Supplementary Table 2. GO terms and KEGG pathway analyses for down-regulated DE-miRNAs following solasonine-treated in BC. Through GO terms analysis of target genes for DE-miRNAs inhibited by solasonine in BC, 1419, 156, and 133 remarkably enriched biological process (BP), cellular component (CC) and molecular function (MF) terms were obtained respectively (adj.P-value ≤0.05); through KEGG pathway enrichment analysis, 121 remarkably enriched pathways were obtained (adj.P-value ≤0.05).

Group	ID	Description	GeneRatio	adj.p-value	geneID
BP	GO:0007409	axonogenesis	141/2564	6.65E-17	ACTB, ADARB1, ALCAM, ANK3, APBB2, APP, RHOA, BCL2, BDNF, BMPR1B, BMPR2, CDH2, CDH11, CHN1, CREB1, DAG1, DBN1, DOK1, DPYSL2, EFNB2, EPHA4, EPHA5, EPHB1, EPHB2, EPHB4, ERBB2, ETV1, FGF13, FGFR2, FN1, FYN, GAB1, GATA3, GDI1, GOLGA4, GSK3B, HSP90AA1, HSP90AB1, KIF5C, STMN1, LRP1, SMAD4, MAP1B, MAP2, RAB8A, MYH10, NFIB, NRCAM, NTRK2, NR4A2, OPHN1, PAFAH1B1, PIK3CB, PIK3R1, PLCG1, POU3F2, PRKCA, MAPK1, RELN, PTCH1, PTEN, PTPRM, PTPRZ1, RAC1, RET, ROBO1, SKIL, SPAST, SPTAN1, SPTBN1, SRF, STXBP1, TIAM1, TRIO, VCL, VEGFA, EZR, VLDLR, WNT5A, FZD3, USP9X, PICALM, SEMA7A, KLF7, UNC5C, NUMB, RAB11A, NRP1, CDK5R1, SEMA5A, DCLK1, RPS6KA5, NUMBL, B4GALT6, B4GALT5, SLIT2, NRXN1, ULK2, IST1, ZEB2, GAB2, RANBP9, UST, PLXNC1, SLC9A6, SEMA4D, SEMA3C, B3GNT2, CHL1, FRS2, RAB10, RAB21, PALLD, MYCBP2, KIF13B, SZT2, ADNP, FLRT3, FLRT2, AUTS2, SH3KBP1, NIN, SEMA4C, YTHDF1, ENAH, RTN4, SEMA6A, ALS2, ZSWIM6, NTN4, BCL11B, RAPH1, TRAK2, NDEL1, PARD6B, DOCK7, EMB, UNC5D, TTL, FBXO45, RNF165
BP	GO:0022604	regulation of cell morphogenesis	133/2564	1.90E-12	ADAM10, ALDOA, ANXA1, RHOA, RND3, BDNF, BMPR2, CD44, CDC42, CDH2, CHN1, CRK, DAG1, DBN1, DIAPH1, DOCK1, DPYSL2, EPHA4, EPHB2, EPS8, PTK2B, FGF13, FMR1, FN1, FYN, GDI1, GNA12, GOLGA4, GSK3B, HAS2, ID1, KIT, LIMS1, LRP1, CAPRIN1, MAP1B, MAP2, MKLN1, MSN, MYH9, MYH10, MYO9A, MYO10, NEDD4, NRCAM, NTRK2, OPA1, P2RY1, PAFAH1B1, POU3F2, PPP3CA, RELN, PTEN, RAC1, RAP2A, RASA1, RET, ROBO1, SDC2, SKIL, SPARC, SRF, TIAM1, UBE3A, VEGFA, EZR, WNT5A, ZMYM2, FZD4, SEMA7A, RAB11A, NRP1, CDK5R1, SEMA5A, SLIT2, RAPGEF2, ULK2, IST1, ZEB2, DNM1L, UST, ABI2, PLXNC1, SEMA4D, SEMA3C, CDC42EP3, PDLIM5, GNA13, RIMS1, RAB21, UNC13A, MYCBP2, KIF13B, ADNP, GRIP1, RHOQ, CORO1C, BAMBI, NSMF, SS18L1, SH3KBP1, ITSN2, NIN, BCL11A, BRWD1, ZRANB1, QRICH1, SEMA4C, YTHDF1, PHIP, AP1AR, PRPF40A, PARVA, CDC42SE1, CDC42SE2, RTN4, STRIP2, HECW2, SEMA6A, ZSWIM6, TRAK2, DOCK5, NDEL1, ANKRD27, LARP4, RNF157, PDZD8, LRRK2, TTL, SH3D19, CAMSAP1, AGO4, BRWD3
BP	GO:0030900	forebrain development	111/2564	4.31E-12	ADCYAP1, APAF1, APP, RHOA, ATP2B4, ATP7A, ATRX, AXL, BMPR1A, CDH2, CDK6, CREB1, CRK, DLX2, E2F1, EPHA5, EPHB2, ERBB4, ETS1, EZH2, FGF13, FGFR2, FYN, GSK3B, NRG1, DNAJB1, ID2, ID4, RBPJ, INHBA, KCNC2, KIF5B, LRP1, MYH10, NEUROD1, NF1, NFIB, NTRK2, NR4A2, OPHN1, PAFAH1B1, PEX13, PITX1, PITX2, POU3F2, POU3F3, PRKG1, RELN, PTEN, RARA, ROBO1, TRA2B, SKI, SLC1A2, SOX2, SRF, SSTR2, TACC1, TBX3, NR2F2, TSC1, WNT1, WNT5A, WNT2B, BTG2, ARID1A, SEMA7A, NCOA1, NUMB, NRP1, CDK5R1, SEMA5A, DCLK1, NUMBL, SLIT2, RAPGEF2, ZEB2, ARPC5, OLIG2, FRS2, BTBD3, RAB3GAP1, PHLPP2, PLCB1, SATB2, SZT2, SUN1, SRGAP2, SLC7A11, CNTNAP2, LEF1, NIN, SLC38A2, NDE1, GNG12, RTN4, ZSWIM6, BCL11B, MCPH1, TTC21B, PGAP1, AKNA, NDEL1, HOOK3, DOCK7, DIXDC1, FOXP2, EFHC1, LRRK2, ARL13B, FBXO45
BP	GO:0060537	muscle tissue development	111/2564	5.21E-10	RHOA, BCL2, BCL9, BMPR1A, KLF5, CCNT2, CENPF, CREB1, CSRP2, CXADR, DDX5, DSG2, EDN1, EFNB2, EGR1, EP300, EPHB1, ERBB3, ERBB4, FGF2, FGFR2, FKBP1A, FLNB, MTOR, G6PD, GATA6, GJA1, NRG1, HLF, HMGCR, HNRNPU, HOXD10, FOXN2, ID2, IGF1, IGFBP5, RBPJ, JARID2, LOX, SMAD1, SMAD4, SMAD7, MEF2A, MEF2C, MEF2D, MEIS1, MTM1, MYH10, MYLK, NF1, PDGFRA, PITX1, PKD2, PPARA, MED1, PPP3CA, PRKAA1, PRKAR1A, MAPK1, PTEN, RARA, RB1, MAP2K4, SGCB, SGCD, SIX1, SKI, SLC9A1, SOX9, SRF, TBX3, NR2F2, TGFB2, TGFBR1, TGFBR2, TSC1, VEGFA, WNT5A, YY1, BTG2, ARID1A, SORBS2, COPS2, NR1D2, YAP1, ZBTB18, SEMA3C, NEBL, PDLIM5, FRS2, AKAP13, TIPARP, GREM1, CACYBP, LEF1, SIX4, SOX6, LUC7L, POGLUT1, NLN, HIVEP3, SAV1, AKIRIN1, MYLK3, FOXP2, OSR1, MTPN, SIK1, SMYD1, ARID2, RBM24
BP	GO:0071559	response to transforming growth factor beta	79/2564	9.05E-10	ACVR2B, APAF1, RHOA, ZFHX3, BMPR1A, BMPR1B, BMPR2, ZFP36L1, ZFP36L2, RUNX3, CBL, COL1A1, CREB1, CREBBP, CRK, EDN1, EP300, FBN1, FBN2, FGFR2, FYN, GCNT2, GLG1, NR3C1, HPGD, HSP90AB1, ID1, ITGA3, LIMS1, LOX, SMAD1, SMAD2, SMAD4, SMAD5, SMAD7, MEF2C, PDE3A, PPM1A, PTPRK, ROCK1, RPS27A, SKI, SKIL, SOX5, SOX9, ADAM17, ZEB1, TGFB2, TGFBR1, TGFBR2, THBS1, TP53, WNT1, WNT5A, YES1, USP9X, ADAM9, CLDN1, TGFBRAP1, ROCK2, ONECUT2, USP15, PEG10, BAMBI, ZNF451, APPL1, HIPK2, ZBTB7A, TRIM33, NLK, RNF111, SOX6, PMEPA1, SMURF2, ZNF703, PDGFD, VASN, ACVR1C, NPNT
BP	GO:0010975	regulation of neuron projection development	127/2564	1.13E-09	ABL2, ADAM10, ADCYAP1, ARF1, ARF6, RHOA, ARSB, BDNF, BMPR2, SCARB2, CDH2, CHN1, CRK, DBN1, DPYSL2, EFNB2, EP300, EPHA4, EPHB2, EZH2, PTK2B, FGF13, FMR1, FN1, MTOR, FYN, GATA3, GDI1, GOLGA4, GSK3B, HGF, ID1, ITGA6, ITGA3, LRP1, CAPRIN1, MAP1B, MAP2, MEF2C, MYO9A, NEDD4, NFE2L2, NRCAM, NTRK2, OPA1, PAFAH1B1, SERPINI1, PMP22, POU3F2, PPP3CA, MAPK6, RELN, PTEN, PTK7, PTPRG, RAP2A, RET, ROBO1, SDC2, SFRP2, SKIL, SNAP25, SRF, TIAM1, TSC1, UBE3A, VEGFA, VIM, VLDLR, WNT5A, FZD1, FZD4, SEMA7A, RAB11A, NRP1, CDK5R1, SEMA5A, SLIT2, MAP4K4, RAPGEF2, ULK2, IST1, ZEB2, MAGI2, DNM1L, UST, ABI2, PLXNC1, SEMA4D, SEMA3C, PDLIM5, CPEB3, SHANK2,

					RIMS1, RAB21, UNC13A, SETX, MYCBP2, CAMSAP2, KIF13B, ADNP, GRIP1, SNAPIN, NSMF, SS18L1, ITSN2, ASAP1, NIN, BCL11A, TMEM106B, RRN3, SEMA4C, YTHDF1, CCDC88A, TMEM30A, RTN4, HECW2, SEMA6A, ZSWIM6, TRAK2, NDEL1, ITM2C, ANKRD27, RNF157, LRRK2, TTL, PAQR3
BP	GO:0001655	urogenital system development	94/2564	1.13E-09	ACVR2B, JAG1, ANXA1, APAF1, AR, ARG2, BCL2, CA2, CENPF, COL4A1, EFNB2, EGR1, EPHA4, EPHB2, ESR1, FBN1, FGF2, FGFR2, GATA3, HAS2, FOXA1, HOXC11, HPGD, TNC, ID2, ID4, IL6R, ITGA6, ITGA3, LIF, SMAD1, SMAD2, SMAD4, SMAD5, SMAD7, MEF2C, MME, MYO1E, NF1, NFIA, NKX3-1, PBX1, PDGFRA, PKD2, PLAG1, POU3F3, PTCH1, PTEN, RARA, RET, SIX1, SOX4, SOX9, STAT1, TGFB2, TGFBR1, TSC1, UBE3A, VEGFA, WNT1, WNT5A, WNT2B, TP63, NRP1, SGPL1, SLIT2, MAGED1, MAGI2, BCL2L11, SPRY1, BASP1, YAP1, FRS2, TMED10, NIPBL, WWTR1, TIPARP, PYGO1, KLHL3, SEC61A1, RRM2B, APH1A, GCNT4, SIX4, NLE1, AHI1, CEP55, LGR4, PDGFD, LZTS2, LRRK2, OSR1, NPNT, FMN1
BP	GO:0009791	post-embryonic development	39/2564	2.03E-09	ACVR2B, ATM, ATRX, BCL2, PRDM1, ERCC1, FBN1, FGFR2, MTOR, GATA3, GNAS, IGF2R, INPPL1, IREB2, ITPR1, SMAD2, MECP2, MYO1E, NR4A2, PLAGL2, TGFBR1, VEGFA, FZD5, SGPL1, BCL2L11, SEMA3C, KDM5B, SZT2, TIPARP, GIGYF2, PYGO1, AGO2, SERP1, SOX6, ASH1L, PLEKHA1, ALX4, BCL11B, FOXP2
BP	GO:0016358	dendrite development	73/2564	2.03E-09	ADAM10, APP, ARF1, ARF4, ARF6, RHOA, CDC42, CRK, DBN1, EPHA4, EPHB1, EPHB2, EZH2, ACSL4, FMR1, MTOR, FYN, GSK3B, ID1, CAPRIN1, MAP1B, MAP2, MECP2, MEF2A, MEF2C, NEDD4, SLC11A2, OPA1, PAFAH1B1, PAK2, PPP3CA, PRKG1, MAPK6, RELN, PTEN, RAP2A, SDC2, STRN, TIAM1, UBE3A, VLDLR, PICALM, KLF7, NRP1, CDK5R1, WASL, DCLK1, RAPGEF2, DNM1L, ABI2, SLC9A6, SEMA4D, PDLIM5, CPEB3, BTBD3, SHANK2, RAB21, CAMSAP2, SRGAP2, GRIP1, NSMF, SS18L1, MINK1, ASAP1, TRAPPC4, DCDC2, BCL11A, TMEM106B, DOCK10, HECW2, TRAK2, ANKRD27, LRRK2
BP	GO:0006470	protein dephosphorylation	91/2564	2.42E-09	ACP1, BCL2, CALM1, CALM2, CALM3, CDC25A, DUSP4, DUSP5, DUSP8, ENSA, EYA4, FKBP1A, MTOR, GNAI2, GSK3B, HSP90AB1, JAK2, MGAT5, MTM1, PPP1R12A, PPM1A, PPP1CC, PPP1R2, PPP2R1B, PPP2R2A, PPP2R2C, PPP2R5A, PPP2R5E, PPP3CA, PPP3R1, PPP6C, PTBP1, PTEN, PTPN3, PTPN4, PTPN12, PTPN14, PTPRE, PTPRG, PTPRJ, PTPRK, PTPRM, PTPRR, PTPRZ1, ROCK1, TSC1, YWHAB, PTP4A1, SHOC2, PTP4A2, PPM1D, CDC14A, RNGTT, MTMR3, MTMR6, ROCK2, MINPP1, PHACTR2, MAGI2, CTDSPL, ARPP19, DUSP14, PTPN21, PTPRT, PPP6R1, PHLPP2, SWAP70, CAMTA1, FBXW11, CTDNEP1, NSMF, PPA2, CTDSPL2, SSH1, RPRD1A, PPP6R3, PPP2R2D, CTTNBP2NL, SLC39A10, PDP2, PPP4R4, RPRD1B, PPP1R3B, PPP1R15B, SSH2, SPPL3, UBLCP1, DUSP18, PPM1L, PPP4R2, CNEP1R1
BP	GO:0001701	in utero embryonic development	101/2564	3.01E-09	ADAM10, ADCY9, AR, ATP7A, PRDM1, BMPR1A, ZFP36L1, BTF3, DBN1, EDN1, BPTF, FGFR2, GABPA, GATA3, GATA6, GJA1, GNA12, HCFC1, IGF1, RBPJ, JAG2, LIF, TM4SF1, SMAD2, SMAD4, MAFG, MBNL1, MFNG, MSH2, MYH9, MYH10, MYO1E, NASP, CNOT2, NPAT, OCRL, PDGFRA, PKD2, PLCG1, MED1, MAPK1, PTCH1, PTPRR, SKIL, SP3, SRF, STK3, STK4, TBX3, NR2F2, TGFBR1, TGFBR2, TP53, UBE2A, KDM6A, VEGFA, PCGF2, FZD5, FOSL1, CUL3, COPS3, NCOA1, COPS2, MED21, SH3PXD2A, MFN2, BCL2L11, GNA13, PLK4, SYF2, TANC2, SLC39A1, RRP7A, FLVCR1, LEF1, NLE1, RRN3, NCAPG2, SOX6, OTUD7B, RTN4, ZMIZ1, BIRC6, MIB1, ZFP14, ALS2, PPP4R4, TBL1XR1, VASH2, GGNBP2, TET1, CMIP, NDEL1, PHF6, GINS4, UBR3, RUNDC1, AMOT, SMIM14, SLC25A34, RPL7L1
BP	GO:0010256	endomembrane system organization	113/2564	4.50E-09	ANK3, FASLG, AR, ARL1, MYRF, SCARB2, CDC42, CLCN3, CREB1, F2R, GOLGA2, AGFG1, MYH9, MYH10, PAFAH1B1, ATP8B1, SERPINE2, PIK3C3, PLSCR1, PPP2R2A, PRKCA, PRKCB, MAPK1, PTEN, RAB1A, RAB2A, RFX2, SPAST, SPTBN1, TGFB2, TMF1, BLZF1, USO1, VAMP4, RAB11A, WASL, VAPB, EIF2AK3, USP6NL, IST1, SEC16A, OPTN, STAM2, RTN3, ARFGEF1, NEK6, RAB10, TMED10, SEC23IP, SEC31A, RAB3GAP1, RAB18, TMCC1, SYT11, CAMSAP2, DNAJC13, SYNE1, SUN1, CTDNEP1, TMED3, CORO1C, ATL3, CHMP2B, TOR1AIP1, SERP1, RAB30, SEC61A1, ASAP1, TMED5, VPS36, HOOK1, CHMP5, VTA1, DYM, FNBP1L, TMEM38B, TMEM33, GOLPH3L, PI4K2B, PARP11, CHMP1B, RTN4, ATP8B2, RAB22A, ALS2, GOLPH3, ATL2, MPP5, FA2H, TMEM43, VCPIP1, REEP4, NDEL1, VMP1, HOOK3, NEK9, SYTL4, FCHO2, LRRK2, WHAMM, TMEM170A, TBC1D20, TANGO2, UBXN2B, VTI1A, TOR1AIP2, SPTSSB, ANO6, REEP3, TMED4, CNEP1R1, XKR6, MIA3
BP	GO:0009896	positive regulation of catabolic process	110/2564	4.63E-09	APC, APP, ATM, ZFP36L1, ZFP36L2, CSNK2A1, PTK2B, FOXO3, FMR1, GJA1, GNAI3, GSK3B, HMGB1, HSP90AA1, IGF1, INSR, LDLR, LRP1, SMAD7, MSN, NEDD4, NFE2L2, NSF, PIK3CB, PIP4K2A, PPARA, PRKAA1, PRKCE, PTEN, RAD23A, ROCK1, SNX1, SORL1, SOX9, TNFAIP3, TSC1, VCP, EZR, WNT5A, BTG2, EPM2A, CUL4B, ADAM9, USP13, ROCK2, TMEM59, RNF14, SOCS5, PUM1, RNF144A, RNF40, AREL1, MFN2, BCL2L11, OPTN, TOB1, TRIB1, HNRNPR, CAMKK2, WWP1, FAF1, RNF139, CPEB3, RAB3GAP1, CNOT1, TNRC6B, GGA3, LARP1, SH3BP4, ARIH1, TIPARP, GIGYF2, ZBTB20, FBXL5, PABPC1, AGO2, SESN1, TNRC6A, TRIB2, CNOT7, UBQLN2, UBQLN1, RNFT1, WAC, DTL, VPS13C, ZC3HAV1, HECW2, TNRC6C, SCOC, SMURF2, FYCO1, LPCAT1, SESN2, TMEM259, MTDH, TP53INP1, LRRK2, SOCS4, RNF19B, TRIM71, SESN3, RC3H1, SH3D19, RNF217, TMTC3, RBM24, CNOT6L, YTHDF3, RNF144B
BP	GO:0048638	regulation of developmental growth	95/2564	5.17E-09	ACACB, ADRB1, APP, AR, BCL2, BDNF, BMPR1A, BMPR2, CREB1, DBN1, DPYSL2, EDN1, ERBB4, FGF2, FGF13, FGFR3, FGFR2, FN1, FXN, MTOR, G6PD, GATA6, GDI1, GJA1, GOLGA4, GSK3B, IGF1, RBPJ, INSR, JARID2, LRP1, MAP1B, MAP2, MEF2C, MEIS1, MTM1, NRCAM, PAFAH1B1, POU3F2, PPARA, PRKDC, MAPK1, PTCH1, PTEN, SFRP2, SIX1, SRF, STAT3, STK3, STK4, TGFBR1, TGFBR2, VEGFA, EZR, WNT5A, YY1, SEMA7A, STC2, RAB11A, NRP1, SOCS2, CDK5R1, SGPL1, SEMA5A, ULK2, IST1, BCL2L11, BASP1, YAP1, SEMA4D, SEMA3C, RIMS1, RAB21, UNC13A, PLCB1, WWC1, ADNP, NIPBL, SERP1, FLVCR1, ITSN2, SIX4, BCL11A, SEMA4C, MBD5, WWC3, RTN4, SEMA6A, SAV1, WWC2, TNKS2, NDEL1, RNF157, TTL, SH3PXD2B

BP	GO:0071560	cellular response to transforming growth factor beta stimulus	75/2564	5.25E-09	ACVR2B, APAF1, RHOA, BMPR1A, BMPR1B, BMPR2, ZFP36L1, ZFP36L2, CBL, COL1A1, CREB1, CREBBP, CRK, EDN1, EP300, FBN1, FBN2, FGFR2, FYN, GCNT2, GLG1, NR3C1, HPGD, HSP90AB1, ID1, ITGA3, LIMS1, LOX, SMAD1, SMAD2, SMAD4, SMAD5, SMAD7, MEF2C, PDE3A, PPM1A, PTPRK, RPS27A, SKI, SKIL, SOX5, SOX9, ADAM17, ZEB1, TGFB2, TGFBR1, TGFBR2, THBS1, TP53, WNT1, WNT5A, YES1, USP9X, ADAM9, CLDN1, TGFBRAP1, ONECUT2, USP15, PEG10, BAMBI, ZNF451, APPL1, HIPK2, ZBTB7A, TRIM33, NLK, RNF111, SOX6, PMEPA1, SMURF2, ZNF703, PDGFD, VASN, ACVR1C, NPNT
BP	GO:0060560	developmental growth involved in morphogenesis	72/2564	5.25E-09	ALCAM, APP, AREG, BDNF, BMPR2, DBN1, DPYSL2, ESR1, FGF13, FGFR2, FN1, GDI1, GOLGA4, GSK3B, HSP90AA1, HSP90AB1, TNC, LRP1, MAP1B, MAP2, NRCAM, PAFAH1B1, MED1, PTK7, SFRP2, SIX1, SOX9, SRF, TGFBR2, TIAM1, VCL, VEGFA, WNT5A, USP9X, SEMA7A, RAB11A, NRP1, CDK5R1, SEMA5A, DCLK1, SLIT2, ULK2, IST1, ZEB2, MAGI2, MED12, SPRY1, SPRY2, YAP1, SLC9A6, SEMA4D, SEMA3C, KDM5B, RIMS1, RAB21, UNC13A, ADNP, FLRT3, AUTS2, ITSN2, NIN, SIX4, BCL11A, SEMA4C, RTN4, SEMA6A, RAPH1, NDEL1, LZTS2, RNF157, TTL, FMN1
BP	GO:0014706	striated muscle tissue development	103/2564	5.76E-09	RHOA, BCL2, BCL9, BMPR1A, KLF5, CCNT2, CENPF, CREB1, CXADR, DDX5, DSG2, EDN1, EFNB2, EGR1, EP300, EPHB1, ERBB3, ERBB4, FGF2, FGFR2, FKBP1A, FLNB, MTOR, G6PD, GATA6, GJA1, NRG1, HLF, HMGCR, HNRNPU, HOXD10, FOXN2, ID2, IGF1, RBPJ, JARID2, LOX, SMAD1, SMAD4, SMAD7, MEF2A, MEF2C, MEF2D, MEIS1, MTM1, MYH10, NF1, PDGFRA, PITX1, PPARA, MED1, PPP3CA, PRKAA1, PRKAR1A, MAPK1, PTEN, RARA, RB1, MAP2K4, SGCB, SGCD, SIX1, SKI, SLC9A1, SRF, TBX3, NR2F2, TGFB2, TGFBR1, TGFBR2, TSC1, VEGFA, WNT5A, YY1, BTG2, ARID1A, SORBS2, COPS2, NR1D2, YAP1, ZBTB18, SEMA3C, NEBL, PDLIM5, FRS2, AKAP13, GREM1, CACYBP, LEF1, SIX4, SOX6, LUC7L, NLN, HIVEP3, SAV1, AKIRIN1, MYLK3, FOXP2, MTPN, SIK1, SMYD1, ARID2, RBM24
BP	GO:0030099	myeloid cell differentiation	108/2564	5.76E-09	ACTN1, JAG1, APP, BCL6, BPGM, ZFP36L1, CA2, RUNX1, CBFB, CDC42, CDK6, CEBPG, CREB1, CREBBP, EP300, ETS1, F2RL1, PTK2B, FASN, FBN1, FOXO3, MTOR, G6PD, GABPA, GATA3, GNAS, HMGB2, HOXA5, HOXA9, ID2, RBPJ, INHBA, IREB2, JAK2, KIT, LBR, LIF, LOX, SMAD5, MEF2C, MEIS1, MEIS2, MITF, KMT2A, MYH9, NF1, NFKBIA, CNOT4, NOTCH2, SLC11A2, PAFAH1B1, PIK3R1, PIP4K2A, PKNOX1, MED1, PRKCA, PRKCB, PURB, RARA, RB1, ARID4A, SP3, SRF, STAT1, STAT3, TFRC, TGFBR2, THBS1, KLF10, TLR4, VEGFA, KAT6A, TNFSF11, PABPC4, KAT2B, SH3PXD2A, GAB2, MAFB, PTBP3, TSPAN2, WASF2, TRIB1, TOB2, TNRC6B, AGO1, FOXP1, TNRC6A, OSTM1, FLVCR1, HIPK2, TMOD3, SENP1, LEF1, ZBTB7A, KLF13, SNRK, NCAPG2, SOX6, KMT2E, TNRC6C, KMT2C, VPS33A, CDC73, KAT8, SFXN1, TMEM64, AGO3, AGO4
BP	GO:0070997	neuron death	94/2564	1.10E-08	ADARB1, APAF1, APP, FASLG, RHOA, ATM, AXL, BCL2, BDNF, BID, CBL, CREB1, ATF2, EFNB2, EGR1, EIF2S1, EN1, EPHB1, ERBB3, F2R, PTK2B, FOXO3, MTOR, FYN, G6PD, GABRB2, GATA3, GSK3B, HSP90AB1, JAK2, LRP1, MCL1, MECP2, MEF2C, MAP3K5, MSH2, NF1, NTF3, NTRK2, NR4A2, PPARA, PTPRZ1, RASA1, RB1, REL, REST, ROCK1, MAP2K4, SIX1, SLC9A1, SOD2, SORL1, STAT3, STXBP1, TGFB2, THRB, TLR4, TP53, TP53BP2, TSC1, WNT1, WNT5A, BTG2, PICALM, FZD1, TP63, NRP1, CDK5R1, BCL2L11, NAMPT, LANCL1, GPNMB, CHL1, RRAS2, TRIM2, ADNP, CLCF1, SLC7A11, NSMF, TOX3, HIPK2, SIX4, SSH1, USP53, DDIT4, OXR1, SLC30A10, NMNAT1, CPEB4, TMEM259, FOXQ1, EGLN3, LRRK2, NCOA7
BP	GO:0071383	cellular response to steroid hormone stimulus	74/2564	1.36E-08	ADCYAP1, ANXA1, AR, RHOA, ATP1A2, ATP2B1, BRCA1, ZFP36L1, ZFP36L2, KLF9, RUNX1, CBFB, DDX5, EDN1, EP300, ESR1, ESRRG, FOXO3, NR6A1, NR3C1, FOXA1, HNRNPU, JAK2, NR3C2, NEDD4, NKX3-1, CNOT2, NR4A2, PPARA, MED1, RAN, RARA, RB1, REST, RNF4, RORA, RORB, SKP2, SSTR2, NR2F2, THRB, NR2C2, UBE2L3, UBE3A, NCOA4, NCOA3, NRIP1, ARID1A, TP63, NCOA1, PIAS2, CLOCK, RNF14, NCOR1, NR1D2, BCL2L11, YAP1, PGRMC2, ABHD2, AKAP13, CNOT1, GRIP1, FOXP1, STRN3, LEF1, ZBTB7A, UBR5, ERRFI1, DDIT4, LMO3, PMEPA1, GPAM, CREBRF, KCTD6
BP	GO:0034330	cell junction organization	82/2564	1.53E-08	ACTB, ACTN1, APC, ARF6, RHOA, BCL2, DST, CAPZA1, RUNX1, CBFB, CD151, CDC42, CDH2, CDH6, CDH11, CTNND1, CXADR, DSG2, ECT2, F2R, F2RL1, PTK2B, FN1, GJA1, GPM6B, ITGA6, KRT5, LAMC1, LIMS1, LRP1, SMAD7, MYO9A, OPHN1, PRKCA, PKN2, PTEN, PTPRJ, PTPRK, RAC1, RAP1B, ROCK1, SLC9A1, SNAI2, SRF, STRN, TGFB2, TGFBR1, THBS1, TJP1, TSC1, UGT8, VCL, VEGFA, FZD5, PIP5K1A, PKP4, NUMB, NRP1, CLDN1, NUMBL, MAP4K4, ROCK2, RAPGEF2, SLK, IQSEC1, TESK2, SORBS1, RASSF8, CORO1C, CADM1, GRHL1, PERP, MPP5, ZNF703, VMP1, PARD6B, PHLDB2, MTDH, WHAMM, CADM2, FMN1, OCLN
BP	GO:0007411	axon guidance	79/2564	1.70E-08	ALCAM, APBB2, APP, BDNF, BMPR1B, BMPR2, CHN1, DAG1, DOK1, DPYSL2, EFNB2, EPHA4, EPHA5, EPHB1, EPHB2, EPHB4, ERBB2, ETV1, FYN, GAB1, GATA3, KIF5C, LRP1, SMAD4, MYH10, NFIB, NRCAM, OPHN1, PIK3CB, PIK3R1, PLCG1, PRKCA, MAPK1, RELN, PTCH1, PTPRM, RAC1, RET, ROBO1, SPTAN1, SPTBN1, TRIO, VEGFA, EZR, VLDLR, WNT5A, FZD3, SEMA7A, KLF7, UNC5C, NRP1, CDK5R1, SEMA5A, RPS6KA5, SLIT2, NRXN1, GAB2, RANBP9, PLXNC1, SEMA4D, SEMA3C, B3GNT2, CHL1, FRS2, PALLD, MYCBP2, FLRT3, FLRT2, SH3KBP1, SEMA4C, YTHDF1, ENAH, SEMA6A, ZSWIM6, NTN4, BCL11B, EMB, UNC5D, RNF165
BP	GO:0010769	regulation of cell morphogenesis involved in differentiation	84/2564	1.70E-08	ADAM10, RHOA, BDNF, BMPR2, CDC42, CDH2, CHN1, CRK, DBN1, DOCK1, DPYSL2, EPHA4, EPHB2, FGF13, FMR1, FN1, GDI1, GOLGA4, GSK3B, HAS2, ID1, LIMS1, LRP1, CAPRIN1, MAP1B, MAP2, NEDD4, NRCAM, NTRK2, OPA1, PAFAH1B1, POU3F2, PPP3CA, RELN, PTEN, RAC1, RAP2A, RET, ROBO1, SDC2, SKIL, SRF, TIAM1, UBE3A, VEGFA, WNT5A, SEMA7A, RAB11A, NRP1, CDK5R1, SEMA5A, SLIT2, RAPGEF2, ULK2, IST1, ZEB2, DNM1L, UST, ABI2, PLXNC1, SEMA4D, SEMA3C, PDLIM5, RAB21, MYCBP2, KIF13B, ADNP, CORO1C, NSMF, SS18L1, NIN, SEMA4C, YTHDF1, AP1AR, RTN4, HECW2, SEMA6A, ZSWIM6, TRAK2, DOCK5, NDEL1, ANKRD27, LRRK2, TTL

BP	GO:0097485	neuron projection guidance	79/2564	1.91E-08	ALCAM, APBB2, APP, BDNF, BMPR1B, BMPR2, CHN1, DAG1, DOK1, DPYSL2, EFNB2, EPHA4, EPHA5, EPHB1, EPHB2, EPHB4, ERBB2, ETV1, FYN, GAB1, GATA3, KIF5C, LRP1, SMAD4, MYH10, NFIB, NRCAM, OPHN1, PIK3CB, PIK3R1, PLCG1, PRKCA, MAPK1, RELN, PTCH1, PTPRM, RAC1, RET, ROBO1, SPTAN1, SPTBN1, TRIO, VEGFA, EZR, VLDLR, WNT5A, FZD3, SEMA7A, KLF7, UNC5C, NRP1, CDK5R1, SEMA5A, RPS6KA5, SLIT2, NRXN1, GAB2, RANBP9, PLXNC1, SEMA4D, SEMA3C, B3GNT2, CHL1, FRS2, PALLD, MYCBP2, FLRT3, FLRT2, SH3KBP1, SEMA4C, YTHDF1, ENAH, SEMA6A, ZSWIM6, NTN4, BCL11B, EMB, UNC5D, RNF165
BP	GO:0060485	mesenchyme development	79/2564	2.17E-08	JAG1, BCL2, BMPR1A, BMPR2, ZFP36L1, COL1A1, DAG1, DDX5, EDN1, ERBB3, ERBB4, EZH2, FGFR2, FOXF2, FN1, MTOR, GCNT2, GSK3B, HAS2, HGF, NRG1, FOXA1, HOXA5, RBPJ, SMAD2, SMAD4, SMAD7, MDM4, MEF2C, PITX2, PKD2, MAPK1, PTEN, PTK7, RET, ROBO1, SFRP2, SIX1, SNAI2, SOX9, STAT1, TGFB2, TGFBR1, TGFBR2, TIAM1, WNT5A, HMGA2, SEMA7A, NRP1, SEMA5A, NOLC1, ZEB2, PDCD6, SPRY1, BASP1, YAP1, SEMA4D, SEMA3C, CORO1C, BAMBI, WWTR1, GREM1, PDCD4, LEF1, SIX4, BNC2, SEMA4C, POGLUT1, RTN4, SEMA6A, FBXL17, ZNF703, AKNA, FAM172A, KBTBD8, PHLDB2, VASN, OSR1, RBM24
BP	GO:0072001	renal system development	82/2564	2.17E-08	ACVR2B, JAG1, APAF1, ARG2, BCL2, CA2, CENPF, COL4A1, EFNB2, EGR1, EPHA4, FBN1, FGF2, FGFR2, GATA3, HAS2, HOXC11, HPGD, ID2, IL6R, ITGA6, ITGA3, LIF, SMAD1, SMAD2, SMAD4, SMAD5, SMAD7, MEF2C, MME, MYO1E, NF1, NFIA, NKX3-1, PBX1, PDGFRA, PKD2, POU3F3, PTCH1, RARA, RET, SIX1, SOX4, SOX9, STAT1, TGFB2, TGFBR1, TSC1, VEGFA, WNT1, WNT5A, WNT2B, NRP1, SGPL1, SLIT2, MAGED1, MAGI2, BCL2L11, SPRY1, BASP1, YAP1, TMED10, NIPBL, WWTR1, TIPARP, PYGO1, KLHL3, SEC61A1, RRM2B, APH1A, GCNT4, SIX4, NLE1, AHI1, CEP55, LGR4, PDGFD, LZTS2, LRRK2, OSR1, NPNT, FMN1
BP	GO:0016570	histone modification	113/2564	2.20E-08	ATM, ATRX, BCL6, BMI1, BRCA1, CAMK2D, CCNA2, CHEK1, ATF2, CREBBP, EP300, EYA4, MECOM, EZH2, FMR1, GATA3, HCFC1, HLCS, JAK2, JARID2, LIF, SMAD4, MECP2, KMT2A, MLLT6, NAP1L2, PRKAA1, PRKCA, PRKCB, ARID4A, KDM5A, REST, SATB1, ATXN7, SKI, SKP1, SNAI2, TAF5, TP53, UBE2A, KDM6A, VEGFA, PCGF2, BRPF1, USP7, KAT6A, YEATS4, HMGA2, NCOA3, CUL4B, HAT1, NCOA1, KAT2B, BAZ1B, RPS6KA5, TRIP12, GTF3C4, CLOCK, RNF40, USP15, PRMT3, CTCF, KDM5B, BRD8, BAZ2A, MTF2, KDM2A, KDM4B, PHF8, RCOR1, RYBP, SUZ12, KAT6B, BRD1, NIPBL, ZNF451, AUTS2, PHF19, TAF5L, BRPF3, LEF1, PHF20, WAC, UBR5, ARID4B, RSF1, MSL2, RIF1, SETD5, MRGBP, KANSL3, YEATS2, ASH1L, KMT2E, KMT2C, MEAF6, CDC73, TBL1XR1, SETD6, NAA50, TET1, EPC1, WDR82, KAT8, PCGF5, MYSM1, LRRK2, JDP2, NACC2, SMYD1, KANSL1L, RNF168, TET3
BP	GO:0050769	positive regulation of neurogenesis	116/2564	3.66E-08	ABL2, ADCYAP1, ARF1, RHOA, ARSB, BCL2, BCL6, BDNF, BMPR2, SCARB2, DAG1, DBN1, DLX2, E2F1, ECT2, EP300, EPHA4, EPHB2, EZH2, PTK2B, FMR1, FN1, MTOR, FYN, GDI1, GOLGA4, HGF, FOXA1, ID2, IL6ST, ITGA6, ITGA3, KIT, LIF, LRP1, CAPRIN1, MAP1B, MEF2C, MME, NAP1L1, NAP1L2, NEUROD1, NFE2L2, NRCAM, NTRK2, OPA1, PAFAH1B1, SERPINE2, SERPINI1, PLAG1, PPP1CC, MAPK6, RELN, PTEN, PTK7, PTPRZ1, RARA, REST, RET, ROBO1, SKIL, SRF, TCF4, ZEB1, TCF12, TIAM1, VEGFA, VLDLR, WNT5A, FZD3, FZD1, FZD4, SEMA7A, NCOA1, NUMB, RAB11A, NRP1, SOCS2, SEMA5A, SPAG9, NUMBL, SLIT2, RAPGEF2, IST1, ZEB2, MAGI2, DNM1L, PLXNC1, OLIG2, SEMA4D, CPEB3, SHANK2, RIMS1, RAB21, SPEN, UNC13A, ZNF609, SETX, ADNP, DICER1, GRIP1, CLCF1, MMD, NIPBL, NSMF, SS18L1, ITSN2, NIN, TMEM106B, RRN3, TMEM30A, SEMA6A, TGIF2, NDEL1, ANKRD27, RNF157
BP	GO:0045787	positive regulation of cell cycle	100/2564	3.67E-08	ANXA1, APP, RHOA, ATM, ATRX, CCND1, BRCA1, CCND2, CCNT1, CCNT2, CDC25A, CDC42, CHEK1, CKS1B, DDX3X, E2F1, ECT2, EDN1, EP300, EREG, EZH2, FGFR2, GATA6, HCFC1, FOXA1, HNRNPU, HSPA2, HSP90AB1, ID2, IGF1, INSR, MDM4, MECP2, MEIS2, NKX3-1, CNOT2, CNOT4, NPM1, PAFAH1B1, PBX1, PKD2, MED1, PRKCA, PRKCE, PKN2, RAD23A, RARA, RB1, RPS6KB1, SOX4, SPAST, ADAM17, TBX3, DYNLT3, TFDP1, TFDP2, TGFB2, TP53, TPR, UBE2E2, WNT5A, BTG2, FOSL1, HMGA2, CUL4B, CUL3, PKP4, CDC14A, RAB11A, CDK5R1, CCPG1, KIF3B, ROCK2, KIF23, BCL2L11, PLK4, CNOT1, PLCB1, NIPBL, ANKRD17, TMOD3, CNOT7, GPSM2, TRIAP1, DTL, PHIP, SMPD3, KMT2E, MEPCE, CNOT6, YTHDC2, CDC73, RAB11FIP4, NUDT16, UBXN2B, TTL, CCNYL1, CNOT6L, STXBP4, GEN1
BP	GO:0021955	central nervous system neuron axonogenesis	21/2564	4.98E-08	ADARB1, CDH11, EPHA4, EPHB1, EPHB2, HSP90AA1, HSP90AB1, NFIB, NR4A2, PAFAH1B1, PTEN, DCLK1, B4GALT6, B4GALT5, SLIT2, ZEB2, MYCBP2, SZT2, NIN, NDEL1, FBXO45
BP	GO:0016050	vesicle organization	87/2564	5.98E-08	AP1G1, ANXA1, FASLG, SHROOM2, AREG, ARF1, BCL2, SCARB2, CLCN3, CREB1, F2R, GNAI3, GOLGA2, AGFG1, INSIG1, KIF5B, RAB8A, NSF, PAFAH1B1, SERPINE2, PIK3C3, PPP6C, RAB1A, RFX2, SNAP25, STXBP1, VAMP1, TMF1, PICALM, EEA1, STX7, CUL3, USO1, VAMP4, RAB11A, WASL, VAPB, VAPA, VAMP3, TGFBRAP1, SEC24C, ZFYVE16, IST1, ZEB2, TBC1D4, SEC16A, PDCD6, CNIH1, STAM2, TFG, VAV3, VTI1B, TMED10, SEC23IP, PPP6R1, SEC31A, TMCC1, UNC13A, ANKRD28, DNAJC13, SNAPIN, CORO1C, CD2AP, CHMP2B, VPS36, HOOK1, TRAPPC4, CHMP5, VTA1, RAB14, FNBP1L, GOLPH3L, PPP6R3, PI4K2B, SAR1A, CHMP1B, RAB22A, ALS2, KIF13A, GOLPH3, ANKRD27, HOOK3, HPS4, MCFD2, TBC1D20, VTI1A, MIA3
BP	GO:0043087	regulation of GTPase activity	116/2564	6.34E-08	ABR, ADCYAP1, ADRB1, ALDH1A1, ARHGAP5, BCL6, BNIP2, CHM, CHML, CHN1, CRK, DOCK1, ECT2, EPHA4, EPHA5, ERBB2, EZH2, F2R, F2RL1, PTK2B, MTOR, GDI1, GNAQ, GSK3B, AGFG1, ITGA6, IPO5, LIMS1, MYO9A, NF1, NTF3, NTRK2, OCRL, OPHN1, PAFAH1B1, PRKG1, RASA1, RP2, CCL20, TIAM1, TSC1, WNT5A, EVI5, PICALM, PIP5K1A, PKP4, NRP1, ASAP2, RABEP1, SLIT2, ARHGAP29, MAP4K4, RASAL2, RAPGEF2, USP6NL, DOCK4, ARHGAP32, TBC1D4, RABGAP1L, IQSEC1, DNM1L, RASGRP1, FAM13A, PLXNC1, RASA4, SPRY1, SPRY2, NET1, VAV3, SEMA4D, ARFGEF1, RALBP1,

