK1,MAP3K4,PRKX,STMN1,CACNB3,STK3,DUSP14 |
| Kegg:00280 | Valine, leucine and isoleucine degradation | 7 | 0.010242 | BCAT1,BCAT2,MCCC1,OXCT1,HIBADH,IVD,DBT |
| Kegg:04310 | Wnt signaling pathway | 14 | 0.012842 | GSK3B,LEF1,AXIN2,CSNK1E,CCND2,PPP3CC,CSNK2A2,PPP3R1,DAAM2,PRKX,SMAD3,ROCK1,TBL1X,CREBBP |
| Kegg:05412 | Arrhythmogenic right ventricular cardiomyopathy (ARVC) | 9 | 0.013072 | DSC2,LEF1,ACTN1,CTNNA1,ITGA2B,ACTB,CACNB3,ITGB5,ITGB7 |
| Kegg:03030 | DNA replication | 6 | 0.013638 | RPA2,RNASEH2A,RNASEH1,MCM7,LIG1,MCM3 |
| Kegg:00760 | Nicotinate and nicotinamide metabolism | 5 | 0.015061 | NNMT,NT5C,NAMPT,NT5C2,NT5C3 |
| Kegg:04060 | Cytokine-cytokine receptor interaction | 20 | 0.015195 | IL12RB1,IL7R,TNFSF13B,TNFRSF25,IL1R2,CLCF1,CXCL16,FASLG,IL1RAP,TNFRSF4,IL23A,IL10RA,CD40LG,CD70,LTB,CCR7,TNFSF10,TNFRSF10A,FLT3LG,CD27 |
| Kegg:00770 | Pantothenate and CoA biosynthesis | 4 | 0.021266 | BCAT1,BCAT2,VNN2,DPYD |
| Kegg:04510 | Focal adhesion | 16 | 0.021688 | GSK3B,ACTN1,BIRC2,CCND2,PTEN,TLN1,THBS1,ITGA2B,ACTB,VCL,PAK1,VASP,ROCK1,FYN,ITGB5,ITGB7 |
| Kegg:00350 | Tyrosine metabolism | 6 | 0.02171 | HEMK1,LCMT2,WBSCR22,LCMT1,MIF,GOT1 |
| Kegg:04670 | Leukocyte transendothelial migration | 11 | 0.02196 | MMP9,ACTN1,CTNNA1,PLCG2,ITGAM,ITK,ACTB,VCL,VASP,ROCK1,TXK |
| Kegg:04115 | p53 signaling pathway | 8 | 0.022462 | CDK6,GADD45A,SESN3,CCND2,CDK4,PTEN,THBS1,CDK2 |
| Kegg:00330 | Arginine and proline metabolism | 7 | 0.023439 | ALDH18A1,GAMT,ARG1,SAT1,SRM,GOT1,GLS |
| Kegg:00340 | Histidine metabolism | 5 | 0.023942 | HEMK1,LCMT2,WBSCR22,LCMT1,HAL |
| Kegg:03040 | Spliceosome | 11 | 0.02731 | SNRPA,LSM7,LSM4,PPIH,RBMX,PPIL1,TXNL4A,SNRPF,NHP2L1,CCDC12,SNRNP40 |
| Kegg:00100 | Steroid biosynthesis | 4 | 0.027328 | SOAT1,SC4MOL,EBP,CYP2R1 |
| Kegg:00290 | Valine, leucine and isoleucine biosynthesis | 3 | 0.02752 | IARS,BCAT1,BCAT2 |
| Kegg:05152 | Tuberculosis | 14 | 0.028867 | CTSS,RAB7A,ITGAX,TLR2,ITGAM,CLEC4E,PPP3CC,MYD88,PPP3R1,IL23A,IL10RA,CREBBP,LAMP2,CEBPB |
| Kegg:04810 | Regulation of actin cytoskeleton | 16 | 0.029147 | FGF9,ACTN1,ITGAX,WAS,SSH2,ITGAM,ITGA2B,MYH9,ACTB,VCL,PAK1,IQGAP2,IQGAP1,ROCK1,ITGB5,ITGB7 |
| Kegg:04145 | Phagosome | 12 | 0.029562 | CTSS,RAB7A,TLR2,ITGAM,THBS1,ACTB,RILP,ATP6V0E2,M6PR,VAMP3,ITGB5,LAMP2 |
| Kegg:05414 | Dilated cardiomyopathy | 9 | 0.03038 | TPM2,ITGA2B,ACTB,ADCY4,MYBPC3,PRKX,CACNB3,ITGB5,ITGB7 |
| Kegg:04020 | Calcium signaling pathway | 14 | 0.031214 | CACNA1E,ITPR3,PLCG2,PPP3CC,CACNA1B,ADCY4,PPP3R1,SLC25A4,PTAFR,P2RX1,PRKX,TRPC1,HTR6,ADRA1D |
| Kegg:03410 | Base excision repair | 5 | 0.033814 | NTHL1,MUTYH,LIG1,OGG1,UNG |
| Kegg:04650 | Natural killer cell mediated cytotoxicity | 11 | 0.034531 | ICAM2,PLCG2,PPP3CC,HCST,FASLG,CD247,PPP3R1,PAK1,FYN,TNFSF10,TNFRSF10A |
| Kegg:04964 | Proximal tubule bicarbonate reclamation | 4 | 0.037121 | CA2,FXYD2,CA4,GLS |
| Kegg:04360 | Axon guidance | 11 | 0.039259 | EPHA1,GSK3B,EFNA4,ABLIM3,PPP3CC,PPP3R1,PAK1,ROCK1,FYN,SEMA4F,EPHA4 |
| Kegg:00910 | Nitrogen metabolism | 4 | 0.041837 | HAL,CA2,CA4,GLS |
| Kegg:04530 | Tight junction | 11 | 0.042085 | CTTN,ACTN1,CTNNA1,CDK4,PTEN,MPP5,MYH9,TJAP1,ACTB,CSNK2A2,CASK |
| Kegg:04062 | Chemokine signaling pathway | 14 | 0.043134 | GSK3B,PREX1,WAS,STAT3,CXCL16,ITK,ADCY4,GNG7,PAK1,PRKX,ROCK1,CCR7,FOXO3,GNGT2 |
| Kegg:00270 | Cysteine and methionine metabolism | 5 | 0.043199 | MAT2A,MTAP,SRM,GOT1,MAT2B |
| Kegg:04610 | Complement and coagulation cascades | 7 | 0.043466 | PLAUR,CD55,PROS1,F13A1,C5AR1,F5,C3AR1 |
| Kegg:05410 | Hypertrophic cardiomyopathy (HCM) | 8 | 0.045886 | TPM2,ITGA2B,ACTB,MYBPC3,PRKAB2,CACNB3,ITGB5,ITGB7 |
| Kegg:05213 | Endometrial cancer | 6 | 0.048919 | GSK3B,LEF1,AXIN2,CTNNA1,PTEN,FOXO3 |

FDR: false discovery rate