					RAB11FIP2, RAB3GAP1, LRCH1, SNX13, PLCB1, DOCK9, ARHGEF12, SRGAP2, CORO1C, RABGAP1, SH3BP4, TBC1D10B, GAPVD1, RGS17, GIT1, ASAP1, FAM13B, RAPGEF6, ERRFI1, ARHGAP17, DOCK10, TBC1D22B, DEPDC1, CDC42SE1, RALGAPB, ALS2, WNK1, DOCK5, NDEL1, ARHGAP24, ANKRD27, DOCK7, ARAP2, LRRK2, TBC1D20, SGSM1, CPEB2, STXBP5, DOCK11, RUNDC1, AMOT, DENND1B, RICTOR, RGPD8
BP	GO:0016569	covalent chromatin modification	115/2564	6.52E-08	ATM, ATRX, BCL6, BMI1, BRCA1, CAMK2D, CCNA2, CHD1, CHEK1, ATF2, CREBBP, EP300, EYA4, MECOM, EZH2, FMR1, GATA3, HCFC1, HLCS, JAK2, JARID2, LIF, SMAD4, MECP2, KMT2A, MLLT6, NAP1L2, PRKAA1, PRKCA, PRKCB, ARID4A, KDM5A, REST, SATB1, ATXN7, SKI, SKP1, SNAI2, TAF5, TP53, UBE2A, KDM6A, VEGFA, PCGF2, BRPF1, USP7, KAT6A, YEATS4, HMGA2, NCOA3, CUL4B, HAT1, NCOA1, KAT2B, BAZ1B, RPS6KA5, TRIP12, GTF3C4, CLOCK, RNF40, USP15, PRMT3, CTCF, KDM5B, BRD8, BAZ2A, MTF2, KDM2A, KDM4B, PHF8, RCOR1, RYBP, SUZ12, KAT6B, BRD1, NIPBL, ZNF451, AUTS2, PHF19, TAF5L, BRPF3, LEF1, PHF20, WAC, UBR5, ARID4B, RSF1, MSL2, RIF1, SETD5, MRGBP, KANSL3, YEATS2, ATF7IP, ASH1L, KMT2E, KMT2C, MEAF6, CDC73, TBL1XR1, SETD6, NAA50, TET1, EPC1, WDR82, KAT8, PCGF5, MYSM1, LRRK2, JDP2, NACC2, SMYD1, KANSL1L, RNF168, TET3
BP	GO:0048813	dendrite morphogenesis	49/2564	6.53E-08	ADAM10, CDC42, DBN1, EPHA4, EPHB1, EPHB2, FMR1, FYN, GSK3B, ID1, CAPRIN1, MAP2, MEF2A, NEDD4, SLC11A2, OPA1, PAFAH1B1, PPP3CA, RELN, PTEN, RAP2A, SDC2, TIAM1, UBE3A, VLDLR, PICALM, KLF7, NRP1, CDK5R1, WASL, DCLK1, RAPGEF2, DNM1L, ABI2, SEMA4D, PDLIM5, BTBD3, SHANK2, RAB21, NSMF, SS18L1, MINK1, DCDC2, TMEM106B, DOCK10, HECW2, TRAK2, ANKRD27, LRRK2
BP	GO:0043401	steroid hormone mediated signaling pathway	58/2564	6.76E-08	AR, RHOA, BRCA1, RUNX1, CBFB, DDX5, EP300, ESR1, ESRRG, NR6A1, NR3C1, FOXA1, JAK2, NR3C2, NEDD4, NKX3-1, CNOT2, NR4A2, PPARA, MED1, RAN, RARA, RB1, RNF4, RORA, RORB, SKP2, NR2F2, THRB, NR2C2, UBE3A, NCOA4, NCOA3, NRIP1, ARID1A, TP63, NCOA1, PIAS2, CLOCK, RNF14, NCOR1, NR1D2, YAP1, PGRMC2, ABHD2, AKAP13, CNOT1, GRIP1, FOXP1, STRN3, LEF1, ZBTB7A, UBR5, LMO3, PMEPA1, GPAM, CREBRF, KCTD6
BP	GO:0030010	establishment of cell polarity	47/2564	7.65E-08	ARF6, RHOA, KRIT1, CDC42, CRK, EPHB1, PTK2B, FGF13, GATA3, GSK3B, HSP90AA1, HSP90AB1, MAP1B, MAP2, MAP4, MSN, MYH9, MYO9A, OPHN1, PAFAH1B1, PTK7, RAP1B, ROCK1, WEE1, WNT5A, ROCK2, UST, SPRY1, SPRY2, ARFGEF1, RAB10, RAB11FIP2, WWC1, GPSM2, NDE1, FRMD4A, BCCIP, GOLPH3, MPP5, MCPH1, NDEL1, SNX27, DOCK7, UBXN2B, AMOT, AMOTL1, RICTOR
BP	GO:0007178	transmembrane receptor protein serine/threonine kinase signaling pathway	91/2564	8.62E-08	ACVR2B, XIAP, RHOA, BMPR1A, BMPR1B, BMPR2, RUNX2, CBL, CREB1, CREBBP, DDX5, EGR1, EP300, FBN1, FBN2, FKBP1A, GCNT2, GLG1, HFE, HIVEP1, HPGD, HSP90AB1, ID1, RBPJ, IGSF1, INHBA, ITGA3, LNPEP, LOX, SMAD1, SMAD2, SMAD4, SMAD5, SMAD7, PCSK6, PPM1A, PTPRK, RPS27A, SFRP2, SKI, SKIL, SORL1, SPTBN1, ADAM17, ZEB1, TGFB2, TGFBR1, TGFBR2, THBS1, TP53, UBE2D1, UBE2D3, VIM, WNT1, WNT5A, USP9X, FZD1, ADAM9, TGFBRAP1, ONECUT2, ZFYVE16, MAGI2, USP15, TOB1, FSTL1, PEG10, BAMBI, WWTR1, ZNF451, APPL1, GREM1, PDCD4, HIPK2, LEF1, ZBTB7A, CTDSPL2, TRIM33, NLK, RNF111, SMPD3, PMEPA1, TGIF2, UBE2O, GREM2, SMURF2, ZNF703, VASN, ACVR1C, PPM1L, NPNT, RNF165
BP	GO:1901214	regulation of neuron death	84/2564	8.62E-08	FASLG, RHOA, ATM, AXL, BCL2, BDNF, CBL, CREB1, ATF2, EFNB2, EGR1, EIF2S1, EN1, EPHB1, ERBB3, F2R, PTK2B, FOXO3, MTOR, FYN, G6PD, GABRB2, GATA3, GSK3B, HSP90AB1, JAK2, LRP1, MCL1, MECP2, MEF2C, MAP3K5, MSH2, NF1, NTF3, NTRK2, NR4A2, PPARA, PTPRZ1, RASA1, REL, REST, ROCK1, MAP2K4, SIX1, SOD2, SORL1, STAT3, STXBP1, TGFB2, TLR4, TP53, TP53BP2, TSC1, WNT1, WNT5A, BTG2, PICALM, FZD1, NRP1, CDK5R1, BCL2L11, LANCL1, GPNMB, CHL1, RRAS2, TRIM2, ADNP, CLCF1, SLC7A11, NSMF, TOX3, HIPK2, SIX4, SSH1, DDIT4, OXR1, SLC30A10, NMNAT1, CPEB4, TMEM259, FOXQ1, EGLN3, LRRK2, NCOA7
BP	GO:0048732	gland development	107/2564	8.62E-08	ADCYAP1, AK4, ANXA1, AR, AREG, ARF6, ARHGAP5, ATM, ATP7A, CCND1, BCL2, BMPR1A, CEBPG, CREB1, DAG1, ERBB4, ESR1, ETS1, EZH2, FASN, FGFR2, GATA3, GATA6, GJA1, HFE, HGF, NRG1, FOXA1, HOXA5, HOXA9, TNC, ID2, ID4, IGF2R, IGFBP5, RBPJ, INSR, JAK2, JARID2, SMAD2, SMAD4, MET, MSN, NF1, NFIB, NKX3-1, PBX1, PDGFRA, SERPINE2, PITX1, PITX2, PKD2, PKM, PLAG1, POU3F2, MED1, PRKDC, MAPK1, PRLR, PTCH1, PTEN, PTPN3, RARA, ROBO1, SIX1, SNAI2, SOX2, SOX9, SP3, SRF, TBX3, TGFB2, TGFBR1, TGFBR2, THRB, TNFAIP3, UBE3A, VEGFA, WNT1, WNT5A, XBP1, CUL3, TNFSF11, TP63, NCOA1, NRP1, SOCS2, CLDN1, ONECUT2, RB1CC1, MAFB, BCL2L11, SEMA3C, KDM5B, FRS2, SEC63, ZBTB1, LEF1, SIX4, BTBD7, ASH1L, RTN4, NTN4, BCL11B, FA2H, ZNF703, ZDHHC21
BP	GO:0001822	kidney development	77/2564	8.90E-08	ACVR2B, JAG1, APAF1, ARG2, BCL2, CA2, CENPF, EFNB2, EGR1, EPHA4, FBN1, FGF2, FGFR2, GATA3, HAS2, HOXC11, HPGD, ID2, IL6R, ITGA3, LIF, SMAD1, SMAD2, SMAD4, SMAD5, SMAD7, MEF2C, MME, MYO1E, NF1, NKX3-1, PBX1, PDGFRA, PKD2, POU3F3, PTCH1, RARA, RET, SIX1, SOX4, SOX9, STAT1, TGFB2, TGFBR1, TSC1, VEGFA, WNT1, WNT2B, NRP1, SGPL1, SLIT2, MAGED1, MAGI2, BCL2L11, SPRY1, BASP1, YAP1, TMED10, NIPBL, WWTR1, TIPARP, PYGO1, KLHL3, SEC61A1, RRM2B, APH1A, GCNT4, SIX4, NLE1, AHI1, LGR4, PDGFD, LZTS2, LRRK2, OSR1, NPNT, FMN1
BP	GO:0070507	regulation of microtubule cytoskeleton organization	58/2564	9.20E-08	APC, RHOA, BICD1, BRCA1, CHEK1, CLTC, DYRK1A, FGF13, GSK3B, HNRNPU, KIF11, STMN1, MAP1B, MAP2, MECP2, MET, MID1, NPM1, PAFAH1B1, PRKAA1, RAC1, RNF4, SPAST, TPR, XPO1, SMC1A, KAT2B, CDK5R1, ROCK2, STAG1, PLK4, STAG2, MAPRE1, TPX2, CAMSAP2, BICD2, EML2, CHMP2B, SENP6, GPSM2, NIN, CHMP5, CHMP1B, TAOK1, SLAIN2, MID1IP1, CEP97, MCPH1, MAP9, RAB6C, DIXDC1, NAV3, PHLDB2, CCSAP, UBXN2B, TTBK2, CAMSAP1, GEN1
BP	GO:0048193	Golgi vesicle transport	94/2564	1.28E-07	AP1G1, ANK3, AREG, ARF1, ARF3, ARF4, ARL1, CAPZA1, CAPZA2, DYNC1LI2, ACSL3, GOLGA2, GOLGA4, INSIG1, KIF11, LAMP1, RAB8A, MYO1B, MYO5A, NSF, PPP6C, RAB1A, RAB6A, RP2, SNX1, SORL1, SPAST, SPTAN1, SPTBN1, VCP, CUL3,

					BLZF1, USO1, NAPG, SEC22C, RABEP1, VAPB, VAPA, VAMP3, KIF3B, KIF23, SCAMP1, SEC24C, SEC16A, PDCD6, ATP9A, OPTN, CNIH1, TFG, COG5, VTI1B, EXOC5, RAB10, TMED10, SEC23IP, RNF139, PPP6R1, SEC31A, MON2, GGA3, ANKRD28, DDHD2, BICD2, TMED3, KIF4A, KLHL20, RAB30, TMED5, GOLGA7, DCTN4, ERGIC2, TRAPPC4, RAB14, VPS13C, GOLPH3L, PPP6R3, CCDC91, AP1AR, SAR1A, GOPC, ERGIC1, KIF13A, GOLPH3, PGAP1, SLC10A7, RAB6C, DCTN5, MCFD2, LRRK2, WHAMM, TBC1D20, VTI1A, TMED4, MIA3
BP	GO:0021537	telencephalon development	71/2564	1.43E-07	RHOA, ATP2B4, CDH2, CDK6, CRK, DLX2, EPHA5, EPHB2, ERBB4, EZH2, FGF13, GSK3B, NRG1, ID2, ID4, INHBA, KIF5B, LRP1, MYH10, NEUROD1, NF1, NFIB, NTRK2, PAFAH1B1, PEX13, POU3F2, POU3F3, RELN, PTEN, RARA, ROBO1, TRA2B, SKI, SLC1A2, SRF, TACC1, TSC1, WNT5A, BTG2, SEMA7A, NCOA1, NUMB, NRP1, CDK5R1, NUMBL, SLIT2, ZEB2, BTBD3, PHLPP2, PLCB1, SZT2, SUN1, SRGAP2, SLC7A11, CNTNAP2, LEF1, NIN, SLC38A2, NDE1, GNG12, RTN4, ZSWIM6, BCL11B, MCPH1, NDEL1, DIXDC1, FOXP2, EFHC1, LRRK2, ARL13B, FBXO45
BP	GO:0061458	reproductive system development	106/2564	1.62E-07	ADCYAP1, ANXA1, AR, ATM, ATRX, AXL, CCND1, BCL2, BCL2L2, PRDM1, BMPR1B, BMPR2, ZFP36L1, CBL, ERCC1, EREG, ESR1, FANCA, BPTF, FGFR2, FOXF2, FOXO3, GATA3, GATA6, GJA1, HMGB2, FOXA1, HOXA9, HSP90AB1, TNC, ID4, RBPJ, INHBA, INSR, ITGB8, KIT, LIF, SMAD4, MAP3K4, MME, MSH2, NASP, NKX3-1, PDGFRA, SERPINE2, PKD2, PLAG1, MED1, MAPK1, PTCH1, PTEN, PTGS2, PTX3, RARA, ARID4A, KDM5A, SFRP2, SOX9, SP3, STK3, STK4, TBX3, NR2F2, TGFB2, TGFBR1, TMF1, UBE3A, VEGFA, WNT5A, WNT2B, FZD5, NCOA4, FOSL1, NRIP1, ARID1A, FZD4, STC2, TP63, NCOA1, ADAM19, SGPL1, SLIT2, BCL2L11, BASP1, PLK4, KDM5B, FRS2, FNDC3A, PATZ1, NIPBL, TIPARP, DAZAP1, LEF1, ARID4B, SIX4, PLEKHA5, LGR4, ASH1L, BIRC6, PLEKHA1, VASH2, GGNBP2, TBC1D20, OSR1, RNF38, AGO4
BP	GO:0032886	regulation of microtubule-based process	64/2564	1.77E-07	APC, RHOA, BICD1, BRCA1, CHEK1, CLTC, DIAPH1, DYRK1A, ERBB2, FGF13, GSK3B, HNRNPU, KIF11, LAMP1, STMN1, MAP1B, MAP2, MECP2, MET, MID1, NPM1, PAFAH1B1, PRKAA1, RAC1, RNF4, SPAST, TPR, XPO1, SMC1A, KAT2B, CDK5R1, ROCK2, STAG1, PLK4, STAG2, MAPRE1, TPX2, CAMSAP2, BICD2, EML2, CHMP2B, SENP6, GPSM2, NIN, CHMP5, RHOT1, CHMP1B, KLHL42, TAOK1, SLAIN2, MID1IP1, CEP97, MCPH1, TTC21B, MAP9, RAB6C, DIXDC1, NAV3, PHLDB2, CCSAP, UBXN2B, TTBK2, CAMSAP1, GEN1
BP	GO:0001503	ossification	99/2564	1.95E-07	ACVR2B, JAG1, AREG, RHOA, ATP2B1, BCL2, BMPR1A, BMPR1B, BMPR2, RUNX2, CBFB, CDH11, CDK6, CLTC, COL1A1, COL5A2, COL13A1, DDX5, PTK2B, FASN, FBN2, FGFR3, FGFR2, GJA1, GNAS, GPM6B, HGF, HNRNPC, HNRNPU, TNC, ID1, ID2, ID4, IGF1, IGFBP5, RBPJ, IL6R, IL6ST, INPPL1, LOX, SMAD1, SMAD5, MEF2C, MEF2D, MMP2, MMP16, NELL1, NF1, DDR2, PBX1, MAPK1, PTCH1, PTGS2, REST, RORB, SFRP2, SKI, SNAI2, SOX2, SOX9, SP3, SPARC, TGFB2, KLF10, WNT5A, FZD1, SEMA7A, TNFSF11, TP63, FGF18, EIF2AK3, MINPP1, TOB1, GPNMB, SEMA4D, TOB2, RRAS2, ITGA11, ZHX3, SATB2, DNAJC13, SUN1, GTPBP4, NIPBL, WWTR1, GREM1, LEF1, TMEM38B, LGR4, SMPD3, TXLNG, ANKH, IFT80, SMOC1, OSR1, TMEM64, ANO6, NPNT, SH3PXD2B
BP	GO:0048762	mesenchymal cell differentiation	64/2564	2.06E-07	JAG1, BCL2, BMPR1A, COL1A1, DAG1, DDX5, EDN1, ERBB4, EZH2, FGFR2, FOXF2, FN1, MTOR, GCNT2, GSK3B, HAS2, HGF, NRG1, FOXA1, RBPJ, SMAD2, SMAD4, SMAD7, MEF2C, PITX2, MAPK1, PTEN, RET, SFRP2, SNAI2, SOX9, STAT1, TGFB2, TGFBR1, TGFBR2, TIAM1, WNT5A, HMGA2, SEMA7A, NRP1, SEMA5A, NOLC1, ZEB2, PDCD6, SPRY1, SEMA4D, SEMA3C, CORO1C, BAMBI, WWTR1, GREM1, PDCD4, LEF1, SEMA4C, RTN4, SEMA6A, FBXL17, ZNF703, AKNA, FAM172A, KBTBD8, PHLDB2, VASN, OSR1
BP	GO:0048608	reproductive structure development	105/2564	2.06E-07	ADCYAP1, ANXA1, AR, ATM, ATRX, AXL, CCND1, BCL2, BCL2L2, PRDM1, BMPR1B, BMPR2, ZFP36L1, CBL, ERCC1, EREG, ESR1, FANCA, BPTF, FGFR2, FOXF2, FOXO3, GATA3, GATA6, GJA1, HMGB2, FOXA1, HOXA9, HSP90AB1, TNC, ID4, RBPJ, INHBA, INSR, ITGB8, KIT, LIF, SMAD4, MAP3K4, MME, MSH2, NASP, NKX3-1, PDGFRA, SERPINE2, PKD2, PLAG1, MED1, MAPK1, PTCH1, PTEN, PTGS2, PTX3, RARA, ARID4A, KDM5A, SFRP2, SOX9, SP3, STK3, STK4, TBX3, NR2F2, TGFB2, TGFBR1, TMF1, UBE3A, VEGFA, WNT5A, WNT2B, FZD5, NCOA4, FOSL1, NRIP1, ARID1A, FZD4, STC2, TP63, NCOA1, ADAM19, SGPL1, SLIT2, BCL2L11, BASP1, PLK4, KDM5B, FRS2, FNDC3A, PATZ1, NIPBL, TIPARP, DAZAP1, LEF1, ARID4B, SIX4, LGR4, ASH1L, BIRC6, PLEKHA1, VASH2, GGNBP2, TBC1D20, OSR1, RNF38, AGO4
BP	GO:0031346	positive regulation of cell projection organization	96/2564	2.12E-07	ABL2, ADCYAP1, APC, ARF1, RHOA, ARSB, ATP7A, BDNF, BMPR2, SCARB2, CDC42, DBN1, EP300, EPHA4, EPS8, EZH2, F2RL1, PTK2B, FMR1, FN1, MTOR, FYN, GDI1, GOLGA4, GPM6A, HGF, ITGA6, ITGA3, KIT, LRP1, CAPRIN1, MAP1B, NFE2L2, NTRK2, OPA1, PAFAH1B1, SERPINI1, MAPK6, RELN, PTK7, RAC1, RALA, RET, ROBO1, SKIL, SRF, TGFBR1, TIAM1, VEGFA, VLDLR, WNT1, WNT5A, FZD1, FZD4, SEMA7A, RAB11A, NRP1, WASL, SEMA5A, SLIT2, RAPGEF2, CCP110, IST1, ZEB2, MAGI2, DNM1L, PLXNC1, WASF2, SEMA4D, CDC42EP3, NCKAP1, CPEB3, SHANK2, RIMS1, RAB21, UNC13A, SETX, ADNP, GRIP1, RHOQ, CORO1C, SS18L1, AUTS2, ITSN2, NIN, TMEM106B, RRN3, FNBP1L, CCDC88A, TMEM30A, AKIRIN1, NDEL1, ANKRD27, NAV3, RNF157, DOCK11
BP	GO:0048511	rhythmic process	79/2564	2.37E-07	AHR, ZFHX3, AXL, BMPR1B, KLF9, CREB1, CREBBP, CSNK2A1, DDX5, DYRK1A, EGR1, EP300, EREG, ESR1, ETS1, EZH2, FOXO3, MTOR, GFPT1, GNAQ, GSK3B, HAS2, HLF, HNRNPU, ID1, ID2, ID4, INHBA, KMT2A, NPAS2, NTRK2, SERPINE1, PDGFRA, PPARA, PPP1CC, PRKAA1, PRKDC, PTEN, PTX3, KDM5A, RORA, RORB, SP1, TGFB2, KLF10, TP53, UBE3A, USP7, NRIP1, USP9X, FZD4, NCOA1, KAT2B, CDK5R1, SGPL1, SLIT2, ROCK2, MAGED1, CLOCK, NCOR1, NR1D2, DNM1L, NAMPT, HNRNPR, ENOX2, NCOA2, KDM5B, CBX3, KDM2A, SETX, MYCBP2, FBXW11, ADNP, FBXL3, DTL, LGR4, ARNTL2, PLEKHA1, SIK1

BP	GO:0032535	regulation of cellular component size	93/2564	3.13E-07	ADD3, ARF1, ARF6, RHOA, ATP7A, BDNF, BMPR2, CAPZA1, CAPZA2, CLCN3, CREB1, DBN1, DPYSL2, EDN1, CLN8, EPS8, F2RL1, PTK2B, FER, FGF13, FN1, MTOR, GDI1, GOLGA4, GSK3B, HSP90AB1, IL7R, LRP1, MAP1B, MAP2, MSN, NRCAM, PAFAH1B1, PRKCE, PTEN, RAB3B, RAC1, RASA1, RET, SLC12A2, SPTAN1, SPTBN1, SRF, TMSB4X, TSC1, VEGFA, EZR, WNT5A, PICALM, SEMA7A, RAB11A, NRP1, CDK5R1, WASL, SEMA5A, SLIT2, ULK2, IST1, RB1CC1, SLC12A6, AKT3, ARPC5, ACTR3, ABI2, VAV3, SEMA4D, SEMA3C, ARPC1A, ARFGEF1, CDC42EP3, NCKAP1, RAB21, SWAP70, ADNP, TMOD3, TMOD2, HP1BP3, SEMA4C, AP1AR, SPIRE1, RTN4, RAB22A, SEMA6A, ALS2, NDEL1, TMEM123, WHAMM, JMY, MTPN, TTL, ANO6, RICTOR, FMN1
BP	GO:0016049	cell growth	114/2564	3.13E-07	ADAM10, ALCAM, APBB2, APP, RHOA, BCL2, BCL6, BDNF, BMPR2, BTG1, CAMK2D, CDC42, CSNK2A1, DBN1, DDX3X, DPYSL2, EDN1, EIF4G2, ERBB2, EXTL3, PTK2B, FGF13, FN1, FXN, MTOR, G6PD, GDI1, GJA1, GOLGA4, GSK3B, HSP90AA1, HSP90AB1, IGF1, IGFBP5, INHBA, LRP1, SMAD4, MAP1B, MAP2, NRCAM, PAFAH1B1, SERPINE2, PPARA, PTPRJ, RB1, RPS6KA3, MAP2K4, SFRP2, SGK1, SLC9A1, SOX9, SRF, ADAM17, TGFB2, TGFBR1, TGFBR2, TIAM1, TP53, VCL, VEGFA, WNT5A, YY1, USP9X, SORBS2, SEMA7A, BLZF1, RAB11A, NRP1, SOCS2, CDK5R1, SEMA5A, DCLK1, SLIT2, ULK2, SERTAD2, IST1, ZEB2, NME6, NET1, SLC9A6, SEMA4D, SEMA3C, PDLIM5, AKAP13, RIMS1, RAB21, UNC13A, ADNP, SH3BP4, SGK3, FLRT3, AUTS2, ITSN2, LEF1, NIN, BCL11A, SEMA4C, USP47, CDKN2AIP, RTN4, NDRG3, SEMA6A, RAPH1, CDC73, ADIPOR2, NDEL1, SESN2, KIAA1109, RNF157, DCUN1D3, DCBLD2, MTPN, TTL, C8orf44-SGK3
BP	GO:0008361	regulation of cell size	55/2564	3.56E-07	RHOA, ATP7A, BDNF, BMPR2, CLCN3, CREB1, DBN1, DPYSL2, EDN1, CLN8, FGF13, FN1, MTOR, GDI1, GOLGA4, GSK3B, HSP90AB1, IL7R, LRP1, MAP1B, MAP2, MSN, NRCAM, PAFAH1B1, PTEN, RAC1, RET, SLC12A2, SRF, TSC1, VEGFA, WNT5A, SEMA7A, RAB11A, NRP1, CDK5R1, SEMA5A, ULK2, IST1, RB1CC1, SLC12A6, AKT3, VAV3, SEMA4D, SEMA3C, RAB21, ADNP, SEMA4C, RTN4, SEMA6A, NDEL1, TMEM123, MTPN, TTL, ANO6
BP	GO:1903311	regulation of mRNA metabolic process	84/2564	3.67E-07	ZFP36L1, ZFP36L2, CCNT1, DDX5, DYRK1A, E2F1, FMR1, MTOR, HNRNPA2B1, HNRNPC, HNRNPK, HNRNPL, HNRNPU, TNPO1, MBNL1, NPM1, PRKCA, PSMD1, PTBP1, RBM3, REST, RNASEL, ROCK1, RPS27A, SRSF1, SRSF2, SRSF6, SRSF7, TRA2B, VIM, XPO1, YWHAB, BTG2, FXR1, PABPC4, ROCK2, WTAP, PUM1, RNF40, RBM8A, TOB1, MBNL2, HNRNPR, SF3B4, IGF2BP3, KHDRBS1, CELF1, CELF2, AHCYL1, SRSF10, PAPOLA, CPEB3, DIS3, CNOT1, SAMD4A, TNRC6B, LARP1, PUM2, GIGYF2, SERBP1, DAZAP1, PABPC1, AGO2, TNRC6A, CNOT7, MYEF2, ZBTB7A, SMU1, DCP1A, ZC3HAV1, TNRC6C, CDC73, FAM172A, RBM17, YTHDC1, TRIM71, SRSF12, SREK1, RC3H1, DCP2, PDE12, RBM24, CNOT6L, YTHDF3
BP	GO:0031331	positive regulation of cellular catabolic process	91/2564	3.69E-07	APP, ATM, ZFP36L1, ZFP36L2, PTK2B, FOXO3, FMR1, GNAI3, GSK3B, HMGB1, HSP90AA1, IGF1, INSR, LDLR, LRP1, SMAD7, MSN, NFE2L2, PIK3CB, PIP4K2A, PPARA, PRKAA1, PTEN, RAD23A, ROCK1, TNFAIP3, TSC1, VCP, EZR, BTG2, EPM2A, ADAM9, USP13, ROCK2, TMEM59, RNF14, SOCS5, PUM1, RNF144A, RNF40, MFN2, BCL2L11, OPTN, TOB1, TRIB1, HNRNPR, CAMKK2, FAF1, RNF139, CPEB3, RAB3GAP1, CNOT1, TNRC6B, LARP1, SH3BP4, ARIH1, GIGYF2, ZBTB20, FBXL5, PABPC1, AGO2, SESN1, TNRC6A, TRIB2, CNOT7, UBQLN2, UBQLN1, RNFT1, WAC, VPS13C, ZC3HAV1, TNRC6C, SCOC, FYCO1, SESN2, TMEM259, MTDH, TP53INP1, LRRK2, SOCS4, RNF19B, TRIM71, SESN3, RC3H1, SH3D19, RNF217, TMTC3, RBM24, CNOT6L, YTHDF3, RNF144B
BP	GO:0007517	muscle organ development	100/2564	4.05E-07	ADARB1, RHOA, ZFHX3, BCL2, BCL9, BMPR1A, KLF5, CCNT2, CENPF, CHD2, CREB1, DDX5, DMD, EDN1, EFNB2, EGR1, EP300, EPHB1, ERBB3, ERBB4, ETV1, FKTN, FGF2, FGFR2, FKBP1A, FLNB, MTOR, G6PD, GATA6, GJA1, NRG1, HLF, HMGCR, HOXD10, FOXN2, IGF1, RBPJ, JARID2, LIF, LOX, SMAD4, SMAD7, MEF2A, MEF2C, MEF2D, MEIS1, MTM1, MYLK, NF1, PITX1, PPARA, MED1, PPP3CA, PRKAA1, MAPK1, PTEN, RB1, SGCB, SGCD, SIX1, SKI, SMTN, TCF12, NR2F2, TGFB2, TGFBR1, TGFBR2, UTRN, WNT5A, XBP1, YY1, BTG2, FXR1, FZD1, CD164, COPS2, NR1D2, BASP1, YAP1, ZBTB18, FRS2, ITGA11, ZNF609, GREM1, SERP1, LEF1, SIX4, BTBD1, SOX6, LUC7L, JPH1, NLN, HIVEP3, SAV1, ALX4, AKIRIN1, FOXP2, MTPN, SMYD1, RBM24
BP	GO:0001764	neuron migration	50/2564	4.50E-07	APBB2, AXL, CRK, ERBB4, FGF13, FYN, GATA3, GJA1, GPM6A, NRG1, ITGA3, MAP1B, MEF2C, MYH10, NRCAM, NTRK2, NR4A2, PAFAH1B1, PEX13, PRKG1, RELN, RAC1, SRF, STAT3, NR2F2, VEGFA, FZD3, USP9X, NRP1, CDK5R1, DCLK1, RAPGEF2, CHL1, ZNF609, SATB2, SRGAP2, FLRT2, NIPBL, NSMF, AUTS2, DCDC2, DDIT4, NDE1, SEMA6A, SH3RF1, NDEL1, NAV1, UNC5D, FBXO45, MDGA1
BP	GO:0034248	regulation of cellular amide metabolic process	113/2564	4.95E-07	APP, RHOA, ZFP36L1, ZFP36L2, DDX3X, EEF1A1, EIF2S1, EIF4EBP2, EIF4G2, EPHA4, ERBB2, ETF1, PTK2B, FOXO3, FMR1, MTOR, GLE1, MKNK2, IGF1, IGFBP5, IREB2, CAPRIN1, NFE2L2, CNOT2, NPM1, PRKAA1, MAPK1, DNAJC3, PURA, RARA, RBM3, ROCK1, RPL22, RPS6KA3, RPS6KB1, SHMT1, SORL1, SOX4, STAT3, THBS1, TPR, TSC1, VIM, EIF4H, CNBP, BTG2, FXR1, PICALM, ENC1, EIF4G3, CDC123, NOLC1, QKI, EIF2AK3, ROCK2, PUM1, SECISBP2L, RBM8A, TOB1, EIF1, HNRNPR, IGF2BP3, KHDRBS1, CELF1, TMED10, RNF139, CPEB3, CNOT1, SAMD4A, TNRC6B, GGA3, LARP4B, LARP1, PUM2, SLC7A11, NGDN, LTN1, GIGYF2, AGO1, PABPC1, AGO2, SERP1, RBMS3, TNRC6A, CNOT7, PAIP2, YTHDF1, OGFOD1, LARP6, SMPD3, CNOT6, PDP2, TNRC6C, CPEB4, SESN2, EIF2A, KBTBD8, PPP1R15B, ORMDL1, LARP4, TRIM71, CPEB2, MTPN, SAMD8, RC3H1, LSM14B, AGO3, AGO4, RBM24, CNOT6L, YTHDF3, EIF4E3, PAIP2B
BP	GO:1901653	cellular response to peptide	95/2564	5.04E-07	ADCY2, ADCY9, APC, APP, ATP2B1, ATP6V1A, BCL2L2, ZFP36L1, KLF5, CA2, CACNA2D1, CCNA2, CDC5L, CREB1, CRK, EDN1, EIF4EBP2, EPHA4, FBN1, FER, FOXO3, FYN, GAB1, GNAI2, GRB14, GSK3B, ID1, IGF1, IGF1R, INSR, JAK2, LRP1, MAP1B, RAB8A, MYO5A, NFE2L2, NFKB1, NR4A2, OPA1, PIK3C2A, PIK3R1, PKM, PRKAA1, PRKACB, PRKAR1A, PRKAR2A, PRKCB, PRKDC, PRLR, PTEN, PTPRE, RAP1B, ROCK1, RPS6KB1, SLC9A1, SORL1, SP1, STAT1, STAT3, KLF10, TLR4, TP53, TSC1, VIM, WNT1, XBP1, PIK3R3, USO1, SOCS2, KAT2B, ROCK2, ATP6V1G1, TBC1D4, BCL2L11, NAMPT, SORBS1, AHCYL1,

					RAB10, SIK2, RHOQ, APPL1, KLF3, CHMP5, ATP6V1H, ERRFI1, PHIP, SMPD3, SLC30A10, DENND4C, MBD5, ZNF106, NDEL1, CPEB2, SESN3, STXBP4
BP	GO:0016311	dephosphorylation	112/2564	5.12E-07	ACP1, BCL2, CALM1, CALM2, CALM3, CDC25A, DUSP4, DUSP5, DUSP8, ENSA, EYA4, FKBP1A, MTOR, GNAI2, GSK3B, HSP90AB1, INPP4A, INPPL1, JAK2, MEF2C, MGAT5, MTM1, PPP1R12A, OCRL, PPM1A, PPP1CC, PPP1R2, PPP2R1B, PPP2R2A, PPP2R2C, PPP2R5A, PPP2R5E, PPP3CA, PPP3R1, PPP6C, PTBP1, PTEN, PTPN3, PTPN4, PTPN12, PTPN14, PTPRE, PTPRG, PTPRJ, PTPRK, PTPRM, PTPRR, PTPRZ1, ROCK1, TGFB2, TSC1, YWHAB, PTP4A1, SHOC2, PTP4A2, PPM1D, CDC14A, RNGTT, MTMR3, MTMR6, ROCK2, MINPP1, PHACTR2, MAGI2, SMG7, CTDSPL, SEMA4D, ARPP19, DUSP14, PTPN21, PTPRT, PPP6R1, SACM1L, NT5C2, PHLPP2, SWAP70, CAMTA1, FBXW11, CTDNEP1, NSMF, PPA2, NT5C3A, CTDSPL2, NT5DC3, SSH1, CEP192, RPRD1A, PPP6R3, PPP2R2D, CTTNBP2NL, SLC39A10, PDP2, SLC7A14, PPP4R4, RPRD1B, RBM26, WNK1, MTMR9, PPP1R3B, CSRNP3, PPP1R15B, SSH2, G6PC3, SPPL3, NUDT16, UBLCP1, DUSP18, PPM1L, PPP4R2, SPRED1, NPNT, CNEP1R1
BP	GO:0001649	osteoblast differentiation	64/2564	5.22E-07	ACVR2B, JAG1, AREG, BMPR1A, BMPR1B, BMPR2, RUNX2, CBFB, CDK6, CLTC, COL1A1, DDX5, FASN, FBN2, FGFR2, GJA1, GNAS, HGF, HNRNPC, HNRNPU, TNC, ID1, ID2, ID4, IGF1, IGFBP5, IL6R, IL6ST, LOX, SMAD1, SMAD5, MEF2C, MEF2D, NELL1, NF1, DDR2, PTCH1, REST, RORB, SFRP2, SKI, SNAI2, SOX2, FZD1, SEMA7A, TP63, TOB1, GPNMB, SEMA4D, RRAS2, ITGA11, ZHX3, SATB2, DNAJC13, GTPBP4, WWTR1, GREM1, LEF1, LGR4, IFT80, SMOC1, TMEM64, NPNT, SH3PXD2B
BP	GO:0034329	cell junction assembly	67/2564	6.29E-07	ACTB, ACTN1, APC, RHOA, BCL2, DST, CAPZA1, RUNX1, CBFB, CD151, CDC42, CDH2, CDH6, CDH11, CTNND1, ECT2, PTK2B, FN1, GJA1, GPM6B, ITGA6, KRT5, LAMC1, LIMS1, LRP1, SMAD7, MYO9A, OPHN1, PRKCA, PKN2, PTEN, PTPRJ, PTPRK, RAC1, RAP1B, ROCK1, SLC9A1, SNAI2, SRF, STRN, THBS1, TJP1, TSC1, UGT8, VCL, VEGFA, FZD5, PIP5K1A, PKP4, NRP1, CLDN1, MAP4K4, ROCK2, RAPGEF2, SLK, TESK2, SORBS1, CORO1C, MPP5, ZNF703, VMP1, PARD6B, PHLDB2, MTDH, WHAMM, FMN1, OCLN
BP	GO:0045666	positive regulation of neuron differentiation	92/2564	6.35E-07	ABL2, ADCYAP1, ARF1, RHOA, ARSB, BCL2, BCL6, BDNF, BMPR2, SCARB2, DBN1, DLX2, ECT2, EP300, EPHA4, EZH2, PTK2B, FMR1, FN1, MTOR, FYN, GDI1, GOLGA4, HGF, FOXA1, ITGA6, ITGA3, LRP1, CAPRIN1, MAP1B, MEF2C, NAP1L2, NEUROD1, NFE2L2, NRCAM, NTRK2, OPA1, PAFAH1B1, SERPINI1, MAPK6, RELN, PTEN, PTK7, RARA, REST, RET, ROBO1, SKIL, SRF, TCF4, ZEB1, TCF12, TIAM1, VEGFA, VLDLR, WNT5A, FZD1, FZD4, SEMA7A, NCOA1, RAB11A, NRP1, SOCS2, SEMA5A, SPAG9, SLIT2, RAPGEF2, IST1, ZEB2, MAGI2, DNM1L, PLXNC1, SEMA4D, CPEB3, SHANK2, RIMS1, RAB21, UNC13A, SETX, ADNP, GRIP1, MMD, SS18L1, ITSN2, NIN, TMEM106B, RRN3, TMEM30A, TGIF2, NDEL1, ANKRD27, RNF157
BP	GO:0050770	regulation of axonogenesis	55/2564	7.09E-07	RHOA, BDNF, BMPR2, CDH2, CHN1, DBN1, DPYSL2, EPHA4, EPHB2, FGF13, FN1, GDI1, GOLGA4, GSK3B, LRP1, MAP1B, MAP2, NRCAM, NTRK2, PAFAH1B1, POU3F2, PTEN, RET, ROBO1, SKIL, SRF, TIAM1, VEGFA, WNT5A, SEMA7A, RAB11A, NRP1, CDK5R1, SEMA5A, SLIT2, ULK2, IST1, ZEB2, UST, PLXNC1, SEMA4D, SEMA3C, RAB21, MYCBP2, KIF13B, ADNP, NIN, SEMA4C, YTHDF1, RTN4, SEMA6A, ZSWIM6, TRAK2, NDEL1, TTL
BP	GO:0000209	protein polyubiquitination	80/2564	8.99E-07	XIAP, BCL2, BLMH, BRCA1, CBFB, CBL, CDC27, FOXF2, UBE2K, LMO7, LNPEP, NEDD4, PSMD1, RNF4, RPS27A, SKP1, SKP2, TNFAIP3, UBE2A, UBE2D1, UBE2D3, UBE2E2, UBE2H, UBE2L3, UBE2V2, UBE3A, CUL3, TRIP12, UBE4A, NPEPPS, RNF14, RNF144A, RNF40, AREL1, WWP1, FBXW11, TRIM2, SASH1, MKRN1, ARIH1, HECTD1, FBXW2, FBXL3, FBXL5, KLHL3, KLHL20, RLIM, UBR5, DTL, UBE2D4, TRIM44, RNF111, UBE2W, RNF114, PELI1, HECW2, KLHL42, RNF213, UBE2O, SMURF2, RMND5A, FBXL17, SPSB1, FBXO11, TNKS2, ZFP91, SYVN1, LONRF1, UBE2Q2, RNF19B, TRIM71, HECTD2, RC3H1, RNF187, FBXO41, RNF217, RNF168, ZNRF2, RNF144B, RNF165
BP	GO:0002262	myeloid cell homeostasis	47/2564	9.76E-07	ANXA1, AXL, BCL6, BPGM, ZFP36L1, CDK6, CEBPG, ETS1, FANCC, FOXO3, G6PD, GATA3, HMGB1, HMGB2, HOXA5, ID2, INHBA, IREB2, JAK2, KIT, SMAD5, SLC11A2, PIK3CB, PKNOX1, MED1, RB1, ARID4A, SP3, SRF, STAT1, STAT3, ADAM17, VEGFA, MAFB, PTBP3, BCL2L11, SLC7A11, FLVCR1, HIPK2, TMOD3, SENP1, ZBTB7A, KLF13, NCAPG2, SOX6, KMT2E, SFXN1
BP	GO:0048588	developmental cell growth	65/2564	1.01E-06	ALCAM, APP, BDNF, BMPR2, DBN1, DPYSL2, EDN1, FGF13, FN1, MTOR, G6PD, GDI1, GOLGA4, GSK3B, HSP90AA1, HSP90AB1, IGF1, LRP1, MAP1B, MAP2, NRCAM, PAFAH1B1, PPARA, MAP2K4, SOX9, SRF, TGFBR2, TIAM1, VCL, VEGFA, WNT5A, YY1, USP9X, SORBS2, SEMA7A, RAB11A, NRP1, CDK5R1, SEMA5A, DCLK1, SLIT2, ULK2, IST1, ZEB2, SLC9A6, SEMA4D, SEMA3C, PDLIM5, AKAP13, RIMS1, RAB21, UNC13A, ADNP, FLRT3, AUTS2, ITSN2, NIN, BCL11A, SEMA4C, RTN4, SEMA6A, RAPH1, NDEL1, RNF157, TTL
BP	GO:0021954	central nervous system neuron development	31/2564	1.04E-06	ADARB1, ATP7A, CDH11, CRK, EPHA4, EPHB1, EPHB2, FGFR2, HSP90AA1, HSP90AB1, MAP2, NFIB, NTRK2, NR4A2, PAFAH1B1, PTEN, ROBO1, WNT5A, BTG2, NRP1, DCLK1, B4GALT6, B4GALT5, SLIT2, RAPGEF2, ZEB2, MYCBP2, SZT2, NIN, NDEL1, FBXO45
BP	GO:0031589	cell-substrate adhesion	88/2564	1.09E-06	ACTN1, JAG1, RHOA, AXL, BCL2, BCL6, CD44, CDC42, CDK6, COL1A1, COL13A1, CRK, DAG1, DOCK1, MEGF9, EPHB1, PTK2B, FER, FN1, GCNT2, GPM6B, GSK3B, HAS2, ID1, ITGA6, ITGA3, ITGAV, JAK2, LAMC1, LIMS1, LRP1, MKLN1, NF1, DDR2, SERPINE1, PIK3CB, PIK3R1, PRKCE, PTEN, PTPRJ, PTPRK, RAB1A, RAC1, RASA1, ROCK1, SLC9A1, SRF, THBS1, TIAM1, TSC1, UTRN, VCL, VEGFA, WNT1, FZD4, PIP5K1A, ADAM9, NRP1, VAMP3, MAP4K4, ROCK2, ONECUT2, SLK, BCL2L11, EDIL3, TESK2, SORBS1, NID2, ITGA11, SRGAP2, CORO1C, ABI3BP, SNED1, MINK1, EPDR1, TRPM7, AP1AR, PARVA, NTN4, MMRN2, DOCK5, ANTXR1, PHLDB2, WHAMM, CCDC80, NPNT, ACER2, FMN1

BP	GO:0061014	positive regulation of mRNA catabolic process	23/2564	1.13E-06	ZFP36L1, ZFP36L2, ROCK1, BTG2, ROCK2, PUM1, TOB1, HNRNPR, CPEB3, CNOT1, TNRC6B, GIGYF2, PABPC1, AGO2, TNRC6A, CNOT7, ZC3HAV1, TNRC6C, TRIM71, RC3H1, RBM24, CNOT6L, YTHDF3
BP	GO:0009755	hormone-mediated signaling pathway	65/2564	1.13E-06	AR, RHOA, BRCA1, RUNX1, CBFB, DDX5, EP300, ESR1, ESRRG, ACSL1, NR6A1, NR3C1, FOXA1, JAK2, NR3C2, NEDD4, NKX3-1, CNOT2, NR4A2, PPARA, MED1, PRLR, RAN, RARA, RB1, RNF4, RORA, RORB, SKP2, SSTR2, NR2F2, THRB, NR2C2, UBE3A, NCOA4, NCOA3, NRIP1, ARID1A, TP63, NCOA1, PIAS2, CLOCK, RNF14, NCOR1, NR1D2, YAP1, PGRMC2, ABHD2, AKAP13, CNOT1, GRIP1, APPL1, FOXP1, STRN3, LEF1, ZBTB7A, UBR5, LGR4, LMO3, LANCL2, PMEPA1, GPAM, ADIPOR2, CREBRF, KCTD6
BP	GO:0046777	protein autophosphorylation	65/2564	1.13E-06	ABL2, ATM, CALM1, CALM2, CALM3, CAMK2D, DYRK1A, EIF2S1, EPHA4, EPHB1, EPHB4, ERBB2, ERBB4, PTK2B, FER, FGFR3, FGFR2, FLT1, FRK, MTOR, FYN, MKNK2, GSK3B, IGF1R, INSR, JAK2, KIT, MARK3, MAP3K9, NTRK2, DDR2, PAK2, PDGFRA, PPP2R5A, PPP2R5E, RAP2A, RAP2B, STK4, VEGFA, YES1, EIF2AK3, ULK2, SLK, OXSR1, RAD50, GPNMB, CAMKK2, NEK6, IRAK3, AAK1, SMG1, SIK2, GREM1, STK39, MINK1, NLK, ERRFI1, TRPM7, TAOK1, RAP2C, WNK1, WNK3, PDGFD, LRRK2, SIK1
BP	GO:0001763	morphogenesis of a branching structure	57/2564	1.25E-06	AR, AREG, BCL2, PRDM1, COL4A1, COL13A1, DAG1, DLX2, EDN1, ESR1, FGF2, FGFR2, HGF, FOXA1, HOXA5, TNC, SMAD4, MET, NKX3-1, PBX1, PKD2, MED1, PTCH1, SFRP2, SIX1, SNAI2, SOX9, SRF, STK4, TBX3, TGFBR2, VEGFA, WNT1, WNT5A, WNT2B, FZD5, TP63, NRP1, SLIT2, MAGED1, SPRY1, SPRY2, YAP1, SEMA3C, GNA13, KDM5B, FRS2, LEF1, SIX4, BCL11A, LGR4, BTBD7, RTN4, NTN4, HHIP, LRRK2, NPNT
BP	GO:0048872	homeostasis of number of cells	67/2564	1.29E-06	ANXA1, AXL, BCL2, BCL6, BPGM, ZFP36L1, CDH2, CDK6, CEBPG, ETS1, EZH2, F2R, FANCC, FOXO3, G6PD, GATA3, HMGB1, HMGB2, HOXA5, ID2, IL7R, INHBA, IREB2, JAK2, KIT, SMAD5, MEF2C, SLC11A2, PIK3CB, PKNOX1, MED1, RB1, ARID4A, SKIL, SOX9, SP3, SRF, STAT1, STAT3, ADAM17, TNFAIP3, VEGFA, DNAJA3, MAFB, PTBP3, AKT3, BCL2L11, SLC7A11, GIGYF2, FLVCR1, HIPK2, TMOD3, SENP1, GCNT4, ZBTB7A, KLF13, NLE1, RRN3, NCAPG2, LGR4, SOX6, DOCK10, KMT2E, SFXN1, DOCK11, RC3H1, NAPEPLD
BP	GO:0043547	positive regulation of GTPase activity	97/2564	1.38E-06	ABR, ADCYAP1, ADRB1, ALDH1A1, ARHGAP5, BNIP2, CHM, CHML, CHN1, CRK, DOCK1, ECT2, ERBB2, EZH2, F2R, F2RL1, PTK2B, GDI1, GNAQ, GSK3B, AGFG1, ITGA6, LIMS1, MYO9A, NF1, NTF3, OCRL, OPHN1, RASA1, RP2, CCL20, TIAM1, TSC1, WNT5A, EVI5, PICALM, PIP5K1A, PKP4, NRP1, ASAP2, RABEP1, ARHGAP29, MAP4K4, RASAL2, RAPGEF2, USP6NL, DOCK4, ARHGAP32, TBC1D4, RABGAP1L, IQSEC1, DNM1L, RASGRP1, FAM13A, RASA4, NET1, VAV3, SEMA4D, ARFGEF1, RALBP1, RAB11FIP2, RAB3GAP1, SNX13, PLCB1, DOCK9, ARHGEF12, SRGAP2, CORO1C, RABGAP1, TBC1D10B, GAPVD1, RGS17, GIT1, ASAP1, FAM13B, RAPGEF6, ERRFI1, ARHGAP17, DOCK10, TBC1D22B, DEPDC1, RALGAPB, ALS2, DOCK5, NDEL1, ARHGAP24, ANKRD27, DOCK7, ARAP2, LRRK2, TBC1D20, SGSM1, STXBP5, DOCK11, RUNDC1, DENND1B, RGPD8
BP	GO:0048863	stem cell differentiation	69/2564	1.45E-06	JAG1, BMPR1A, ZFP36L2, RUNX2, RUNX1, CBFB, CDK6, CHD2, EDN1, ERBB4, ESR1, FGFR2, FN1, GATA3, GATA6, GPM6A, NRG1, FOXA1, HNRNPU, RBPJ, JARID2, KIT, LIF, SMAD4, MEF2C, KMT2A, NFE2L2, PDGFRA, PITX2, MAPK1, PSMD1, REST, RET, SNAI2, SOX5, SOX9, SRF, STAT3, TCF12, TGFB2, TP53, HMGA2, FZD1, SEMA7A, CDK13, TP63, NRP1, SEMA5A, NOLC1, PUM1, ZEB2, PDCD6, YAP1, SEMA4D, SEMA3C, MTF2, CORO1C, GREM1, SEMA4C, OCIAD1, SOX6, SEMA6A, FBXL17, SETD6, FAM172A, KBTBD8, MSI2, OSR1, RBM24
BP	GO:0051098	regulation of binding	91/2564	1.46E-06	ACTB, APP, ARF6, BCL2, BDNF, CALM3, CEBPG, CLIC2, CRK, E2F1, EIF2S1, EP300, EPHA4, FKBP1A, FMR1, GATA3, GOLGA2, GSK3B, HFE, NRG1, HMGB1, HMGB2, HSP90AB1, ID1, ID2, ID4, IFIT2, IFIT1, IGF1, JAK2, STMN1, LIF, LOX, LRP1, SMAD2, SMAD4, MAP2, MARK3, MEF2C, MET, MFNG, NEUROD1, NFKBIA, NKX3-1, P2RY1, PLCL1, PPARA, PPP3CA, RAN, RARA, RB1, ROCK1, SKI, SUMO3, SORL1, SP100, STK3, STK4, TDG, TMBIM6, TGFBR1, TIAM1, TMSB4X, WNT5A, HMGA2, TNFSF11, NRP1, CCPG1, RAPGEF2, MAPRE1, PLCL2, MAU2, ADNP, SNAPIN, GTPBP4, BAMBI, NIPBL, HIPK2, LEF1, ZBTB7A, RSF1, BTBD1, LARP6, MEPCE, ZNF462, GREM2, DERL1, LRRK2, SPPL3, TTBK2, ZFP90
BP	GO:0048545	response to steroid hormone	93/2564	1.68E-06	ADCYAP1, ANXA1, AR, AREG, RHOA, ATP1A2, ATP2B1, CCND1, BCL2, BRCA1, ZFP36L1, ZFP36L2, KLF9, CA2, CALM3, RUNX1, CBFB, COL1A1, DDX5, DSG2, EDN1, EP300, ESR1, ESRRG, FOXO3, NR6A1, NR3C1, HMGB2, FOXA1, HNRNPU, JAK2, LOX, NR3C2, NEDD4, NKX3-1, CNOT2, NR4A2, PPARA, MED1, PTGS2, RAN, RARA, RB1, REST, RNF4, RORA, RORB, SKP2, SPARC, SSTR2, NR2F2, TGFB2, TGFBR2, THBS1, THRB, NR2C2, UBE2L3, UBE3A, NCOA4, FOSL1, NCOA3, NRIP1, ARID1A, TP63, NCOA1, ADAM9, PIAS2, CLDN1, SLIT2, CLOCK, RNF14, NCOR1, NR1D2, BCL2L11, YAP1, PGRMC2, NCOA2, ABHD2, AKAP13, CNOT1, GRIP1, FOXP1, STRN3, LEF1, ZBTB7A, UBR5, ERRFI1, DDIT4, LMO3, PMEPA1, GPAM, CREBRF, KCTD6
BP	GO:1901861	regulation of muscle tissue development	48/2564	1.79E-06	BCL2, BMPR1A, CENPF, CREB1, DDX5, EDN1, EFNB2, EPHB1, ERBB3, ERBB4, FGF2, FGFR2, MTOR, G6PD, GATA6, GJA1, NRG1, HMGCR, IGF1, IGFBP5, RBPJ, JARID2, LOX, SMAD4, MEF2C, MEIS1, MTM1, PPARA, PRKAA1, MAPK1, PTEN, SIX1, TGFBR1, TGFBR2, YY1, NR1D2, YAP1, FRS2, GREM1, LEF1, SIX4, SOX6, LUC7L, NLN, SAV1, AKIRIN1, MTPN, RBM24
BP	GO:0035265	organ growth	58/2564	2.09E-06	ACACB, ACVR2B, AR, BCL2, BMPR1A, COL12A1, EDN1, ERBB4, ESR1, FGF2, FGFR3, FGFR2, FXN, MTOR, G6PD, GATA6, GJA1, IGF1, RBPJ, JARID2, SMAD1, SMAD2, MEF2C, MEIS1, DDR2, PLAG1, PPARA, PRKAR1A, MAPK1, PTEN, RARA,

					MAP2K4, SOX9, STK3, STK4, TGFB2, TGFBR1, TGFBR2, UBE3A, YY1, SORBS2, BCL2L11, SPRY2, BASP1, YAP1, PDLIM5, AKAP13, WWC1, SERP1, FLVCR1, SCARA3, BNC2, TMEM38B, SMPD3, WWC3, SAV1, WWC2, ARID2
BP	GO:0007265	Ras protein signal transduction	104/2564	2.23E-06	ABL2, ABR, ARF6, RHOA, RND3, ARHGAP5, BCL6, CBL, CCNA2, CDC42, CRK, DOK1, ECT2, EPHB2, EPS8, F2R, F2RL1, FGF2, GDI1, GNA12, GNB1, LPAR4, NRG1, IGF1, ITGA3, JAK2, KPNB1, STMN1, RAB8A, MET, NF1, NOTCH2, NRAS, OPHN1, PLD1, RAB1A, RAB2A, RAB3B, RAB6A, RAB27B, RAC1, RALA, RAP1B, RAP2A, RAP2B, RASA1, RB1, ROBO1, ROCK1, SOS2, TGFB2, TIAM1, TP53, TRIO, SHOC2, CUL3, RAB11A, NRP1, ARHGAP29, MAP4K4, ROCK2, RAPGEF2, G3BP2, IQSEC1, MFN2, RASGRP1, ABI2, RASA4, WASF2, SPRY1, SPRY2, NET1, VAV3, ARFGEF1, CDC42EP3, GNA13, NCKAP1, RAB10, AKAP13, RRAS2, RAB18, RAB21, PSD3, ARHGEF12, RHOQ, AUTS2, FBXO8, RAB30, GPSM2, ITSN2, ARHGEF3, RAB14, RAPGEF6, RALGPS2, RHOT1, CDC42SE1, CDC42SE2, RAB22A, PLEKHG1, ALS2, RAP2C, RAB6C, KSR2, RABL3
BP	GO:0071902	positive regulation of protein serine/threonine kinase activity	83/2564	2.40E-06	RHOA, ATP2B4, CCND1, CALM1, CALM2, CALM3, CCND2, CCNT1, CCNT2, CKS1B, CRK, DDX3X, DUSP5, EDN1, EPHA4, ERBB2, EZH2, F2R, ACSL1, PTK2B, FGF2, FLT1, HGF, NRG1, HSP90AB1, IGF1, INSR, JAK2, KIT, MAP3K1, MAP3K4, MAP3K5, MAP3K9, NTF3, PIK3CB, PIK3CG, PKD2, PRKAA1, MAPK1, MAP2K3, RET, ROBO1, RPS27A, MAP2K4, STK3, STK4, ADAM17, TGFBR1, THBS1, TIAM1, TLR4, VEGFA, WNT5A, FZD5, HMGA2, FZD4, FZD8, TNFSF11, PDE5A, ADAM9, FGF18, CDK5R1, SPAG9, MAGED1, RAPGEF2, ZEB2, RASGRP1, SPRY2, MAP3K2, FRS2, ERP29, AKAP13, TAB2, SASH1, STK39, CAB39, TAOK1, ALS2, PDGFD, LRRK2, CCNYL1, TAB3, SAMD5
BP	GO:0000381	regulation of alternative mRNA splicing, via spliceosome	27/2564	2.45E-06	DDX5, DYRK1A, FMR1, HNRNPL, HNRNPU, MBNL1, PTBP1, REST, SRSF1, SRSF2, SRSF6, SRSF7, TRA2B, WTAP, RBM8A, MBNL2, KHDRBS1, CELF1, CELF2, SRSF10, ZBTB7A, SMU1, FAM172A, RBM17, SRSF12, SREK1, RBM24
BP	GO:0008584	male gonad development	44/2564	2.45E-06	AR, ATRX, CCND1, BCL2, BCL2L2, CBL, ERCC1, ESR1, FANCA, GATA3, GATA6, GJA1, HMGB2, HOXA9, INHBA, INSR, KIT, SMAD4, MSH2, NASP, NKX3-1, PDGFRA, RARA, ARID4A, KDM5A, SFRP2, SOX9, TGFB2, TGFBR1, TMF1, WNT5A, WNT2B, NCOA4, NCOA1, SGPL1, BCL2L11, FNDC3A, PATZ1, ARID4B, SIX4, PLEKHA1, TBC1D20, RNF38, AGO4
BP	GO:0016202	regulation of striated muscle tissue development	47/2564	2.45E-06	BCL2, BMPR1A, CENPF, CREB1, DDX5, EDN1, EFNB2, EPHB1, ERBB3, ERBB4, FGF2, FGFR2, MTOR, G6PD, GATA6, GJA1, NRG1, HMGCR, IGF1, RBPJ, JARID2, LOX, SMAD4, MEF2C, MEIS1, MTM1, PPARA, PRKAA1, MAPK1, PTEN, SIX1, TGFBR1, TGFBR2, YY1, NR1D2, YAP1, FRS2, GREM1, LEF1, SIX4, SOX6, LUC7L, NLN, SAV1, AKIRIN1, MTPN, RBM24
BP	GO:0090068	positive regulation of cell cycle process	76/2564	2.71E-06	ANXA1, APP, RHOA, ATM, ATRX, CCND1, BRCA1, CCND2, CDC25A, CDC42, DDX3X, E2F1, ECT2, EDN1, EP300, EREG, EZH2, GATA6, HNRNPU, HSPA2, ID2, IGF1, INSR, MDM4, MECP2, CNOT2, CNOT4, NPM1, PBX1, PKD2, MED1, PRKCE, PKN2, RB1, SOX4, SPAST, ADAM17, TFDP1, TFDP2, TP53, TPR, UBE2E2, WNT5A, BTG2, HMGA2, CUL4B, CUL3, PKP4, CDC14A, RAB11A, CDK5R1, KIF3B, ROCK2, KIF23, PLK4, CNOT1, PLCB1, NIPBL, ANKRD17, TMOD3, CNOT7, GPSM2, TRIAP1, DTL, PHIP, SMPD3, KMT2E, MEPCE, CNOT6, CDC73, RAB11FIP4, NUDT16, UBXN2B, CNOT6L, STXBP4, GEN1
BP	GO:0050673	epithelial cell proliferation	101/2564	2.88E-06	AR, AREG, ATP7A, CCND1, BCL2L2, BMPR1A, BMPR2, ZFP36L1, KLF9, RUNX3, KRIT1, CDK6, ATF2, EFNB2, ERBB2, EREG, ESR1, FGF2, FGFR2, FLT1, MTOR, GATA3, B4GALT1, GJA1, GLUL, HAS2, HGF, HMGB1, HMGB2, HOXA5, ID1, ID2, IGF1, IGFBP5, KIT, LAMC1, MEF2C, NF1, NFIB, NKX3-1, NOTCH2, NRAS, PIK3CB, PLCG1, MED1, PRKCA, PRKDC, MAPK1, PTCH1, PTEN, PTPRK, PTPRM, PURA, RB1, ROBO1, SFRP2, SRSF6, SIX1, SNAI2, SOX2, SOX9, SP1, SPARC, STAT1, STAT3, ADAM17, NR2F2, TGFB2, TGFBR1, THBS1, TNFAIP3, VEGFA, VEGFB, WNT5A, XBP1, SCG2, TNFSF11, TP63, NRP1, SEMA5A, MAGED1, AKT3, PDCD6, YAP1, KDM5B, FRS2, SIX4, ERRFI1, AGGF1, LGR4, RTN4, IFT80, SAV1, BCL11B, CDC73, VASH2, ZNF703, FOXP2, OSR1, STXBP4, RICTOR
BP	GO:0021543	pallium development	51/2564	2.92E-06	RHOA, ATP2B4, CDH2, CDK6, CRK, DLX2, EPHA5, EZH2, FGF13, GSK3B, ID4, KIF5B, LRP1, NEUROD1, NF1, NTRK2, PAFAH1B1, PEX13, POU3F2, POU3F3, RELN, PTEN, RARA, ROBO1, TRA2B, SRF, TACC1, TSC1, BTG2, NCOA1, NRP1, CDK5R1, SLIT2, ZEB2, BTBD3, PHLPP2, PLCB1, SUN1, SRGAP2, CNTNAP2, LEF1, SLC38A2, NDE1, GNG12, RTN4, MCPH1, NDEL1, DIXDC1, FOXP2, EFHC1, FBXO45
BP	GO:0046546	development of primary male sexual characteristics	44/2564	2.94E-06	AR, ATRX, CCND1, BCL2, BCL2L2, CBL, ERCC1, ESR1, FANCA, GATA3, GATA6, GJA1, HMGB2, HOXA9, INHBA, INSR, KIT, SMAD4, MSH2, NASP, NKX3-1, PDGFRA, RARA, ARID4A, KDM5A, SFRP2, SOX9, TGFB2, TGFBR1, TMF1, WNT5A, WNT2B, NCOA4, NCOA1, SGPL1, BCL2L11, FNDC3A, PATZ1, ARID4B, SIX4, PLEKHA1, TBC1D20, RNF38, AGO4
BP	GO:0006338	chromatin remodeling	53/2564	3.05E-06	ACTB, ATRX, CHD1, CHD4, CHEK1, ESR1, BPTF, GATA3, HMGB1, HMGB2, FOXA1, HNRNPC, JARID2, NASP, NPM1, RB1, KDM5A, RBBP4, SATB1, SMARCC2, SMARCD1, SMARCE1, SOX9, TPR, KDM6A, HMGA2, ARID1A, SMARCA5, TP63, KAT2B, BAZ1B, KDM5B, BAZ2A, CBX3, ZBTB1, SCMH1, KDM4B, SATB2, SMCHD1, BAZ2B, ZBTB7A, RSF1, CHRAC1, PBRM1, ZMIZ1, GATAD2B, CENPK, CENPO, PABPC1L, ACTR8, MYSM1, SPTY2D1, SMYD1
BP	GO:0048675	axon extension	40/2564	3.08E-06	ALCAM, BMPR2, DBN1, DPYSL2, FN1, GDI1, GOLGA4, GSK3B, HSP90AA1, HSP90AB1, LRP1, MAP1B, MAP2, NRCAM, PAFAH1B1, SRF, VCL, VEGFA, WNT5A, USP9X, SEMA7A, RAB11A, NRP1, CDK5R1, SEMA5A, DCLK1, SLIT2, ULK2, SLC9A6, SEMA4D, SEMA3C, RAB21, ADNP, AUTS2, SEMA4C, RTN4, SEMA6A, RAPH1, NDEL1, TTL

BP	GO:0006417	regulation of translation	99/2564	3.11E-06	APP, RHOA, ZFP36L1, ZFP36L2, DDX3X, EIF2S1, EIF4EBP2, EIF4G2, ERBB2, ETF1, PTK2B, FOXO3, FMR1, MTOR, GLE1, MKNK2, IGFBP5, IREB2, CAPRIN1, CNOT2, NPM1, MAPK1, DNAJC3, PURA, RARA, RBM3, ROCK1, RPL22, RPS6KA3, RPS6KB1, SHMT1, SOX4, STAT3, THBS1, TPR, TSC1, VIM, EIF4H, CNBP, BTG2, FXR1, ENC1, EIF4G3, CDC123, NOLC1, QKI, EIF2AK3, ROCK2, PUM1, SECISBP2L, RBM8A, TOB1, EIF1, HNRNPR, IGF2BP3, KHDRBS1, CELF1, RNF139, CPEB3, CNOT1, SAMD4A, TNRC6B, LARP4B, LARP1, PUM2, NGDN, LTN1, GIGYF2, AGO1, PABPC1, AGO2, SERP1, RBMS3, TNRC6A, CNOT7, PAIP2, YTHDF1, OGFOD1, LARP6, CNOT6, TNRC6C, CPEB4, SESN2, EIF2A, KBTBD8, PPP1R15B, LARP4, TRIM71, CPEB2, MTPN, RC3H1, LSM14B, AGO3, AGO4, RBM24, CNOT6L, YTHDF3, EIF4E3, PAIP2B
BP	GO:0042176	regulation of protein catabolic process	91/2564	3.52E-06	APC, CSNK2A1, CYP51A1, EEF1A1, EPHA4, PTK2B, FOXF2, FMR1, FYN, GJA1, GNA12, GSK3B, HFE, NRG1, UBE2K, HMGCR, HSP90AA1, HSP90AB1, LDLR, LRP1, SMAD7, MDM4, MSN, MTM1, NEDD4, NELL1, NFE2L2, NSF, OPHN1, SERPINE2, PSMD1, PTEN, PTPN3, RAD23A, ROCK1, SNX1, SORL1, SOX9, TIMP3, TMF1, TNFAIP3, UBE3A, VCP, EZR, WNT1, WNT5A, XPO1, USP7, CUL4B, ADAM9, USP13, RNF14, SOCS5, N4BP1, RNF144A, RNF40, AREL1, TRIB1, WWP1, FAF1, IRAK3, RNF139, MYCBP2, GGA3, RYBP, ARIH1, TIPARP, FBXL5, TRIB2, HIPK2, USP25, SENP1, UBQLN2, UBQLN1, UBXN1, RNFT1, WAC, DTL, AZIN1, YOD1, HECW2, SMURF2, LPCAT1, TMEM259, LRRK2, SOCS4, RNF19B, SH3D19, RNF217, TMTC3, RNF144B
BP	GO:0098727	maintenance of cell number	48/2564	3.62E-06	JAG1, BCL9, BMPR1A, ZFP36L2, CDH2, DDX6, EZH2, FANCC, FGF2, FOXO3, IGF1, RBPJ, KIT, LIF, SMAD2, SMAD4, CNOT2, NOTCH2, PBX1, REST, SKI, SOX2, SOX4, SOX9, SS18, STAT3, TBX3, KLF10, HMGA2, NCOA3, SMC1A, ARID1A, TP63, MED21, MED12, YAP1, MTF2, CNOT1, NIPBL, FOXP1, RIF1, SAV1, CDC73, MCPH1, ZNF322, SETD6, TET1, HOOK3
BP	GO:0006892	post-Golgi vesicle-mediated transport	36/2564	3.62E-06	AP1G1, ANK3, ARF1, ARF3, ARF4, ACSL3, GOLGA4, LAMP1, MYO1B, MYO5A, NSF, RP2, SORL1, SPTBN1, BLZF1, RABEP1, VAMP3, SCAMP1, SEC16A, OPTN, VTI1B, EXOC5, RAB10, MON2, GGA3, KLHL20, GOLGA7, RAB14, VPS13C, GOLPH3L, CCDC91, AP1AR, GOPC, KIF13A, GOLPH3, VTI1A
BP	GO:0018209	peptidyl-serine modification	80/2564	3.62E-06	APP, ATM, ATP2B4, BCL2, CAMK2D, CD44, CSNK2A1, DMD, DYRK1A, MTOR, GALNT1, GALNT2, GALNT3, MKNK2, GSK3B, HGF, HSP90AA1, HSP90AB1, LIF, SMAD7, MARK3, NTF3, NTRK2, PAK2, PDE4D, PLCL1, PRKAA1, PRKACB, PRKCA, PRKCB, PRKCE, PKN2, PRKDC, PRKG1, MAPK1, PTGS2, RET, ROCK1, RPS6KA3, RPS6KB1, SFRP2, SGK1, STK4, TGFBR1, TGFBR2, VEGFA, WNT5A, HMGA2, GALNT4, CDK5R1, DCLK1, RPS6KA5, EIF2AK3, ROCK2, AKT3, HIPK3, SPRY2, NEK6, IL24, STK38L, SMG1, GPD1L, PLCL2, SGK3, STK39, HIPK2, SPOCK3, NLK, CAB39, DDIT4, POGLUT1, FNIP2, WNK1, GGNBP2, DOCK7, LRRK2, TTBK2, PAQR3, RICTOR, C8orf44-SGK3
BP	GO:0060541	respiratory system development	56/2564	3.62E-06	ACVR2B, ATP7A, BMPR1A, BMPR2, CREB1, DAG1, EP300, FGFR2, GATA6, FOXA1, HOXA5, TNC, ID1, IGFBP5, RBPJ, ITGA3, LIF, LOX, SMAD2, MME, NFIB, PDGFRA, MAPK1, PTK7, RARA, SRSF6, SIX1, SKI, SOX9, SP3, SPARC, SRF, TGFBR2, THRB, VEGFA, WNT5A, WNT2B, FGF18, PHF14, SPRY1, SPRY2, BASP1, YAP1, MAN1A2, CIC, SMCHD1, SLC7A11, LEF1, SIX4, ERRFI1, TMEM38B, SMPD3, SAV1, HHIP, TNS3, FOXP2
BP	GO:0034101	erythrocyte homeostasis	40/2564	3.70E-06	AXL, BCL6, BPGM, ZFP36L1, CDK6, CEBPG, ETS1, FOXO3, G6PD, GATA3, HMGB2, HOXA5, ID2, INHBA, IREB2, JAK2, KIT, SMAD5, SLC11A2, PKNOX1, MED1, RB1, ARID4A, SP3, SRF, STAT1, STAT3, VEGFA, MAFB, PTBP3, FLVCR1, HIPK2, TMOD3, SENP1, ZBTB7A, KLF13, NCAPG2, SOX6, KMT2E, SFXN1
BP	GO:0030522	intracellular receptor signaling pathway	72/2564	3.74E-06	AHR, BIRC3, XIAP, AR, RHOA, BRCA1, RUNX1, CBFB, DDX5, EP300, ESR1, ESRRG, EZH2, NR6A1, NR3C1, FOXA1, JAK2, NEDD4, NFKBIA, NKX3-1, CNOT2, NR4A2, PPARA, MED1, RAN, RARA, RB1, RNF4, RORA, RORB, RPS27A, SEC14L1, SKP2, SNAI2, STAT3, NR2F2, THRB, TLR4, TSPAN6, TNFAIP3, UBE3A, NCOA4, NCOA3, NRIP1, ARID1A, TP63, NCOA1, PIAS2, CLOCK, RNF14, NCOR1, PUM1, NR1D2, YAP1, BRD8, CNOT1, TAB2, PUM2, GRIP1, ANKRD17, FOXP1, STRN3, ZBTB7A, UBR5, ASXL2, LMO3, PMEPA1, GPAM, ZCCHC3, DCBLD2, KCTD6, TAB3
BP	GO:0010498	proteasomal protein catabolic process	108/2564	3.92E-06	CDC27, FOXF2, FMR1, GNA12, GSK3B, HFE, UBE2K, HSP90AB1, SMAD7, MTM1, NEDD4, NFE2L2, OPHN1, PCBP2, PSMD1, RAD23A, RNF4, RPS27A, SKP1, SKP2, HSPA13, TMF1, UBE2A, UBE2D1, UBE2D3, UBE2H, UBE3A, VCP, RNF103, USP7, CUL5, CUL4B, CUL3, ENC1, USP13, BUB3, SOCS6, UBE4A, CLOCK, RNF14, SOCS5, N4BP1, RNF144A, RNF40, AREL1, TRIB1, ERLIN1, WWP1, FAF1, ERLIN2, RNF139, UBXN4, FAF2, FBXW11, TRIM2, RYBP, CD2AP, ARIH1, FBXL2, ARMC8, WWTR1, LTN1, FBXL3, FBXL5, KLHL20, TRIB2, USP25, SENP1, UBQLN2, UBQLN1, UBXN1, RNFT1, WAC, JKAMP, SGTB, UBE2W, YOD1, PCNP, PELI1, HECW2, KLHL42, SMURF2, RMND5A, FBXL17, GID4, DERL1, HECTD3, TBL1XR1, RNF122, DNAJB14, SPSB1, EDEM3, KLHL15, SYVN1, TMEM259, LRRK2, SOCS4, RNF19B, UBR3, TRIM71, UBXN2B, RNF187, RNF217, TMTC3, FBXO45, DNAJC18, RNF144B, SPOPL
BP	GO:0048736	appendage development	52/2564	3.92E-06	ASPH, ATRX, BMPR1A, BMPR1B, BMPR2, CACNA1C, RUNX2, CREBBP, EN1, FBN2, FGFR2, GJA1, GNA12, GNAS, HOXA9, HOXC11, HOXC13, HOXD10, ITGA6, SMAD4, MBNL1, PBX1, PITX1, PITX2, MED1, PTCH1, RARA, SFRP2, SKI, SOX4, SOX9, TBX3, NR2F2, TGFB2, WNT5A, RECK, TP63, KAT2B, BCL2L11, SEMA3C, SLC7A11, NIPBL, GREM1, SLC39A1, FLVCR1, LEF1, ALX4, SMOC1, LMBR1, OSR1, FMN1, RNF165
BP	GO:0060173	limb development	52/2564	3.92E-06	ASPH, ATRX, BMPR1A, BMPR1B, BMPR2, CACNA1C, RUNX2, CREBBP, EN1, FBN2, FGFR2, GJA1, GNA12, GNAS, HOXA9, HOXC11, HOXC13, HOXD10, ITGA6, SMAD4, MBNL1, PBX1, PITX1, PITX2, MED1, PTCH1, RARA, SFRP2, SKI, SOX4, SOX9, TBX3, NR2F2, TGFB2, WNT5A, RECK, TP63, KAT2B, BCL2L11, SEMA3C, SLC7A11, NIPBL, GREM1, SLC39A1, FLVCR1, LEF1, ALX4, SMOC1, LMBR1, OSR1, FMN1, RNF165

BP	GO:0048017	inositol lipid-mediated signaling	53/2564	3.97E-06	RHOA, ZFP36L1, CA8, CBL, EDN1, ERBB2, ERBB3, ERBB4, F2R, F2RL1, FLT1, FYN, GAB1, GATA3, HGF, IGF1, IGF1R, INSR, JAK2, KIT, NEDD4, NF1, NKX3-1, NPR3, NTF3, NTRK2, PDGFRA, SERPINE2, PIK3C2A, PIK3C3, PIK3CB, PIK3CG, PIK3R1, PIP4K2A, PLCG1, PLD1, MAPK1, RELN, PTEN, RPS6KB1, SOX9, TGFB2, UBE3A, EZR, PIP5K1A, GAB2, RASGRP1, SEMA4D, PLCB1, FBXL2, CEP55, PLEKHA1, PDGFD
BP	GO:0007179	transforming growth factor beta receptor signaling pathway	56/2564	4.07E-06	ACVR2B, RHOA, BMPR1A, BMPR1B, BMPR2, CBL, CREB1, CREBBP, EP300, FBN1, FBN2, GCNT2, GLG1, HPGD, HSP90AB1, ID1, ITGA3, LOX, SMAD1, SMAD2, SMAD4, SMAD5, SMAD7, PPM1A, PTPRK, RPS27A, SKI, SKIL, ADAM17, ZEB1, TGFB2, TGFBR1, TGFBR2, THBS1, TP53, WNT1, USP9X, ADAM9, TGFBRAP1, ONECUT2, USP15, PEG10, BAMBI, ZNF451, APPL1, HIPK2, ZBTB7A, TRIM33, NLK, RNF111, PMEPA1, SMURF2, ZNF703, VASN, ACVR1C, NPNT
BP	GO:0046661	male sex differentiation	48/2564	4.07E-06	AR, ATRX, CCND1, BCL2, BCL2L2, BMPR1A, CBL, ERCC1, ESR1, FANCA, GATA3, GATA6, GJA1, HMGB2, HOXA9, INHBA, INSR, KIT, SMAD4, SMAD5, MSH2, NASP, NKX3-1, PDGFRA, RARA, ARID4A, KDM5A, SFRP2, SOX9, TBX3, TGFB2, TGFBR1, TMF1, WNT5A, WNT2B, NCOA4, NCOA1, SGPL1, BCL2L11, FNDC3A, PATZ1, ARID4B, SIX4, LGR4, PLEKHA1, TBC1D20, RNF38, AGO4
BP	GO:0010976	positive regulation of neuron projection development	72/2564	4.07E-06	ABL2, ADCYAP1, ARF1, RHOA, ARSB, BDNF, BMPR2, SCARB2, DBN1, EP300, EPHA4, EZH2, PTK2B, FMR1, FN1, MTOR, FYN, GDI1, GOLGA4, HGF, ITGA6, ITGA3, LRP1, CAPRIN1, MAP1B, NFE2L2, NTRK2, OPA1, PAFAH1B1, SERPINI1, MAPK6, RELN, PTK7, RET, ROBO1, SKIL, SRF, TIAM1, VEGFA, VLDLR, WNT5A, FZD1, FZD4, SEMA7A, RAB11A, NRP1, SEMA5A, SLIT2, RAPGEF2, IST1, ZEB2, MAGI2, DNM1L, PLXNC1, SEMA4D, CPEB3, SHANK2, RIMS1, RAB21, UNC13A, SETX, ADNP, GRIP1, SS18L1, ITSN2, NIN, TMEM106B, RRN3, TMEM30A, NDEL1, ANKRD27, RNF157
BP	GO:0050678	regulation of epithelial cell proliferation	90/2564	4.22E-06	AR, AREG, ATP7A, CCND1, BMPR1A, BMPR2, ZFP36L1, KLF9, RUNX3, KRIT1, CDK6, ATF2, EFNB2, ERBB2, EREG, FGF2, FGFR2, FLT1, MTOR, GATA3, B4GALT1, GJA1, GLUL, HAS2, HMGB1, HMGB2, HOXA5, ID1, IGF1, LAMC1, MEF2C, NF1, NFIB, NKX3-1, NOTCH2, NRAS, PLCG1, MED1, PRKCA, PRKDC, PTCH1, PTEN, PTPRK, PTPRM, RB1, ROBO1, SFRP2, SRSF6, SIX1, SNAI2, SOX2, SOX9, SP1, SPARC, STAT1, STAT3, ADAM17, NR2F2, TGFB2, TGFBR1, THBS1, TNFAIP3, VEGFA, VEGFB, WNT5A, XBP1, SCG2, TP63, NRP1, SEMA5A, MAGED1, AKT3, PDCD6, YAP1, KDM5B, FRS2, SIX4, ERRFI1, AGGF1, RTN4, IFT80, SAV1, BCL11B, CDC73, VASH2, ZNF703, FOXP2, OSR1, STXBP4, RICTOR
BP	GO:0030218	erythrocyte differentiation	38/2564	4.37E-06	BCL6, BPGM, ZFP36L1, CDK6, CEBPG, ETS1, FOXO3, G6PD, GATA3, HMGB2, HOXA5, ID2, INHBA, JAK2, KIT, SMAD5, SLC11A2, PKNOX1, MED1, RB1, ARID4A, SP3, SRF, STAT1, STAT3, VEGFA, MAFB, PTBP3, FLVCR1, HIPK2, TMOD3, SENP1, ZBTB7A, KLF13, NCAPG2, SOX6, KMT2E, SFXN1
BP	GO:2001233	regulation of apoptotic signaling pathway	95/2564	4.40E-06	APAF1, FASLG, AR, BCL2, BCL2L2, BDNF, BID, BMPR1B, BRCA1, CD44, CSNK2A1, DDX3X, E2F1, EYA4, FXN, FYN, GNAI2, GNAI3, GSK3B, HGF, HMGB2, HNRNPK, IGF1, INHBA, ITGA6, ITGAV, JAK2, MCL1, MNT, NF1, NFE2L2, NKX3-1, NR4A2, OPA1, SERPINE1, PAK2, PLAGL2, PPP2R1B, PPP3R1, PTEN, PTGS2, RB1, RET, SFRP2, SKIL, SNAI2, SOD2, SP100, STK3, STK4, TMBIM6, TFDP1, TFDP2, TGFBR1, THBS1, TIMP3, TNFAIP3, TP53, TP53BP2, TPT1, XBP1, YWHAB, PCGF2, SCG2, PRKRA, TP63, HRK, NRP1, EIF2AK3, MAGED1, RB1CC1, BCL2L11, DNM1L, YAP1, ZMYND11, SERINC3, ERP29, FAF1, SGK3, TMEM14A, UBQLN1, RRM2B, TRIAP1, NLE1, RRN3, PHIP, USP47, BIRC6, SH3RF1, ITM2C, SYVN1, ITPRIP, LRRK2, NACC2, C8orf44-SGK3
BP	GO:0048634	regulation of muscle organ development	47/2564	4.59E-06	BCL2, BMPR1A, CENPF, CREB1, DDX5, EDN1, EFNB2, EPHB1, ERBB3, ERBB4, FGF2, FGFR2, MTOR, G6PD, GATA6, GJA1, NRG1, HMGCR, IGF1, RBPJ, JARID2, LOX, SMAD4, MEF2C, MEIS1, MTM1, PPARA, PRKAA1, MAPK1, PTEN, SIX1, TGFBR1, TGFBR2, YY1, NR1D2, YAP1, FRS2, GREM1, LEF1, SIX4, SOX6, LUC7L, NLN, SAV1, AKIRIN1, MTPN, RBM24
BP	GO:0007163	establishment or maintenance of cell polarity	58/2564	4.60E-06	ARF4, ARF6, RHOA, RND3, DST, KRIT1, CDC42, CRK, EPHB1, PTK2B, FGF13, GATA3, GSK3B, HSP90AA1, HSP90AB1, MAP1B, MAP2, MAP4, MSN, MYH9, MYO9A, OPHN1, PAFAH1B1, PTK7, RAP1B, ROCK1, SLC9A1, WEE1, WNT5A, MAP7, ROCK2, UST, ARPC5, ACTR3, SPRY1, SPRY2, ARFGEF1, RAB10, RAB11FIP2, WWC1, RHOQ, CLIC4, GPSM2, NDE1, FRMD4A, PARVA, BCCIP, GOLPH3, MPP5, MCPH1, NDEL1, SNX27, PARD6B, DOCK7, UBXN2B, AMOT, AMOTL1, RICTOR
BP	GO:0060996	dendritic spine development	34/2564	5.06E-06	ADAM10, ARF1, ARF4, ARF6, CDC42, DBN1, EPHA4, EPHB1, EPHB2, ACSL4, FMR1, MTOR, CAPRIN1, MEF2C, OPA1, PAFAH1B1, PAK2, MAPK6, RELN, PTEN, TIAM1, UBE3A, CDK5R1, WASL, DNM1L, ABI2, SLC9A6, PDLIM5, CPEB3, SHANK2, SRGAP2, ASAP1, DOCK10, LRRK2
BP	GO:0021952	central nervous system projection neuron axonogenesis	15/2564	5.15E-06	ADARB1, CDH11, EPHA4, EPHB1, EPHB2, NFIB, NR4A2, PAFAH1B1, DCLK1, SLIT2, ZEB2, MYCBP2, SZT2, NIN, FBXO45
BP	GO:0048015	phosphatidylinositol-mediated signaling	52/2564	5.22E-06	RHOA, ZFP36L1, CA8, CBL, EDN1, ERBB2, ERBB3, ERBB4, F2R, F2RL1, FLT1, FYN, GAB1, GATA3, HGF, IGF1, IGF1R, INSR, JAK2, KIT, NEDD4, NF1, NKX3-1, NPR3, NTF3, NTRK2, PDGFRA, SERPINE2, PIK3C2A, PIK3C3, PIK3CB, PIK3CG, PIK3R1, PIP4K2A, PLCG1, MAPK1, RELN, PTEN, RPS6KB1, SOX9, TGFB2, UBE3A, EZR, PIP5K1A, GAB2, RASGRP1, SEMA4D, PLCB1, FBXL2, CEP55, PLEKHA1, PDGFD

BP	GO:0000380	alternative mRNA splicing, via spliceosome	29/2564	5.22E-06	DDX5, DYRK1A, FMR1, HNRNPL, HNRNPU, MBNL1, PTBP1, REST, SRSF1, SRSF2, SRSF6, SRSF7, TRA2B, CDK13, WTAP, RBM8A, MBNL2, KHDRBS1, CELF1, CELF2, SRSF10, RSRC1, ZBTB7A, SMU1, FAM172A, RBM17, SRSF12, SREK1, RBM24
BP	GO:0043434	response to peptide hormone	100/2564	5.37E-06	ADCY2, ADCY9, ANXA1, APC, AREG, ATP2B1, ATP6V1A, ZFP36L1, BTG1, CA2, CCNA2, CDC5L, COL1A1, CREB1, CRK, DAG1, EDN1, EGR1, EIF4EBP2, EREG, FBN1, FER, FOXO3, MTOR, FYN, GAB1, GJA1, GNAI2, GRB14, GSK3B, IGF1R, IGFBP5, INPPL1, INSR, JAK2, MAP1B, RAB8A, MYO5A, NFE2L2, NFKB1, NR4A2, OPA1, PIK3C2A, PIK3R1, PKM, PPARA, PRKAA1, PRKACB, PRKAR1A, PRKAR2A, PRKCB, PRKDC, PRLR, PTEN, PTGS2, PTPRE, RAP1B, ROCK1, RPS6KB1, SRSF6, SLC9A1, SORL1, SP1, SPARC, STAT1, STAT3, TSC1, WNT1, XBP1, BTG2, PIK3R3, STC2, USO1, SOCS2, KAT2B, ROCK2, ATP6V1G1, RNF40, EPM2AIP1, TBC1D4, SORBS1, AHCYL1, RAB10, SIK2, RHOQ, APPL1, CACYBP, ATP6V1H, ERRFI1, PHIP, SLC30A10, DENND4C, MBD5, ZNF106, NDEL1, SESN2, ACVR1C, CPEB2, SESN3, STXBP4
BP	GO:0060213	positive regulation of nuclear-transcribed mRNA poly(A) tail shortening	10/2564	6.31E-06	BTG2, TOB1, CPEB3, CNOT1, TNRC6B, PABPC1, AGO2, TNRC6A, CNOT7, TNRC6C
BP	GO:0017145	stem cell division	20/2564	6.83E-06	ZFP36L2, FGF13, FGFR2, KIT, NAP1L2, PAFAH1B1, SFRP2, SOX5, TGFB2, TIAL1, NCOA3, CUL3, NUMB, NUMBL, RAB10, WWTR1, LEF1, PRDM15, AKNA, DOCK7
BP	GO:0048738	cardiac muscle tissue development	62/2564	6.83E-06	BMPR1A, CREB1, CXADR, DSG2, EDN1, EFNB2, ERBB3, ERBB4, FGF2, FGFR2, FKBP1A, MTOR, G6PD, GATA6, GJA1, NRG1, HNRNPU, ID2, IGF1, RBPJ, JARID2, SMAD1, SMAD4, SMAD7, MEF2A, MEF2C, MEIS1, MYH10, PDGFRA, PPARA, MED1, PRKAR1A, MAPK1, PTEN, RARA, MAP2K4, SGCB, SGCD, SLC9A1, SRF, TBX3, TGFB2, TGFBR1, TGFBR2, TSC1, VEGFA, WNT5A, YY1, ARID1A, SORBS2, YAP1, NEBL, PDLIM5, FRS2, AKAP13, GREM1, CACYBP, SOX6, SAV1, MYLK3, SIK1, ARID2
BP	GO:0001667	ameboidal-type cell migration	104/2564	6.94E-06	ANXA1, ARF6, RHOA, ARSB, BMPR2, KRIT1, CCR6, CYP1B1, DOCK1, EDN1, EFNB2, EPHB4, ERBB4, ETS1, PTK2B, FER, FGF2, FN1, MTOR, GATA3, GLUL, GNA12, HAS2, HMGB1, ID1, ITGA3, KIT, LGALS8, MECP2, MEF2C, MET, MYH9, NF1, NFE2L2, DDR2, PAFAH1B1, PIK3C2A, PITX2, PLCG1, PRKCA, PRKCE, PKN2, MAP2K3, PTEN, PTGS2, PTPRG, PTPRM, PTPRR, RET, ROBO1, SOX9, SP1, SP100, SPARC, SRF, ADAM17, NR2F2, TGFB2, TGFBR1, TGFBR2, THBS1, TMSB4X, VEGFA, WNT5A, SCG2, PIP5K1A, SEMA7A, PIK3R3, ADAM9, RAB11A, FGF18, NRP1, SGPL1, SEMA5A, SLIT2, MAP4K4, ROCK2, AKAP12, ZEB2, IQSEC1, AKT3, PDCD6, WASF2, SEMA4D, SEMA3C, PDXDC1, SASH1, SRGAP2, CORO1C, APPL1, GREM1, FOXP1, AGO2, SEMA4C, RTN4, SEMA6A, SMURF2, MMRN2, DOCK5, ACVR1C, AMOT, AMOTL1, SPRED1, MIA3
BP	GO:0021953	central nervous system neuron differentiation	52/2564	7.24E-06	ADARB1, ATP7A, CDH11, CRK, DLX2, EPHA4, EPHB1, EPHB2, CLN8, ERBB4, FGFR2, HOXD10, HSP90AA1, HSP90AB1, ID4, INHBA, MAP2, NFIB, NTRK2, NR4A2, OPHN1, PAFAH1B1, PTCH1, PTEN, ROBO1, RORA, SFRP2, SOX4, WNT1, WNT5A, BTG2, FZD1, NRP1, DCLK1, B4GALT6, B4GALT5, SLIT2, RAPGEF2, ZEB2, OLIG2, MYCBP2, SATB2, SZT2, GIGYF2, NIN, ZSWIM6, BCL11B, NDEL1, MTPN, UNC5D, FBXO45, MDGA1
BP	GO:0045927	positive regulation of growth	69/2564	7.34E-06	ACACB, ADAM10, RHOA, BCL2, BDNF, BMPR1A, BMPR2, CDC42, CREB1, CSNK2A1, DBN1, DDX3X, EDN1, EIF4G2, ERBB2, ERBB4, EXTL3, PTK2B, FGF2, FGFR2, FN1, FXN, MTOR, GATA6, GDI1, GOLGA4, IGF1, RBPJ, INSR, LRP1, MAP1B, MEF2C, MTM1, PAFAH1B1, POU3F2, PRKDC, MAPK1, RPS6KA3, SFRP2, SLC9A1, SRF, ADAM17, TGFB2, TGFBR1, TGFBR2, VEGFA, EZR, SEMA7A, RAB11A, NRP1, SEMA5A, IST1, BASP1, YAP1, SEMA4D, RIMS1, UNC13A, PLCB1, ADNP, NIPBL, SERP1, ITSN2, LEF1, USP47, CDKN2AIP, NDEL1, RNF157, MTPN, SH3PXD2B
BP	GO:0043484	regulation of RNA splicing	42/2564	7.37E-06	DDX5, DYRK1A, FMR1, HNRNPA2B1, HNRNPF, HNRNPH1, HNRNPK, HNRNPL, HNRNPU, MBNL1, PIK3R1, PTBP1, RBM3, REST, SRSF1, SRSF2, SRSF6, SRSF7, TRA2B, TMBIM6, WTAP, RBM8A, PTBP3, MBNL2, SF3B4, KHDRBS1, CELF1, CELF2, SRSF10, SETX, DAZAP1, ZBTB7A, ESRP1, SMU1, RBM22, FAM172A, RBM17, YTHDC1, SRSF12, SREK1, RBM24, ZNF326
BP	GO:0051402	neuron apoptotic process	63/2564	7.54E-06	ADARB1, APAF1, APP, FASLG, RHOA, ATM, AXL, BCL2, BDNF, BID, ATF2, EN1, ERBB3, F2R, PTK2B, FOXO3, FYN, G6PD, GABRB2, GATA3, HSP90AB1, JAK2, LRP1, MCL1, MECP2, MEF2C, MSH2, NF1, NTF3, NTRK2, NR4A2, PTPRZ1, RASA1, RB1, ROCK1, MAP2K4, SIX1, SOD2, STXBP1, TGFB2, THRB, TP53, BTG2, TP63, NRP1, CDK5R1, BCL2L11, LANCL1, CHL1, TRIM2, ADNP, CLCF1, NSMF, TOX3, HIPK2, SIX4, USP53, OXR1, SLC30A10, NMNAT1, CPEB4, FOXQ1, EGLN3
BP	GO:0072073	kidney epithelium development	43/2564	7.67E-06	JAG1, ARG2, BCL2, EFNB2, EPHA4, FGF2, FGFR2, GATA3, LIF, SMAD1, SMAD2, SMAD4, SMAD5, SMAD7, MEF2C, MYO1E, PBX1, PKD2, POU3F3, PTCH1, RARA, RET, SIX1, SOX9, STAT1, VEGFA, WNT1, WNT2B, SLIT2, MAGED1, MAGI2, SPRY1, BASP1, YAP1, WWTR1, KLHL3, SIX4, AHI1, LGR4, LZTS2, OSR1, NPNT, FMN1
BP	GO:0001654	eye development	86/2564	7.67E-06	ACVR2B, JAG1, FASLG, SHROOM2, ATP2B1, ATP2B4, BCL2, PRDM1, BMPR1B, BMPR2, CACNA1C, COL4A1, COL5A2, CYP1B1, DLX2, EPHB1, EPHB2, CLN8, FBN1, FBN2, FOXF2, GATA3, GJA1, GNB1, GPD2, GPM6A, INHBA, MEIS1, MEIS2, MITF, MYH10, NEUROD1, NF1, NTRK2, OPA1, PDGFRA, PITX2, PKNOX1, MED1, PTPRM, RARA, RET, RORB, SALL2, SKI, SKIL, SOX2, SOX9, SP3, SRF, STAT3, ZEB1, TGFB2, TGFBR1, TGFBR2, THRB, VEGFA, VIM, WNT5A, WNT2B, YY1, FZD5,

					ARID1A, FZD4, NRP1, ZEB2, MFN2, ABI2, KDM5B, FRS2, ATF6, RAB3GAP1, RAB18, PDS5B, SLC7A11, NIPBL, HIPK2, AHI1, TGIF2, SMOC1, BCL11B, LPCAT1, RAB11FIP4, FOXP2, TBC1D20, SH3PXD2B
BP	GO:0035196	production of miRNAs involved in gene silencing by miRNA	21/2564	7.67E-06	DDX5, ESR1, HNRNPA2B1, SMAD1, SMAD2, PPP3CA, TP53, PRKRA, NCOR1, PUM1, PUM2, DICER1, AGO1, AGO2, DGCR8, MRPL44, SNIP1, TRIM71, AGO3, AGO4, LIN28B
BP	GO:1902850	microtubule cytoskeleton organization involved in mitosis	41/2564	8.27E-06	RHOA, RCC1, CLTC, GOLGA2, HNRNPU, KIF11, KPNB1, STMN1, MAP4, MECP2, PAFAH1B1, RAN, SPAST, TACC1, TPR, VCP, SMC1A, RAB11A, KIF3B, KIF23, SPRY1, SPRY2, STAG1, STAG2, TPX2, KIF4A, CHMP2B, GPSM2, CHMP5, NDE1, CEP192, BCCIP, CHMP1B, CEP97, MCPH1, MAP9, NDEL1, EFHC1, CCSAP, UBXN2B, MZT1
BP	GO:0043161	proteasome-mediated ubiquitin-dependent protein catabolic process	96/2564	9.13E-06	CDC27, FOXF2, GNA12, GSK3B, HFE, UBE2K, HSP90AB1, SMAD7, MTM1, NEDD4, NFE2L2, PCBP2, PSMD1, RAD23A, RNF4, RPS27A, SKP1, SKP2, HSPA13, UBE2A, UBE2D1, UBE2D3, UBE2H, UBE3A, VCP, RNF103, USP7, CUL5, CUL4B, CUL3, BUB3, UBE4A, CLOCK, RNF14, SOCS5, N4BP1, RNF144A, AREL1, TRIB1, ERLIN1, WWP1, FAF1, ERLIN2, UBXN4, FAF2, FBXW11, TRIM2, RYBP, CD2AP, ARIH1, FBXL2, ARMC8, WWTR1, LTN1, FBXL3, FBXL5, KLHL20, TRIB2, SENP1, UBQLN2, UBQLN1, UBXN1, WAC, JKAMP, SGTB, UBE2W, YOD1, PCNP, PELI1, HECW2, KLHL42, SMURF2, RMND5A, FBXL17, GID4, DERL1, HECTD3, TBL1XR1, RNF122, DNAJB14, SPSB1, EDEM3, KLHL15, SYVN1, LRRK2, SOCS4, RNF19B, UBR3, TRIM71, UBXN2B, RNF187, RNF217, FBXO45, DNAJC18, RNF144B, SPOPL
BP	GO:0007160	cell-matrix adhesion	60/2564	9.13E-06	ACTN1, JAG1, RHOA, BCL2, BCL6, CD44, CDK6, COL13A1, DAG1, PTK2B, FN1, GPM6B, GSK3B, ITGA6, ITGA3, ITGAV, LIMS1, LRP1, MKLN1, NF1, DDR2, SERPINE1, PIK3CB, PIK3R1, PTEN, PTPRJ, PTPRK, RAC1, RASA1, ROCK1, SLC9A1, SRF, THBS1, TIAM1, TSC1, UTRN, VCL, VEGFA, PIP5K1A, ADAM9, NRP1, MAP4K4, ROCK2, ONECUT2, SLK, BCL2L11, TESK2, SORBS1, NID2, ITGA11, CORO1C, SNED1, MINK1, EPDR1, TRPM7, PHLDB2, WHAMM, NPNT, ACER2, FMN1
BP	GO:0050808	synapse organization	94/2564	9.14E-06	ACTB, ACTN1, ADAM10, ANK3, APP, ARF1, ARF4, ARF6, RHOA, BDNF, CDC42, CDH2, COL4A1, COL4A5, DAG1, DBN1, EFNB2, EPHA4, EPHB1, EPHB2, ERBB2, ERBB4, F2R, GPC4, FMR1, FYN, GABRB2, GLRB, GPM6A, NRG1, TNC, IGF1R, INSR, ITGA3, CAPRIN1, MAP1B, MECP2, MEF2C, MYH10, MYO5A, NEDD4, NFIA, NRCAM, NTRK2, OPA1, OPHN1, PAFAH1B1, PCDH8, RELN, PTEN, REST, SIX1, SPARC, STAU1, TIAM1, TSC1, UBE3A, UTRN, VCP, WNT5A, FZD5, FZD1, NRP1, CDK5R1, WASL, DNAJA3, NRXN1, MAGI2, DNM1L, ABI2, WASF2, SLC9A6, SEMA4D, PDLIM5, SHANK2, UNC13A, ADNP, SNAPIN, SLC7A11, FLRT3, FLRT2, CHMP2B, PCDH17, PCLO, ABHD17B, SIX4, SSH1, DOCK10, ALS2, CTTNBP2, TANC1, LRRK2, FBXO45, MDGA1
BP	GO:0071695	anatomical structure maturation	48/2564	9.14E-06	APP, RHOA, BCL2, DAG1, EREG, PTK2B, FGFR3, FOXO3, MTOR, G6PD, GATA3, GJA1, FOXA1, HOXA5, IGF1, RBPJ, MECP2, MMP2, MYO5A, NF1, NRCAM, NR4A2, OPA1, PDE3A, RB1, RET, TGFB2, WNT1, WNT5A, XBP1, RECK, CDK5R1, B4GALT6, B4GALT5, PTBP3, SEMA4D, CNTNAP2, ANKRD17, GREM1, FLVCR1, ZBTB7A, MBTPS2, BCL11A, NTN4, PABPC1L, LRRK2, ANO6, GLDN
BP	GO:0071772	response to BMP	49/2564	9.21E-06	ACVR2B, XIAP, BMPR1A, BMPR1B, BMPR2, RUNX2, DDX5, EGR1, FBN1, GATA3, GATA6, HFE, HIVEP1, ID1, RBPJ, ITGA3, SMAD1, SMAD2, SMAD4, SMAD5, SMAD7, PCSK6, PPM1A, SFRP2, SKI, SKIL, SORL1, SOX9, UBE2D1, UBE2D3, WNT1, WNT5A, USP9X, FZD1, ZFYVE16, USP15, TOB1, FSTL1, GREM1, PDCD4, HIPK2, LEF1, CTDSPL2, TRIM33, SMPD3, UBE2O, GREM2, SMURF2, RNF165
BP	GO:0071773	cellular response to BMP stimulus	49/2564	9.21E-06	ACVR2B, XIAP, BMPR1A, BMPR1B, BMPR2, RUNX2, DDX5, EGR1, FBN1, GATA3, GATA6, HFE, HIVEP1, ID1, RBPJ, ITGA3, SMAD1, SMAD2, SMAD4, SMAD5, SMAD7, PCSK6, PPM1A, SFRP2, SKI, SKIL, SORL1, SOX9, UBE2D1, UBE2D3, WNT1, WNT5A, USP9X, FZD1, ZFYVE16, USP15, TOB1, FSTL1, GREM1, PDCD4, HIPK2, LEF1, CTDSPL2, TRIM33, SMPD3, UBE2O, GREM2, SMURF2, RNF165
BP	GO:0018105	peptidyl-serine phosphorylation	74/2564	9.46E-06	APP, ATM, ATP2B4, BCL2, CAMK2D, CD44, CSNK2A1, DMD, DYRK1A, MTOR, MKNK2, GSK3B, HGF, HSP90AA1, HSP90AB1, LIF, SMAD7, MARK3, NTF3, NTRK2, PAK2, PDE4D, PLCL1, PRKAA1, PRKACB, PRKCA, PRKCB, PRKCE, PKN2, PRKDC, PRKG1, MAPK1, PTGS2, RET, ROCK1, RPS6KA3, RPS6KB1, SFRP2, SGK1, STK4, TGFBR1, TGFBR2, VEGFA, WNT5A, HMGA2, CDK5R1, DCLK1, RPS6KA5, EIF2AK3, ROCK2, AKT3, HIPK3, SPRY2, NEK6, IL24, STK38L, SMG1, GPD1L, PLCL2, SGK3, STK39, HIPK2, NLK, CAB39, DDIT4, FNIP2, WNK1, GGNBP2, DOCK7, LRRK2, TTBK2, PAQR3, RICTOR, C8orf44-SGK3
BP	GO:0070646	protein modification by small protein removal	74/2564	9.46E-06	ACTB, APC, BIRC3, AR, RHOA, BRCA1, CCNA2, CDC25A, EP300, ESR1, GATA3, HCFC1, FOXK2, SMAD1, SMAD2, SMAD4, SMAD7, MDM4, NFKBIA, PSMD1, PTEN, RAD23A, RPS27A, ATXN7, SKP2, TGFBR1, TNFAIP3, TP53, UBE2D1, USP4, USP1, VCP, YY1, USP7, USP9X, COPS3, KAT2B, USP13, USP10, COPS2, USP34, CCP110, SPATA2, USP15, STAM2, TNIP1, OTUD3, SENP6, USP25, SENP1, DESI2, UBXN1, USP53, OTUD4, ZRANB1, INO80D, USP47, ASXL2, RHOT1, YOD1, MBD5, OTUD7B, USP31, USP37, COPS7B, SMURF2, OTUB2, VCPIP1, USP42, USP32, ACTR8, MBD6, MYSM1, USP12
BP	GO:0030518	intracellular steroid hormone receptor	41/2564	9.74E-06	AR, RHOA, BRCA1, RUNX1, CBFB, DDX5, EP300, ESR1, NR3C1, FOXA1, JAK2, NEDD4, NKX3-1, CNOT2, MED1, RAN, RB1, RNF4, SKP2, UBE3A, NCOA4, NCOA3, NRIP1, ARID1A, TP63, NCOA1, PIAS2, CLOCK, RNF14, NCOR1, YAP1, CNOT1, GRIP1, FOXP1, STRN3, ZBTB7A, UBR5, LMO3, PMEPA1, GPAM, KCTD6

		signaling pathway			
BP	GO:0071375	cellular response to peptide hormone stimulus	78/2564	9.93E-06	ADCY2, ADCY9, APC, ATP2B1, ATP6V1A, ZFP36L1, CA2, CCNA2, CDC5L, CREB1, CRK, EDN1, EIF4EBP2, FBN1, FER, FOXO3, FYN, GAB1, GNAI2, GRB14, GSK3B, IGF1R, INSR, JAK2, MAP1B, RAB8A, MYO5A, NFE2L2, NFKB1, NR4A2, OPA1, PIK3C2A, PIK3R1, PKM, PRKAA1, PRKACB, PRKAR1A, PRKAR2A, PRKCB, PRKDC, PRLR, PTEN, PTPRE, RAP1B, ROCK1, RPS6KB1, SLC9A1, SORL1, SP1, STAT1, STAT3, TSC1, WNT1, XBP1, PIK3R3, USO1, SOCS2, KAT2B, ROCK2, ATP6V1G1, TBC1D4, SORBS1, AHCYL1, RAB10, SIK2, RHOQ, APPL1, ATP6V1H, ERRFI1, PHIP, SLC30A10, DENND4C, MBD5, ZNF106, NDEL1, CPEB2, SESN3, STXBP4
BP	GO:0016573	histone acetylation	46/2564	1.00E-05	BRCA1, CHEK1, ATF2, CREBBP, EP300, GATA3, HCFC1, LIF, SMAD4, MECP2, KMT2A, NAP1L2, SNAI2, TAF5, PCGF2, BRPF1, KAT6A, YEATS4, NCOA3, HAT1, NCOA1, KAT2B, RPS6KA5, GTF3C4, CLOCK, CTCF, BRD8, KAT6B, BRD1, ZNF451, AUTS2, TAF5L, BRPF3, LEF1, PHF20, RSF1, MSL2, SETD5, MRGBP, KANSL3, YEATS2, MEAF6, NAA50, EPC1, KAT8, KANSL1L
BP	GO:0030323	respiratory tube development	50/2564	1.09E-05	ACVR2B, ATP7A, BMPR1A, BMPR2, CREB1, DAG1, EP300, FGFR2, GATA6, FOXA1, HOXA5, TNC, ID1, IGFBP5, RBPJ, ITGA3, LIF, LOX, SMAD2, MME, NFIB, PDGFRA, MAPK1, PTK7, SRSF6, SOX9, SP3, SPARC, SRF, TGFBR2, THRB, VEGFA, WNT5A, WNT2B, FGF18, PHF14, SPRY1, SPRY2, YAP1, MAN1A2, CIC, SLC7A11, HECA, ERRFI1, TMEM38B, SMPD3, SAV1, HHIP, TNS3, FOXP2
BP	GO:0000082	G1/S transition of mitotic cell cycle	70/2564	1.11E-05	ANXA1, ATM, BCAT1, CCND1, BCL2, BID, CCND2, CDC25A, CDK6, RCC1, DDX3X, E2F1, EP300, EZH2, GSPT1, ID2, ID4, INHBA, MCM3, MDM4, NASP, CNOT2, CNOT4, NPAT, ORC2, ORC4, ORC5, PKD2, PPP3CA, PPP6C, PRKDC, PTEN, RB1, RBL1, RPS6KB1, RRM2, SKP2, SOX4, ADAM17, TFDP1, TFDP2, TP53, UBE2E2, WEE1, BTG2, CUL5, CUL4B, CUL3, CCNE2, CTDSPL, GPNMB, KHDRBS1, CNOT1, PHF8, PLCB1, ANKRD17, GIGYF2, CNOT7, TRIAP1, KMT2E, MEPCE, CNOT6, USP37, ZNF655, CDC73, DCUN1D3, TRIM71, NACC2, CACUL1, CNOT6L
BP	GO:0060562	epithelial tube morphogenesis	78/2564	1.11E-05	APAF1, AR, AREG, RHOA, BCL2, COL4A1, DAG1, EDN1, EFNB2, EPHA4, ESR1, FGF2, FGFR2, GATA3, GJA1, FOXA1, HOXA5, TNC, RBPJ, SMAD4, MEF2C, MET, NKX3-1, PBX1, PKD2, MED1, PRKACB, PTCH1, PTK7, RALA, RARA, RET, SFRP2, SIX1, SKI, SOX4, SOX9, SRF, STK3, STK4, TBX3, TGFB2, TGFBR2, TSC1, KDM6A, VEGFA, WNT1, WNT5A, WNT2B, LUZP1, FZD3, ARID1A, FZD1, NRP1, SLIT2, MAGED1, ZEB2, MED12, SPRY1, SPRY2, YAP1, GNA13, KDM5B, KLHL3, FOXP1, LEF1, SIX4, AHI1, SEMA4C, LGR4, MIB1, HHIP, LZTS2, OSR1, TRIM71, ARL13B, NPNT, FMN1
BP	GO:0150063	visual system development	86/2564	1.13E-05	ACVR2B, JAG1, FASLG, SHROOM2, ATP2B1, ATP2B4, BCL2, PRDM1, BMPR1B, BMPR2, CACNA1C, COL4A1, COL5A2, CYP1B1, DLX2, EPHB1, EPHB2, CLN8, FBN1, FBN2, FOXF2, GATA3, GJA1, GNB1, GPD2, GPM6A, INHBA, MEIS1, MEIS2, MITF, MYH10, NEUROD1, NF1, NTRK2, OPA1, PDGFRA, PITX2, PKNOX1, MED1, PTPRM, RARA, RET, RORB, SALL2, SKI, SKIL, SOX2, SOX9, SP3, SRF, STAT3, ZEB1, TGFB2, TGFBR1, TGFBR2, THRB, VEGFA, VIM, WNT5A, WNT2B, YY1, FZD5, ARID1A, FZD4, NRP1, ZEB2, MFN2, ABI2, KDM5B, FRS2, ATF6, RAB3GAP1, RAB18, PDS5B, SLC7A11, NIPBL, HIPK2, AHI1, TGIF2, SMOC1, BCL11B, LPCAT1, RAB11FIP4, FOXP2, TBC1D20, SH3PXD2B
BP	GO:2000027	regulation of animal organ morphogenesis	65/2564	1.15E-05	JAG1, AR, RHOA, BCL2, BMPR1A, BMPR2, RUNX2, CDC42, CLTC, EDN1, ESR1, GPC4, FGFR2, GATA3, HGF, HOXC11, RBPJ, LIF, SMAD4, MLLT3, NFIB, MED1, PSMD1, PTK7, RAC1, ROBO1, SFRP2, SRSF6, SIX1, SNAI2, SOX9, STAT1, TGFB2, TGFBR1, TGFBR2, THRB, TIAM1, TNFAIP3, VEGFA, WNT1, WNT5A, WNT2B, XBP1, FZD5, FZD3, FZD1, FZD4, MAGED1, MAGI2, MED12, SPRY1, BASP1, SEMA3C, FRS2, DAAM1, GREM1, SIX4, AHI1, LGR4, BTBD7, NTN4, SMURF2, VANGL1, FOXP2, PRICKLE2
BP	GO:0019827	stem cell population maintenance	46/2564	1.17E-05	JAG1, BCL9, BMPR1A, ZFP36L2, CDH2, DDX6, FANCC, FGF2, FOXO3, RBPJ, KIT, LIF, SMAD2, SMAD4, CNOT2, NOTCH2, PBX1, REST, SKI, SOX2, SOX4, SOX9, SS18, STAT3, TBX3, KLF10, HMGA2, NCOA3, SMC1A, ARID1A, TP63, MED21, MED12, YAP1, MTF2, CNOT1, NIPBL, FOXP1, RIF1, SAV1, CDC73, MCPH1, ZNF322, SETD6, TET1, HOOK3
BP	GO:0030509	BMP signaling pathway	46/2564	1.17E-05	ACVR2B, XIAP, BMPR1A, BMPR1B, BMPR2, RUNX2, DDX5, EGR1, FBN1, HFE, HIVEP1, ID1, RBPJ, ITGA3, SMAD1, SMAD2, SMAD4, SMAD5, SMAD7, PCSK6, PPM1A, SFRP2, SKI, SKIL, SORL1, UBE2D1, UBE2D3, WNT1, WNT5A, USP9X, FZD1, ZFYVE16, USP15, TOB1, FSTL1, GREM1, PDCD4, HIPK2, LEF1, CTDSPL2, TRIM33, SMPD3, UBE2O, GREM2, SMURF2, RNF165
BP	GO:0008406	gonad development	58/2564	1.17E-05	ADCYAP1, AR, ATM, ATRX, CCND1, BCL2, BCL2L2, BMPR1B, CBL, ERCC1, EREG, ESR1, FANCA, FOXO3, GATA3, GATA6, GJA1, HMGB2, HOXA9, INHBA, INSR, KIT, SMAD4, MSH2, NASP, NKX3-1, PDGFRA, PTX3, RARA, ARID4A, KDM5A, SFRP2, SOX9, TGFB2, TGFBR1, TMF1, UBE3A, VEGFA, WNT5A, WNT2B, NCOA4, NRIP1, FZD4, NCOA1, SGPL1, SLIT2, BCL2L11, BASP1, FNDC3A, PATZ1, TIPARP, ARID4B, SIX4, PLEKHA1, TBC1D20, OSR1, RNF38, AGO4
BP	GO:0060348	bone development	58/2564	1.17E-05	RHOA, BMPR1B, BMPR2, RUNX2, FOXN3, COL1A1, COL12A1, COL13A1, EP300, FBN1, FGFR3, FGFR2, GJA1, GLG1, GNAS, HAS2, IGF1, INPPL1, INSIG1, KIT, LOX, SMAD1, SMAD5, MEF2C, MEF2D, MEIS1, MMP16, NOTCH2, PAFAH1B1, PIP4K2A, PITX2, MED1, RARA, SFRP2, SKI, SOX9, SPARC, SRF, TGFBR2, TP53, WNT1, TNFSF11, FGF18, WASF2, SEMA4D, AKAP13, GREM1, FOXP1, MBTPS2, SCARA3, DYM, TMEM38B, SMPD3, BBX, IFT80, MCPH1, ANO6, SH3PXD2B
BP	GO:0030324	lung development	49/2564	1.22E-05	ACVR2B, ATP7A, BMPR1A, BMPR2, CREB1, DAG1, EP300, FGFR2, GATA6, FOXA1, HOXA5, TNC, ID1, IGFBP5, RBPJ, ITGA3, LIF, LOX, SMAD2, MME, NFIB, PDGFRA, MAPK1, PTK7, SRSF6, SOX9, SP3, SPARC, SRF, TGFBR2, THRB, VEGFA, WNT5A,

					WNT2B, FGF18, PHF14, SPRY1, SPRY2, YAP1, MAN1A2, CIC, SLC7A11, ERRFI1, TMEM38B, SMPD3, SAV1, HHIP, TNS3, FOXP2
BP	GO:0061138	morphogenesis of a branching epithelium	51/2564	1.24E-05	AR, AREG, BCL2, COL4A1, DAG1, EDN1, ESR1, FGF2, FGFR2, HGF, FOXA1, HOXA5, TNC, SMAD4, MET, NKX3-1, PBX1, PKD2, MED1, PTCH1, SFRP2, SIX1, SNAI2, SOX9, SRF, STK4, TBX3, TGFBR2, VEGFA, WNT1, WNT5A, WNT2B, FZD5, TP63, NRP1, SLIT2, MAGED1, SPRY1, SPRY2, YAP1, SEMA3C, GNA13, KDM5B, FRS2, LEF1, SIX4, LGR4, BTBD7, NTN4, HHIP, NPNT
BP	GO:0007044	cell-substrate junction assembly	33/2564	1.29E-05	ACTN1, RHOA, BCL2, DST, CD151, PTK2B, FN1, GPM6B, ITGA6, KRT5, LAMC1, LIMS1, LRP1, PTEN, PTPRJ, PTPRK, RAC1, ROCK1, SLC9A1, THBS1, TSC1, VEGFA, PIP5K1A, NRP1, MAP4K4, ROCK2, SLK, TESK2, SORBS1, CORO1C, PHLDB2, WHAMM, FMN1
BP	GO:0030278	regulation of ossification	55/2564	1.43E-05	ACVR2B, JAG1, AREG, ATP2B1, BCL2, BMPR1A, BMPR1B, BMPR2, RUNX2, CDK6, DDX5, PTK2B, FBN2, FGFR2, GJA1, GNAS, GPM6B, HGF, ID1, ID2, IGF1, IGFBP5, RBPJ, IL6R, IL6ST, SMAD1, SMAD5, MEF2C, NELL1, DDR2, PBX1, MAPK1, PTCH1, REST, RORB, SFRP2, SKI, SNAI2, SOX9, TGFB2, WNT5A, TP63, TOB1, SEMA4D, TOB2, ZHX3, NIPBL, GREM1, TXLNG, ANKH, SMOC1, OSR1, TMEM64, ANO6, NPNT
BP	GO:1900153	positive regulation of nuclear-transcribed mRNA catabolic process, deadenylation-dependent decay	12/2564	1.48E-05	ZFP36L1, ZFP36L2, BTG2, TOB1, CPEB3, CNOT1, TNRC6B, PABPC1, AGO2, TNRC6A, CNOT7, TNRC6C
BP	GO:0044843	cell cycle G1/S phase transition	73/2564	1.54E-05	ANXA1, ATM, ATP2B4, BCAT1, CCND1, BCL2, BID, CCNA2, CCND2, CDC25A, CDK6, RCC1, DDX3X, E2F1, EP300, EZH2, GSPT1, ID2, ID4, INHBA, MCM3, MDM4, NASP, CNOT2, CNOT4, NPAT, ORC2, ORC4, ORC5, PKD2, PPP3CA, PPP6C, PRKDC, PTEN, RB1, RBL1, RPS6KB1, RRM2, SKP2, SOX4, ADAM17, TFDP1, TFDP2, TP53, UBE2E2, WEE1, BTG2, CUL5, CUL4B, CUL3, CCNE2, CTDSPL, GPNMB, KHDRBS1, CNOT1, PHF8, PLCB1, ANKRD17, GIGYF2, CNOT7, TRIAP1, KMT2E, MEPCE, CNOT6, USP37, ZNF655, CDC73, DCUN1D3, TRIM71, NACC2, CACUL1, CNOT6L, STXBP4
BP	GO:0050773	regulation of dendrite development	44/2564	1.56E-05	ADAM10, ARF1, ARF6, RHOA, CRK, DBN1, EPHA4, EZH2, FMR1, MTOR, GSK3B, ID1, CAPRIN1, MEF2C, NEDD4, OPA1, PAFAH1B1, PPP3CA, MAPK6, RELN, PTEN, RAP2A, SDC2, TIAM1, UBE3A, VLDLR, CDK5R1, RAPGEF2, DNM1L, ABI2, SEMA4D, PDLIM5, CPEB3, SHANK2, RAB21, CAMSAP2, NSMF, SS18L1, ASAP1, BCL11A, TMEM106B, HECW2, ANKRD27, LRRK2
BP	GO:0071229	cellular response to acid chemical	56/2564	1.62E-05	ABL2, ATM, ATP7A, COL1A1, COL4A1, COL5A2, CREB1, E2F1, EDN1, EGR1, PTK2B, FGFR2, MTOR, FYN, GNB1, TNC, IPO5, LDLR, MMP2, NTRK2, OPA1, PDGFRA, PKD2, PRKAA1, PRKCE, PTK7, RARA, RET, RORB, SHMT1, SIX1, SMARCD1, SOX9, ZEB1, TNFSF4, VEGFA, WNT5A, XBP1, YES1, ZNF35, FZD4, CLDN1, YAP1, CPEB3, SETX, SH3BP4, NSMF, SESN1, BCL11A, LANCL2, RRAGD, PDGFD, CPEB4, SESN2, OSR1, SESN3
BP	GO:0048024	regulation of mRNA splicing, via spliceosome	33/2564	1.62E-05	DDX5, DYRK1A, FMR1, HNRNPA2B1, HNRNPK, HNRNPL, HNRNPU, MBNL1, PTBP1, RBM3, REST, SRSF1, SRSF2, SRSF6, SRSF7, TRA2B, WTAP, RBM8A, MBNL2, SF3B4, KHDRBS1, CELF1, CELF2, SRSF10, DAZAP1, ZBTB7A, SMU1, FAM172A, RBM17, YTHDC1, SRSF12, SREK1, RBM24
BP	GO:2000649	regulation of sodium ion transmembrane transporter activity	22/2564	1.62E-05	ANK3, ATP1A2, ATP1B1, CAMK2D, DMD, STOM, FGF12, GLRX, KIF5B, NEDD4, PRKCE, PTPN3, SLC9A1, UTRN, SLMAP, GPD1L, STK39, KLHL24, HECW2, WNK1, WNK3, OSR1
BP	GO:0018394	peptidyl-lysine acetylation	48/2564	1.67E-05	BRCA1, CHEK1, ATF2, CREBBP, EP300, GATA3, HCFC1, LIF, SMAD4, MECP2, KMT2A, NAP1L2, PRKAA1, SNAI2, SOX4, TAF5, PCGF2, BRPF1, KAT6A, YEATS4, NCOA3, HAT1, NCOA1, KAT2B, RPS6KA5, GTF3C4, CLOCK, CTCF, BRD8, KAT6B, BRD1, ZNF451, AUTS2, TAF5L, BRPF3, LEF1, PHF20, RSF1, MSL2, SETD5, MRGBP, KANSL3, YEATS2, MEAF6, NAA50, EPC1, KAT8, KANSL1L
BP	GO:0090307	mitotic spindle assembly	23/2564	1.67E-05	RHOA, GOLGA2, HNRNPU, KIF11, KPNB1, TPR, SMC1A, RAB11A, KIF3B, KIF23, STAG1, STAG2, TPX2, KIF4A, CHMP2B, CHMP5, CEP192, BCCIP, CHMP1B, CEP97, MAP9, CCSAP, MZT1
BP	GO:0043405	regulation of MAP kinase activity	80/2564	1.67E-05	CRK, DUSP4, DUSP5, DUSP8, EDN1, EPHA4, EPHB2, ERBB2, EZH2, F2R, PTK2B, FGF2, FLT1, HGF, NRG1, HMGCR, IGF1, IGF1R, INSR, JAK2, KIT, MAP3K1, MAP3K4, MAP3K5, MAP3K9, NF1, NTF3, PIK3CB, PIK3CG, PRKAA1, MAPK1, MAP2K3, PTPRJ, RET, ROBO1, RPS27A, MAP2K4, SFRP2, SORL1, TGFBR1, THBS1, TIAM1, TLR4, VEGFA, WNT5A, FZD5, FZD4, FZD8, TNFSF11, PDE5A, ADAM9, FGF18, SPAG9, MAGED1, ZEB2, HIPK3, RASGRP1, TRIB1, SPRY1, SPRY2, MAP3K2, FRS2, ERP29, DUSP14, IRAK3, AKAP13, TAB2, SASH1, PDCD4, STK39, TRIB2, TAOK1, PDGFD, LRRK2, DUSP18, PAQR3, SPRED1, SPRED2, TAB3, SAMD5

BP	GO:0045637	regulation of myeloid cell differentiation	64/2564	1.68E-05	JAG1, ZFP36L1, CA2, RUNX1, CBFB, CDK6, CREB1, CREBBP, EP300, ETS1, PTK2B, FBN1, FOXO3, MTOR, GABPA, GNAS, HMGB2, HOXA5, HOXA9, ID2, INHBA, LIF, LOX, MEF2C, MEIS1, MEIS2, MITF, KMT2A, NF1, NFKBIA, CNOT4, NOTCH2, PIK3R1, MED1, PRKCA, PRKCB, PURB, RARA, RB1, STAT1, STAT3, THBS1, KLF10, TLR4, TNFSF11, KAT2B, MAFB, TRIB1, TOB2, TNRC6B, AGO1, FOXP1, TNRC6A, SENP1, LEF1, KLF13, NCAPG2, KMT2E, TNRC6C, KMT2C, CDC73, TMEM64, AGO3, AGO4
BP	GO:0110110	positive regulation of animal organ morphogenesis	29/2564	1.80E-05	JAG1, AR, EDN1, FGFR2, GATA3, HOXC11, RBPJ, LIF, SMAD4, MED1, ROBO1, SRSF6, SIX1, SOX9, TGFB2, TGFBR1, TGFBR2, TNFAIP3, VEGFA, WNT2B, XBP1, MAGED1, SPRY1, BASP1, SEMA3C, FRS2, SIX4, LGR4, FOXP2
BP	GO:0048880	sensory system development	86/2564	1.83E-05	ACVR2B, JAG1, FASLG, SHROOM2, ATP2B1, ATP2B4, BCL2, PRDM1, BMPR1B, BMPR2, CACNA1C, COL4A1, COL5A2, CYP1B1, DLX2, EPHB1, EPHB2, CLN8, FBN1, FBN2, FOXF2, GATA3, GJA1, GNB1, GPD2, GPM6A, INHBA, MEIS1, MEIS2, MITF, MYH10, NEUROD1, NF1, NTRK2, OPA1, PDGFRA, PITX2, PKNOX1, MED1, PTPRM, RARA, RET, RORB, SALL2, SKI, SKIL, SOX2, SOX9, SP3, SRF, STAT3, ZEB1, TGFB2, TGFBR1, TGFBR2, THRB, VEGFA, VIM, WNT5A, WNT2B, YY1, FZD5, ARID1A, FZD4, NRP1, ZEB2, MFN2, ABI2, KDM5B, FRS2, ATF6, RAB3GAP1, RAB18, PDS5B, SLC7A11, NIPBL, HIPK2, AHI1, TGIF2, SMOC1, BCL11B, LPCAT1, RAB11FIP4, FOXP2, TBC1D20, SH3PXD2B
BP	GO:0001558	regulation of cell growth	94/2564	1.85E-05	ADAM10, APBB2, RHOA, BCL2, BCL6, BDNF, BMPR2, BTG1, CAMK2D, CDC42, CSNK2A1, DBN1, DDX3X, DPYSL2, EDN1, EIF4G2, ERBB2, EXTL3, PTK2B, FGF13, FN1, FXN, MTOR, G6PD, GDI1, GJA1, GOLGA4, GSK3B, IGF1, IGFBP5, INHBA, LRP1, SMAD4, MAP1B, MAP2, NRCAM, PAFAH1B1, SERPINE2, PPARA, PTPRJ, RB1, RPS6KA3, SFRP2, SGK1, SLC9A1, SRF, ADAM17, TGFB2, TGFBR1, TP53, VEGFA, WNT5A, YY1, SEMA7A, BLZF1, RAB11A, NRP1, SOCS2, CDK5R1, SEMA5A, SLIT2, ULK2, SERTAD2, IST1, NME6, NET1, SEMA4D, SEMA3C, RIMS1, RAB21, UNC13A, ADNP, SH3BP4, SGK3, ITSN2, LEF1, BCL11A, SEMA4C, USP47, CDKN2AIP, RTN4, NDRG3, SEMA6A, CDC73, ADIPOR2, NDEL1, SESN2, KIAA1109, RNF157, DCUN1D3, DCBLD2, MTPN, TTL, C8orf44-SGK3
BP	GO:1990778	protein localization to cell periphery	75/2564	1.92E-05	ACTB, ADAM10, ANK3, AR, ARF6, ATP1B1, CDH2, CLTC, DAG1, EPHB2, ACSL3, GPC4, FGF13, GOLGA4, ITGA3, KIF5B, LRP1, RAB8A, MYO5A, NSF, P2RY1, PIK3R1, PPP2R5A, PRKCE, PTCH1, RAB3B, RAP2A, ROCK1, SNAP25, SPTBN1, STXBP1, EZR, SLMAP, PICALM, PIP5K1A, STX7, BLZF1, NUMB, RAB11A, MAP7, RABEP1, VAMP3, ROCK2, TMEM59, RAPGEF2, SEC16A, OPTN, VTI1B, SORBS1, EXOC5, RAB10, RAB11FIP2, KIF1B, GGA3, EFR3A, GRIP1, RHOQ, APPL1, GPSM2, KCNIP3, GOLGA7, RAPGEF6, ADAM22, LZTFL1, GOLPH3L, DENND4C, GOPC, GPR158, KIF13A, GOLPH3, MPP5, WNK3, FCHO2, ARL13B, FAM126B
BP	GO:0051648	vesicle localization	74/2564	2.03E-05	SHROOM2, AREG, ARF1, CALM3, CDH2, FMR1, GOLGA2, GSK3B, KIF5B, KIF5C, MAP2, MYO5A, NSF, P2RY1, PAFAH1B1, PIK3CG, PPP6C, PRKCB, PTEN, RAB1A, RAB27B, RAP1B, SNAP25, STXBP1, VAMP1, PICALM, CUL3, USO1, RAB11A, WASL, KIF3B, KIF23, SEC24C, RIMS3, MAGI2, SV2A, SEC16A, PDCD6, DNM1L, RASGRP1, CNIH1, TFG, AP3M2, TMED10, SEC23IP, PPP6R1, SEC31A, RAB3GAP1, RIMS1, UNC13A, KIF1B, SYT11, ANKRD28, SNAPIN, AP3M1, PCDH17, PCLO, GIT1, TRAPPC4, NDE1, FNBP1L, PPP6R3, AP1AR, WDR11, SAR1A, KIF13A, VPS33A, TRAK2, FYCO1, NDEL1, MCFD2, LRRK2, TBC1D20, FAM91A1
BP	GO:0035264	multicellular organism growth	43/2564	2.10E-05	ADARB1, ADRB1, APP, AR, ATM, ATRX, BCL2, ZFP36L1, CREB1, EN1, EP300, ERCC1, FXN, MTOR, GNAS, GPD2, HOXA5, IGF1, PDE4D, PLAG1, POU3F2, PTCH1, RARA, SLC1A2, STAT3, TP53, KDM6A, EZR, STC2, SOCS2, SGPL1, NIPBL, WWTR1, GIGYF2, FLVCR1, SMPD3, WDR11, MBD5, PLEKHA1, TBL1XR1, RMI1, TNKS2, SH3PXD2B
BP	GO:0048013	ephrin receptor signaling pathway	30/2564	2.12E-05	ACTB, RHOA, CDC42, CHN1, CRK, EFNB2, EPHA4, EPHA5, EPHB1, EPHB2, EPHB4, FYN, RBPJ, MMP2, RAC1, RASA1, ROCK1, SDC2, SS18, TIAM1, YES1, CDK5R1, WASL, ROCK2, ARPC5, ACTR3, VAV3, ARPC1A, GIT1, APH1A
BP	GO:0003401	axis elongation	16/2564	2.16E-05	AREG, ESR1, FGFR2, TNC, MED1, PTK7, SFRP2, SIX1, SOX9, WNT5A, MAGI2, MED12, SPRY1, SPRY2, YAP1, SIX4
BP	GO:0007223	Wnt signaling pathway, calcium modulating pathway	18/2564	2.21E-05	CALM1, GNB1, PPP3CA, PPP3R1, WNT5A, FZD5, FZD3, FZD4, TNRC6B, PLCB1, AGO1, AGO2, TNRC6A, LEF1, NLK, TNRC6C, AGO3, AGO4
BP	GO:0018393	internal peptidyl-lysine acetylation	46/2564	2.21E-05	BRCA1, CHEK1, ATF2, CREBBP, EP300, GATA3, HCFC1, LIF, SMAD4, MECP2, KMT2A, NAP1L2, SNAI2, TAF5, PCGF2, BRPF1, KAT6A, YEATS4, NCOA3, HAT1, NCOA1, KAT2B, RPS6KA5, GTF3C4, CLOCK, CTCF, BRD8, KAT6B, BRD1, ZNF451, AUTS2, TAF5L, BRPF3, LEF1, PHF20, RSF1, MSL2, SETD5, MRGBP, KANSL3, YEATS2, MEAF6, NAA50, EPC1, KAT8, KANSL1L
BP	GO:0038127	ERBB signaling pathway	42/2564	2.43E-05	APP, FASLG, AREG, ARF4, CBL, CBLB, CDC42, DOK1, ERBB2, ERBB3, ERBB4, EREG, PTK2B, FER, GAB1, NRG1, HIP1, HSP90AA1, RBPJ, PIK3C2A, PIK3R1, PLCG1, PRKCA, MAPK1, PTPN3, PTPN12, PTPRJ, PTPRR, SOX9, ADAM17, CUL5, RPS6KA5, SOCS5, SPRY1, SPRY2, STAM2, SH3KBP1, ERRFI1, SLC30A10, RTN4, MVB12B, SOCS4
BP	GO:0007548	sex differentiation	67/2564	2.47E-05	ADCYAP1, AR, ATM, ATRX, AXL, CCND1, BCL2, BCL2L2, BMPR1A, BMPR1B, CBL, ERCC1, EREG, ESR1, FANCA, FOXF2, FOXO3, GATA3, GATA6, GJA1, HMGB2, HOXA9, INHBA, INSR, KIT, SMAD4, SMAD5, MSH2, NASP, NKX3-1, PBX1, PDGFRA,

					PTX3, RARA, ARID4A, KDM5A, SFRP2, SOX9, TBX3, TGFB2, TGFBR1, TMF1, UBE3A, VEGFA, WNT5A, WNT2B, NCOA4, NRIP1, FZD4, TP63, NCOA1, SGPL1, SLIT2, BCL2L11, BASP1, FNDC3A, PATZ1, NIPBL, TIPARP, ARID4B, SIX4, LGR4, PLEKHA1, TBC1D20, OSR1, RNF38, AGO4
BP	GO:1903313	positive regulation of mRNA metabolic process	28/2564	2.48E-05	ZFP36L1, ZFP36L2, RBM3, ROCK1, TRA2B, BTG2, ROCK2, PUM1, TOB1, HNRNPR, SF3B4, CPEB3, CNOT1, TNRC6B, GIGYF2, DAZAP1, PABPC1, AGO2, TNRC6A, CNOT7, ZC3HAV1, TNRC6C, CDC73, TRIM71, RC3H1, RBM24, CNOT6L, YTHDF3
BP	GO:0090287	regulation of cellular response to growth factor stimulus	71/2564	2.61E-05	XIAP, BMPR2, RUNX2, CREBBP, EP300, FBN1, FBN2, FGF2, FLT1, GATA3, GLG1, HSP90AB1, RBPJ, ITGA3, LOX, SMAD2, SMAD4, SMAD7, NEDD4, NTF3, PCSK6, PPM1A, PRKCB, ROBO1, RPS27A, SFRP2, SKI, SKIL, SORL1, ADAM17, ZEB1, TGFBR1, TGFBR2, THBS1, TP53, VEGFA, WNT1, WNT5A, FZD1, FZD4, FGF18, SLIT2, ONECUT2, PDCD6, TOB1, SPRY1, SPRY2, SLC9A6, FSTL1, PEG10, DSTYK, BAMBI, ZNF451, GREM1, HIPK2, ZBTB7A, CTDSPL2, TRIM33, RNF111, PMEPA1, SEMA6A, UBE2O, GREM2, HHIP, SMURF2, MMRN2, ZNF703, VASN, NPNT, SHISA2, RNF165
BP	GO:0045137	development of primary sexual characteristics	58/2564	2.62E-05	ADCYAP1, AR, ATM, ATRX, CCND1, BCL2, BCL2L2, BMPR1B, CBL, ERCC1, EREG, ESR1, FANCA, FOXO3, GATA3, GATA6, GJA1, HMGB2, HOXA9, INHBA, INSR, KIT, SMAD4, MSH2, NASP, NKX3-1, PDGFRA, PTX3, RARA, ARID4A, KDM5A, SFRP2, SOX9, TGFB2, TGFBR1, TMF1, UBE3A, VEGFA, WNT5A, WNT2B, NCOA4, NRIP1, FZD4, NCOA1, SGPL1, SLIT2, BCL2L11, BASP1, FNDC3A, PATZ1, TIPARP, ARID4B, SIX4, PLEKHA1, TBC1D20, OSR1, RNF38, AGO4
BP	GO:0072659	protein localization to plasma membrane	65/2564	2.66E-05	ACTB, ANK3, AR, ARF6, ATP1B1, CDH2, CLTC, EPHB2, ACSL3, FGF13, GOLGA4, ITGA3, KIF5B, LRP1, RAB8A, MYO5A, NSF, P2RY1, PIK3R1, PPP2R5A, PRKCE, PTCH1, RAB3B, RAP2A, ROCK1, SPTBN1, STXBP1, EZR, SLMAP, PICALM, PIP5K1A, STX7, BLZF1, NUMB, RAB11A, MAP7, VAMP3, ROCK2, TMEM59, RAPGEF2, SEC16A, OPTN, VTI1B, SORBS1, EXOC5, RAB10, RAB11FIP2, GGA3, EFR3A, GRIP1, RHOQ, APPL1, KCNIP3, GOLGA7, RAPGEF6, GOLPH3L, DENND4C, GOPC, GPR158, KIF13A, GOLPH3, MPP5, WNK3, FCHO2, FAM126B
BP	GO:1901215	negative regulation of neuron death	55/2564	2.82E-05	RHOA, AXL, BCL2, BDNF, CBL, CREB1, EN1, ERBB3, F2R, PTK2B, FYN, GABRB2, GSK3B, HSP90AB1, JAK2, LRP1, MECP2, MEF2C, MSH2, NTF3, NTRK2, NR4A2, PPARA, PTPRZ1, RASA1, REL, REST, ROCK1, MAP2K4, SIX1, SOD2, SORL1, STAT3, STXBP1, TSC1, WNT1, BTG2, FZD1, NRP1, GPNMB, CHL1, ADNP, CLCF1, SLC7A11, TOX3, HIPK2, SIX4, OXR1, SLC30A10, NMNAT1, CPEB4, TMEM259, FOXQ1, LRRK2, NCOA7
BP	GO:0014065	phosphatidylinositol 3-kinase signaling	43/2564	2.95E-05	ZFP36L1, CBL, EDN1, ERBB2, ERBB3, ERBB4, F2R, F2RL1, FLT1, FYN, GAB1, GATA3, HGF, IGF1, IGF1R, INSR, JAK2, KIT, NEDD4, NF1, NKX3-1, NTF3, NTRK2, PDGFRA, SERPINE2, PIK3C2A, PIK3CB, PIK3CG, PIK3R1, PIP4K2A, MAPK1, RELN, PTEN, SOX9, TGFB2, UBE3A, PIP5K1A, RASGRP1, SEMA4D, FBXL2, CEP55, PLEKHA1, PDGFD
BP	GO:0097191	extrinsic apoptotic signaling pathway	58/2564	3.00E-05	FASLG, AR, BCL2, BCL2L2, BID, BMPR1B, BRCA1, DDX3X, ERBB3, EYA4, FGFR3, FOXO3, FYN, MKNK2, GSK3B, HGF, HMGB2, IGF1, IL6R, IL12A, INHBA, ITGA6, ITGAV, JAK2, MCL1, NF1, SERPINE1, PAK2, PIK3R1, PPP2R1B, PTEN, RET, SFRP2, SKIL, SNAI2, SP100, STK3, STK4, TGFB2, TGFBR1, THBS1, TIMP3, TNFAIP3, SCG2, NRP1, RB1CC1, BCL2L11, YAP1, ZMYND11, FAF1, SGK3, APPL1, PHIP, BIRC6, SH3RF1, ITM2C, ITPRIP, C8orf44-SGK3
BP	GO:0043254	regulation of protein complex assembly	102/2564	3.02E-05	ADD3, ARF1, ARF6, RHOA, ATM, BID, CAPZA1, CAPZA2, CDC42, CREB1, DBN1, DDX3X, DYRK1A, EP300, EPS8, ERCC1, ESR1, PTK2B, FER, MTOR, GSK3B, GTF2H1, HCFC1, HMGB1, HSP90AA1, INSIG1, STMN1, MAP1B, MAP2, MECP2, MET, MITF, MSN, CNOT2, PPM1A, PRKAA1, PRKCE, RAC1, RASA1, RB1, RNF4, SORL1, SPTAN1, SPTBN1, SRF, STXBP1, TLR4, TMSB4X, TP53, VCP, VEGFA, FOSL1, CUL4B, HRK, CDK5R1, WASL, SLIT2, G3BP2, PAN2, BCL2L11, DNM1L, ARPC5, ACTR3, ABI2, ARPC1A, ARFGEF1, CDC42EP3, NCKAP1, FAF1, MAPRE1, CNOT1, SETX, CAMSAP2, EML2, ZNF451, SENP6, DNAJC15, TMOD3, TMOD2, ASAP1, NIN, TPPP3, RRN3, AP1AR, ATF7IP, CAND1, SAR1A, SPIRE1, PMEPA1, CNOT6, FNIP2, SLAIN2, ANKRD27, NAV3, WHAMM, JMY, MTPN, CAMSAP1, CNOT6L, RICTOR, PAN3, FMN1
BP	GO:1902305	regulation of sodium ion transmembrane transport	24/2564	3.02E-05	ANK3, ARF1, ATP1A2, ATP1B1, ATP2B4, CAMK2D, DMD, STOM, FGF12, GLRX, KIF5B, NEDD4, PRKCE, PTPN3, SLC9A1, UTRN, SLMAP, GPD1L, STK39, KLHL24, HECW2, WNK1, WNK3, OSR1
BP	GO:0099173	postsynapse organization	46/2564	3.03E-05	ACTB, ACTN1, ADAM10, ARF1, ARF4, ARF6, CDC42, CDH2, DBN1, EPHA4, EPHB1, EPHB2, FYN, GLRB, IGF1R, INSR, ITGA3, CAPRIN1, MYH10, NRCAM, OPA1, OPHN1, PAFAH1B1, RELN, PTEN, TIAM1, UBE3A, WNT5A, NRP1, CDK5R1, WASL, DNAJA3, NRXN1, MAGI2, DNM1L, ABI2, WASF2, PDLIM5, SHANK2, SLC7A11, CHMP2B, ABHD17B, SSH1, DOCK10, TANC1, LRRK2
BP	GO:1990138	neuron projection extension	47/2564	3.03E-05	ALCAM, BMPR2, DBN1, DPYSL2, FN1, GDI1, GOLGA4, GSK3B, HSP90AA1, HSP90AB1, LRP1, MAP1B, MAP2, NRCAM, PAFAH1B1, SRF, TIAM1, VCL, VEGFA, WNT5A, USP9X, SEMA7A, RAB11A, NRP1, CDK5R1, SEMA5A, DCLK1, SLIT2, ULK2, SLC9A6, SEMA4D, SEMA3C, RIMS1, RAB21, UNC13A, ADNP, FLRT3, AUTS2, ITSN2, BCL11A, SEMA4C, RTN4, SEMA6A, RAPH1, NDEL1, RNF157, TTL
BP	GO:0016579	protein deubiquitination	69/2564	3.16E-05	ACTB, APC, BIRC3, AR, RHOA, BRCA1, CCNA2, CDC25A, EP300, ESR1, GATA3, HCFC1, FOXK2, SMAD1, SMAD2, SMAD4, SMAD7, MDM4, NFKBIA, PSMD1, PTEN, RAD23A, RPS27A, ATXN7, SKP2, TGFBR1, TNFAIP3, TP53, UBE2D1, USP4, USP1, VCP, YY1, USP7, USP9X, KAT2B, USP13, USP10, USP34, CCP110, SPATA2, USP15, STAM2, TNIP1, OTUD3, USP25, DESI2,

					UBXN1, USP53, OTUD4, ZRANB1, INO80D, USP47, ASXL2, RHOT1, YOD1, MBD5, OTUD7B, USP31, USP37, SMURF2, OTUB2, VCPIP1, USP42, USP32, ACTR8, MBD6, MYSM1, USP12
BP	GO:0018210	peptidyl-threonine modification	40/2564	3.16E-05	APP, BCL2, CALM1, CALM2, CALM3, CAMK2D, CHEK1, CSNK2A1, DYRK1A, MTOR, GALNT1, GALNT2, GALNT3, GSK3B, UBE2K, SMAD7, PRKCA, PRKCB, MAPK1, ROCK1, TGFBR1, TGFBR2, WNT5A, GALNT4, CDK5R1, ROCK2, OXSR1, HIPK3, SPRY2, STK39, HIPK2, NLK, CAB39, DDIT4, WNK1, WNK3, LRRK2, TTBK2, SPRED1, SPRED2
BP	GO:0007052	mitotic spindle organization	34/2564	3.29E-05	RHOA, RCC1, CLTC, GOLGA2, HNRNPU, KIF11, KPNB1, STMN1, MAP4, MECP2, RAN, SPAST, TACC1, TPR, VCP, SMC1A, RAB11A, KIF3B, KIF23, STAG1, STAG2, TPX2, KIF4A, CHMP2B, GPSM2, CHMP5, CEP192, BCCIP, CHMP1B, CEP97, MAP9, EFHC1, CCSAP, MZT1
BP	GO:0072089	stem cell proliferation	37/2564	3.30E-05	ZFP36L1, DAGLA, RUNX1, ETV6, MECOM, FGF2, FGF13, FGFR2, HMGB2, HNRNPU, ID4, NF1, PAFAH1B1, SFRP2, SNAI2, SOX5, TBX3, TP53, VEGFA, WNT1, WNT5A, WNT2B, FZD3, HMGA2, NUMB, NUMBL, YAP1, FRS2, RAB10, LEF1, NDE1, HHIP, AKNA, DOCK7, LRRK2, TRIM71, AGO3
BP	GO:0106027	neuron projection organization	30/2564	3.30E-05	ADAM10, APP, ARF1, CDC42, DBN1, EPHA4, EPHB1, EPHB2, FYN, GSK3B, IGF1R, INSR, ITGA3, CAPRIN1, OPA1, PAFAH1B1, RELN, PTEN, TIAM1, UBE3A, CDK5R1, WASL, DNM1L, ABI2, PDLIM5, SHANK2, ABHD17B, DOCK10, TANC1, LRRK2
BP	GO:0010721	negative regulation of cell development	80/2564	3.39E-05	ADCYAP1, JAG1, APP, ARF6, RHOA, BCL2, BMPR1A, DDX6, DLX2, EFNB2, EPHA4, EPHB2, ERBB4, FBN1, FGF13, FOXO3, G6PD, GDI1, GSK3B, NRG1, ID1, ID2, ID4, IGF1, LDLR, LRP1, SMAD4, MAP2, MEIS1, NF1, PAFAH1B1, PBX1, PMP22, PPARA, MED1, PPP3CA, PTEN, PTPRG, REST, SKI, SORL1, SOX2, SOX9, STAT3, THRB, TP53, TSC1, UBE3A, VEGFA, VIM, WNT5A, YY1, SEMA7A, NRP1, CDK5R1, SEMA5A, SLIT2, MAP4K4, RAPGEF2, ULK2, OLIG2, SEMA4D, SEMA3C, SRGAP2, DICER1, SNAPIN, CORO1C, ASAP1, BCL11A, SEMA4C, AP1AR, RTN4, MIB1, SEMA6A, TRAK2, ITM2C, HOOK3, DIXDC1, LRRK2, PAQR3
BP	GO:0030307	positive regulation of cell growth	47/2564	3.51E-05	ADAM10, RHOA, BCL2, BDNF, BMPR2, CDC42, CSNK2A1, DBN1, DDX3X, EDN1, EIF4G2, ERBB2, EXTL3, PTK2B, FN1, FXN, MTOR, GDI1, GOLGA4, IGF1, LRP1, MAP1B, PAFAH1B1, RPS6KA3, SFRP2, SLC9A1, SRF, ADAM17, TGFB2, TGFBR1, VEGFA, SEMA7A, RAB11A, NRP1, SEMA5A, IST1, SEMA4D, RIMS1, UNC13A, ADNP, ITSN2, LEF1, USP47, CDKN2AIP, NDEL1, RNF157, MTPN
BP	GO:0010810	regulation of cell-substrate adhesion	56/2564	3.52E-05	JAG1, RHOA, BCL2, BCL6, CDC42, CDK6, COL1A1, CRK, DAG1, DOCK1, PTK2B, FN1, GCNT2, GPM6B, GSK3B, HAS2, ITGA6, ITGA3, JAK2, LIMS1, LRP1, NF1, DDR2, SERPINE1, PIK3CB, PIK3R1, PRKCE, PTEN, PTPRJ, RAC1, RASA1, ROCK1, SLC9A1, THBS1, TSC1, UTRN, VEGFA, WNT1, FZD4, NRP1, MAP4K4, ROCK2, ONECUT2, SLK, EDIL3, CORO1C, ABI3BP, MINK1, AP1AR, MMRN2, DOCK5, PHLDB2, CCDC80, NPNT, ACER2, FMN1
BP	GO:0043523	regulation of neuron apoptotic process	55/2564	3.61E-05	FASLG, RHOA, ATM, AXL, BCL2, BDNF, ATF2, EN1, ERBB3, F2R, PTK2B, FOXO3, FYN, G6PD, GABRB2, GATA3, HSP90AB1, JAK2, LRP1, MCL1, MECP2, MEF2C, MSH2, NF1, NTF3, NTRK2, NR4A2, PTPRZ1, RASA1, ROCK1, MAP2K4, SIX1, SOD2, STXBP1, TGFB2, TP53, BTG2, NRP1, CDK5R1, BCL2L11, LANCL1, CHL1, TRIM2, ADNP, CLCF1, NSMF, TOX3, HIPK2, SIX4, OXR1, SLC30A10, NMNAT1, CPEB4, FOXQ1, EGLN3
BP	GO:0007569	cell aging	36/2564	3.74E-05	ARG2, ATM, BCL2, BCL6, BMPR1A, CDK6, CHEK1, ERCC1, MTOR, ID2, LIMS1, MME, MNT, NPM1, OPA1, SERPINE1, PAWR, PRKDC, PTEN, RBL1, SRF, NEK4, TBX3, TP53, WNT1, KAT6A, HMGA2, TP63, DNAJA3, AKT3, NAMPT, NEK6, ZNF277, PDCD4, SLC30A10, ZMIZ1
BP	GO:0021987	cerebral cortex development	36/2564	3.74E-05	RHOA, CDH2, CRK, FGF13, GSK3B, LRP1, NF1, NTRK2, PAFAH1B1, PEX13, POU3F2, POU3F3, RELN, ROBO1, TRA2B, TACC1, TSC1, NCOA1, NRP1, CDK5R1, SLIT2, BTBD3, PLCB1, SUN1, SRGAP2, CNTNAP2, SLC38A2, NDE1, GNG12, RTN4, MCPH1, NDEL1, DIXDC1, FOXP2, EFHC1, FBXO45
BP	GO:0001837	epithelial to mesenchymal transition	41/2564	3.83E-05	JAG1, COL1A1, DAG1, DDX5, EZH2, FGFR2, FOXF2, MTOR, GCNT2, GSK3B, HAS2, HGF, FOXA1, RBPJ, SMAD2, SMAD4, SMAD7, PTEN, SFRP2, SNAI2, SOX9, TGFB2, TGFBR1, TGFBR2, TIAM1, WNT5A, HMGA2, NOLC1, PDCD6, SPRY1, BAMBI, WWTR1, GREM1, PDCD4, LEF1, RTN4, ZNF703, AKNA, KBTBD8, PHLDB2, VASN
BP	GO:0045023	G0 to G1 transition	20/2564	3.88E-05	APAF1, BMI1, BRCA1, CHEK1, E2F1, EZH2, MDM4, MED1, RBBP4, RRM2, TFDP1, TFDP2, PCGF2, CBX3, MGA, RYBP, CBX5, SUZ12, PHC3, EPC1
BP	GO:0010631	epithelial cell migration	81/2564	3.88E-05	ANXA1, ARF6, RHOA, ARSB, BMPR2, KRIT1, CCR6, CYP1B1, DOCK1, EDN1, EFNB2, EPHB4, ETS1, PTK2B, FGF2, MTOR, GATA3, GLUL, HAS2, HMGB1, ID1, ITGA3, KIT, LGALS8, MECP2, MEF2C, MET, MYH9, NF1, NFE2L2, PIK3C2A, PLCG1, PRKCA, PRKCE, PKN2, MAP2K3, PTEN, PTGS2, PTPRG, PTPRM, PTPRR, ROBO1, SOX9, SP1, SP100, SPARC, SRF, ADAM17, NR2F2, TGFB2, TGFBR1, TGFBR2, THBS1, TMSB4X, VEGFA, WNT5A, SCG2, PIK3R3, ADAM9, RAB11A, FGF18, NRP1, SEMA5A, SLIT2, MAP4K4, ROCK2, ZEB2, IQSEC1, AKT3, PDCD6, SASH1, CORO1C, GREM1, FOXP1, RTN4, MMRN2, DOCK5, AMOT, AMOTL1, SPRED1, MIA3
BP	GO:0048194	Golgi vesicle budding	28/2564	3.89E-05	AREG, GOLGA2, INSIG1, NSF, PPP6C, RAB1A, CUL3, USO1, VAPB, VAPA, SEC24C, SEC16A, PDCD6, CNIH1, TFG, TMED10, SEC23IP, PPP6R1, SEC31A, ANKRD28, TRAPPC4, GOLPH3L, PPP6R3, SAR1A, GOLPH3, MCFD2, TBC1D20, MIA3

BP	GO:0097061	dendritic spine organization	28/2564	3.89E-05	ADAM10, ARF1, CDC42, DBN1, EPHA4, EPHB1, EPHB2, FYN, IGF1R, INSR, ITGA3, CAPRIN1, OPA1, PAFAH1B1, RELN, PTEN, TIAM1, UBE3A, CDK5R1, WASL, DNM1L, ABI2, PDLIM5, SHANK2, ABHD17B, DOCK10, TANC1, LRRK2
BP	GO:0048754	branching morphogenesis of an epithelial tube	43/2564	3.89E-05	AR, AREG, BCL2, COL4A1, DAG1, EDN1, ESR1, FGF2, FGFR2, FOXA1, HOXA5, TNC, SMAD4, MET, NKX3-1, PBX1, PKD2, MED1, PTCH1, SFRP2, SIX1, SOX9, SRF, STK4, TBX3, TGFBR2, VEGFA, WNT1, WNT5A, WNT2B, NRP1, SLIT2, MAGED1, SPRY1, SPRY2, YAP1, GNA13, KDM5B, LEF1, SIX4, LGR4, HHIP, NPNT
BP	GO:0050804	modulation of chemical synaptic transmission	96/2564	3.89E-05	ABR, ADCYAP1, APP, ARF1, ATP1A2, BDNF, CA2, CALM3, CDH2, CDH11, CREB1, DBN1, EDN1, EIF4EBP2, EPHA4, EPHB1, EPHB2, F2R, PTK2B, FGF14, FMR1, MTOR, FYN, GLUL, GNAI2, GRIK3, GRM3, GSK3B, JAK2, KCNJ10, KIF5B, KIT, MAP1B, MECP2, MEF2C, RAB8A, MME, NF1, NTF3, NTRK2, OPHN1, P2RY1, SERPINE2, PLCB4, PLCL1, PLCG1, PPP3CA, PRKCB, PRKCE, MAPK1, RELN, PTEN, PTGS2, RAB3B, RAP1B, RARA, RPL22, SH3GL1, SLC6A1, SNAP25, SRF, STAT3, STAU1, STXBP1, VAMP1, DGKE, RAB11A, NRXN1, AKAP12, RAPGEF2, RIMS3, DNM1L, CPEB3, RAB3GAP1, SHANK2, RIMS1, UNC13A, SYT11, PLCL2, PLCB1, ADNP, NPTXR, SNAPIN, SLC7A11, SLC24A2, NSMF, PCDH17, GIT1, SSH1, YTHDF1, RHOT1, JPH3, TSHZ3, ATAD1, LRRK2, TPRG1L
BP	GO:2001236	regulation of extrinsic apoptotic signaling pathway	44/2564	3.89E-05	FASLG, AR, BCL2, BID, BMPR1B, BRCA1, EYA4, FYN, HGF, HMGB2, IGF1, INHBA, ITGA6, ITGAV, MCL1, NF1, SERPINE1, PAK2, PPP2R1B, PTEN, RET, SFRP2, SKIL, SNAI2, SP100, STK3, STK4, TGFBR1, THBS1, TIMP3, TNFAIP3, SCG2, NRP1, RB1CC1, YAP1, ZMYND11, FAF1, SGK3, PHIP, BIRC6, SH3RF1, ITM2C, ITPRIP, C8orf44-SGK3
BP	GO:0031050	dsRNA processing	21/2564	3.89E-05	DDX5, ESR1, HNRNPA2B1, SMAD1, SMAD2, PPP3CA, TP53, PRKRA, NCOR1, PUM1, PUM2, DICER1, AGO1, AGO2, DGCR8, MRPL44, SNIP1, TRIM71, AGO3, AGO4, LIN28B
BP	GO:0070918	production of small RNA involved in gene silencing by RNA	21/2564	3.89E-05	DDX5, ESR1, HNRNPA2B1, SMAD1, SMAD2, PPP3CA, TP53, PRKRA, NCOR1, PUM1, PUM2, DICER1, AGO1, AGO2, DGCR8, MRPL44, SNIP1, TRIM71, AGO3, AGO4, LIN28B
BP	GO:0021885	forebrain cell migration	23/2564	3.89E-05	RHOA, AXL, FGF13, NRG1, PAFAH1B1, PEX13, POU3F2, POU3F3, RELN, ROBO1, SRF, NRP1, CDK5R1, SLIT2, SUN1, SRGAP2, RTN4, NDEL1, DIXDC1, EFHC1, LRRK2, ARL13B, FBXO45
BP	GO:0045667	regulation of osteoblast differentiation	38/2564	3.98E-05	ACVR2B, JAG1, AREG, BMPR1A, BMPR1B, BMPR2, RUNX2, CDK6, DDX5, FBN2, FGFR2, GNAS, HGF, ID1, ID2, IGF1, IGFBP5, IL6R, IL6ST, SMAD1, SMAD5, MEF2C, NELL1, DDR2, PTCH1, REST, RORB, SFRP2, SKI, SNAI2, TP63, TOB1, SEMA4D, ZHX3, GREM1, SMOC1, TMEM64, NPNT
BP	GO:0060211	regulation of nuclear-transcribed mRNA poly(A) tail shortening	10/2564	4.11E-05	BTG2, TOB1, CPEB3, CNOT1, TNRC6B, PABPC1, AGO2, TNRC6A, CNOT7, TNRC6C
BP	GO:0099177	regulation of trans-synaptic signaling	96/2564	4.19E-05	ABR, ADCYAP1, APP, ARF1, ATP1A2, BDNF, CA2, CALM3, CDH2, CDH11, CREB1, DBN1, EDN1, EIF4EBP2, EPHA4, EPHB1, EPHB2, F2R, PTK2B, FGF14, FMR1, MTOR, FYN, GLUL, GNAI2, GRIK3, GRM3, GSK3B, JAK2, KCNJ10, KIF5B, KIT, MAP1B, MECP2, MEF2C, RAB8A, MME, NF1, NTF3, NTRK2, OPHN1, P2RY1, SERPINE2, PLCB4, PLCL1, PLCG1, PPP3CA, PRKCB, PRKCE, MAPK1, RELN, PTEN, PTGS2, RAB3B, RAP1B, RARA, RPL22, SH3GL1, SLC6A1, SNAP25, SRF, STAT3, STAU1, STXBP1, VAMP1, DGKE, RAB11A, NRXN1, AKAP12, RAPGEF2, RIMS3, DNM1L, CPEB3, RAB3GAP1, SHANK2, RIMS1, UNC13A, SYT11, PLCL2, PLCB1, ADNP, NPTXR, SNAPIN, SLC7A11, SLC24A2, NSMF, PCDH17, GIT1, SSH1, YTHDF1, RHOT1, JPH3, TSHZ3, ATAD1, LRRK2, TPRG1L
BP	GO:0045165	cell fate commitment	66/2564	4.33E-05	JAG1, APC, AR, RHOA, BCL2, PRDM1, BMPR1A, RUNX2, DLX2, ERBB4, ETS2, FGF2, FGF13, FGFR2, MTOR, GATA3, GATA6, NRG1, FOXA1, HOXD10, ID2, RBPJ, JAG2, SMAD1, SMAD2, SMAD4, SMAD5, MCL1, MEF2C, MITF, NEUROD1, NOTCH2, PITX1, POU3F2, PRKDC, PTCH1, RARA, RORA, SFRP2, SIX1, SOX2, SOX5, SOX9, STAT3, TBX3, NR2F2, TGFBR1, TP53, WNT1, WNT5A, WNT2B, NRP1, ONECUT2, OLIG2, SPRY2, RAB10, MYT1L, MGA, SATB2, ZNF521, ESRP1, SOX6, BCL11B, CDC73, DOCK7, SH3PXD2B
BP	GO:0043393	regulation of protein binding	56/2564	4.39E-05	ACTB, APP, ARF6, BCL2, BDNF, CRK, EIF2S1, EP300, EPHA4, FKBP1A, GOLGA2, GSK3B, HFE, NRG1, HSP90AB1, ID1, IFIT2, IFIT1, STMN1, LOX, LRP1, MAP2, MARK3, MEF2C, MET, MFNG, NKX3-1, PLCL1, PPARA, RAN, ROCK1, SORL1, STK3, STK4, TDG, TMBIM6, TGFBR1, TIAM1, WNT5A, TNFSF11, NRP1, CCPG1, RAPGEF2, MAPRE1, PLCL2, ADNP, SNAPIN, BAMBI, HIPK2, LEF1, BTBD1, GREM2, DERL1, LRRK2, SPPL3, TTBK2
BP	GO:0090114	COPII-coated vesicle budding	26/2564	4.42E-05	AREG, GOLGA2, INSIG1, NSF, PPP6C, RAB1A, CUL3, USO1, VAPB, VAPA, SEC24C, SEC16A, PDCD6, CNIH1, TFG, TMED10, SEC23IP, PPP6R1, SEC31A, ANKRD28, TRAPPC4, PPP6R3, SAR1A, MCFD2, TBC1D20, MIA3

BP	GO:0006888	ER to Golgi vesicle-mediated transport	55/2564	4.48E-05	ANK3, AREG, ARF1, ARF4, CAPZA1, CAPZA2, DYNC1LI2, GOLGA2, INSIG1, NSF, PPP6C, RAB1A, SORL1, SPAST, SPTAN1, SPTBN1, VCP, CUL3, USO1, SEC22C, VAPB, VAPA, SEC24C, SEC16A, PDCD6, CNIH1, TFG, COG5, VTI1B, TMED10, SEC23IP, RNF139, PPP6R1, SEC31A, ANKRD28, DDHD2, TMED3, RAB30, TMED5, DCTN4, ERGIC2, TRAPPC4, PPP6R3, SAR1A, GOPC, ERGIC1, PGAP1, DCTN5, MCFD2, LRRK2, WHAMM, TBC1D20, VTI1A, TMED4, MIA3
BP	GO:0000910	cytokinesis	47/2564	4.48E-05	ANK3, APC, ARF1, RHOA, CALM1, CALM2, CALM3, CDC42, ECT2, STMN1, MYH9, MYH10, PIK3C3, PRKCE, PKN2, RASA1, ROCK1, SPAST, SPTBN1, CUL3, PKP4, CDC14A, RAB11A, KIF3B, ROCK2, KIF23, CCP110, IST1, KLHL21, ACTR3, ZFYVE26, KIF4A, CHMP2B, GIT1, CHMP5, TTC19, CEP55, PRPF40A, SPIRE1, CHMP1B, BIRC6, KIF13A, MAP9, RAB11FIP4, LZTS2, KLHL13, EFHC1
BP	GO:0010634	positive regulation of epithelial cell migration	47/2564	4.48E-05	ANXA1, ARF6, BMPR2, CCR6, DOCK1, EDN1, ETS1, PTK2B, FGF2, MTOR, GATA3, HAS2, HMGB1, ITGA3, MET, NFE2L2, PIK3C2A, PLCG1, PRKCA, PRKCE, MAP2K3, PTGS2, SOX9, SP1, SPARC, ADAM17, TGFB2, TGFBR2, THBS1, TMSB4X, VEGFA, WNT5A, ADAM9, RAB11A, FGF18, NRP1, SEMA5A, MAP4K4, ROCK2, IQSEC1, AKT3, PDCD6, SASH1, FOXP1, RTN4, DOCK5, AMOTL1
BP	GO:0006475	internal protein amino acid acetylation	46/2564	4.49E-05	BRCA1, CHEK1, ATF2, CREBBP, EP300, GATA3, HCFC1, LIF, SMAD4, MECP2, KMT2A, NAP1L2, SNAI2, TAF5, PCGF2, BRPF1, KAT6A, YEATS4, NCOA3, HAT1, NCOA1, KAT2B, RPS6KA5, GTF3C4, CLOCK, CTCF, BRD8, KAT6B, BRD1, ZNF451, AUTS2, TAF5L, BRPF3, LEF1, PHF20, RSF1, MSL2, SETD5, MRGBP, KANSL3, YEATS2, MEAF6, NAA50, EPC1, KAT8, KANSL1L
BP	GO:0030098	lymphocyte differentiation	81/2564	4.49E-05	ANXA1, RHOA, ATM, ATP7A, AXL, BCL2, BCL6, PRDM1, ZFP36L1, ZFP36L2, RUNX2, RUNX1, RUNX3, CBFB, CDK6, CEBPG, CCR6, KLF6, EGR1, EP300, ERBB2, FANCA, PTK2B, MTOR, GATA3, HMGB1, ID2, RBPJ, IL7R, IL12A, INHBA, JAG2, KIT, SMAD7, CD46, MFNG, MSH2, NOTCH2, PIK3R1, PKNOX1, PRKDC, PTPRJ, RARA, RORA, RPL22, SATB1, SOX4, SP3, SRF, STAT3, ADAM17, ZEB1, TGFBR2, TP53, TPD52, TSC1, TNFSF4, WNT1, XBP1, FZD5, FZD8, DNAJA3, SOCS5, MAFB, RASGRP1, MALT1, ZBTB1, PLCL2, CLCF1, PATZ1, FOXP1, LEF1, ZBTB7A, DOCK10, ZMIZ1, SH3RF1, BCL11B, DOCK11, RC3H1, ATP11C, IRF2BP2
BP	GO:0034333	adherens junction assembly	30/2564	4.90E-05	ACTN1, RHOA, BCL2, PTK2B, GPM6B, LIMS1, LRP1, SMAD7, PTEN, PTPRJ, PTPRK, RAC1, ROCK1, SLC9A1, THBS1, TSC1, VCL, VEGFA, PIP5K1A, NRP1, MAP4K4, ROCK2, SLK, TESK2, SORBS1, CORO1C, ZNF703, PHLDB2, WHAMM, FMN1
BP	GO:0048640	negative regulation of developmental growth	35/2564	4.91E-05	ADRB1, FGF13, FGFR3, FXN, G6PD, GJA1, JARID2, MAP2, MEIS1, PPARA, PTCH1, PTEN, SFRP2, STK3, STK4, TGFBR2, WNT5A, YY1, SEMA7A, STC2, NRP1, SOCS2, CDK5R1, SEMA5A, ULK2, SEMA4D, SEMA3C, WWC1, BCL11A, SEMA4C, WWC3, RTN4, SEMA6A, SAV1, WWC2
BP	GO:0090132	epithelium migration	81/2564	4.97E-05	ANXA1, ARF6, RHOA, ARSB, BMPR2, KRIT1, CCR6, CYP1B1, DOCK1, EDN1, EFNB2, EPHB4, ETS1, PTK2B, FGF2, MTOR, GATA3, GLUL, HAS2, HMGB1, ID1, ITGA3, KIT, LGALS8, MECP2, MEF2C, MET, MYH9, NF1, NFE2L2, PIK3C2A, PLCG1, PRKCA, PRKCE, PKN2, MAP2K3, PTEN, PTGS2, PTPRG, PTPRM, PTPRR, ROBO1, SOX9, SP1, SP100, SPARC, SRF, ADAM17, NR2F2, TGFB2, TGFBR1, TGFBR2, THBS1, TMSB4X, VEGFA, WNT5A, SCG2, PIK3R3, ADAM9, RAB11A, FGF18, NRP1, SEMA5A, SLIT2, MAP4K4, ROCK2, ZEB2, IQSEC1, AKT3, PDCD6, SASH1, CORO1C, GREM1, FOXP1, RTN4, MMRN2, DOCK5, AMOT, AMOTL1, SPRED1, MIA3
BP	GO:0050684	regulation of mRNA processing	40/2564	4.97E-05	ZFP36L1, CCNT1, DDX5, DYRK1A, FMR1, HNRNPA2B1, HNRNPK, HNRNPL, HNRNPU, MBNL1, PTBP1, RBM3, REST, SRSF1, SRSF2, SRSF6, SRSF7, TRA2B, WTAP, RNF40, RBM8A, MBNL2, SF3B4, KHDRBS1, CELF1, CELF2, AHCYL1, SRSF10, PAPOLA, CPEB3, DAZAP1, ZBTB7A, SMU1, CDC73, FAM172A, RBM17, YTHDC1, SRSF12, SREK1, RBM24
BP	GO:0034332	adherens junction organization	41/2564	5.07E-05	ACTN1, ARF6, RHOA, BCL2, CDH2, CDH6, CDH11, CTNND1, PTK2B, GPM6B, LIMS1, LRP1, SMAD7, PTEN, PTPRJ, PTPRK, RAC1, ROCK1, SLC9A1, THBS1, TSC1, VCL, VEGFA, PIP5K1A, NUMB, NRP1, NUMBL, MAP4K4, ROCK2, SLK, IQSEC1, TESK2, SORBS1, RASSF8, CORO1C, CADM1, ZNF703, PHLDB2, WHAMM, CADM2, FMN1
BP	GO:0000288	nuclear-transcribed mRNA catabolic process, deadenylation-dependent decay	27/2564	5.16E-05	ZFP36L1, ZFP36L2, DDX6, CNOT2, CNOT4, BTG2, PAN2, TOB1, HBS1L, CPEB3, DIS3, CNOT1, SAMD4A, TNRC6B, PABPC1, AGO2, TNRC6A, CNOT7, LSM7, DCP1A, CNOT6, TNRC6C, RC3H1, DCP2, PDE12, CNOT6L, PAN3
BP	GO:0022029	telencephalon cell migration	22/2564	5.17E-05	RHOA, FGF13, NRG1, PAFAH1B1, PEX13, POU3F2, POU3F3, RELN, ROBO1, SRF, NRP1, CDK5R1, SLIT2, SUN1, SRGAP2, RTN4, NDEL1, DIXDC1, EFHC1, LRRK2, ARL13B, FBXO45
BP	GO:0060602	branch elongation of an epithelium	12/2564	5.17E-05	AREG, ESR1, FGFR2, TNC, MED1, SIX1, SOX9, WNT5A, SPRY1, SPRY2, YAP1, SIX4

BP	GO:1900151	regulation of nuclear-transcribed mRNA catabolic process, deadenylation-dependent decay	12/2564	5.17E-05	ZFP36L1, ZFP36L2, BTG2, TOB1, CPEB3, CNOT1, TNRC6B, PABPC1, AGO2, TNRC6A, CNOT7, TNRC6C
BP	GO:0045732	positive regulation of protein catabolic process	55/2564	5.78E-05	APC, CSNK2A1, PTK2B, FMR1, GJA1, GSK3B, HSP90AA1, LDLR, LRP1, SMAD7, MSN, NEDD4, NFE2L2, NSF, PTEN, RAD23A, SNX1, SORL1, SOX9, TNFAIP3, VCP, EZR, WNT5A, CUL4B, ADAM9, USP13, RNF14, SOCS5, RNF144A, RNF40, AREL1, TRIB1, WWP1, FAF1, RNF139, GGA3, ARIH1, TIPARP, FBXL5, TRIB2, UBQLN2, UBQLN1, RNFT1, DTL, HECW2, SMURF2, LPCAT1, TMEM259, LRRK2, SOCS4, RNF19B, SH3D19, RNF217, TMTC3, RNF144B
BP	GO:0000289	nuclear-transcribed mRNA poly(A) tail shortening	17/2564	5.79E-05	CNOT2, CNOT4, BTG2, PAN2, TOB1, CPEB3, CNOT1, SAMD4A, TNRC6B, PABPC1, AGO2, TNRC6A, CNOT7, CNOT6, TNRC6C, CNOT6L, PAN3
BP	GO:0060840	artery development	32/2564	5.87E-05	ACVR2B, JAG1, PRDM1, BMPR1A, BMPR2, EFNB2, HOXA1, HPGD, RBPJ, LDLR, LOX, LRP1, SMAD7, MYH10, MYLK, NF1, NKX3-1, PKD2, ROBO1, SIX1, SOX4, SRF, TGFB2, TGFBR1, VEGFA, LUZP1, NRP1, AKT3, HECTD1, ZMIZ1, DCTN5, ARID2
BP	GO:0021700	developmental maturation	68/2564	6.02E-05	AP1G1, APP, RHOA, AXL, BCL2, RUNX2, CBFB, CLCN3, CCR6, DAG1, EREG, PTK2B, FGFR3, FOXO3, MTOR, G6PD, GATA3, GJA1, FOXA1, HOXA5, ID2, IGF1, RBPJ, MAP1B, MECP2, MMP2, MYO5A, NF1, NFIA, NRCAM, NR4A2, OPA1, PDE3A, RELN, PTEN, RB1, RET, STXBP1, TGFB2, VEGFA, WNT1, WNT5A, XBP1, FZD5, PICALM, RECK, CDK5R1, B4GALT6, B4GALT5, NRXN1, PTBP3, SEMA4D, ABHD2, UNC13A, SNAPIN, CNTNAP2, ANKRD17, GREM1, FLVCR1, ZBTB7A, MBTPS2, BCL11A, NTN4, PABPC1L, ANKRD27, LRRK2, ANO6, GLDN
BP	GO:0031647	regulation of protein stability	68/2564	6.02E-05	ASPH, ATP1B1, BCL2, CREB1, CREBBP, EP300, EPHA4, GNAQ, HCFC1, HIP1, HSP90AA1, HSP90AB1, ID1, IGF1, LAMP1, LAMP2, SMAD7, MDM4, PIK3R1, PRKDC, MAPK1, PTEN, RAD23A, SOX4, STK3, STK4, STXBP1, TP53, TSC1, USP4, VHL, XBP1, USP7, USP9X, CUL3, PRKRA, NAPG, USP13, B4GALT5, USP34, SEC16A, RNF139, AAK1, GGA3, OTUD3, FBXW11, GTPBP4, FBXL3, USP25, A1CF, GOLGA7, NLK, TRIM44, USP47, CDKN2AIP, ATF7IP, RTN4, SAV1, MTMR9, DERL1, CDC73, NAA15, SYVN1, TBRG1, HPS4, LRRK2, STXBP4, RNF149
BP	GO:0050768	negative regulation of neurogenesis	70/2564	6.04E-05	ADCYAP1, JAG1, APP, ARF6, RHOA, BMPR1A, DDX6, DLX2, EFNB2, EPHA4, EPHB2, ERBB4, FGF13, FOXO3, GDI1, GSK3B, NRG1, ID1, ID2, ID4, LDLR, LRP1, MAP2, MEIS1, NF1, PAFAH1B1, PBX1, PMP22, MED1, PPP3CA, PTEN, PTPRG, REST, SKI, SORL1, SOX2, SOX9, STAT3, THRB, TP53, TSC1, UBE3A, VIM, WNT5A, SEMA7A, NRP1, CDK5R1, SEMA5A, SLIT2, MAP4K4, RAPGEF2, ULK2, OLIG2, SEMA4D, SEMA3C, SRGAP2, DICER1, SNAPIN, ASAP1, BCL11A, SEMA4C, RTN4, MIB1, SEMA6A, TRAK2, ITM2C, HOOK3, DIXDC1, LRRK2, PAQR3
BP	GO:0006473	protein acetylation	53/2564	6.04E-05	BRCA1, CHEK1, ATF2, CREBBP, EP300, GATA3, GSK3B, HCFC1, LIF, SMAD4, MECP2, KMT2A, NAP1L2, PRKAA1, SNAI2, SOX4, TAF5, PCGF2, BRPF1, KAT6A, YEATS4, NCOA3, HAT1, NCOA1, KAT2B, RPS6KA5, GTF3C4, CLOCK, CTCF, BRD8, KAT6B, BRD1, ZNF451, AUTS2, TAF5L, BRPF3, LEF1, PHF20, RSF1, MSL2, SETD5, MRGBP, KANSL3, YEATS2, TAOK1, MEAF6, NAA25, NAA15, NAA50, EPC1, KAT8, NAA30, KANSL1L
BP	GO:0045665	negative regulation of neuron differentiation	57/2564	6.04E-05	JAG1, APP, ARF6, RHOA, DDX6, DLX2, EFNB2, EPHA4, EPHB2, FGF13, FOXO3, GDI1, GSK3B, ID1, ID2, ID4, LRP1, MAP2, MEIS1, PAFAH1B1, PBX1, PMP22, MED1, PPP3CA, PTEN, PTPRG, REST, SOX2, SOX9, THRB, TSC1, UBE3A, VIM, WNT5A, SEMA7A, NRP1, CDK5R1, SEMA5A, SLIT2, MAP4K4, RAPGEF2, ULK2, OLIG2, SEMA4D, SEMA3C, SNAPIN, ASAP1, BCL11A, SEMA4C, RTN4, MIB1, SEMA6A, TRAK2, ITM2C, DIXDC1, LRRK2, PAQR3
BP	GO:0090092	regulation of transmembrane receptor protein serine/threonine kinase signaling pathway	60/2564	6.05E-05	ACVR2B, XIAP, BMPR1A, BMPR2, CREBBP, EP300, FBN1, FBN2, FKBP1A, GLG1, HFE, HSP90AB1, RBPJ, IGSF1, INHBA, ITGA3, LOX, SMAD2, SMAD4, SMAD7, PCSK6, PPM1A, RPS27A, SFRP2, SKI, SKIL, SORL1, SPTBN1, ADAM17, ZEB1, TGFB2, TGFBR1, TGFBR2, THBS1, TP53, WNT1, WNT5A, FZD1, ONECUT2, MAGI2, TOB1, FSTL1, PEG10, BAMBI, WWTR1, ZNF451, GREM1, HIPK2, ZBTB7A, CTDSPL2, TRIM33, RNF111, PMEPA1, UBE2O, GREM2, SMURF2, ZNF703, VASN, NPNT, RNF165
BP	GO:0001952	regulation of cell-matrix adhesion	36/2564	6.05E-05	JAG1, RHOA, BCL2, BCL6, CDK6, DAG1, PTK2B, GPM6B, GSK3B, LIMS1, LRP1, NF1, DDR2, SERPINE1, PIK3CB, PIK3R1, PTEN, PTPRJ, RAC1, RASA1, ROCK1, SLC9A1, THBS1, TSC1, UTRN, VEGFA, NRP1, MAP4K4, ROCK2, ONECUT2, SLK, CORO1C, MINK1, PHLDB2, ACER2, FMN1
BP	GO:0003002	regionalization	80/2564	6.28E-05	ACVR2B, AR, ATM, BMI1, BMPR1A, BMPR1B, BMPR2, DLX2, EDN1, EN1, EP300, ETS2, BPTF, FGFR2, FOXA1, HOXA5, HOXA9, HOXC9, HOXC11, HOXC13, HOXD10, RBPJ, SMAD2, SMAD4, MEF2C, MLLT3, NEUROD1, NKX3-1, PCSK6, PBX1, PCDH8, PITX2, PRKACB, PRKDC, RELN, PTCH1, ROBO1, SFRP2, TRA2B, SIX1, SKI, SRF, TBX3, NR2F2, TGFBR1, TP53, KDM6A, WNT1, WNT5A, WNT2B, YY1, PCGF2, BTG2, FZD5, TP63, NRP1, ZEB2, MAFB, MED12, SPRY1, BASP1, SEMA3C,

					FRS2, MTF2, SCMH1, GPR161, GREM1, HIPK2, LEF1, NLE1, AHI1, POGLUT1, MIB1, ALX4, GREM2, HHIP, TTC21B, PGAP1, OSR1, ARL13B
BP	GO:0048286	lung alveolus development	18/2564	6.29E-05	ATP7A, BMPR2, CREB1, FGFR2, GATA6, FOXA1, HOXA5, IGFBP5, LIF, PHF14, MAN1A2, CIC, SLC7A11, ERRFI1, TMEM38B, SMPD3, TNS3, FOXP2
BP	GO:0070317	negative regulation of G0 to G1 transition	18/2564	6.29E-05	APAF1, BMI1, BRCA1, CHEK1, E2F1, EZH2, RBBP4, RRM2, TFDP1, TFDP2, PCGF2, CBX3, MGA, RYBP, CBX5, SUZ12, PHC3, EPC1
BP	GO:0042692	muscle cell differentiation	86/2564	6.29E-05	BCL2, BCL9, BDNF, BNIP2, KLF5, CDC42, CDH2, CSRP2, CXADR, DMD, EDN1, EFNB2, EREG, EZH2, FGFR2, MTOR, G6PD, GATA6, NRG1, HNRNPU, IGF1, IGFBP5, RBPJ, KIT, LOX, SMAD4, MECP2, MEF2A, MEF2C, MYH9, MYH10, NFATC3, PDGFRA, PPARA, PPP3CA, PRKAR1A, PTBP1, RARA, RB1, RORA, MAP2K4, SGCB, SGCD, SIX1, SKI, SLC9A1, SOD2, SOX9, SRF, TBX3, ZEB1, TSC1, VEGFA, WNT1, XBP1, YY1, ADAM12, ARID1A, SORBS2, SPAG9, QKI, NEBL, PDLIM5, FRS2, EHD1, AKAP13, SYNE1, ANKRD17, GREM1, CACYBP, PDCD4, TMOD3, TMOD2, MYEF2, SIX4, SEMA4C, SOX6, NLN, EPC1, TANC1, MYLK3, MTPN, SIK1, SMYD1, RBM24, NPNT
BP	GO:0048639	positive regulation of developmental growth	49/2564	6.53E-05	ACACB, BCL2, BDNF, BMPR1A, BMPR2, CREB1, DBN1, EDN1, ERBB4, FGF2, FGFR2, FN1, MTOR, GATA6, GDI1, GOLGA4, IGF1, RBPJ, INSR, LRP1, MAP1B, MEF2C, MTM1, PAFAH1B1, POU3F2, PRKDC, MAPK1, SRF, TGFBR2, VEGFA, EZR, SEMA7A, RAB11A, NRP1, SEMA5A, IST1, BASP1, YAP1, SEMA4D, RIMS1, UNC13A, PLCB1, ADNP, NIPBL, SERP1, ITSN2, NDEL1, RNF157, SH3PXD2B
BP	GO:0051099	positive regulation of binding	48/2564	6.64E-05	APP, ARF6, BDNF, CALM3, CEBPG, CLIC2, EIF2S1, EP300, EPHA4, FKBP1A, FMR1, GATA3, GSK3B, HFE, HMGB1, HMGB2, HSP90AB1, IGF1, JAK2, STMN1, LRP1, MARK3, MEF2C, MET, MFNG, NEUROD1, PLCL1, RAN, RARA, RB1, SKI, STK3, STK4, TIAM1, WNT5A, HMGA2, NRP1, RAPGEF2, MAPRE1, PLCL2, MAU2, BAMBI, NIPBL, HIPK2, LARP6, DERL1, LRRK2, SPPL3
BP	GO:0070316	regulation of G0 to G1 transition	19/2564	6.68E-05	APAF1, BMI1, BRCA1, CHEK1, E2F1, EZH2, MED1, RBBP4, RRM2, TFDP1, TFDP2, PCGF2, CBX3, MGA, RYBP, CBX5, SUZ12, PHC3, EPC1
BP	GO:0035304	regulation of protein dephosphorylation	40/2564	6.72E-05	CALM1, CALM2, CALM3, ENSA, FKBP1A, MTOR, GNAI2, GSK3B, HSP90AB1, JAK2, MGAT5, PPP1R12A, PPP1R2, PPP2R1B, PPP2R2A, PPP2R2C, PPP2R5A, PPP2R5E, PTBP1, ROCK1, TSC1, YWHAB, SHOC2, ROCK2, PHACTR2, MAGI2, ARPP19, PPP6R1, SWAP70, CAMTA1, NSMF, PPP6R3, PPP2R2D, SLC39A10, PPP4R4, PPP1R3B, PPP1R15B, SPPL3, PPP4R2, CNEP1R1
BP	GO:0010770	positive regulation of cell morphogenesis involved in differentiation	43/2564	6.88E-05	RHOA, BDNF, BMPR2, CDC42, CRK, DBN1, DOCK1, EPHA4, FN1, GDI1, GOLGA4, HAS2, LIMS1, LRP1, CAPRIN1, MAP1B, NTRK2, OPA1, PAFAH1B1, RELN, RAC1, ROBO1, SKIL, SRF, TIAM1, VEGFA, SEMA7A, RAB11A, NRP1, SEMA5A, SLIT2, IST1, ZEB2, DNM1L, PLXNC1, SEMA4D, RAB21, ADNP, SS18L1, NIN, DOCK5, NDEL1, ANKRD27
BP	GO:0061515	myeloid cell development	25/2564	7.61E-05	APP, BCL6, BPGM, EP300, FBN1, G6PD, KIT, MEIS1, NOTCH2, SLC11A2, PAFAH1B1, PIP4K2A, MED1, ARID4A, SRF, TNFSF11, PABPC4, PTBP3, TSPAN2, WASF2, FOXP1, FLVCR1, TMOD3, ZBTB7A, SOX6
BP	GO:0030705	cytoskeleton-dependent intracellular transport	48/2564	7.68E-05	APP, BICD1, DST, CDC42, FMR1, HNRNPU, KIF5B, KIF5C, TNPO1, LAMP1, MAP1B, MAP2, MYO5A, MYO10, OPA1, PAFAH1B1, PURA, RAB1A, RAB6A, RAB27B, SPAST, WASL, KIF3B, KIF23, RASGRP1, AP3M2, RAB21, KIF1B, BICD2, SUN1, SNAPIN, KIF4A, AP3M1, HOOK1, NDE1, FNBP1L, ARL8B, RHOT1, CCDC88A, IFT80, KIF13A, TRAK2, FYCO1, TTC21B, NDEL1, HOOK3, TTC30A, LCA5
BP	GO:0043010	camera-type eye development	73/2564	7.68E-05	ACVR2B, JAG1, SHROOM2, ATP2B1, ATP2B4, BMPR1B, BMPR2, CACNA1C, COL4A1, CYP1B1, DLX2, EPHB1, EPHB2, CLN8, FBN1, FBN2, FOXF2, GATA3, GJA1, GNB1, GPD2, GPM6A, INHBA, MEIS1, MITF, MYH10, NEUROD1, NF1, NTRK2, OPA1, PDGFRA, PITX2, PKNOX1, MED1, PTPRM, RARA, RET, RORB, SKI, SKIL, SOX9, SP3, SRF, ZEB1, TGFB2, TGFBR1, TGFBR2, THRB, VEGFA, VIM, WNT5A, WNT2B, YY1, FZD5, ARID1A, FZD4, NRP1, ZEB2, MFN2, ABI2, KDM5B, FRS2, RAB3GAP1, PDS5B, SLC7A11, HIPK2, AHI1, TGIF2, BCL11B, LPCAT1, RAB11FIP4, FOXP2, TBC1D20
BP	GO:0042326	negative regulation of phosphorylation	100/2564	7.86E-05	ADARB1, APC, RHOA, CALM1, CALM2, CALM3, CBL, CBLB, DAG1, DMD, DUSP4, DUSP5, DUSP8, EPHB2, MECOM, F2RL1, FKTN, MTOR, GNAQ, HGF, HMGCR, HNRNPU, IGF1R, INHBA, IPO5, LIF, SMAD4, SMAD7, NF1, NPM1, NTF3, PEBP1, PAFAH1B1, PAK2, PDE4D, PPARA, PPP2R5A, PRKAR1A, PRKAR2A, PRKDC, DNAJC3, PTEN, PTPRJ, PTPRR, RB1, SFRP2, SORL1, STAT3, NR2F2, TIMP3, TLR4, TNFAIP3, EZR, EIF3A, KAT2B, SLIT2, NCOR1, SOCS5, RANBP9, HIPK3, CTDSPL, TRIB1, SPRY1, SPRY2, TNIP1, SEMA4D, IPO7, HEXIM1, ZMYND11, DUSP14, PTPRT, IRAK3, GPD1L, CORO1C, WWTR1, IBTK, GREM1, PDCD4, TRIB2, DNAJC15, ERRFI1, DDIT4, CAMK2N1, ASH1L, LMO3, PMEPA1, SEMA6A, PRDM15, WNK1, GGNBP2, PPP1R15B, ITPRIP, LRRK2, SOCS4, DUSP18, PAQR3, SPRED1, SPRED2, PDE12, RNF149
BP	GO:0009101	glycoprotein biosynthetic process	79/2564	8.06E-05	ATP7A, BCL2, BMPR1B, BMPR2, EXTL3, FKTN, GALNT1, GALNT2, GALNT3, GCNT2, GFPT1, B4GALT1, GOLGA2, IGF1, MFNG, MGAT5, PAWR, ST6GAL1, ST3GAL1, SOAT1, VCP, VEGFB, GALNT4, B4GALT4, B4GALT6, B4GALT5, ITM2B, CHST3, TMEM59, FAM20B, GFPT2, HS3ST3B1, HS3ST1, UST, TNIP1, ARFGEF1, B3GNT2, FUT9, MAN1A2, MGAT4A, PHLDA1, SLC35D1, PLCB1, GLCE, ST6GALNAC4, AGO2, SERP1, C1GALT1C1, DSE, ST8SIA3, GCNT4, GALNT7, CHST12, GALNT10,

					POGLUT1, GOLPH3, TRAK2, SRD5A3, EDEM3, TET1, ITM2C, TMTC1, B3GNT5, MAGT1, SYVN1, TMTC4, HS6ST2, MCFD2, DSEL, B3GAT2, ALG10B, B3GALNT2, TMTC3, TET3, HS6ST3, GXYLT1, EOGT, DPY19L4, ACER2
BP	GO:1901888	regulation of cell junction assembly	29/2564	8.18E-05	RHOA, RUNX1, CBFB, GJA1, GPM6B, LIMS1, LRP1, PTEN, PTPRJ, RAC1, RAP1B, ROCK1, SLC9A1, SNAI2, THBS1, TJP1, TSC1, VEGFA, FZD5, NRP1, CLDN1, MAP4K4, ROCK2, RAPGEF2, SLK, CORO1C, PHLDB2, FMN1, OCLN
BP	GO:0006352	DNA-templated transcription, initiation	61/2564	8.23E-05	AR, CCND1, RUNX2, CBFB, CREB1, CREBBP, E2F3, ESR1, ESRRG, NR6A1, NR3C1, GTF2A1, GTF2H1, GTF2I, HMGB1, RBPJ, MECP2, MITF, NR3C2, NOTCH2, NR4A2, PPARA, MED1, PTEN, RARA, RORA, RORB, SOX9, SRF, TAF5, TAF11, TAF13, TCF4, TEAD1, TFAM, THRB, TP53, NR2C2, UBTF, FOSL1, SMARCA5, PPM1D, KAT2B, GTF3C4, MED17, MED26, MED12, MED13, NR1D2, MED6, YAP1, BAZ2A, SETX, WWTR1, ZNF451, RSF1, RRN3, ATF7IP, BDP1, CAND1, POLR1B
BP	GO:0035329	hippo signaling	17/2564	8.24E-05	MARK3, STK3, STK4, TEAD1, TJP1, YWHAB, PJA2, YAP1, WWC1, WWTR1, MOB1A, WWC3, SAV1, MOB3B, WWC2, AMOT, AMOTL1
BP	GO:0051961	negative regulation of nervous system development	73/2564	8.47E-05	ADCYAP1, JAG1, APP, ARF6, RHOA, BMPR1A, DDX6, DLX2, EFNB2, EPHA4, EPHB2, ERBB4, FGF13, FOXO3, GDI1, GSK3B, NRG1, ID1, ID2, ID4, LDLR, LRP1, MAP2, MEIS1, NF1, PAFAH1B1, PBX1, PMP22, MED1, PPP3CA, PRKACB, PTEN, PTPRG, REST, SKI, SORL1, SOX2, SOX9, STAT3, THRB, TP53, TSC1, UBE3A, VIM, WNT5A, SEMA7A, NRP1, CDK5R1, SEMA5A, SLIT2, MAP4K4, EIF2AK3, RAPGEF2, ULK2, OLIG2, SEMA4D, SEMA3C, SRGAP2, DICER1, GPR161, SNAPIN, ASAP1, BCL11A, SEMA4C, RTN4, MIB1, SEMA6A, TRAK2, ITM2C, HOOK3, DIXDC1, LRRK2, PAQR3
BP	GO:0006900	vesicle budding from membrane	32/2564	8.51E-05	AREG, ARF1, GOLGA2, INSIG1, NSF, PPP6C, RAB1A, PICALM, CUL3, USO1, WASL, VAPB, VAPA, SEC24C, SEC16A, PDCD6, CNIH1, TFG, TMED10, SEC23IP, PPP6R1, SEC31A, ANKRD28, TRAPPC4, FNBP1L, GOLPH3L, PPP6R3, SAR1A, GOLPH3, MCFD2, TBC1D20, MIA3
BP	GO:0090130	tissue migration	81/2564	8.55E-05	ANXA1, ARF6, RHOA, ARSB, BMPR2, KRIT1, CCR6, CYP1B1, DOCK1, EDN1, EFNB2, EPHB4, ETS1, PTK2B, FGF2, MTOR, GATA3, GLUL, HAS2, HMGB1, ID1, ITGA3, KIT, LGALS8, MECP2, MEF2C, MET, MYH9, NF1, NFE2L2, PIK3C2A, PLCG1, PRKCA, PRKCE, PKN2, MAP2K3, PTEN, PTGS2, PTPRG, PTPRM, PTPRR, ROBO1, SOX9, SP1, SP100, SPARC, SRF, ADAM17, NR2F2, TGFB2, TGFBR1, TGFBR2, THBS1, TMSB4X, VEGFA, WNT5A, SCG2, PIK3R3, ADAM9, RAB11A, FGF18, NRP1, SEMA5A, SLIT2, MAP4K4, ROCK2, ZEB2, IQSEC1, AKT3, PDCD6, SASH1, CORO1C, GREM1, FOXP1, RTN4, MMRN2, DOCK5, AMOT, AMOTL1, SPRED1, MIA3
BP	GO:0007389	pattern specification process	96/2564	8.60E-05	ACVR2B, APC, AR, ASPH, ATM, BMI1, BMPR1A, BMPR1B, BMPR2, DLX2, EDN1, EN1, EP300, ERBB4, ETS2, BPTF, FGFR2, GJA1, FOXA1, HOXA5, HOXA9, HOXC9, HOXC11, HOXC13, HOXD10, RBPJ, SMAD1, SMAD2, SMAD4, SMAD5, MEF2C, MFNG, MID1, MLLT3, NEUROD1, NKX3-1, PCSK6, PBX1, PCDH8, PITX2, PKD2, PRKACB, PRKDC, RELN, PTCH1, ROBO1, SFRP2, TRA2B, SIX1, SKI, SRF, TBX3, ZEB1, NR2F2, TGFBR1, TGFBR2, TP53, KDM6A, WNT1, WNT5A, WNT2B, YY1, PCGF2, BTG2, FZD5, TP63, NRP1, KIF3B, ZEB2, MAFB, MED12, SPRY1, BASP1, SEMA3C, FRS2, MTF2, SCMH1, SATB2, GPR161, GREM1, HIPK2, LEF1, NLE1, RNF111, AHI1, POGLUT1, MIB1, ALX4, GREM2, HHIP, TTC21B, PGAP1, BICC1, ACVR1C, OSR1, ARL13B
BP	GO:0002064	epithelial cell development	53/2564	8.73E-05	JAG1, AR, ATRX, PRDM1, KLF5, CDK6, ESR1, F2RL1, FASN, FLNB, FOSL2, B4GALT1, GJA1, GSK3B, FOXA1, HOXA5, ID1, MET, MSN, MYO1E, PAFAH1B1, PDE4D, RAP1B, RARA, ARID4A, ROCK1, SOX9, TJP1, VEGFA, EZR, VIM, WNT5A, XBP1, VEZF1, TP63, CLDN1, ROCK2, ONECUT2, SLC4A7, CLOCK, RAPGEF2, MAGI2, ABI2, FRS2, FNDC3A, PALLD, EXPH5, ARID4B, RAP2C, BCL11B, FRMD6, TBC1D20, YIPF6
BP	GO:0007422	peripheral nervous system development	26/2564	8.75E-05	BDNF, RUNX1, RUNX3, DAG1, ERBB2, ERBB3, ETV1, NRG1, HOXD10, NF1, NTF3, NTRK2, SERPINI1, PMP22, POU3F2, SCN8A, SKI, SLC5A3, UGT8, CLDN1, ONECUT2, MED12, DICER1, ADAM22, MPP5, FA2H
BP	GO:0051056	regulation of small GTPase mediated signal transduction	77/2564	8.95E-05	ABL2, ABR, ARF6, RHOA, ARHGAP5, BCL6, CBL, CDC42, CHN1, CRK, ECT2, EPHB2, EPS8, F2R, F2RL1, GDI1, LPAR4, NRG1, IGF1, ITGA3, JAK2, STMN1, MET, MYO9A, NF1, NOTCH2, OCRL, OPHN1, RELN, RAC1, RASA1, ROBO1, SOS2, TGFB2, TIAM1, TRIO, SHOC2, CUL3, NRP1, SLIT2, ARHGAP29, MAP4K4, ARHGAP32, IQSEC1, MFN2, RASGRP1, FAM13A, RASA4, SPRY1, SPRY2, NET1, VAV3, ARFGEF1, GNA13, RALBP1, AKAP13, PSD3, ARHGEF12, SRGAP2, RHOQ, CD2AP, AUTS2, FBXO8, ITSN2, ARHGEF3, FAM13B, RALGPS2, ARHGAP17, RHOT1, CDC42SE1, CDC42SE2, RALGAPB, PLEKHG1, ALS2, ARHGAP24, ARAP2, AMOT
BP	GO:0003279	cardiac septum development	34/2564	9.50E-05	JAG1, PRDM1, BMPR1A, BMPR2, FGFR2, GATA3, GATA6, ID2, RBPJ, SMAD4, SMAD7, MDM4, MYH10, NOTCH2, PTK7, RARA, ROBO1, SOX4, TBX3, TGFB2, TGFBR1, TGFBR2, TP53, WNT5A, LUZP1, FZD1, NRP1, SLIT2, SEMA3C, FRS2, HECTD1, PARVA, SAV1, DCTN5
BP	GO:0034249	negative regulation of cellular amide metabolic process	57/2564	9.71E-05	ZFP36L1, ZFP36L2, DDX3X, EIF2S1, EIF4EBP2, FMR1, IGF1, IGFBP5, IREB2, CAPRIN1, CNOT2, PRKAA1, PURA, RARA, RBM3, ROCK1, SHMT1, SORL1, STAT3, TPR, TSC1, BTG2, FXR1, ENC1, EIF2AK3, ROCK2, PUM1, TOB1, HNRNPR, IGF2BP3, CELF1, RNF139, CPEB3, CNOT1, SAMD4A, TNRC6B, GGA3, LARP1, GIGYF2, AGO1, AGO2, TNRC6A, CNOT7, PAIP2, TNRC6C, CPEB4, SESN2, ORMDL1, TRIM71, CPEB2, RC3H1, AGO3, AGO4, RBM24, CNOT6L, YTHDF3, PAIP2B

BP	GO:1905475	regulation of protein localization to membrane	49/2564	9.82E-05	ACTB, ADAM10, ANK3, AR, ARF6, BCL2, BID, CDH2, CLTC, DAG1, E2F1, STOM, EPHB2, ERBB2, ACSL3, GPC4, FYN, GDI1, ITGA3, KIF5B, LRP1, PIK3R1, PPP2R5A, PPP3R1, PRKCE, SPTBN1, TFDP1, TFDP2, TP53, TP53BP2, EZR, YWHAB, PICALM, STX7, TP63, NUMB, RAB11A, CDK5R1, TMEM59, VTI1B, SORBS1, RAB11FIP2, RHOQ, SLC7A11, APPL1, SSH1, LZTFL1, GOPC, WNK3
BP	GO:0030217	T cell differentiation	59/2564	1.00E-04	ANXA1, RHOA, ATP7A, BCL2, BCL6, PRDM1, ZFP36L1, ZFP36L2, RUNX2, RUNX1, RUNX3, CBFB, CDK6, CCR6, EGR1, ERBB2, FANCA, MTOR, GATA3, HMGB1, IL7R, IL12A, JAG2, KIT, SMAD7, CD46, PKNOX1, PRKDC, RARA, RORA, RPL22, SATB1, SOX4, SP3, SRF, STAT3, ADAM17, ZEB1, TGFBR2, TP53, TSC1, TNFSF4, WNT1, XBP1, FZD5, FZD8, DNAJA3, SOCS5, MAFB, RASGRP1, MALT1, ZBTB1, PATZ1, FOXP1, LEF1, ZMIZ1, SH3RF1, BCL11B, RC3H1
BP	GO:0035051	cardiocyte differentiation	45/2564	1.07E-04	JAG1, CXADR, EDN1, EFNB2, MTOR, G6PD, GATA6, NRG1, HNRNPU, IGF1, RBPJ, SMAD4, MEF2A, MEF2C, MYH10, PDGFRA, PITX2, PPARA, MAPK1, RARA, REST, MAP2K4, SGCB, SGCD, SLC9A1, SRF, TBX3, TGFB2, TSC1, VEGFA, YY1, ARID1A, SORBS2, SPRY1, SEMA3C, NEBL, PDLIM5, FRS2, AKAP13, GREM1, CACYBP, PDCD4, SOX6, MYLK3, SIK1
BP	GO:0061351	neural precursor cell proliferation	41/2564	1.10E-04	ADCYAP1, RHOA, DAGLA, CDH2, DBN1, EPHB1, FGF13, FGFR2, FOXO3, GNAI2, ID2, ID4, NAP1L1, NF1, PAFAH1B1, POU3F2, POU3F3, PTPRZ1, RORA, SOX5, TP53, VEGFA, WNT1, WNT5A, BTG2, FZD3, NUMB, NUMBL, ZEB2, FRS2, RAB10, LEF1, NDE1, HHIP, AKNA, HOOK3, ZNF503, DOCK7, DIXDC1, LRRK2, TRIM71
BP	GO:2001234	negative regulation of apoptotic signaling pathway	57/2564	1.10E-04	FASLG, AR, BCL2, BCL2L2, BDNF, BID, BRCA1, CD44, CSNK2A1, DDX3X, EYA4, FXN, FYN, GNAI2, GNAI3, HGF, HMGB2, IGF1, ITGA6, ITGAV, MCL1, MNT, NFE2L2, NR4A2, OPA1, SERPINE1, PTGS2, RB1, SFRP2, SNAI2, SOD2, TMBIM6, TGFBR1, THBS1, TNFAIP3, TPT1, XBP1, PCGF2, SCG2, NRP1, RB1CC1, YAP1, ZMYND11, SGK3, TMEM14A, RRM2B, TRIAP1, NLE1, RRN3, PHIP, USP47, BIRC6, SH3RF1, SYVN1, ITPRIP, LRRK2, C8orf44-SGK3
BP	GO:0051650	establishment of vesicle localization	68/2564	1.12E-04	SHROOM2, AREG, ARF1, CALM3, FMR1, GOLGA2, GSK3B, KIF5B, KIF5C, MAP2, MYO5A, NSF, P2RY1, PAFAH1B1, PPP6C, PRKCB, RAB1A, RAB27B, RAP1B, SNAP25, STXBP1, VAMP1, PICALM, CUL3, USO1, RAB11A, WASL, KIF3B, KIF23, SEC24C, RIMS3, SV2A, SEC16A, PDCD6, DNM1L, RASGRP1, CNIH1, TFG, AP3M2, TMED10, SEC23IP, PPP6R1, SEC31A, RAB3GAP1, RIMS1, UNC13A, KIF1B, SYT11, ANKRD28, SNAPIN, AP3M1, PCLO, GIT1, TRAPPC4, NDE1, FNBP1L, PPP6R3, AP1AR, WDR11, SAR1A, KIF13A, TRAK2, FYCO1, NDEL1, MCFD2, LRRK2, TBC1D20, FAM91A1
BP	GO:0006367	transcription initiation from RNA polymerase II promoter	49/2564	1.12E-04	AR, CCND1, RUNX2, CBFB, CREB1, CREBBP, E2F3, ESR1, ESRRG, NR6A1, NR3C1, GTF2A1, GTF2H1, GTF2I, HMGB1, RBPJ, MECP2, NR3C2, NOTCH2, NR4A2, PPARA, MED1, PTEN, RARA, RORA, RORB, SOX9, SRF, TAF5, TAF11, TAF13, TCF4, TEAD1, THRB, TP53, NR2C2, PPM1D, KAT2B, MED17, MED26, MED12, MED13, NR1D2, MED6, YAP1, WWTR1, ZNF451, ATF7IP, CAND1
BP	GO:0002028	regulation of sodium ion transport	28/2564	1.12E-04	ANK3, ARF1, ATP1A2, ATP1B1, ATP2B4, CAMK2D, DMD, STOM, FGF12, GLRX, KIF5B, MLLT6, NEDD4, SERPINE2, PRKCE, PTPN3, SLC9A1, UTRN, SLMAP, AHCYL1, GPD1L, STK39, KLHL24, HECW2, WNK1, WNK3, OSR1, SIK1
BP	GO:0050772	positive regulation of axonogenesis	28/2564	1.12E-04	RHOA, BDNF, BMPR2, DBN1, FN1, GDI1, GOLGA4, LRP1, MAP1B, NTRK2, PAFAH1B1, ROBO1, SKIL, SRF, TIAM1, VEGFA, SEMA7A, RAB11A, NRP1, SEMA5A, SLIT2, IST1, ZEB2, PLXNC1, SEMA4D, ADNP, NIN, NDEL1
BP	GO:0033598	mammary gland epithelial cell proliferation	14/2564	1.12E-04	AREG, CCND1, ESR1, GATA3, HOXA5, ID2, MED1, MAPK1, ROBO1, WNT5A, TNFSF11, KDM5B, RTN4, ZNF703
BP	GO:0035303	regulation of dephosphorylation	53/2564	1.12E-04	CALM1, CALM2, CALM3, ENSA, FKBP1A, MTOR, GNAI2, GSK3B, HSP90AB1, JAK2, MEF2C, MGAT5, PPP1R12A, PPP1R2, PPP2R1B, PPP2R2A, PPP2R2C, PPP2R5A, PPP2R5E, PTBP1, ROCK1, TGFB2, TSC1, YWHAB, SHOC2, MTMR3, ROCK2, PHACTR2, MAGI2, SMG7, SEMA4D, ARPP19, PPP6R1, SWAP70, CAMTA1, NSMF, CEP192, PPP6R3, PPP2R2D, SLC39A10, SLC7A14, PPP4R4, RBM26, WNK1, MTMR9, PPP1R3B, CSRNP3, PPP1R15B, SPPL3, PPP4R2, SPRED1, NPNT, CNEP1R1
BP	GO:0035690	cellular response to drug	82/2564	1.16E-04	ACTB, ADCY2, AHR, ANXA1, ATP2B4, ATRX, AXL, BRCA1, KLF9, CCNA2, CRK, CYP1B1, ECT2, EDN1, EGR1, ETS1, EZH2, FDX1, FOXO3, FMR1, FXN, FYN, GABPA, GNAI2, GNAQ, GNB1, NR3C1, HGF, HSP90AB1, ID1, KCNC2, MEF2C, MAP3K5, MET, KMT2A, MTR, PPP1R12A, NFE2L2, NFKB1, NKX3-1, OPA1, P2RY1, PAWR, PPP3CA, PRKAA1, PRKCE, MAPK1, PTEN, PTGS2, RAP1B, RAP2A, REST, SOX9, TFRC, TNFAIP3, TP53, VIM, PCGF2, HMGA2, NCOA1, CDK5R1, SLIT2, ROCK2, NET1, ZNF277, SETX, PLCB1, LARP1, CHMP5, BCL11A, ERRFI1, SSH1, DDIT4, TMEM38B, SMPD3, RBM22, PLEKHA1, PDGFD, TP53INP1, LRRK2, RNF149, ACER2
BP	GO:1902903	regulation of supramolecular fiber organization	79/2564	1.16E-04	ADD3, APC, APP, ARF1, ARF6, RHOA, CAPZA1, CAPZA2, CDC42, DBN1, DYRK1A, EDN1, EPS8, F2RL1, PTK2B, FER, FGF13, MTOR, ID1, STMN1, LDLR, SMAD4, MAP1B, MAP2, MECP2, MEF2C, MET, MID1, PIK3R1, PRKCE, RAC1, RASA1, RB1, ROCK1, SLC9A1, SPAST, SPTAN1, SPTBN1, TGFBR1, TMSB4X, TSC1, NRP1, CDK5R1, WASL, SEMA5A, SLIT2, ROCK2, ARPC5, ACTR3, ABI2, WASF2, ARPC1A, ARFGEF1, CDC42EP3, NCKAP1, AKAP13, MAPRE1, SWAP70, CAMSAP2, EML2, TMOD3, TMOD2, NIN, AP1AR, SPIRE1, TAOK1, SLAIN2, MID1IP1, NAV3, PHLDB2, MYLK3, WHAMM, JMY, MTPN, TTBK2, CAMSAP1, RICTOR, SH3PXD2B, FMN1

BP	GO:0045778	positive regulation of ossification	29/2564	1.23E-04	ACVR2B, JAG1, ATP2B1, BMPR1A, BMPR1B, BMPR2, RUNX2, FBN2, GNAS, GPM6B, HGF, IGF1, IL6R, IL6ST, SMAD1, SMAD5, MEF2C, NELL1, DDR2, SFRP2, TGFB2, WNT5A, TP63, TOB2, ZHX3, NIPBL, OSR1, ANO6, NPNT
BP	GO:0043491	protein kinase B signaling	64/2564	1.23E-04	AREG, AXL, ZFP36L1, DAG1, ERBB2, ERBB3, ERBB4, EREG, ESR1, FGF2, FGFR3, FGFR2, MTOR, FYN, GAB1, GATA3, GCNT2, HGF, NRG1, HIP1, HSP90AA1, HSP90AB1, IGF1, IGF1R, IGFBP5, INSR, KIT, LOX, MET, MTM1, NKX3-1, NTRK2, PDGFRA, PIK3CB, PIK3CG, PIK3R1, PTEN, PTPRJ, RAC1, RET, SOX9, STK3, TGFBR1, THBS1, PIK3R3, TNFSF11, FGF18, SEMA5A, MAGI2, PDCD6, SPRY2, ARFGEF1, FRS2, PHLPP2, SETX, OTUD3, SMPD3, RTN4, PLEKHA1, SESN2, MTDH, SESN3, RICTOR, FAM110C
BP	GO:0021795	cerebral cortex cell migration	18/2564	1.24E-04	RHOA, FGF13, PAFAH1B1, PEX13, POU3F2, POU3F3, RELN, ROBO1, NRP1, CDK5R1, SLIT2, SUN1, SRGAP2, RTN4, NDEL1, DIXDC1, EFHC1, FBXO45
BP	GO:0007045	cell-substrate adherens junction assembly	27/2564	1.24E-04	ACTN1, RHOA, BCL2, PTK2B, GPM6B, LIMS1, LRP1, PTEN, PTPRJ, PTPRK, RAC1, ROCK1, SLC9A1, THBS1, TSC1, VEGFA, PIP5K1A, NRP1, MAP4K4, ROCK2, SLK, TESK2, SORBS1, CORO1C, PHLDB2, WHAMM, FMN1
BP	GO:0048041	focal adhesion assembly	27/2564	1.24E-04	ACTN1, RHOA, BCL2, PTK2B, GPM6B, LIMS1, LRP1, PTEN, PTPRJ, PTPRK, RAC1, ROCK1, SLC9A1, THBS1, TSC1, VEGFA, PIP5K1A, NRP1, MAP4K4, ROCK2, SLK, TESK2, SORBS1, CORO1C, PHLDB2, WHAMM, FMN1
BP	GO:0035107	appendage morphogenesis	41/2564	1.25E-04	ASPH, ATRX, BMPR1A, BMPR1B, CACNA1C, RUNX2, CREBBP, EN1, FBN2, FGFR2, GJA1, GNA12, GNAS, HOXA9, HOXC11, HOXD10, SMAD4, MBNL1, PBX1, PITX1, MED1, PTCH1, SFRP2, SKI, SOX4, SOX9, TBX3, TGFB2, WNT5A, RECK, TP63, BCL2L11, SEMA3C, NIPBL, FLVCR1, LEF1, ALX4, LMBR1, OSR1, FMN1, RNF165
BP	GO:0035108	limb morphogenesis	41/2564	1.25E-04	ASPH, ATRX, BMPR1A, BMPR1B, CACNA1C, RUNX2, CREBBP, EN1, FBN2, FGFR2, GJA1, GNA12, GNAS, HOXA9, HOXC11, HOXD10, SMAD4, MBNL1, PBX1, PITX1, MED1, PTCH1, SFRP2, SKI, SOX4, SOX9, TBX3, TGFB2, WNT5A, RECK, TP63, BCL2L11, SEMA3C, NIPBL, FLVCR1, LEF1, ALX4, LMBR1, OSR1, FMN1, RNF165
BP	GO:0007050	cell cycle arrest	58/2564	1.31E-04	APBB2, APC, ZFHX3, ATM, CCND1, BRCA1, CDK6, E2F1, EIF4G2, EP300, MTOR, GATA6, HSP90AB1, ID2, IL12A, INHBA, MDM4, MSH2, NEUROD1, NKX3-1, CNOT2, CNOT4, NOTCH2, PKD2, PPM1A, PRKAA1, RB1, SKIL, SOX2, SOX4, TFDP1, TFDP2, TGFB2, TGFBR1, THBS1, TP53, BTG2, HMGA2, CDC14A, KAT2B, CDK5R1, CDC123, MAGI2, CNOT1, HBP1, CNOT7, TRIAP1, CAB39, PRR11, KMT2E, CNOT6, RRAGD, MCPH1, TBRG1, TP53INP1, WHAMM, JMY, CNOT6L
BP	GO:0071230	cellular response to amino acid stimulus	24/2564	1.31E-04	ATP7A, COL1A1, COL4A1, COL5A2, MTOR, FYN, IPO5, MMP2, NTRK2, OPA1, PDGFRA, SIX1, ZEB1, XBP1, CPEB3, SH3BP4, NSMF, SESN1, BCL11A, RRAGD, PDGFD, CPEB4, SESN2, SESN3
BP	GO:0043543	protein acylation	60/2564	1.33E-04	BRCA1, CHEK1, ATF2, CREBBP, EP300, GATA3, GLUL, GSK3B, HCFC1, LIF, SMAD4, MECP2, KMT2A, NAP1L2, PPM1A, PRKAA1, SNAI2, SOX4, TAF5, PCGF2, BRPF1, KAT6A, YEATS4, NCOA3, HAT1, NCOA1, KAT2B, RPS6KA5, GTF3C4, NMT2, CLOCK, CTCF, BRD8, KAT6B, BRD1, ZNF451, AUTS2, TAF5L, BRPF3, ABHD17B, GOLGA7, LEF1, PHF20, RSF1, MSL2, SETD5, MRGBP, KANSL3, YEATS2, HHAT, TAOK1, MEAF6, NAA25, NAA15, NAA50, EPC1, KAT8, NAA30, KANSL1L, ZDHHC21
BP	GO:0032970	regulation of actin filament-based process	85/2564	1.35E-04	ABL2, ADD3, ARF1, ARF6, RHOA, RND3, ATP1A2, CACNA1C, CAMK2D, CAPZA1, CAPZA2, CDC42, CRK, DBN1, DSC2, DSG2, ECT2, EDN1, EPHA5, EPS8, F2RL1, PTK2B, FER, FGF13, MTOR, GPM6B, ID1, KCNJ2, STMN1, LRP1, SMAD4, MEF2C, MET, MYH9, NOTCH2, NTF3, PDE4D, PDGFRA, PIK3R1, PRKCE, RAC1, RASA1, ROCK1, SLC9A1, SPTAN1, SPTBN1, TGFBR1, TMSB4X, TSC1, NRP1, CDK5R1, WASL, SEMA5A, SLIT2, ROCK2, ARPC5, ACTR3, ABI2, WASF2, ARPC1A, ARFGEF1, CDC42EP3, NCKAP1, AKAP13, SWAP70, RHOQ, CD2AP, TMOD3, TMOD2, ARHGAP17, AP1AR, CCDC88A, SPIRE1, TAOK1, ABRACL, DIXDC1, PHLDB2, MYLK3, FRMD6, WHAMM, JMY, MTPN, RICTOR, SH3PXD2B, FMN1
BP	GO:0014066	regulation of phosphatidylinositol 3-kinase signaling	36/2564	1.42E-04	CBL, ERBB3, ERBB4, F2R, F2RL1, FLT1, FYN, GAB1, HGF, IGF1, IGF1R, INSR, JAK2, KIT, NEDD4, NKX3-1, NTF3, NTRK2, PDGFRA, SERPINE2, PIK3CB, PIK3CG, PIK3R1, PIP4K2A, MAPK1, RELN, PTEN, SOX9, TGFB2, UBE3A, PIP5K1A, RASGRP1, SEMA4D, FBXL2, CEP55, PDGFD
BP	GO:0001933	negative regulation of protein phosphorylation	92/2564	1.43E-04	ADARB1, APC, CALM1, CALM2, CALM3, CBL, CBLB, DAG1, DMD, DUSP4, DUSP5, DUSP8, EPHB2, MECOM, F2RL1, FKTN, MTOR, GNAQ, HGF, HMGCR, IGF1R, IPO5, LIF, SMAD4, SMAD7, NF1, NPM1, NTF3, PEBP1, PAFAH1B1, PAK2, PDE4D, PRKAR1A, PRKAR2A, PRKDC, DNAJC3, PTEN, PTPRJ, PTPRR, RB1, SFRP2, SORL1, NR2F2, TIMP3, TLR4, TNFAIP3, EZR, EIF3A, KAT2B, SLIT2, NCOR1, SOCS5, RANBP9, HIPK3, CTDSPL, TRIB1, SPRY1, SPRY2, TNIP1, SEMA4D, IPO7, HEXIM1, ZMYND11, DUSP14, PTPRT, IRAK3, GPD1L, CORO1C, WWTR1, IBTK, GREM1, PDCD4, TRIB2, ERRFI1, DDIT4, CAMK2N1, ASH1L, LMO3, PMEPA1, SEMA6A, PRDM15, WNK1, GGNBP2, PPP1R15B, ITPRIP, LRRK2, SOCS4, DUSP18, PAQR3, SPRED1, SPRED2, RNF149
BP	GO:0031098	stress-activated protein kinase	72/2564	1.45E-04	APP, RHOA, ZFP36L1, EDN1, EPHA4, EPHB1, MECOM, F2RL1, PTK2B, FKTN, HGF, HMGB1, HMGCR, IGF1R, MAP3K1, MAP3K4, MAP3K5, MID1, MAP3K9, NFKB1, PAFAH1B1, PAK2, MAPK1, MAP2K3, RAP2A, RPS27A, MAP2K4, SFRP2, SKP1, SLAMF1, NEK4, STK3, STK4, TGFB2, TIAM1, TLR4, VEGFA, EZR, WNT5A, FZD5, FZD4, FZD8, TNFSF11, SPAG9, MAP4K4,

		signaling cascade			NCOR1, SLK, RB1CC1, ZEB2, PJA2, OXSR1, HIPK3, RASGRP1, TRIB1, MAP3K2, ZMYND11, TAB2, PLCB1, FBXW11, SASH1, PDCD4, STK39, HIPK2, MINK1, IRAK4, SEMA4C, TAOK1, SH3RF1, TAB3, MAGI3, SAMD5, RELL1
BP	GO:0048814	regulation of dendrite morphogenesis	29/2564	1.50E-04	ADAM10, DBN1, EPHA4, FMR1, GSK3B, ID1, CAPRIN1, NEDD4, OPA1, PAFAH1B1, PPP3CA, RELN, PTEN, RAP2A, SDC2, TIAM1, UBE3A, CDK5R1, RAPGEF2, DNM1L, ABI2, SEMA4D, PDLIM5, RAB21, NSMF, SS18L1, HECW2, ANKRD27, LRRK2
BP	GO:0061387	regulation of extent of cell growth	33/2564	1.56E-04	BDNF, BMPR2, DBN1, DPYSL2, FGF13, FN1, GDI1, GOLGA4, GSK3B, LRP1, MAP1B, MAP2, NRCAM, PAFAH1B1, SRF, VEGFA, WNT5A, SEMA7A, RAB11A, NRP1, CDK5R1, SEMA5A, ULK2, IST1, SEMA4D, SEMA3C, RAB21, ADNP, SEMA4C, RTN4, SEMA6A, NDEL1, TTL
BP	GO:1901522	positive regulation of transcription from RNA polymerase II promoter involved in cellular response to chemical stimulus	12/2564	1.57E-04	RUNX2, EP300, RBPJ, SMAD1, SMAD4, SMAD5, NFE2L2, TP53, VEGFA, XBP1, SESN2, CHD6
BP	GO:0007051	spindle organization	45/2564	1.61E-04	RHOA, ATRX, RCC1, CLTC, GOLGA2, HNRNPU, KIF11, KPNB1, STMN1, MAP4, MECP2, MYH9, RAN, RNF4, SPAST, TACC1, TPR, VCP, EZR, SMC1A, RAB11A, KIF3B, KIF23, NCOR1, STAG1, STAG2, NEK6, MAPRE1, TPX2, KIF4A, CHMP2B, SENP6, GPSM2, CHMP5, CEP192, CEP72, BCCIP, CHMP1B, CEP97, MAP9, LZTS2, EFHC1, CCSAP, NEK7, MZT1
BP	GO:0048705	skeletal system morphogenesis	58/2564	1.65E-04	ACVR2B, BMPR1B, BMPR2, RUNX2, FOXN3, COL1A1, COL12A1, COL13A1, DLX2, FBN2, FGFR3, FGFR2, GLG1, GNAS, HAS2, HOXA1, HOXA5, HOXC9, HOXC11, HOXD10, INPPL1, INSIG1, SMAD2, MEF2C, MEF2D, MMP2, MMP16, PDGFRA, RARA, SFRP2, SIX1, SKI, SOX9, ZEB1, TGFBR1, TGFBR2, PCGF2, PRKRA, FGF18, SGPL1, MED12, SATB2, NIPBL, TIPARP, GREM1, SLC39A1, FLVCR1, SCARA3, SIX4, NLE1, SMPD3, IFT80, PLEKHA1, ALX4, HHIP, OSR1, SH3PXD2B, FMN1
BP	GO:0017015	regulation of transforming growth factor beta receptor signaling pathway	35/2564	1.65E-04	CREBBP, EP300, FBN1, FBN2, GLG1, HSP90AB1, ITGA3, LOX, SMAD2, SMAD4, SMAD7, PPM1A, RPS27A, SKI, SKIL, ADAM17, ZEB1, TGFBR1, TGFBR2, THBS1, TP53, WNT1, ONECUT2, PEG10, BAMBI, ZNF451, HIPK2, ZBTB7A, TRIM33, RNF111, PMEPA1, SMURF2, ZNF703, VASN, NPNT
BP	GO:0071496	cellular response to external stimulus	76/2564	1.67E-04	ATP1A2, ATP2B1, AXL, BCL2, BMPR2, CBL, CHEK1, COL1A1, DAG1, DSC2, EIF2S1, MTOR, FYN, GJA1, GLUL, HFE, TNC, ITGA6, KCNJ2, LAMP2, FADS1, MAP3K1, MAP3K5, NFE2L2, NFKB1, NR4A2, OPA1, P2RY1, PIK3C3, MED1, PRKAA1, MAPK1, PTGS2, RAC1, MAP2K4, SFRP2, SKP2, SLC1A2, SLC9A1, SNAI2, SOX9, SRF, KLF10, TLR4, TP53, TSC1, WNT2B, XBP1, FOSL1, PPM1D, NCOA1, MTMR3, EIF2AK3, DNM1L, NAMPT, MAP3K2, SIK2, SZT2, ADNP, GABARAPL1, SESN1, TNRC6A, DNAJC15, BCL11A, SLC38A2, SSH1, RRAGD, PIEZO2, CPEB4, SEH1L, SESN2, LRRK2, MTPN, SESN3, C12orf66, SIK1
BP	GO:1990089	response to nerve growth factor	20/2564	1.67E-04	APP, ARF6, BDNF, CBL, CDC5L, CREB1, CRK, DYNC1LI2, E2F1, FOXO3, ID1, KCNC2, NTF3, NTRK2, PTEN, UBE3A, RAPGEF2, MAGI2, EHD1, KIF1B
BP	GO:0014068	positive regulation of phosphatidylinositol 3-kinase signaling	28/2564	1.69E-04	CBL, ERBB3, ERBB4, F2R, F2RL1, FLT1, FYN, GAB1, HGF, IGF1, IGF1R, INSR, JAK2, KIT, NEDD4, NKX3-1, NTF3, NTRK2, PDGFRA, PIK3CB, PIK3CG, PIK3R1, RELN, SOX9, TGFB2, UBE3A, SEMA4D, PDGFD
BP	GO:0006997	nucleus organization	37/2564	1.69E-04	ETS1, HMGB2, AGFG1, PAFAH1B1, PPP2R2A, PRKCA, PRKCB, ATXN7, SPAST, TMF1, TPR, NOLC1, NEK6, SYNE1, SUN1, CTDNEP1, CHMP2B, TOR1AIP1, PYGO1, SERBP1, HIPK2, CHMP5, RRN3, NDC1, PARP11, CHMP1B, RTN4, TMEM43, REEP4, NDEL1, SEH1L, POLR1B, NEK9, TMEM170A, UBXN2B, REEP3, CNEP1R1
BP	GO:0007041	lysosomal transport	32/2564	1.79E-04	AP1G1, ARF1, ARSB, SCARB2, IGF2R, LAMP1, LAMP2, LRP1, MTM1, NEDD4, SORL1, VCP, NCOA4, TGFBRAP1, ZFYVE16, HMGXB4, SNAPIN, CHMP2B, AP3M1, HOOK1, CHMP5, TMEM106B, VPS53, CCDC91, SCYL2, EPG5, KIF13A, VPS33A, TRAK2, SNX27, HOOK3, LRRK2
BP	GO:0001657	ureteric bud development	30/2564	1.98E-04	ARG2, BCL2, FGF2, FGFR2, GATA3, SMAD1, SMAD2, SMAD4, SMAD5, SMAD7, PBX1, PKD2, PTCH1, RARA, RET, SIX1, SOX9, VEGFA, WNT1, WNT2B, SLIT2, MAGED1, SPRY1, BASP1, SIX4, LGR4, LZTS2, OSR1, NPNT, FMN1

BP	GO:0003170	heart valve development	22/2564	1.99E-04	JAG1, PRDM1, BMPR1A, BMPR2, MTOR, GATA3, RBPJ, SMAD4, MDM4, MEF2C, NOTCH2, RB1, ROBO1, ROCK1, SNAI2, SOX4, SOX9, TGFB2, TGFBR2, SLIT2, ROCK2, HECTD1
BP	GO:0030521	androgen receptor signaling pathway	22/2564	1.99E-04	AR, RHOA, BRCA1, DDX5, EP300, NKX3-1, RAN, RB1, RNF4, UBE3A, NCOA4, NCOA3, NRIP1, ARID1A, NCOA1, PIAS2, RNF14, NCOR1, GRIP1, FOXP1, ZBTB7A, PMEPA1
BP	GO:0018107	peptidyl-threonine phosphorylation	36/2564	1.99E-04	APP, BCL2, CALM1, CALM2, CALM3, CAMK2D, CHEK1, CSNK2A1, DYRK1A, MTOR, GSK3B, UBE2K, SMAD7, PRKCA, PRKCB, MAPK1, ROCK1, TGFBR1, TGFBR2, WNT5A, CDK5R1, ROCK2, OXSR1, HIPK3, SPRY2, STK39, HIPK2, NLK, CAB39, DDIT4, WNK1, WNK3, LRRK2, TTBK2, SPRED1, SPRED2
BP	GO:0035335	peptidyl-tyrosine dephosphorylation	31/2564	2.08E-04	ACP1, CDC25A, DUSP4, DUSP5, DUSP8, EYA4, MTM1, PTEN, PTPN3, PTPN4, PTPN12, PTPN14, PTPRE, PTPRG, PTPRJ, PTPRK, PTPRM, PTPRR, PTPRZ1, PTP4A1, PTP4A2, CDC14A, RNGTT, MTMR3, MTMR6, DUSP14, PTPN21, PTPRT, SSH1, SSH2, DUSP18
BP	GO:0034976	response to endoplasmic reticulum stress	66/2564	2.08E-04	APAF1, CCND1, BCL2, CANX, EIF2S1, EP300, EXTL3, GFPT1, GSK3B, UBE2K, ITPR1, MAP3K5, NFE2L2, OPA1, PIK3R1, DNAJC3, SSR1, HSPA13, TMBIM6, THBS1, TP53, VCP, XBP1, RNF103, STC2, USP13, VAPB, UBE4A, EIF2AK3, TATDN2, SEC16A, BCL2L11, ERLIN1, SERINC3, ERP29, ERLIN2, RNF139, SEC31A, ATF6, ERP44, UBXN4, FAF2, SERP1, USP25, UBQLN2, UBQLN1, UBXN1, RNFT1, MBTPS2, JKAMP, SGTB, TMEM33, YOD1, HERPUD2, DERL1, DNAJB14, EDEM3, TMX1, SESN2, SYVN1, PPP1R15B, TMEM259, LRRK2, CREBRF, TMTC3, DNAJC18
BP	GO:0048008	platelet-derived growth factor receptor signaling pathway	21/2564	2.13E-04	CBL, CBLB, FER, HIP1, JAK2, LOX, LRP1, MYO1E, PDGFRA, PIK3C2A, PTEN, PTPN12, PTPRJ, VEGFA, NRP1, SGPL1, PHF14, TIPARP, SMPD3, PLEKHA1, PDGFD
BP	GO:0017148	negative regulation of translation	52/2564	2.17E-04	ZFP36L1, ZFP36L2, DDX3X, EIF2S1, EIF4EBP2, FMR1, IGFBP5, IREB2, CAPRIN1, CNOT2, PURA, RARA, RBM3, ROCK1, SHMT1, STAT3, TPR, TSC1, BTG2, FXR1, ENC1, EIF2AK3, ROCK2, PUM1, TOB1, HNRNPR, IGF2BP3, CELF1, RNF139, CPEB3, CNOT1, SAMD4A, TNRC6B, LARP1, GIGYF2, AGO1, AGO2, TNRC6A, CNOT7, PAIP2, TNRC6C, CPEB4, SESN2, TRIM71, CPEB2, RC3H1, AGO3, AGO4, RBM24, CNOT6L, YTHDF3, PAIP2B
BP	GO:0051817	modification of morphology or physiology of other organism involved in symbiotic interaction	33/2564	2.24E-04	CALM1, CALM2, CALM3, CCNT1, CHD1, DAG1, EP300, STOM, F2RL1, FMR1, IGF2R, INSR, ITGAV, KPNB1, KPNA3, KPNA4, SERPINB9, PTX3, REST, SP1, TAF11, HMGA2, VAPB, VAPA, BCL2L11, TNIP1, KPNA6, FBXL2, HIPK2, LEF1, YTHDC2, TBC1D20, NAPEPLD
BP	GO:1990090	cellular response to nerve growth factor stimulus	19/2564	2.33E-04	APP, ARF6, BDNF, CBL, CDC5L, CREB1, CRK, DYNC1LI2, E2F1, FOXO3, ID1, NTF3, NTRK2, PTEN, UBE3A, RAPGEF2, MAGI2, EHD1, KIF1B
BP	GO:1903844	regulation of cellular response to transforming growth factor beta stimulus	35/2564	2.33E-04	CREBBP, EP300, FBN1, FBN2, GLG1, HSP90AB1, ITGA3, LOX, SMAD2, SMAD4, SMAD7, PPM1A, RPS27A, SKI, SKIL, ADAM17, ZEB1, TGFBR1, TGFBR2, THBS1, TP53, WNT1, ONECUT2, PEG10, BAMBI, ZNF451, HIPK2, ZBTB7A, TRIM33, RNF111, PMEPA1, SMURF2, ZNF703, VASN, NPNT
BP	GO:0035966	response to topologically incorrect protein	50/2564	2.35E-04	CCND1, CANX, EIF2S1, EP300, EXTL3, GFPT1, HSPA2, HSP90AA1, HSP90AB1, DNAJB1, NFE2L2, PIK3R1, DNAJC3, SSR1, HSPA13, TMBIM6, THBS1, VCP, XBP1, CUL3, STC2, VAPB, EIF2AK3, TATDN2, MFN2, BCL2L11, OPTN, DNAJB4, HSPA4L, SEC31A, ATF6, ERP44, UBXN4, FAF2, SERP1, HSPA14, MBTPS2, JKAMP, TMEM33, UBE2W, YOD1, HERPUD2, DERL1, DNAJB14, EDEM3, KLHL15, SYVN1, PPP1R15B, CREBRF, DNAJC18
BP	GO:0055007	cardiac muscle cell differentiation	37/2564	2.36E-04	CXADR, EDN1, EFNB2, MTOR, G6PD, GATA6, NRG1, HNRNPU, IGF1, RBPJ, SMAD4, MEF2A, MEF2C, MYH10, PDGFRA, PPARA, RARA, MAP2K4, SGCB, SGCD, SLC9A1, SRF, TBX3, TSC1, VEGFA, YY1, ARID1A, SORBS2, NEBL, PDLIM5, FRS2, AKAP13, GREM1, CACYBP, SOX6, MYLK3, SIK1
BP	GO:0001824	blastocyst development	30/2564	2.36E-04	GABPA, HCFC1, IGF1, TM4SF1, MFNG, NASP, CNOT2, SKIL, SP3, SRF, TGFBR1, UBE2A, CUL3, COPS2, MED21, MFN2, RRP7A, NLE1, NCAPG2, RTN4, ZFP14, PPP4R4, TBL1XR1, TET1, NDEL1, PHF6, GINS4, SMIM14, SLC25A34, RPL7L1
BP	GO:0072163	mesonephric epithelium development	30/2564	2.36E-04	ARG2, BCL2, FGF2, FGFR2, GATA3, SMAD1, SMAD2, SMAD4, SMAD5, SMAD7, PBX1, PKD2, PTCH1, RARA, RET, SIX1, SOX9, VEGFA, WNT1, WNT2B, SLIT2, MAGED1, SPRY1, BASP1, SIX4, LGR4, LZTS2, OSR1, NPNT, FMN1

BP	GO:0072164	mesonephric tubule development	30/2564	2.36E-04	ARG2, BCL2, FGF2, FGFR2, GATA3, SMAD1, SMAD2, SMAD4, SMAD5, SMAD7, PBX1, PKD2, PTCH1, RARA, RET, SIX1, SOX9, VEGFA, WNT1, WNT2B, SLIT2, MAGED1, SPRY1, BASP1, SIX4, LGR4, LZTS2, OSR1, NPNT, FMN1
BP	GO:0018212	peptidyl-tyrosine modification	80/2564	2.46E-04	ABL2, APP, AREG, AXL, BDNF, CBL, CBLB, CD44, DYRK1A, EPHA4, EPHA5, EPHB1, EPHB2, EPHB4, ERBB2, ERBB3, ERBB4, EREG, PTK2B, FER, FGFR3, FGFR2, FLT1, FRK, MTOR, FYN, HGF, NRG1, IGF1, IGF1R, IL6R, IL6ST, IL12A, INSR, JAK2, KIT, LIF, MET, NTF3, NTRK2, DDR2, PAK2, PDGFRA, PRKCE, MAP2K3, PRLR, RELN, PTPRJ, RAP2B, RET, MAP2K4, SFRP2, STAT3, ADAM17, TP53, VEGFA, WEE1, YES1, NRP1, BAZ1B, SOCS5, ABI2, TESK2, SEMA4D, CAMKK2, IL24, ADNP, CLCF1, DSTYK, IBTK, GREM1, CNOT7, ERRFI1, NCAPG2, RAP2C, GGNBP2, PDGFD, SOCS4, TTL, RICTOR
BP	GO:0060021	roof of mouth development	28/2564	2.57E-04	ACVR2B, ASPH, BMPR1A, EPHB2, FOXF2, INHBA, INSIG1, JAG2, SMAD2, SMAD4, MEF2C, PDGFRA, SKI, SNAI2, TBX3, TGFB2, TGFBR1, TGFBR2, WNT5A, FZD1, SGPL1, SATB2, TIPARP, LEF1, BNC2, PLEKHA1, ALX4, OSR1
BP	GO:0051225	spindle assembly	32/2564	2.58E-04	RHOA, RCC1, GOLGA2, HNRNPU, KIF11, KPNB1, RNF4, TPR, SMC1A, RAB11A, KIF3B, KIF23, NCOR1, STAG1, STAG2, NEK6, MAPRE1, TPX2, KIF4A, CHMP2B, SENP6, GPSM2, CHMP5, CEP192, BCCIP, CHMP1B, CEP97, MAP9, LZTS2, CCSAP, NEK7, MZT1
BP	GO:0046620	regulation of organ growth	33/2564	2.65E-04	ACACB, BMPR1A, EDN1, ERBB4, FGF2, FGFR2, FXN, MTOR, G6PD, GATA6, GJA1, IGF1, RBPJ, JARID2, MEF2C, MEIS1, PPARA, MAPK1, PTEN, STK3, STK4, TGFBR1, TGFBR2, YY1, BCL2L11, BASP1, YAP1, WWC1, SERP1, FLVCR1, WWC3, SAV1, WWC2
BP	GO:0051146	striated muscle cell differentiation	67/2564	2.65E-04	BCL2, BCL9, BDNF, KLF5, CDH2, CSRP2, CXADR, DMD, EDN1, EFNB2, EZH2, MTOR, G6PD, GATA6, NRG1, HNRNPU, IGF1, IGFBP5, RBPJ, LOX, SMAD4, MEF2A, MEF2C, MYH9, MYH10, PDGFRA, PPARA, PPP3CA, PRKAR1A, RARA, RB1, MAP2K4, SGCB, SGCD, SIX1, SKI, SLC9A1, SRF, TBX3, TSC1, VEGFA, WNT1, XBP1, YY1, ADAM12, ARID1A, SORBS2, SPAG9, NEBL, PDLIM5, FRS2, EHD1, AKAP13, GREM1, CACYBP, TMOD3, TMOD2, MYEF2, SIX4, SOX6, NLN, TANC1, MYLK3, MTPN, SIK1, SMYD1, RBM24
BP	GO:0010506	regulation of autophagy	73/2564	2.69E-04	ABL2, ATM, ATP6V1A, BCL2, EEF1A1, EIF4G2, EP300, FOXO3, MTOR, GNAI3, GOLGA2, GSK3B, HGF, HMGB1, FOXK2, ITPR1, MCL1, RAB8A, MET, MTM1, NEDD4, PIK3CB, PIP4K2A, PRKAA1, ROCK1, STAT3, TP53, TSC1, XBP1, FZD5, EPM2A, CDK5R1, MTMR3, USP13, USP10, TMEM59, ATP6V1G1, VPS26A, ULK2, RB1CC1, MFN2, BCL2L11, DNM1L, OPTN, NAMPT, CAMKK2, RAB3GAP1, TAB2, LARP1, SH3BP4, FBXL2, SESN1, UBQLN2, UBQLN1, WAC, ATP6V1H, VPS13C, WDR41, DRAM1, RRAGD, SCOC, MTMR9, FYCO1, SESN2, KAT8, MTDH, TP53INP1, LRRK2, DRAM2, SESN3, PIKFYVE, TAB3, ACER2
BP	GO:0045926	negative regulation of growth	59/2564	2.75E-04	ADRB1, APBB2, BCL2, BCL6, BMPR2, BTG1, DDX3X, FGF13, FGFR3, FXN, G6PD, GJA1, IGFBP5, INHBA, JARID2, SMAD4, MAP2, MEIS1, NOTCH2, SERPINE2, PPARA, PTCH1, PTEN, PTPRJ, SFRP2, STK3, STK4, TGFB2, TGFBR2, TP53, WNT5A, YY1, SEMA7A, STC2, NRP1, SOCS2, CDK5R1, SEMA5A, SLIT2, ULK2, SERTAD2, NME6, SEMA4D, SEMA3C, WWC1, SH3BP4, BCL11A, SEMA4C, CDKN2AIP, WWC3, RTN4, NDRG3, SEMA6A, SAV1, ADIPOR2, WWC2, SESN2, DCUN1D3, DCBLD2
BP	GO:0042770	signal transduction in response to DNA damage	37/2564	2.75E-04	ATM, ATRX, BID, BRCA1, CD44, CDC5L, CHEK1, DDX5, DYRK1A, E2F1, EP300, FOXO3, MDM4, CNOT2, CNOT4, PRKDC, SNAI2, SOX4, SP100, TFDP1, TFDP2, TP53, WNT1, BTG2, PPM1D, USP10, CNOT1, HIPK2, CNOT7, TRIAP1, DTL, CNOT6, SESN2, SPRED1, SPRED2, CNOT6L, ACER2
BP	GO:0060997	dendritic spine morphogenesis	21/2564	2.75E-04	ADAM10, CDC42, DBN1, EPHA4, EPHB1, EPHB2, CAPRIN1, OPA1, PAFAH1B1, RELN, PTEN, TIAM1, UBE3A, CDK5R1, WASL, DNM1L, ABI2, PDLIM5, SHANK2, DOCK10, LRRK2
BP	GO:0060411	cardiac septum morphogenesis	25/2564	3.04E-04	JAG1, BMPR1A, BMPR2, FGFR2, GATA6, ID2, RBPJ, SMAD4, SMAD7, NOTCH2, RARA, ROBO1, SOX4, TBX3, TGFB2, TGFBR1, TGFBR2, TP53, WNT5A, FZD1, NRP1, SLIT2, SEMA3C, PARVA, SAV1
BP	GO:0033002	muscle cell proliferation	57/2564	3.07E-04	BMPR1A, EDN1, EPHB1, ERBB4, EREG, FGF2, FGFR2, MTOR, GATA6, GJA1, GNAI2, GNAI3, HMGCR, HPGD, ID2, IGF1, IGFBP5, RBPJ, IL6R, IL12A, JAK2, JARID2, SMAD1, MEF2C, MEF2D, MEIS1, MAP3K5, MMP2, NPR3, PRKAR1A, PRKDC, PRKG1, MAPK1, PTEN, PTGS2, SIX1, SKP2, SOD2, STAT1, STAT3, TGFB2, TGFBR1, TGFBR2, THBS1, TNFAIP3, MFN2, NAMPT, TRIB1, YAP1, FOXP1, PDCD4, IRAK4, SMPD3, SAV1, AKIRIN1, PDGFD, ARID2
BP	GO:0021761	limbic system development	32/2564	3.09E-04	ATP2B4, CDK6, CRK, DLX2, EPHA5, ETS1, EZH2, FGF13, FGFR2, GSK3B, ID4, KIF5B, NEUROD1, NF1, PAFAH1B1, POU3F2, RELN, PTEN, RARA, SRF, TBX3, TSC1, BTG2, NCOA1, NRP1, CDK5R1, ZEB2, ARPC5, RAB3GAP1, PHLPP2, CNTNAP2, LEF1
BP	GO:0060425	lung morphogenesis	19/2564	3.10E-04	DAG1, FGFR2, FOXA1, HOXA5, TNC, ID1, LIF, NFIB, MAPK1, SRSF6, SOX9, SRF, TGFBR2, WNT2B, SPRY1, SPRY2, YAP1, HHIP, FOXP2
BP	GO:0001656	metanephros development	28/2564	3.12E-04	BCL2, EGR1, FBN1, GATA3, HOXC11, ID2, LIF, SMAD4, NF1, NKX3-1, PDGFRA, PKD2, POU3F3, PTCH1, RET, SIX1, SOX9, STAT1, SPRY1, BASP1, YAP1, NIPBL, WWTR1, APH1A, SIX4, LGR4, OSR1, FMN1
BP	GO:0018108	peptidyl-tyrosine phosphorylation	79/2564	3.14E-04	ABL2, APP, AREG, AXL, BDNF, CBL, CBLB, CD44, DYRK1A, EPHA4, EPHA5, EPHB1, EPHB2, EPHB4, ERBB2, ERBB3, ERBB4, EREG, PTK2B, FER, FGFR3, FGFR2, FLT1, FRK, MTOR, FYN, HGF, NRG1, IGF1, IGF1R, IL6R, IL6ST, IL12A, INSR, JAK2, KIT, LIF, MET, NTF3, NTRK2, DDR2, PAK2, PDGFRA, PRKCE, MAP2K3, PRLR, RELN, PTPRJ, RAP2B, RET, MAP2K4, SFRP2,

					STAT3, ADAM17, TP53, VEGFA, WEE1, YES1, NRP1, BAZ1B, SOCS5, ABI2, TESK2, SEMA4D, CAMKK2, IL24, ADNP, CLCF1, DSTYK, IBTK, GREM1, CNOT7, ERRFI1, NCAPG2, RAP2C, GGNBP2, PDGFD, SOCS4, RICTOR
BP	GO:0061326	renal tubule development	29/2564	3.31E-04	JAG1, BCL2, COL4A1, FGF2, GATA3, LIF, SMAD4, MEF2C, PBX1, PKD2, POU3F3, PTCH1, SIX1, SOX9, STAT1, VEGFA, WNT1, WNT2B, MAGED1, YAP1, WWTR1, KLHL3, SIX4, AHI1, LGR4, LZTS2, OSR1, NPNT, FMN1
BP	GO:0019216	regulation of lipid metabolic process	87/2564	3.31E-04	ACACB, ANXA1, ARF1, BRCA1, CREB1, CREBBP, CYP51A1, EGR1, ACSL1, ACSL3, PTK2B, FASN, FGF2, FGFR3, FLT1, MTOR, HMGCR, ID2, INSIG1, KIT, KPNB1, LDLR, FADS1, ME1, NFKB1, NFYB, NPAS2, PDGFRA, PIK3CG, PIK3R1, PPARA, MED1, PPP2R5A, PRKAA1, PRKCE, PTGS2, RAN, RB1, RBL1, REST, RORA, SC5D, SCD, SNAI2, SORL1, SP1, PIK3R3, NCOA1, SOCS2, MTMR3, SOCS6, NCOR1, SOCS5, LPGAT1, NR1D2, VAV3, NCOA2, SORBS1, ERLIN1, GLIPR1, ERLIN2, DDX20, CTDNEP1, ZBTB20, DNAJC15, GRHL1, SOCS7, MBTPS2, SMPD3, PDP2, GPAM, MID1IP1, ELOVL5, BCL11B, MTMR9, ELOVL6, ADIPOR2, TBL1XR1, LPCAT1, CHD9, LONP2, SLC45A3, ORMDL1, STARD4, SAMD8, SIK1, CNEP1R1
BP	GO:0090169	regulation of spindle assembly	13/2564	3.38E-04	HNRNPU, RNF4, TPR, SMC1A, STAG1, STAG2, CHMP2B, SENP6, GPSM2, CHMP5, CHMP1B, CEP97, CCSAP
BP	GO:0048568	embryonic organ development	90/2564	3.43E-04	ABR, PRDM1, BMPR1A, ZFP36L1, RUNX2, COL5A2, DLX2, EDN1, EN1, EPHB2, ERCC1, BPTF, FBN1, FBN2, FGFR2, FOXF2, GATA3, GJA1, GNAS, HOXA1, HOXA5, HOXC9, HOXC11, HOXD10, ID2, RBPJ, INSIG1, KIT, LIF, SMAD2, MEF2C, KMT2A, MMP16, NEUROD1, PBX1, PDGFRA, PKD2, MED1, MAPK1, PTCH1, PTK7, RARA, TRA2B, SIX1, SOX9, SP3, SRF, STK3, STK4, TBX3, ZEB1, NR2F2, TGFB2, TGFBR1, TGFBR2, TP53, KDM6A, VEGFA, WNT1, WNT5A, PCGF2, FZD5, FZD3, ARID1A, PRKRA, NCOA1, MAFB, MED12, SPRY2, YAP1, PLK4, FRS2, SATB2, NIPBL, SYF2, LRIG1, SLC39A1, FLVCR1, HIPK2, LEF1, SIX4, AHI1, BIRC6, MIB1, ALX4, VASH2, GGNBP2, OSR1, ARID2, ARL13B
BP	GO:0035282	segmentation	30/2564	3.44E-04	ATM, BMI1, BMPR1A, EP300, RBPJ, SMAD4, MLLT3, NKX3-1, PCSK6, PCDH8, PRKDC, SFRP2, TBX3, TP53, KDM6A, WNT5A, FZD5, NRP1, ZEB2, MAFB, MED12, BASP1, SEMA3C, FRS2, MTF2, LEF1, NLE1, POGLUT1, MIB1, OSR1
BP	GO:0055024	regulation of cardiac muscle tissue development	30/2564	3.44E-04	BMPR1A, CREB1, EDN1, EFNB2, ERBB3, ERBB4, FGF2, FGFR2, MTOR, G6PD, GATA6, GJA1, NRG1, IGF1, RBPJ, JARID2, SMAD4, MEF2C, MEIS1, PPARA, MAPK1, PTEN, TGFBR1, TGFBR2, YY1, YAP1, FRS2, GREM1, SOX6, SAV1
BP	GO:0006986	response to unfolded protein	45/2564	3.62E-04	CCND1, CANX, EIF2S1, EP300, EXTL3, GFPT1, HSPA2, HSP90AA1, HSP90AB1, DNAJB1, NFE2L2, PIK3R1, DNAJC3, SSR1, HSPA13, TMBIM6, THBS1, VCP, XBP1, STC2, VAPB, EIF2AK3, TATDN2, MFN2, BCL2L11, OPTN, DNAJB4, HSPA4L, SEC31A, ATF6, ERP44, UBXN4, FAF2, SERP1, HSPA14, MBTPS2, JKAMP, TMEM33, YOD1, HERPUD2, DERL1, EDEM3, SYVN1, PPP1R15B, CREBRF
BP	GO:0051897	positive regulation of protein kinase B signaling	45/2564	3.62E-04	AREG, AXL, ERBB2, ERBB3, ERBB4, EREG, ESR1, FGF2, FGFR3, FGFR2, MTOR, FYN, GAB1, GATA3, GCNT2, HGF, NRG1, HIP1, HSP90AA1, HSP90AB1, IGF1R, IGFBP5, INSR, KIT, MET, PDGFRA, PIK3CB, PIK3CG, PIK3R1, PTPRJ, RAC1, RET, STK3, TGFBR1, THBS1, TNFSF11, FGF18, SEMA5A, SPRY2, ARFGEF1, FRS2, RTN4, MTDH, RICTOR, FAM110C
BP	GO:0009952	anterior/posterior pattern specification	53/2564	3.75E-04	ACVR2B, ATM, BMPR1A, BMPR2, EN1, EP300, ETS2, BPTF, HOXA5, HOXA9, HOXC9, HOXC11, HOXC13, HOXD10, RBPJ, SMAD2, SMAD4, MLLT3, NEUROD1, NKX3-1, PCSK6, PBX1, PCDH8, PRKDC, SFRP2, SKI, SRF, TBX3, NR2F2, TGFBR1, TP53, KDM6A, WNT1, WNT5A, WNT2B, YY1, PCGF2, BTG2, FZD5, ZEB2, MED12, BASP1, SEMA3C, FRS2, SCMH1, HIPK2, LEF1, NLE1, POGLUT1, MIB1, ALX4, PGAP1, OSR1
BP	GO:0030516	regulation of axon extension	29/2564	4.01E-04	BMPR2, DBN1, DPYSL2, FN1, GDI1, GOLGA4, GSK3B, LRP1, MAP1B, MAP2, NRCAM, PAFAH1B1, SRF, VEGFA, WNT5A, SEMA7A, RAB11A, NRP1, CDK5R1, SEMA5A, SEMA4D, SEMA3C, RAB21, ADNP, SEMA4C, RTN4, SEMA6A, NDEL1, TTL
BP	GO:0098876	vesicle-mediated transport to the plasma membrane	29/2564	4.01E-04	ANK3, ARF1, ARF3, ARF4, ACSL3, GOLGA4, RAB8A, NSF, SNAP25, SPTBN1, BLZF1, RAB11A, RABEP1, VAMP3, VPS26A, SEC16A, OPTN, EXOC5, RAB10, GGA3, GRIP1, GOLGA7, GOLPH3L, GOPC, ANKRD50, KIF13A, GOLPH3, SNX27, ANKRD27
BP	GO:0001101	response to acid chemical	75/2564	4.12E-04	ABL2, RHOA, ATM, ATP2B4, ATP7A, COL1A1, COL4A1, COL5A2, CREB1, ATF2, E2F1, EDN1, EGR1, ACSL1, PTK2B, FGFR2, MTOR, FYN, GJA1, GLRB, GNB1, HLCS, TNC, IGF2R, IPO5, LDLR, MMP2, NTRK2, OPA1, PDGFRA, PIK3C3, PKD2, PRKAA1, PRKCE, PTCH1, PTGS2, PTK7, RARA, RET, RORB, SCD, SHMT1, SIX1, SLC1A2, SMARCD1, SOX9, SPARC, ZEB1, TMBIM6, TNFSF4, VEGFA, WNT5A, XBP1, YES1, YY1, ZNF35, FZD4, NCOA1, CLDN1, YAP1, CPEB3, SETX, SH3BP4, NSMF, SESN1, BCL11A, LANCL2, RRAGD, PDGFD, CPEB4, SESN2, LRP11, OSR1, SESN3, ACER2
BP	GO:0006913	nucleocytoplasmic transport	75/2564	4.12E-04	CBLB, ECT2, GLE1, GSK3B, HNRNPA2B1, AGFG1, KPNB1, KPNA3, KPNA4, TNPO1, IPO5, PPP1R12A, NEDD4, NEUROD1, NF1, NFKBIA, NPM1, PIK3R1, MED1, PPM1A, PPP1CC, PPP3CA, MAPK1, PTGS2, PTPN14, RAN, ATXN1, SRSF1, SRSF2, SRSF6, SRSF7, SP100, STAT3, TP53, TPR, TSC1, XPO1, SLBP, NOLC1, ZC3H11A, SMG7, RBM8A, NXF1, IPO7, KHDRBS1, AHCYL1, MALT1, AKAP13, DDX20, XPO7, SMG1, KPNA6, APPL1, IPO11, RSRC1, UBR5, CTDSPL2, CPSF2, RBM27, RBM22, NDC1, NXT2, THOC2, XPO5, RBM26, XPO4, SEH1L, FYTTD1, RPAIN, LZTS2, LTV1, YTHDC1, LRRK2, NUP43, RGPD8

BP	GO:0140014	mitotic nuclear division	61/2564	4.21E-04	APC, RHOA, ATM, ATRX, CDC27, CENPF, RCC1, CHEK1, EDN1, EPS8, EREG, GOLGA2, HNRNPU, IGF1, INSR, KIF11, KPNB1, RAN, RB1, SPAST, TPR, SMC1A, CUL3, CDC14A, CDK13, RAB11A, BUB3, KIF3B, KIF23, NME6, STAG1, SMC2, STAG2, NEK6, TPX2, PDS5B, PDS5A, MAU2, KIF4A, NIPBL, CHMP2B, CHMP5, NDE1, PHIP, CEP192, SMPD3, PPP2R2D, BCCIP, CHMP1B, HECW2, CENPK, NCAPG, CEP97, MAP9, NAA50, NDEL1, SEH1L, CCSAP, UBXN2B, GEN1, MZT1
BP	GO:0045070	positive regulation of viral genome replication	15/2564	4.27E-04	ADARB1, DDX3X, STOM, IFIT1, PKN2, RAD23A, STAU1, VAPB, VAPA, LARP1, PABPC1, CNOT7, YTHDC2, TBC1D20, PDE12
BP	GO:0071108	protein K48-linked deubiquitination	15/2564	4.27E-04	TNFAIP3, USP7, USP9X, USP13, USP34, OTUD3, USP25, DESI2, UBXN1, OTUD4, YOD1, OTUD7B, USP37, OTUB2, VCPIP1
BP	GO:0061614	pri-miRNA transcription by RNA polymerase II	18/2564	4.29E-04	BMPR1A, KLF5, DDX5, ETS1, NR3C1, SMAD1, SMAD4, NFATC3, NFIB, PPARA, SOX9, SRF, STAT3, TEAD1, TGFB2, TP53, YY1, FOSL1
BP	GO:0120163	negative regulation of cold-induced thermogenesis	18/2564	4.29E-04	ACVR2B, ALDH1A1, ID1, RBPJ, LNPEP, NOVA1, NOVA2, NPR3, PLCL1, RB1, ADAM17, TLR4, ADAMTS5, PLCL2, LGR4, ACOT13, ARRDC3, DOCK7
BP	GO:0043001	Golgi to plasma membrane protein transport	16/2564	4.41E-04	ANK3, ACSL3, GOLGA4, NSF, SPTBN1, BLZF1, VAMP3, SEC16A, OPTN, RAB10, GGA3, GOLGA7, GOLPH3L, GOPC, KIF13A, GOLPH3
BP	GO:0061013	regulation of mRNA catabolic process	49/2564	4.52E-04	ZFP36L1, ZFP36L2, E2F1, FMR1, MTOR, HNRNPC, HNRNPU, TNPO1, NPM1, PRKCA, PSMD1, RNASEL, ROCK1, RPS27A, VIM, XPO1, YWHAB, BTG2, FXR1, PABPC4, ROCK2, PUM1, TOB1, HNRNPR, IGF2BP3, CPEB3, DIS3, CNOT1, SAMD4A, TNRC6B, LARP1, PUM2, GIGYF2, SERBP1, PABPC1, AGO2, TNRC6A, CNOT7, MYEF2, DCP1A, ZC3HAV1, TNRC6C, TRIM71, RC3H1, DCP2, PDE12, RBM24, CNOT6L, YTHDF3
BP	GO:0033143	regulation of intracellular steroid hormone receptor signaling pathway	25/2564	4.65E-04	AR, RHOA, BRCA1, RUNX1, CBFB, DDX5, EP300, ESR1, FOXA1, CNOT2, MED1, SKP2, TP63, PIAS2, CLOCK, RNF14, NCOR1, YAP1, CNOT1, FOXP1, STRN3, ZBTB7A, LMO3, GPAM, KCTD6
BP	GO:0050821	protein stabilization	45/2564	4.71E-04	ATP1B1, CREB1, EP300, EPHA4, GNAQ, HCFC1, HIP1, HSP90AA1, HSP90AB1, IGF1, LAMP1, LAMP2, SMAD7, MDM4, PIK3R1, PTEN, SOX4, STK3, STK4, STXBP1, TP53, TSC1, VHL, USP7, USP9X, PRKRA, NAPG, USP13, SEC16A, AAK1, OTUD3, GTPBP4, A1CF, GOLGA7, NLK, TRIM44, ATF7IP, RTN4, SAV1, MTMR9, NAA15, SYVN1, TBRG1, HPS4, STXBP4
BP	GO:0043524	negative regulation of neuron apoptotic process	39/2564	4.95E-04	RHOA, AXL, BCL2, BDNF, EN1, ERBB3, F2R, PTK2B, FYN, GABRB2, HSP90AB1, JAK2, LRP1, MECP2, MEF2C, MSH2, NTF3, NTRK2, NR4A2, PTPRZ1, RASA1, ROCK1, MAP2K4, SIX1, SOD2, STXBP1, BTG2, NRP1, CHL1, ADNP, CLCF1, TOX3, HIPK2, SIX4, OXR1, SLC30A10, NMNAT1, CPEB4, FOXQ1
BP	GO:0001823	mesonephros development	30/2564	4.98E-04	ARG2, BCL2, FGF2, FGFR2, GATA3, SMAD1, SMAD2, SMAD4, SMAD5, SMAD7, PBX1, PKD2, PTCH1, RARA, RET, SIX1, SOX9, VEGFA, WNT1, WNT2B, SLIT2, MAGED1, SPRY1, BASP1, SIX4, LGR4, LZTS2, OSR1, NPNT, FMN1
BP	GO:0019058	viral life cycle	72/2564	5.00E-04	ADARB1, AXL, BCL2, SCARB2, CDC42, CXADR, DAG1, DDX3X, DDX5, DDX6, EFNB2, STOM, FMR1, HSP90AB1, IFIT1, ITGAV, KPNB1, KPNA3, LAMP1, RPSA, LDLR, CD46, NFIA, PCBP1, PCBP2, PLSCR1, PKN2, PTX3, RAB1A, RAD23A, RAN, RNASEL, RPS27A, SLAMF1, SLC20A2, STAU1, TFRC, TPR, VCP, XPO1, DEK, HMGA2, EEA1, CLDN1, VAPB, VAPA, NMT2, ROCK2, USP6NL, IST1, TNIP1, WWP1, LARP1, KPNA6, FBXL2, CHMP2B, PABPC1, CNOT7, CHMP5, VTA1, NDC1, ZC3HAV1, CHMP1B, FAM111A, YTHDC2, SLC52A2, SEH1L, MVB12B, TBC1D20, PDE12, TRIM59, NUP43
BP	GO:0007034	vacuolar transport	38/2564	5.00E-04	AP1G1, ARF1, ARSB, SCARB2, IGF2R, LAMP1, LAMP2, LRP1, MTM1, NEDD4, SORL1, VCP, NCOA4, TGFBRAP1, ZFYVE16, HMGXB4, VTI1B, LEPROTL1, SNAPIN, CHMP2B, AP3M1, VPS36, HOOK1, CHMP5, TMEM106B, VPS13C, VPS53, CCDC91, SCYL2, CHMP1B, EPG5, KIF13A, VPS33A, TRAK2, SNX27, HOOK3, LRRK2, VTI1A
BP	GO:0072006	nephron development	38/2564	5.00E-04	JAG1, BCL2, EGR1, FGF2, GATA3, IL6R, ITGA3, LIF, SMAD4, MEF2C, MYO1E, PBX1, PDGFRA, PKD2, POU3F3, PTCH1, RET, SIX1, SOX9, STAT1, VEGFA, WNT1, WNT2B, MAGED1, MAGI2, BASP1, YAP1, WWTR1, KLHL3, SEC61A1, SIX4, AHI1, LGR4, PDGFD, LZTS2, OSR1, NPNT, FMN1

BP	GO:0030330	DNA damage response, signal transduction by p53 class mediator	31/2564	5.06E-04	ATM, ATRX, BRCA1, CD44, DDX5, DYRK1A, E2F1, EP300, FOXO3, MDM4, CNOT2, CNOT4, SNAI2, SOX4, SP100, TFDP1, TFDP2, TP53, BTG2, PPM1D, USP10, CNOT1, HIPK2, CNOT7, TRIAP1, CNOT6, SESN2, SPRED1, SPRED2, CNOT6L, ACER2
BP	GO:0060419	heart growth	32/2564	5.12E-04	ACACB, BMPR1A, EDN1, ERBB4, FGF2, FGFR2, MTOR, G6PD, GATA6, GJA1, IGF1, RBPJ, JARID2, SMAD1, MEF2C, MEIS1, PPARA, PRKAR1A, MAPK1, PTEN, MAP2K4, TGFB2, TGFBR1, TGFBR2, YY1, SORBS2, BASP1, YAP1, PDLIM5, AKAP13, SAV1, ARID2
BP	GO:0045995	regulation of embryonic development	36/2564	5.12E-04	AR, BMPR1A, COL5A2, DAG1, GATA3, IGF1, INSR, NFE2L2, PAFAH1B1, PRKACB, PTK7, SFRP2, SIX1, STK3, STK4, TDG, NR2C2, WNT1, WNT5A, WNT2B, FZD3, FZD1, TRIP12, B4GALT5, PLCB1, GPR161, NIPBL, RAB14, SIX4, POGLUT1, TGIF2, WNK1, PHLDB2, CCSAP, OSR1, AMOT
BP	GO:0043666	regulation of phosphoprotein phosphatase activity	33/2564	5.14E-04	CALM1, CALM2, CALM3, ENSA, FKBP1A, MTOR, GNAI2, GSK3B, HSP90AB1, JAK2, MGAT5, PPP1R12A, PPP1R2, PPP2R1B, PPP2R2A, PPP2R2C, PPP2R5A, PPP2R5E, ROCK1, TSC1, SHOC2, ROCK2, PHACTR2, MAGI2, ARPP19, PPP6R1, PPP6R3, PPP2R2D, SLC39A10, PPP4R4, PPP1R3B, PPP1R15B, PPP4R2
BP	GO:0006979	response to oxidative stress	93/2564	5.14E-04	ANXA1, APP, AREG, ATP7A, AXL, BCL2, BTG1, CCNA2, COL1A1, CRK, CYP1B1, ECT2, EDN1, EIF2S1, CLN8, ERCC1, ETS1, EZH2, FANCC, PTK2B, FER, FOXO3, FXN, FYN, G6PD, HGF, JAK2, KCNC2, KPNA4, MCL1, MAP3K5, MET, MMP2, MTF1, MTR, NFE2L2, NR4A2, PAWR, PDGFRA, PKD2, PON2, PRKAA1, MAPK1, PTGS1, PTGS2, PTPRK, REST, SOD2, SP1, STAT1, STAU1, TLR4, TNFAIP3, TP53, TSC1, UBE3A, WNT1, PCGF2, FOSL1, FZD1, PRKRA, STC2, ADAM9, OXSR1, SLC23A2, NET1, LANCL1, CAMKK2, ZNF277, SETX, SZT2, SLC7A11, SESN1, UBQLN1, RRM2B, MYEF2, SCARA3, OXR1, SMPD3, NDUFA12, ALS2, PLEKHA1, PDGFD, SESN2, CHD6, PPP1R15B, TP53INP1, LRRK2, CPEB2, NCOA7, SESN3, VKORC1L1, MSRB3
BP	GO:0032409	regulation of transporter activity	64/2564	5.16E-04	ACTB, ANK3, APP, ATP1A2, ATP1B1, ATP7A, BCL2, CACNA2D1, CALM1, CALM2, CALM3, CAMK2D, CLIC2, CTSS, DMD, STOM, EPHB2, PTK2B, FGF12, FGF14, FKBP1A, FMR1, GEM, GJA1, GLRX, GRIA2, HSPA2, KCNC2, KIF5B, MEF2C, KMT2A, MYO5A, NEDD4, PDE4D, PKD2, PRKCE, RELN, PTEN, PTPN3, SGK1, SLC9A1, TMSB4X, UTRN, SLMAP, OXSR1, AHCYL1, SHANK2, GPD1L, STK39, UBQLN1, MINK1, CAB39, KLHL24, CTTNBP2NL, JPH1, GOPC, JPH3, HECW2, WNK1, WNK3, OSR1, ALG10B, LRRC55, KCNRG
BP	GO:0051258	protein polymerization	64/2564	5.16E-04	ADD3, ARF1, ARF6, RHOA, CAPZA1, CAPZA2, DBN1, DIAPH1, DYRK1A, EPS8, PTK2B, FER, FGF13, MTOR, GOLGA2, UBE2K, HSP90AA1, JAK2, STMN1, MAP1B, MAP2, MECP2, MET, OPA1, PRKCE, RAC1, RASA1, SPTAN1, SPTBN1, TMSB4X, CDK5R1, WASL, SLIT2, RANBP9, DNM1L, ARPC5, ACTR3, ABI2, ARPC1A, ARFGEF1, CDC42EP3, NCKAP1, MAPRE1, CAMSAP2, EML2, TMOD3, TMOD2, NIN, TPPP3, NDE1, CEP192, AP1AR, SPIRE1, SLAIN2, MID1IP1, NDEL1, NAV3, WHAMM, JMY, MTPN, CAMSAP1, RICTOR, FMN1, MZT1
BP	GO:0060998	regulation of dendritic spine development	24/2564	5.17E-04	ADAM10, ARF1, ARF6, DBN1, EPHA4, FMR1, MTOR, CAPRIN1, MEF2C, OPA1, PAFAH1B1, MAPK6, RELN, PTEN, TIAM1, UBE3A, CDK5R1, DNM1L, ABI2, PDLIM5, CPEB3, SHANK2, ASAP1, LRRK2
BP	GO:0051169	nuclear transport	75/2564	5.27E-04	CBLB, ECT2, GLE1, GSK3B, HNRNPA2B1, AGFG1, KPNB1, KPNA3, KPNA4, TNPO1, IPO5, PPP1R12A, NEDD4, NEUROD1, NF1, NFKBIA, NPM1, PIK3R1, MED1, PPM1A, PPP1CC, PPP3CA, MAPK1, PTGS2, PTPN14, RAN, ATXN1, SRSF1, SRSF2, SRSF6, SRSF7, SP100, STAT3, TP53, TPR, TSC1, XPO1, SLBP, NOLC1, ZC3H11A, SMG7, RBM8A, NXF1, IPO7, KHDRBS1, AHCYL1, MALT1, AKAP13, DDX20, XPO7, SMG1, KPNA6, APPL1, IPO11, RSRC1, UBR5, CTDSPL2, CPSF2, RBM27, RBM22, NDC1, NXT2, THOC2, XPO5, RBM26, XPO4, SEH1L, FYTTD1, RPAIN, LZTS2, LTV1, YTHDC1, LRRK2, NUP43, RGPD8
BP	GO:0003179	heart valve morphogenesis	19/2564	5.29E-04	JAG1, BMPR1A, BMPR2, MTOR, GATA3, SMAD4, MDM4, MEF2C, NOTCH2, RB1, ROBO1, ROCK1, SNAI2, SOX4, SOX9, TGFB2, TGFBR2, SLIT2, ROCK2
BP	GO:0099518	vesicle cytoskeletal trafficking	19/2564	5.29E-04	KIF5B, MAP2, MYO5A, PAFAH1B1, RAB1A, WASL, KIF3B, KIF23, RASGRP1, AP3M2, KIF1B, SNAPIN, AP3M1, NDE1, FNBP1L, KIF13A, TRAK2, FYCO1, NDEL1
BP	GO:0050679	positive regulation of epithelial cell proliferation	50/2564	5.36E-04	AR, AREG, ATP7A, CCND1, BMPR1A, BMPR2, ERBB2, FGF2, FGFR2, MTOR, B4GALT1, GLUL, HAS2, HMGB1, HMGB2, ID1, IGF1, LAMC1, NF1, NOTCH2, NRAS, PLCG1, MED1, PRKCA, SRSF6, SOX9, SP1, STAT3, ADAM17, TGFBR1, TNFAIP3, VEGFA, VEGFB, WNT5A, XBP1, SCG2, TP63, NRP1, SEMA5A, AKT3, PDCD6, KDM5B, AGGF1, RTN4, VASH2, ZNF703, FOXP2, OSR1, STXBP4, RICTOR
BP	GO:0032092	positive regulation of protein binding	28/2564	5.43E-04	APP, ARF6, BDNF, EP300, EPHA4, FKBP1A, GSK3B, HFE, HSP90AB1, LRP1, MARK3, MEF2C, MFNG, PLCL1, RAN, STK3, STK4, TIAM1, WNT5A, NRP1, RAPGEF2, MAPRE1, PLCL2, BAMBI, HIPK2, DERL1, LRRK2, SPPL3
BP	GO:0072080	nephron tubule development	28/2564	5.43E-04	JAG1, BCL2, FGF2, GATA3, LIF, SMAD4, MEF2C, PBX1, PKD2, POU3F3, PTCH1, SIX1, SOX9, STAT1, VEGFA, WNT1, WNT2B, MAGED1, YAP1, WWTR1, KLHL3, SIX4, AHI1, LGR4, LZTS2, OSR1, NPNT, FMN1

BP	GO:0072331	signal transduction by p53 class mediator	61/2564	5.57E-04	ATM, ATRX, BCL2, BRCA1, CD44, CHD4, CHEK1, CSNK2A1, DDX5, DYRK1A, E2F1, EP300, FOXO3, HNRNPK, HUS1, MDM4, MSH2, CNOT2, CNOT4, PRKAA1, RBBP4, SNAI2, SOX4, SP100, TAF5, TAF11, TAF13, TFDP1, TFDP2, TP53, TP53BP2, BTG2, BRPF1, KAT6A, PPM1D, TP63, CDK5R1, USP10, EXO1, RAD50, HEXIM1, TPX2, CNOT1, HIPK2, CNOT7, RRM2B, PHF20, TRIAP1, DDIT4, RRN3, CNOT6, PERP, MEAF6, RMI1, SESN2, TP53INP1, JMY, SPRED1, SPRED2, CNOT6L, ACER2
BP	GO:0048259	regulation of receptor-mediated endocytosis	30/2564	5.80E-04	ARF1, ARF6, BICD1, CBL, EFNB2, FMR1, HFE, HIP1, HNRNPK, MKLN1, NTF3, OPHN1, SERPINE1, PIK3CB, RAC1, VEGFA, PICALM, NUMB, WASL, MAGI2, AAK1, RAB21, SYT11, CD2AP, GREM1, UBQLN2, AHI1, SCYL2, ATAD1, ANKRD13A
BP	GO:0042063	gliogenesis	65/2564	5.84E-04	ADCYAP1, ANXA1, APP, AREG, RHOA, MYRF, CDH2, CDK6, CREB1, DAG1, DLX2, E2F1, EPHA4, ERBB2, ERBB3, EZH2, PTK2B, MTOR, NRG1, ID2, ID4, IL6ST, KCNJ10, LDLR, LIF, LRP1, NF1, NFIB, NTRK2, P2RY1, PAFAH1B1, SERPINE2, PLAG1, POU3F2, PPP1CC, MAPK1, RELN, PTEN, PTPRZ1, SKI, SOX2, SOX4, SOX9, STAT3, TGFB2, TIAM1, TLR4, VIM, CDK5R1, B4GALT6, B4GALT5, MED12, TSPAN2, OLIG2, SUN1, SRGAP2, DICER1, CLCF1, LEF1, ADAM22, SOX6, RTN4, MPP5, FA2H, SLC45A3
BP	GO:0010766	negative regulation of sodium ion transport	10/2564	5.84E-04	ATP1A2, CAMK2D, NEDD4, SERPINE2, PRKCE, STK39, HECW2, WNK1, WNK3, OSR1
BP	GO:0060749	mammary gland alveolus development	10/2564	5.84E-04	AR, AREG, CCND1, ERBB4, ESR1, HOXA5, ID2, VEGFA, TNFSF11, SOCS2
BP	GO:0061377	mammary gland lobule development	10/2564	5.84E-04	AR, AREG, CCND1, ERBB4, ESR1, HOXA5, ID2, VEGFA, TNFSF11, SOCS2
BP	GO:0060428	lung epithelium development	15/2564	5.86E-04	CREB1, FGFR2, GATA6, FOXA1, HOXA5, RBPJ, NFIB, SRSF6, SOX9, THRB, YAP1, ERRFI1, TMEM38B, SAV1, FOXP2
BP	GO:0043244	regulation of protein complex disassembly	32/2564	5.91E-04	ADD3, APC, ASPH, CAPZA1, CAPZA2, EPS8, ETF1, F2RL1, FGF13, GLE1, IGF1R, INSR, MAP1B, MID1, SPAST, SPTAN1, SPTBN1, SEMA5A, IRAK3, SETX, SWAP70, CAMSAP2, TMOD3, TMOD2, OGFOD1, TAOK1, MID1IP1, FYCO1, NAV3, MTPN, TTBK2, CAMSAP1
BP	GO:0022898	regulation of transmembrane transporter activity	61/2564	6.10E-04	ACTB, ANK3, APP, ATP1A2, ATP1B1, ATP7A, BCL2, CACNA2D1, CALM1, CALM2, CALM3, CAMK2D, CLIC2, CTSS, DMD, STOM, EPHB2, PTK2B, FGF12, FGF14, FKBP1A, FMR1, GEM, GJA1, GLRX, GRIA2, HSPA2, KCNC2, KIF5B, MEF2C, MYO5A, NEDD4, PDE4D, PKD2, PRKCE, RELN, PTEN, PTPN3, SLC9A1, TMSB4X, UTRN, SLMAP, OXSR1, AHCYL1, SHANK2, GPD1L, STK39, UBQLN1, MINK1, CAB39, KLHL24, JPH1, GOPC, JPH3, HECW2, WNK1, WNK3, OSR1, ALG10B, LRRC55, KCNRG
BP	GO:0031334	positive regulation of protein complex assembly	61/2564	6.10E-04	ARF1, ARF6, RHOA, ATM, BID, CREB1, ERCC1, ESR1, PTK2B, FER, MTOR, GSK3B, GTF2H1, HSP90AA1, MAP1B, MECP2, MET, MITF, MSN, CNOT2, PRKCE, RAC1, SRF, TLR4, TP53, VCP, VEGFA, FOSL1, CUL4B, HRK, CDK5R1, WASL, G3BP2, PAN2, BCL2L11, ARPC5, ACTR3, ABI2, ARPC1A, CDC42EP3, NCKAP1, FAF1, MAPRE1, CNOT1, SETX, ASAP1, NIN, TPPP3, AP1AR, CAND1, SPIRE1, CNOT6, FNIP2, SLAIN2, NAV3, WHAMM, JMY, CNOT6L, RICTOR, PAN3, FMN1
BP	GO:0031668	cellular response to extracellular stimulus	61/2564	6.10E-04	ATP2B1, AXL, BCL2, BMPR2, CBL, COL1A1, DSC2, EIF2S1, MTOR, FYN, GLUL, HFE, TNC, ITGA6, LAMP2, FADS1, MAP3K5, NFE2L2, NR4A2, OPA1, P2RY1, PIK3C3, MED1, PRKAA1, MAPK1, PTGS2, SFRP2, SKP2, SLC1A2, SNAI2, SRF, KLF10, TP53, TSC1, WNT2B, XBP1, FOSL1, PPM1D, NCOA1, MTMR3, EIF2AK3, DNM1L, NAMPT, SIK2, SZT2, ADNP, GABARAPL1, SESN1, TNRC6A, DNAJC15, BCL11A, SLC38A2, SSH1, RRAGD, CPEB4, SEH1L, SESN2, LRRK2, SESN3, C12orf66, SIK1
BP	GO:0010921	regulation of phosphatase activity	44/2564	6.11E-04	CALM1, CALM2, CALM3, ENSA, FKBP1A, MTOR, GNAI2, GSK3B, HSP90AB1, JAK2, MEF2C, MGAT5, PPP1R12A, PPP1R2, PPP2R1B, PPP2R2A, PPP2R2C, PPP2R5A, PPP2R5E, ROCK1, TGFB2, TSC1, SHOC2, ROCK2, PHACTR2, MAGI2, SEMA4D, ARPP19, PPP6R1, CEP192, PPP6R3, PPP2R2D, SLC39A10, SLC7A14, PPP4R4, RBM26, WNK1, MTMR9, PPP1R3B, CSRNP3, PPP1R15B, PPP4R2, SPRED1, NPNT
BP	GO:0007029	endoplasmic reticulum organization	20/2564	6.24E-04	VAPB, EIF2AK3, SEC16A, RTN3, RAB10, SEC31A, RAB3GAP1, RAB18, TMCC1, ATL3, SEC61A1, TMEM38B, TMEM33, RTN4, ATL2, LRRK2, TMEM170A, TOR1AIP2, SPTSSB, MIA3
BP	GO:0036445	neuronal stem cell division	9/2564	6.25E-04	FGF13, FGFR2, SOX5, NUMB, NUMBL, RAB10, LEF1, AKNA, DOCK7
BP	GO:0055057	neuroblast division	9/2564	6.25E-04	FGF13, FGFR2, SOX5, NUMB, NUMBL, RAB10, LEF1, AKNA, DOCK7

BP	GO:0003281	ventricular septum development	24/2564	6.25E-04	PRDM1, BMPR2, FGFR2, GATA3, ID2, RBPJ, SMAD4, SMAD7, MDM4, PTK7, ROBO1, SOX4, TBX3, TGFB2, TGFBR1, TGFBR2, WNT5A, LUZP1, FZD1, SLIT2, FRS2, HECTD1, SAV1, DCTN5
BP	GO:0006914	autophagy	100/2564	6.31E-04	ABL2, ARSB, ATM, ATP6V1A, BCL2, CLTC, CSNK2A1, EEF1A1, EIF4G2, EP300, FOXO3, MTOR, GNAI3, GOLGA2, GSK3B, HGF, HMGB1, HSP90AA1, FOXK2, ITPR1, LAMP2, LGALS8, MCL1, RAB8A, MET, MTM1, NEDD4, PIK3C3, PIK3CB, PIP4K2A, PRKAA1, RAB1A, ROCK1, STAT3, TMBIM6, TP53, TSC1, VCP, XBP1, FZD5, EPM2A, CDK5R1, MTMR3, USP13, USP10, TMEM59, ATP6V1G1, VPS26A, ULK2, RB1CC1, MFN2, BCL2L11, DNM1L, OPTN, NAMPT, STAM2, CAMKK2, RAB3GAP1, TAB2, LARP1, SNAPIN, SH3BP4, GABARAPL1, FBXL2, CHMP2B, KLHL3, SESN1, UBQLN2, UBQLN1, VPS36, WAC, VTA1, ATP6V1H, VPS13C, FNBP1L, WDR41, DRAM1, YOD1, EPG5, RRAGD, SCOC, VPS33A, FUNDC2, MTMR9, FYCO1, VMP1, SESN2, KAT8, ACBD5, MTDH, TP53INP1, LRRK2, DRAM2, UBXN2B, VTI1A, SESN3, PIKFYVE, TAB3, ACER2, TOMM5
BP	GO:0061919	process utilizing autophagic mechanism	100/2564	6.31E-04	ABL2, ARSB, ATM, ATP6V1A, BCL2, CLTC, CSNK2A1, EEF1A1, EIF4G2, EP300, FOXO3, MTOR, GNAI3, GOLGA2, GSK3B, HGF, HMGB1, HSP90AA1, FOXK2, ITPR1, LAMP2, LGALS8, MCL1, RAB8A, MET, MTM1, NEDD4, PIK3C3, PIK3CB, PIP4K2A, PRKAA1, RAB1A, ROCK1, STAT3, TMBIM6, TP53, TSC1, VCP, XBP1, FZD5, EPM2A, CDK5R1, MTMR3, USP13, USP10, TMEM59, ATP6V1G1, VPS26A, ULK2, RB1CC1, MFN2, BCL2L11, DNM1L, OPTN, NAMPT, STAM2, CAMKK2, RAB3GAP1, TAB2, LARP1, SNAPIN, SH3BP4, GABARAPL1, FBXL2, CHMP2B, KLHL3, SESN1, UBQLN2, UBQLN1, VPS36, WAC, VTA1, ATP6V1H, VPS13C, FNBP1L, WDR41, DRAM1, YOD1, EPG5, RRAGD, SCOC, VPS33A, FUNDC2, MTMR9, FYCO1, VMP1, SESN2, KAT8, ACBD5, MTDH, TP53INP1, LRRK2, DRAM2, UBXN2B, VTI1A, SESN3, PIKFYVE, TAB3, ACER2, TOMM5
BP	GO:0016197	endosomal transport	53/2564	6.31E-04	ARF6, ARL1, CLTC, RAB8A, MYO5B, RAB6A, RPS27A, SNX1, SORL1, VCP, EVI5, PICALM, EEA1, VAMP4, SNX4, RAB11A, SPAG9, DCLK1, VAMP3, VPS26A, ZFYVE16, ARL4C, STAM2, VTI1B, RAB10, EHD1, TMCC1, GGA3, GRIP1, LEPROTL1, CORO1C, TMEM87A, CHMP2B, TBC1D10B, VPS36, CHMP5, VTA1, RAB14, VPS53, CHMP1B, ANKRD50, ALS2, EPG5, UBE2O, SNX27, ANKRD27, RAB6C, RAB11FIP4, MVB12B, LRRK2, VTI1A, DENND1B, PIKFYVE
BP	GO:0048103	somatic stem cell division	12/2564	6.31E-04	ZFP36L2, FGF13, FGFR2, KIT, SOX5, TGFB2, NUMB, NUMBL, RAB10, LEF1, AKNA, DOCK7
BP	GO:0048207	vesicle targeting, rough ER to cis-Golgi	22/2564	6.32E-04	AREG, GOLGA2, NSF, PPP6C, RAB1A, CUL3, USO1, SEC24C, SEC16A, PDCD6, CNIH1, TFG, TMED10, SEC23IP, PPP6R1, SEC31A, ANKRD28, TRAPPC4, PPP6R3, SAR1A, MCFD2, TBC1D20
BP	GO:0048208	COPII vesicle coating	22/2564	6.32E-04	AREG, GOLGA2, NSF, PPP6C, RAB1A, CUL3, USO1, SEC24C, SEC16A, PDCD6, CNIH1, TFG, TMED10, SEC23IP, PPP6R1, SEC31A, ANKRD28, TRAPPC4, PPP6R3, SAR1A, MCFD2, TBC1D20
BP	GO:1904888	cranial skeletal system development	22/2564	6.32E-04	RUNX2, FOXN3, DLX2, FGFR2, GNAS, HOXA1, INSIG1, SMAD2, MEF2C, MMP16, PDGFRA, SIX1, TGFB2, TGFBR1, TGFBR2, TP63, MED12, NIPBL, SLC39A1, SIX4, CEP55, SH3PXD2B
BP	GO:0060993	kidney morphogenesis	28/2564	6.32E-04	BCL2, FGF2, GATA3, LIF, SMAD4, PBX1, PKD2, PTCH1, SIX1, SOX4, SOX9, STAT1, VEGFA, WNT1, WNT2B, MAGED1, BASP1, WWTR1, KLHL3, GCNT4, SIX4, AHI1, LGR4, LZTS2, LRRK2, OSR1, NPNT, FMN1
BP	GO:0009100	glycoprotein metabolic process	87/2564	6.45E-04	ARSB, ATP7A, BCL2, BMPR1B, BMPR2, EXTL3, FKTN, GALNT1, GALNT2, GALNT3, GCNT2, GFPT1, B4GALT1, GOLGA2, IGF1, MFNG, MGAT5, PCSK6, PAWR, PTX3, RAB1A, ST6GAL1, ST3GAL1, SOAT1, VCP, VEGFB, RNF103, GALNT4, B4GALT4, B4GALT6, B4GALT5, ITM2B, CHST3, TMEM59, FAM20B, GFPT2, HS3ST3B1, HS3ST1, UST, TNIP1, ARFGEF1, B3GNT2, FUT9, MAN1A2, RNF139, MGAT4A, PHLDA1, ERP44, SLC35D1, PLCB1, GLCE, ST6GALNAC4, AGO2, SERP1, C1GALT1C1, DSE, SPOCK3, ST8SIA3, GCNT4, GALNT7, CHST12, GALNT10, POGLUT1, GOLPH3, TRAK2, SRD5A3, EDEM3, TET1, ITM2C, TMTC1, B3GNT5, MAGT1, SYVN1, TMTC4, HS6ST2, MCFD2, DSEL, B3GAT2, ALG10B, B3GALNT2, TMTC3, TET3, HS6ST3, GXYLT1, EOGT, DPY19L4, ACER2
BP	GO:0032956	regulation of actin cytoskeleton organization	74/2564	6.45E-04	ABL2, ADD3, ARF1, ARF6, RHOA, RND3, CAPZA1, CAPZA2, CDC42, CRK, DBN1, ECT2, EDN1, EPHA5, EPS8, F2RL1, PTK2B, FER, MTOR, GPM6B, ID1, STMN1, LRP1, SMAD4, MEF2C, MET, NOTCH2, NTF3, PDGFRA, PIK3R1, PRKCE, RAC1, RASA1, ROCK1, SLC9A1, SPTAN1, SPTBN1, TGFBR1, TMSB4X, TSC1, NRP1, CDK5R1, WASL, SEMA5A, SLIT2, ROCK2, ARPC5, ACTR3, ABI2, WASF2, ARPC1A, ARFGEF1, CDC42EP3, NCKAP1, AKAP13, SWAP70, RHOQ, CD2AP, TMOD3, TMOD2, ARHGAP17, AP1AR, CCDC88A, SPIRE1, TAOK1, DIXDC1, PHLDB2, MYLK3, WHAMM, JMY, MTPN, RICTOR, SH3PXD2B, FMN1
BP	GO:0007623	circadian rhythm	50/2564	6.52E-04	AHR, ZFHX3, KLF9, CREB1, DYRK1A, EGR1, EP300, EZH2, MTOR, GFPT1, GNAQ, GSK3B, HNRNPU, ID1, ID2, ID4, KMT2A, NPAS2, NTRK2, SERPINE1, PPARA, PPP1CC, PRKAA1, PRKDC, PTEN, KDM5A, RORA, RORB, KLF10, TP53, UBE3A, USP7, NRIP1, USP9X, ROCK2, MAGED1, CLOCK, NCOR1, NR1D2, NAMPT, HNRNPR, NCOA2, KDM2A, SETX, MYCBP2, FBXW11, FBXL3, LGR4, ARNTL2, SIK1
BP	GO:0051403	stress-activated MAPK cascade	64/2564	6.61E-04	APP, ZFP36L1, EDN1, EPHA4, EPHB1, MECOM, F2RL1, PTK2B, FKTN, HGF, HMGB1, HMGCR, IGF1R, MAP3K4, MAP3K5, MID1, MAP3K9, NFKB1, PAFAH1B1, MAPK1, MAP2K3, RAP2A, RPS27A, MAP2K4, SFRP2, SKP1, SLAMF1, STK3, TGFB2, TIAM1, TLR4, VEGFA, EZR, WNT5A, FZD5, FZD4, FZD8, TNFSF11, SPAG9, MAP4K4, NCOR1, RB1CC1, ZEB2, PJA2, HIPK3,

					RASGRP1, TRIB1, MAP3K2, ZMYND11, TAB2, PLCB1, FBXW11, SASH1, PDCD4, HIPK2, MINK1, IRAK4, SEMA4C, TAOK1, SH3RF1, TAB3, MAGI3, SAMD5, RELL1
BP	GO:0043406	positive regulation of MAP kinase activity	59/2564	6.69E-04	CRK, DUSP5, EDN1, EPHA4, ERBB2, EZH2, F2R, PTK2B, FGF2, FLT1, HGF, NRG1, IGF1, INSR, JAK2, KIT, MAP3K1, MAP3K4, MAP3K5, MAP3K9, NTF3, PIK3CB, PIK3CG, PRKAA1, MAPK1, MAP2K3, RET, ROBO1, RPS27A, MAP2K4, TGFBR1, THBS1, TIAM1, TLR4, VEGFA, WNT5A, FZD5, FZD4, FZD8, TNFSF11, PDE5A, ADAM9, FGF18, SPAG9, MAGED1, ZEB2, RASGRP1, MAP3K2, FRS2, ERP29, AKAP13, TAB2, SASH1, STK39, TAOK1, PDGFD, LRRK2, TAB3, SAMD5
BP	GO:0014897	striated muscle hypertrophy	31/2564	6.69E-04	ATP2B4, CAMK2D, EDN1, EZH2, MTOR, G6PD, GATA6, IGF1, IGFBP5, IL6ST, JARID2, SMAD4, MEF2A, MEF2C, PPARA, PPP3CA, PRKCA, ROCK1, MAP2K4, SLC9A1, TIAM1, YY1, SORBS2, PDE5A, ROCK2, PDLIM5, AKAP13, CAMTA2, LMCD1, ERRFI1, MTPN
BP	GO:0072009	nephron epithelium development	31/2564	6.69E-04	JAG1, BCL2, FGF2, GATA3, LIF, SMAD4, MEF2C, MYO1E, PBX1, PKD2, POU3F3, PTCH1, SIX1, SOX9, STAT1, VEGFA, WNT1, WNT2B, MAGED1, MAGI2, BASP1, YAP1, WWTR1, KLHL3, SIX4, AHI1, LGR4, LZTS2, OSR1, NPNT, FMN1
BP	GO:1903362	regulation of cellular protein catabolic process	57/2564	6.80E-04	CSNK2A1, EPHA4, PTK2B, FOXF2, FMR1, GNA12, GSK3B, HFE, UBE2K, HSP90AA1, HSP90AB1, LDLR, LRP1, SMAD7, MSN, MTM1, NELL1, NFE2L2, OPHN1, PTEN, RAD23A, TMF1, TNFAIP3, UBE3A, VCP, EZR, WNT1, USP7, USP13, RNF14, SOCS5, N4BP1, RNF144A, RNF40, TRIB1, FAF1, RNF139, RYBP, ARIH1, FBXL5, TRIB2, HIPK2, USP25, SENP1, UBQLN2, UBQLN1, UBXN1, RNFT1, WAC, YOD1, TMEM259, LRRK2, SOCS4, RNF19B, RNF217, TMTC3, RNF144B
BP	GO:0010977	negative regulation of neuron projection development	40/2564	6.82E-04	ARF6, RHOA, EFNB2, EPHA4, EPHB2, FGF13, GDI1, GSK3B, ID1, LRP1, MAP2, PAFAH1B1, PMP22, PPP3CA, PTEN, PTPRG, TSC1, UBE3A, VIM, WNT5A, SEMA7A, NRP1, CDK5R1, SEMA5A, SLIT2, MAP4K4, RAPGEF2, ULK2, SEMA4D, SEMA3C, SNAPIN, ASAP1, BCL11A, SEMA4C, RTN4, SEMA6A, TRAK2, ITM2C, LRRK2, PAQR3
BP	GO:0072384	organelle transport along microtubule	26/2564	6.96E-04	BICD1, CDC42, KIF5B, LAMP1, MAP1B, MAP2, OPA1, PAFAH1B1, RAB1A, RAB6A, SPAST, KIF3B, KIF23, RASGRP1, AP3M2, KIF1B, BICD2, SUN1, SNAPIN, AP3M1, NDE1, RHOT1, KIF13A, TRAK2, FYCO1, NDEL1
BP	GO:0035567	non-canonical Wnt signaling pathway	39/2564	7.02E-04	RHOA, CALM1, CDC42, CLTC, GPC4, GNB1, MLLT3, PPP3CA, PPP3R1, PSMD1, PTK7, RAC1, SFRP2, TIAM1, WNT1, WNT5A, FZD5, FZD3, FZD1, FZD4, FZD8, MAGI2, MED12, DAAM1, TNRC6B, PLCB1, AGO1, AGO2, TNRC6A, LEF1, NLK, IFT80, RNF213, TNRC6C, SMURF2, VANGL1, PRICKLE2, AGO3, AGO4
BP	GO:0007568	aging	70/2564	7.02E-04	APAF1, APP, ARG2, ATM, ATP2B1, BCL2, BCL6, BMPR1A, CANX, CDK6, CHEK1, CREB1, DAG1, EDN1, EIF2S1, CLN8, ERCC1, FOXO3, MTOR, HMGCR, ID2, IGFBP5, LIMS1, LRP1, MME, MNT, MSH2, NFE2L2, NPM1, OPA1, P2RY1, SERPINE1, PAWR, PDE4D, PPP3CA, PRKDC, MAPK1, PTEN, PTGS2, RBL1, SLC1A2, SLC12A2, SOD2, SRF, STAT3, NEK4, TBX3, TGFBR2, TP53, WNT1, KAT6A, HMGA2, PICALM, TP63, CLDN1, DNAJA3, LITAF, AKT3, NAMPT, NEK6, ZNF277, SEC63, CACYBP, SERP1, PDCD4, SLC30A10, ZMIZ1, LRRK2, NAPEPLD, RNF165
BP	GO:0046677	response to antibiotic	71/2564	7.18E-04	ADCY2, ADCYAP1, AHR, ANXA1, AREG, RHOA, ATP7A, AXL, CCND1, BCL2, CBL, COL1A1, CRK, CYP1B1, ECT2, EDN1, EGR1, EPS8, ETS1, EZH2, PTK2B, FDX1, FGFR2, FOXO3, FXN, FYN, G6PD, GATA3, HGF, HMGCR, HPGD, HSP90AA1, TNC, ID1, JAK2, KCNC2, KPNA4, MEF2C, MAP3K5, MET, NFE2L2, OPA1, PAWR, PRKAA1, PRKCE, PTEN, RARA, SLC9A1, SPARC, STAT1, STAT3, TNFAIP3, TP53, UBE3A, PCGF2, FOSL1, ADAM9, CLDN1, NET1, KDM5B, ZNF277, SETX, LARP1, CYB5R4, RSRC1, SMPD3, PLEKHA1, PDGFD, PPP1R15B, TP53INP1, LRRK2
BP	GO:0014033	neural crest cell differentiation	27/2564	7.23E-04	JAG1, BMPR1A, EDN1, ERBB4, FN1, NRG1, SMAD4, MEF2C, PITX2, MAPK1, RET, SNAI2, SOX9, SEMA7A, NRP1, SEMA5A, NOLC1, ZEB2, PDCD6, SEMA4D, SEMA3C, CORO1C, SEMA4C, SEMA6A, FBXL17, FAM172A, KBTBD8
BP	GO:0090288	negative regulation of cellular response to growth factor stimulus	42/2564	7.23E-04	FBN1, FBN2, GATA3, GLG1, SMAD2, SMAD7, NEDD4, PPM1A, RPS27A, SFRP2, SKI, SKIL, SORL1, ADAM17, TGFBR1, TGFBR2, THBS1, TP53, WNT1, WNT5A, FZD1, SLIT2, ONECUT2, PDCD6, TOB1, SPRY1, SPRY2, PEG10, BAMBI, ZNF451, GREM1, HIPK2, ZBTB7A, CTDSPL2, TRIM33, PMEPA1, SEMA6A, GREM2, SMURF2, MMRN2, VASN, SHISA2
BP	GO:1903320	regulation of protein modification by small protein conjugation or removal	54/2564	7.23E-04	BIRC3, XIAP, BMI1, BRCA1, EGR1, FKBP1A, FOXF2, MTOR, FYN, GOLGA2, HSP90AA1, HSP90AB1, SMAD7, PRKCE, PTEN, RAB1A, SKP2, SOX4, TGFBR1, TNFAIP3, UBE2D1, UBE2I, UBE2L3, UBE3A, USP4, VCP, CUL3, TRIP12, N4BP1, RNF40, PDCD6, DNM1L, PRMT3, TNIP1, MALT1, MYCBP2, SASH1, GTPBP4, UBQLN1, UBXN1, UBR5, DCUN1D1, OTUD4, TRIM44, RNF111, FANCI, PELI1, ARRDC3, FANCM, DERL1, SPRTN, LRRK2, DCUN1D3, SPOPL
BP	GO:0045785	positive regulation of cell adhesion	84/2564	7.25E-04	ANK3, ANXA1, RHOA, ZFHX3, ATM, BCL6, RUNX1, RUNX3, CBFB, CD44, CDC42, CDK6, CRK, DAG1, DOCK1, EFNB2, ERBB2, ETS1, PTK2B, FN1, FYN, GATA3, GCNT2, GSK3B, HAS2, HMGB1, FOXA1, IGF1, IL6R, IL6ST, IL7R, IL12A, ITGA6, ITGA3, ITGAV, JAK2, LIMS1, SMAD7, CD46, MYO10, PAK2, PIK3R1, PPP3CA, PRKCA, PRKCE, PTPRJ, RAC1, RARA, RET, ROCK1,

					SFRP2, SOX2, TFRC, TGFB2, TGFBR2, TSC1, TNFSF4, UTRN, VEGFA, WNT5A, XBP1, YES1, TNFSF11, ADAM19, ADAM9, NRP1, DNAJA3, MAP4K4, SOCS5, EDIL3, RASGRP1, VAV3, NFAT5, MALT1, ZBTB1, ABI3BP, CD274, ZMIZ1, VTCN1, MMRN2, DOCK5, CCDC80, NPNT, FMN1
BP	GO:0048844	artery morphogenesis	24/2564	7.46E-04	JAG1, PRDM1, BMPR1A, BMPR2, EFNB2, HOXA1, HPGD, RBPJ, LDLR, LRP1, SMAD7, MYLK, NF1, PKD2, SIX1, SOX4, SRF, TGFB2, TGFBR1, VEGFA, NRP1, AKT3, ZMIZ1, ARID2
BP	GO:0010970	transport along microtubule	41/2564	7.46E-04	APP, BICD1, DST, CDC42, FMR1, HNRNPU, KIF5B, KIF5C, TNPO1, LAMP1, MAP1B, MAP2, OPA1, PAFAH1B1, PURA, RAB1A, RAB6A, RAB27B, SPAST, KIF3B, KIF23, RASGRP1, AP3M2, RAB21, KIF1B, BICD2, SUN1, SNAPIN, KIF4A, AP3M1, NDE1, ARL8B, RHOT1, IFT80, KIF13A, TRAK2, FYCO1, TTC21B, NDEL1, TTC30A, LCA5
BP	GO:0099111	microtubule-based transport	41/2564	7.46E-04	APP, BICD1, DST, CDC42, FMR1, HNRNPU, KIF5B, KIF5C, TNPO1, LAMP1, MAP1B, MAP2, OPA1, PAFAH1B1, PURA, RAB1A, RAB6A, RAB27B, SPAST, KIF3B, KIF23, RASGRP1, AP3M2, RAB21, KIF1B, BICD2, SUN1, SNAPIN, KIF4A, AP3M1, NDE1, ARL8B, RHOT1, IFT80, KIF13A, TRAK2, FYCO1, TTC21B, NDEL1, TTC30A, LCA5
BP	GO:0031396	regulation of protein ubiquitination	49/2564	7.56E-04	BIRC3, XIAP, BMI1, BRCA1, FKBP1A, FOXF2, MTOR, FYN, GOLGA2, HSP90AA1, HSP90AB1, SMAD7, PRKCE, PTEN, RAB1A, SKP2, SOX4, TGFBR1, TNFAIP3, UBE2D1, UBE2L3, UBE3A, USP4, CUL3, TRIP12, N4BP1, RNF40, PDCD6, DNM1L, PRMT3, MALT1, MYCBP2, SASH1, GTPBP4, UBQLN1, UBXN1, UBR5, DCUN1D1, TRIM44, RNF111, FANCI, PELI1, ARRDC3, FANCM, DERL1, SPRTN, LRRK2, DCUN1D3, SPOPL
BP	GO:1903706	regulation of hemopoiesis	96/2564	7.57E-04	JAG1, ANXA1, RHOA, AXL, BCL6, PRDM1, ZFP36L1, ZFP36L2, CA2, RUNX1, RUNX3, CBFB, CDK6, CREB1, CREBBP, EP300, ERBB2, ETS1, FANCA, PTK2B, FBN1, FOXO3, MTOR, GABPA, GATA3, GNAS, HMGB1, HMGB2, HOXA5, HOXA9, ID2, IL7R, IL12A, INHBA, LIF, LOX, SMAD7, CD46, MEF2C, MEIS1, MEIS2, MITF, KMT2A, NF1, NFE2L2, NFKBIA, CNOT4, NOTCH2, PIK3R1, MED1, PRKCA, PRKCB, PSMD1, PURB, RARA, RB1, STAT1, STAT3, ZEB1, TCF12, TGFBR2, THBS1, KLF10, TLR4, TNFSF4, XBP1, TNFSF11, KAT2B, SOCS5, MAFB, RASGRP1, TRIB1, YAP1, TOB2, MALT1, ZBTB1, TNRC6B, AGO1, FOXP1, TNRC6A, SENP1, LEF1, KLF13, NCAPG2, KMT2E, ZMIZ1, SH3RF1, TNRC6C, KMT2C, CDC73, MYSM1, RC3H1, TMEM64, AGO3, AGO4, ATP11C
BP	GO:0010837	regulation of keratinocyte proliferation	14/2564	7.57E-04	AREG, ZFP36L1, KLF9, EFNB2, HAS2, NOTCH2, MED1, PTPRK, SRSF6, SNAI2, TP63, YAP1, BCL11B, STXBP4
BP	GO:0090224	regulation of spindle organization	16/2564	7.66E-04	CLTC, HNRNPU, RNF4, TPR, SMC1A, STAG1, STAG2, TPX2, CHMP2B, SENP6, GPSM2, CHMP5, CHMP1B, CEP97, MAP9, CCSAP
BP	GO:0055017	cardiac muscle tissue growth	30/2564	7.68E-04	BMPR1A, EDN1, ERBB4, FGF2, FGFR2, MTOR, G6PD, GATA6, GJA1, IGF1, RBPJ, JARID2, SMAD1, MEF2C, MEIS1, PPARA, PRKAR1A, MAPK1, PTEN, MAP2K4, TGFB2, TGFBR1, TGFBR2, YY1, SORBS2, YAP1, PDLIM5, AKAP13, SAV1, ARID2
BP	GO:0060487	lung epithelial cell differentiation	11/2564	7.68E-04	CREB1, GATA6, FOXA1, HOXA5, RBPJ, NFIB, SOX9, THRB, YAP1, TMEM38B, SAV1
BP	GO:0022612	gland morphogenesis	33/2564	7.68E-04	AR, AREG, BCL2, DAG1, ESR1, FGFR2, HGF, FOXA1, TNC, ID4, IGFBP5, MSN, NFIB, NKX3-1, PLAG1, MED1, PTCH1, SNAI2, SOX9, TBX3, TGFB2, TGFBR2, TNFAIP3, WNT5A, XBP1, CUL3, TP63, NRP1, SEMA3C, KDM5B, FRS2, BTBD7, NTN4
BP	GO:0031111	negative regulation of microtubule polymerization or depolymerization	15/2564	7.68E-04	APC, DYRK1A, FGF13, STMN1, MAP1B, MAP2, MID1, MAPRE1, CAMSAP2, EML2, TAOK1, MID1IP1, NAV3, TTBK2, CAMSAP1
BP	GO:0031345	negative regulation of cell projection organization	46/2564	7.68E-04	ARF6, RHOA, EFNB2, EPHA4, EPHB2, FGF13, FYN, GDI1, GSK3B, ID1, ITGA3, LRP1, MAP2, MAP4, PAFAH1B1, PMP22, PPP3CA, PTEN, PTPRG, TSC1, UBE3A, VIM, WNT5A, SEMA7A, NRP1, CDK5R1, SEMA5A, SLIT2, MAP4K4, RAPGEF2, ULK2, CCP110, SPRY2, SEMA4D, SEMA3C, SNAPIN, ASAP1, BCL11A, SEMA4C, RTN4, SEMA6A, TRAK2, CEP97, ITM2C, LRRK2, PAQR3
BP	GO:0030111	regulation of Wnt signaling pathway	77/2564	7.77E-04	APC, XIAP, APP, RUNX1, CBFB, CDH2, COL1A1, CSNK2A1, CTNND1, DDX3X, EGR1, ESR1, FGFR2, FOXO3, GNAQ, GSK3B, RBPJ, ITGA3, LRP1, MLLT3, NFKB1, PPM1A, PSMD1, PTK7, SFRP2, SKI, SNAI2, SOX2, SOX4, SOX9, STK3, STK4, TIAM1, TNFAIP3, VCP, WNT5A, FZD1, RECK, CUL3, SEMA5A, USP34, ZEB2, HMGXB4, YAP1, SPIN1, CTDNEP1, BAMBI, WWTR1, GREM1, DKK2, RBMS3, LEF1, UBR5, DCDC2, NLK, NLE1, ZRANB1, GID8, USP47, RNF220, LGR4, SCYL2, IFT80, RNF213, PRDM15, SMURF2, WNK1, CDC73, TBL1XR1, BICC1, ZNF703, TNKS2, LZTS2, DIXDC1, LRRK2, TMEM64, SHISA2
BP	GO:0014855	striated muscle cell proliferation	25/2564	7.79E-04	BMPR1A, EPHB1, ERBB4, FGF2, FGFR2, GATA6, GJA1, RBPJ, JAK2, JARID2, SMAD1, MEF2C, MEIS1, PRKAR1A, MAPK1, PTEN, SIX1, STAT3, TGFB2, TGFBR1, TGFBR2, YAP1, SAV1, AKIRIN1, ARID2

BP	GO:0042110	T cell activation	94/2564	8.03E-04	ANXA1, ARG2, RHOA, ATP7A, BCL2, BCL6, PRDM1, ZFP36L1, ZFP36L2, RUNX2, RUNX1, RUNX3, CBFB, CD44, CD151, CDC42, CDK6, CCR6, CXADR, EFNB2, EGR1, ERBB2, F2RL1, FANCA, FKBP1A, MTOR, FYN, GATA3, GJA1, HFE, HMGB1, IGF1, IL6R, IL6ST, IL7R, IL12A, JAG2, KIT, SMAD7, CD46, MSN, MYH9, PAK2, PAWR, PIK3CG, PIK3R1, PKNOX1, PPP3CA, PRKAR1A, PRKDC, PRLR, RAC1, RARA, RORA, RPL22, SATB1, SOX4, SP3, SRF, STAT3, ADAM17, ZEB1, TFRC, TGFBR2, TP53, TSC1, TNFSF4, WNT1, XBP1, YES1, FZD5, FZD8, TNFSF11, PDE5A, DNAJA3, SOCS6, SOCS5, MAFB, RASGRP1, GPNMB, MALT1, ZBTB1, KIF13B, PATZ1, FOXP1, CD274, LEF1, PAG1, PELI1, ZMIZ1, SH3RF1, BCL11B, VTCN1, RC3H1
BP	GO:0009411	response to UV	37/2564	8.34E-04	CCND1, BCL2, CDC25A, CHEK1, CREBBP, EIF2S1, EP300, ERCC1, FMR1, HUS1, IL12A, MAP3K4, MME, MSH2, NEDD4, NPM1, PIK3R1, POLH, PRKAA1, PTGS2, PTPRK, TP53, UBE2A, USP1, YY1, CUL4B, N4BP1, POLD3, ZBTB1, SCARA3, TRIAP1, DTL, TIPIN, USP47, SPRTN, TP53INP1, DCUN1D3
BP	GO:0032869	cellular response to insulin stimulus	51/2564	8.42E-04	APC, ATP2B1, ATP6V1A, ZFP36L1, EIF4EBP2, FER, FOXO3, GAB1, GNAI2, GRB14, GSK3B, IGF1R, INSR, RAB8A, MYO5A, OPA1, PIK3C2A, PIK3R1, PKM, PRKAA1, PRKCB, PRKDC, PTEN, PTPRE, RPS6KB1, SLC9A1, SORL1, SP1, STAT1, TSC1, XBP1, PIK3R3, USO1, SOCS2, KAT2B, ATP6V1G1, TBC1D4, SORBS1, RAB10, SIK2, RHOQ, APPL1, ATP6V1H, ERRFI1, PHIP, DENND4C, ZNF106, NDEL1, CPEB2, SESN3, STXBP4
BP	GO:0007162	negative regulation of cell adhesion	64/2564	8.52E-04	ADAM10, JAG1, ANXA1, ARG2, RHOA, BCL6, RUNX1, RUNX3, CBFB, COL1A1, CYP1B1, ERBB2, ERBB3, GCNT2, HFE, HMGB1, TNC, JAK2, LRP1, SMAD7, NF1, SERPINE1, PAWR, SERPINE2, PIK3R1, PPARA, PRKAR1A, PRKG1, PTEN, RASA1, SNAI2, TGFBI, THBS1, TNFSF4, VEGFA, WNT1, FZD4, PDE5A, CD164, SEMA5A, SOCS6, MAP4K4, SOCS5, PLXNC1, GPNMB, SEMA4D, SWAP70, GTPBP4, CORO1C, CD274, ADAM22, AP1AR, PAG1, PELI1, SEMA6A, WNK1, VTCN1, CBLL1, ZNF703, AKNA, PHLDB2, RC3H1, ACER2, MIA3
BP	GO:0030510	regulation of BMP signaling pathway	27/2564	8.52E-04	XIAP, BMPR2, FBN1, RBPJ, ITGA3, SMAD2, SMAD4, SMAD7, PCSK6, PPM1A, SFRP2, SKI, SKIL, SORL1, WNT1, WNT5A, FZD1, TOB1, FSTL1, GREM1, HIPK2, CTDSPL2, TRIM33, UBE2O, GREM2, SMURF2, RNF165
BP	GO:0006893	Golgi to plasma membrane transport	21/2564	8.57E-04	ANK3, ARF1, ARF3, ARF4, ACSL3, GOLGA4, NSF, SPTBN1, BLZF1, RABEP1, VAMP3, SEC16A, OPTN, EXOC5, RAB10, GGA3, GOLGA7, GOLPH3L, GOPC, KIF13A, GOLPH3
BP	GO:0048010	vascular endothelial growth factor receptor signaling pathway	28/2564	8.76E-04	RHOA, AXL, CDC42, CRK, DOCK1, PTK2B, FLT1, FYN, HSP90AA1, ITGAV, NEDD4, PAK2, PIK3CB, PIK3R1, PRKCB, RAC1, ROCK1, VEGFA, VEGFB, FZD4, FGF18, NRP1, ROCK2, PDCD6, WASF2, VAV3, NCKAP1, MMRN2
BP	GO:0090101	negative regulation of transmembrane receptor protein serine/threonine kinase signaling pathway	34/2564	8.83E-04	FBN1, FBN2, GLG1, IGSF1, SMAD2, SMAD7, PPM1A, RPS27A, SFRP2, SKI, SKIL, SORL1, ADAM17, TGFBR1, TGFBR2, TP53, WNT1, WNT5A, FZD1, ONECUT2, MAGI2, TOB1, PEG10, BAMBI, ZNF451, GREM1, HIPK2, ZBTB7A, CTDSPL2, TRIM33, PMEPA1, GREM2, SMURF2, VASN
BP	GO:0048661	positive regulation of smooth muscle cell proliferation	29/2564	8.90E-04	BMPR1A, EDN1, EREG, FGF2, FGFR2, MTOR, GNAI2, GNAI3, HMGCR, HPGD, ID2, IGF1, IGFBP5, IL6R, JAK2, MEF2D, MAP3K5, MMP2, PTGS2, SKP2, STAT1, TGFBR2, THBS1, MFN2, NAMPT, FOXP1, IRAK4, SMPD3, PDGFD
BP	GO:0003300	cardiac muscle hypertrophy	30/2564	8.98E-04	ATP2B4, CAMK2D, EDN1, EZH2, MTOR, G6PD, GATA6, IGF1, IL6ST, JARID2, SMAD4, MEF2A, MEF2C, PPARA, PPP3CA, PRKCA, ROCK1, MAP2K4, SLC9A1, TIAM1, YY1, SORBS2, PDE5A, ROCK2, PDLIM5, AKAP13, CAMTA2, LMCD1, ERRFI1, MTPN
BP	GO:0014896	muscle hypertrophy	31/2564	8.98E-04	ATP2B4, CAMK2D, EDN1, EZH2, MTOR, G6PD, GATA6, IGF1, IGFBP5, IL6ST, JARID2, SMAD4, MEF2A, MEF2C, PPARA, PPP3CA, PRKCA, ROCK1, MAP2K4, SLC9A1, TIAM1, YY1, SORBS2, PDE5A, ROCK2, PDLIM5, AKAP13, CAMTA2, LMCD1, ERRFI1, MTPN
BP	GO:1904019	epithelial cell apoptotic process	31/2564	8.98E-04	FASLG, ARF6, BID, BMPR2, ZFP36L1, KRIT1, E2F1, EIF2S1, FOXO3, MTOR, GATA3, JAG2, JAK2, MAP3K5, NEUROD1, NFE2L2, SERPINE1, PIK3CG, PLCG1, RB1, SRSF6, STK3, STK4, TGFBR2, THBS1, TNFAIP3, SCG2, SEMA5A, EXOC5, PDCD4, ANO6
BP	GO:0043409	negative regulation of MAPK cascade	45/2564	8.99E-04	DAG1, DUSP4, DUSP5, DUSP8, EPHB2, MECOM, F2RL1, FKTN, HMGCR, IGF1R, LIF, SMAD4, NF1, PEBP1, PAFAH1B1, PTEN, PTPRJ, PTPRR, SFRP2, SORL1, TIMP3, TLR4, EZR, EIF3A, NCOR1, RANBP9, HIPK3, SPRY1, SPRY2, TNIP1, ZMYND11, DUSP14, IRAK3, PDCD4, ERRFI1, CAMK2N1, ASH1L, LMO3, SEMA6A, PRDM15, DUSP18, PAQR3, SPRED1, SPRED2, RNF149

BP	GO:2000045	regulation of G1/S transition of mitotic cell cycle	45/2564	8.99E-04	ANXA1, ATM, CCND1, BCL2, BID, CCND2, CDK6, DDX3X, E2F1, EP300, EZH2, ID2, MDM4, CNOT2, CNOT4, PKD2, PRKDC, PTEN, RB1, RBL1, SOX4, ADAM17, TFDP1, TFDP2, TP53, UBE2E2, WEE1, BTG2, CUL4B, CTDSPL, GPNMB, CNOT1, PLCB1, ANKRD17, GIGYF2, CNOT7, TRIAP1, KMT2E, MEPCE, CNOT6, ZNF655, CDC73, DCUN1D3, NACC2, CNOT6L
BP	GO:0051302	regulation of cell division	42/2564	9.06E-04	RHOA, CALM1, CALM2, CALM3, CDC42, ECT2, EREG, FGF2, FGFR2, NAP1L2, NKX3-1, PIK3C3, PRKCE, PKN2, PTCH1, RBL1, SFRP2, SPAST, TGFB2, VEGFA, VEGFB, NCOA3, CUL3, PKP4, CDC14A, TP63, RAB11A, KIF3B, KIF23, CCP110, KLHL21, ZFYVE26, GIT1, PRPF40A, BIRC6, KIF13A, PRDM15, MAP9, PDGFD, RAB11FIP4, KLHL13, EFHC1
BP	GO:0030859	polarized epithelial cell differentiation	10/2564	9.23E-04	RHOA, CDC42, MSN, MYO9A, OPHN1, PTK7, WNT5A, TP63, RAB10, AHI1
BP	GO:0007611	learning or memory	58/2564	9.25E-04	APP, ARF4, ATP1A2, BDNF, CREB1, EIF4EBP2, EN1, EP300, EPHB2, CLN8, FGF13, MTOR, FYN, HMGCR, INSR, ITGA3, KIT, LDLR, MECP2, MEF2C, MEIS2, MME, NF1, SLC11A2, NTF3, NTRK2, PAFAH1B1, MAPK1, RELN, PTEN, PTGS2, PTPRZ1, ATXN1, SGK1, SLC6A1, SNAP25, SRF, VLDLR, BTG2, FOSL1, PICALM, NRXN1, PJA2, CPEB3, SHANK2, CIC, PLCB1, DDHD2, ADNP, SLC7A11, SLC24A2, CNTNAP2, TMOD2, YTHDF1, JPH3, ATAD1, TANC1, FOXP2
BP	GO:0061448	connective tissue development	61/2564	9.28E-04	ATP7A, BMPR1A, BMPR1B, BMPR2, RUNX2, RUNX3, CD44, COL1A1, COL12A1, ATF2, DLX2, EDN1, EGR1, FGF2, FGFR3, GLG1, GNAS, FOXA1, HOXA5, ID2, ID4, IL6R, ITGB8, LOX, LUM, SMAD1, SMAD5, MEF2C, MEF2D, NFIB, PITX1, RARA, SFRP2, SNAI2, SORL1, SOX5, SOX9, SRF, ZEB1, TGFBI, TGFBR1, TGFBR2, TRPS1, WNT5A, WNT2B, XBP1, HMGA2, KLF7, FGF18, EIF2AK3, SATB2, GREM1, SCARA3, SMPD3, SOX6, IFT80, ARRDC3, TBL1XR1, PDGFD, OSR1, SH3PXD2B
BP	GO:0045931	positive regulation of mitotic cell cycle	41/2564	9.41E-04	ANXA1, APP, CCND1, CCND2, CDC25A, DDX3X, EDN1, EREG, FOXA1, HNRNPU, HSPA2, IGF1, INSR, MECP2, MEIS2, NKX3-1, PAFAH1B1, PBX1, PRKCA, PKN2, RB1, RPS6KB1, ADAM17, DYNLT3, TPR, UBE2E2, CUL4B, CUL3, RAB11A, PLCB1, NIPBL, ANKRD17, TMOD3, DTL, PHIP, SMPD3, KMT2E, MEPCE, UBXN2B, TTL, GEN1
BP	GO:0007030	Golgi organization	37/2564	9.42E-04	ARL1, CDC42, GOLGA2, ATP8B1, MAPK1, RAB1A, RAB2A, BLZF1, USO1, VAMP4, USP6NL, SEC16A, OPTN, ARFGEF1, TMED10, SEC23IP, CAMSAP2, SYNE1, TMED3, ATL3, RAB30, TMED5, HOOK1, DYM, GOLPH3L, PI4K2B, ATP8B2, GOLPH3, ATL2, VCPIP1, VMP1, LRRK2, TBC1D20, TANGO2, UBXN2B, VTI1A, TMED4
BP	GO:0016482	cytosolic transport	40/2564	9.79E-04	AP1G1, ARL1, CLTC, KIF5B, LAMP1, MAP2, MSN, PIK3C3, MAPK1, RAB6A, SNX1, SORL1, EZR, EVI5, EEA1, SPAG9, VAMP3, VPS26A, VTI1B, SRSF10, RAB21, MON2, KIF1B, DNAJC13, TMEM87A, TBC1D10B, KLHL20, HOOK1, RAB14, VPS13C, VPS53, CCDC91, AP1AR, UBE2O, ANKRD27, RAB6C, HOOK3, LRRK2, VTI1A, PIKFYVE
BP	GO:0061157	mRNA destabilization	13/2564	1.00E-03	ZFP36L1, ZFP36L2, ROCK1, ROCK2, PUM1, HNRNPR, CPEB3, GIGYF2, TRIM71, RC3H1, RBM24, CNOT6L, YTHDF3
BP	GO:0042149	cellular response to glucose starvation	16/2564	1.01E-03	BCL2, NFE2L2, PIK3C3, PRKAA1, TP53, XBP1, MTMR3, EIF2AK3, SIK2, SZT2, SESN1, CPEB4, SESN2, SESN3, C12orf66, SIK1
BP	GO:0046328	regulation of JNK cascade	45/2564	1.01E-03	APP, EDN1, EPHA4, EPHB1, MECOM, F2RL1, PTK2B, FKTN, HMGB1, IGF1R, MAP3K4, MAP3K5, MAP3K9, PAFAH1B1, RAP2A, MAP2K4, SFRP2, SLAMF1, STK3, TIAM1, TLR4, WNT5A, FZD5, FZD4, FZD8, TNFSF11, SPAG9, MAP4K4, NCOR1, RB1CC1, ZEB2, PJA2, HIPK3, RASGRP1, MAP3K2, ZMYND11, PLCB1, SASH1, PDCD4, HIPK2, MINK1, TAOK1, SH3RF1, MAGI3, SAMD5
BP	GO:0010632	regulation of epithelial cell migration	64/2564	1.01E-03	ANXA1, ARF6, RHOA, ARSB, BMPR2, KRIT1, CCR6, DOCK1, EDN1, ETS1, PTK2B, FGF2, MTOR, GATA3, GLUL, HAS2, HMGB1, ITGA3, MECP2, MEF2C, MET, NF1, NFE2L2, PIK3C2A, PLCG1, PRKCA, PRKCE, MAP2K3, PTEN, PTGS2, PTPRG, PTPRM, PTPRR, SOX9, SP1, SP100, SPARC, ADAM17, NR2F2, TGFB2, TGFBR2, THBS1, TMSB4X, VEGFA, WNT5A, ADAM9, RAB11A, FGF18, NRP1, SEMA5A, SLIT2, MAP4K4, ROCK2, IQSEC1, AKT3, PDCD6, SASH1, CORO1C, FOXP1, RTN4, MMRN2, DOCK5, AMOTL1, SPRED1
BP	GO:0000281	mitotic cytokinesis	23/2564	1.01E-03	ANK3, APC, ARF1, RHOA, ECT2, STMN1, MYH10, RASA1, ROCK1, SPAST, SPTBN1, ROCK2, KIF23, ZFYVE26, KIF4A, CHMP2B, CHMP5, TTC19, CEP55, CHMP1B, MAP9, LZTS2, EFHC1
BP	GO:0035871	protein K11-linked deubiquitination	7/2564	1.02E-03	TNFAIP3, OTUD3, YOD1, OTUD7B, USP37, OTUB2, VCPIP1
BP	GO:0019079	viral genome replication	33/2564	1.02E-03	ADARB1, BCL2, CDC42, DDX3X, DDX5, STOM, FMR1, IFIT1, NFIA, PCBP1, PCBP2, PLSCR1, PKN2, RAD23A, RNASEL, STAU1, VCP, DEK, HMGA2, EEA1, VAPB, VAPA, ROCK2, TNIP1, LARP1, FBXL2, PABPC1, CNOT7, ZC3HAV1, FAM111A, YTHDC2, TBC1D20, PDE12
BP	GO:0044773	mitotic DNA damage checkpoint	28/2564	1.02E-03	ATM, CCND1, FOXN3, ATF2, E2F1, EP300, HUS1, MDM4, MSH2, CNOT2, CNOT4, PRKDC, SOX4, TFDP1, TFDP2, TP53, BTG2, HMGA2, CNOT1, SYF2, GIGYF2, CNOT7, DONSON, TRIAP1, TIPIN, CNOT6, TAOK1, CNOT6L

BP	GO:0006814	sodium ion transport	51/2564	1.02E-03	ANK3, SHROOM2, ARF1, ATP1A2, ATP1B1, ATP2B4, CAMK2D, DMD, STOM, FGF12, FGF13, GLRX, KCNK1, KIF5B, MLLT6, NEDD4, SERPINE2, PKD2, PRKCE, PTPN3, SCN3A, SCN8A, SCNN1A, SGK1, SLC5A3, SLC6A8, SLC9A1, SLC12A2, SLC20A2, UTRN, SLMAP, SLC4A4, SLC4A7, SLC23A2, SLC9A6, AHCYL1, GPD1L, SLC24A2, KLHL3, STK39, SLC38A2, KLHL24, HECW2, WNK1, WNK3, SLC38A1, SLC10A7, OSR1, SIK1, ANO6, SLC41A1
BP	GO:0032271	regulation of protein polymerization	51/2564	1.02E-03	ADD3, ARF1, ARF6, RHOA, CAPZA1, CAPZA2, DBN1, DYRK1A, EPS8, PTK2B, FER, MTOR, HSP90AA1, STMN1, MAP1B, MAP2, MECP2, MET, PRKCE, RAC1, RASA1, SPTAN1, SPTBN1, TMSB4X, CDK5R1, WASL, SLIT2, ARPC5, ACTR3, ABI2, ARPC1A, ARFGEF1, CDC42EP3, NCKAP1, MAPRE1, CAMSAP2, EML2, TMOD3, TMOD2, NIN, TPPP3, AP1AR, SPIRE1, SLAIN2, NAV3, WHAMM, JMY, MTPN, CAMSAP1, RICTOR, FMN1
BP	GO:0045669	positive regulation of osteoblast differentiation	21/2564	1.05E-03	ACVR2B, JAG1, BMPR1A, BMPR1B, BMPR2, RUNX2, FBN2, GNAS, HGF, IGF1, IL6R, IL6ST, SMAD1, SMAD5, MEF2C, NELL1, DDR2, SFRP2, TP63, ZHX3, NPNT
BP	GO:0071786	endoplasmic reticulum tubular network organization	9/2564	1.06E-03	RTN3, RAB10, RAB3GAP1, RAB18, ATL3, TMEM33, RTN4, ATL2, TMEM170A
BP	GO:0042594	response to starvation	46/2564	1.07E-03	ADCYAP1, BCL2, BMPR2, CBL, DSC2, EIF2S1, FOXO3, MTOR, GLUL, HFE, FOXK2, LAMP2, FADS1, MAP3K5, NFE2L2, PIK3C3, PRKAA1, MAPK1, SSTR2, KLF10, TP53, WNT2B, XBP1, PPM1D, MTMR3, EIF2AK3, ULK2, FSTL1, SIK2, SZT2, LARP1, GABARAPL1, SESN1, TNRC6A, DNAJC15, SLC38A2, RRAGD, CPEB4, SEH1L, SESN2, EIF2A, LRP11, LRRK2, SESN3, C12orf66, SIK1
BP	GO:0030879	mammary gland development	37/2564	1.07E-03	AR, AREG, ARHGAP5, ATP7A, CCND1, CREB1, ERBB4, ESR1, FASN, FGFR2, GATA3, GJA1, NRG1, HOXA5, HOXA9, ID2, IGFBP5, JAK2, MED1, MAPK1, PRLR, PTCH1, ROBO1, SOX9, TBX3, TGFBR2, VEGFA, WNT5A, XBP1, TNFSF11, NCOA1, SOCS2, BCL2L11, KDM5B, LEF1, RTN4, ZNF703
BP	GO:0044344	cellular response to fibroblast growth factor stimulus	37/2564	1.07E-03	ZFP36L1, ZFP36L2, RUNX2, CBL, CD44, CDC5L, COL1A1, FGF2, FGF12, FGFR3, FGFR2, GALNT3, GATA3, HNRNPF, HNRNPH1, MAPK1, PTBP1, THBS1, TIAL1, WNT5A, SHOC2, FGF18, SPRY1, SPRY2, KDM5B, FRS2, SETX, FLRT3, FLRT2, DSTYK, RAB14, ESRP1, HHIP, TRIM71, SPRED1, SPRED2, SHISA2
BP	GO:0018205	peptidyl-lysine modification	82/2564	1.09E-03	ATP7A, ATRX, BRCA1, CHEK1, ATF2, CREBBP, EGR1, EP300, MECOM, EZH2, GATA3, HCFC1, JARID2, LIF, LOX, SMAD4, MECP2, KMT2A, MLLT6, NAP1L2, PRKAA1, ARID4A, SNAI2, SUMO3, SOX4, TAF5, TPR, UBE2I, KDM6A, PCGF2, BRPF1, KAT6A, YEATS4, NCOA3, HAT1, CBX4, NCOA1, KAT2B, PIAS2, RPS6KA5, GTF3C4, CLOCK, CTCF, BRD8, MTF2, SUZ12, KAT6B, BRD1, ZNF451, AUTS2, SENP6, PHF19, TAF5L, BRPF3, SENP1, LEF1, PHF20, ARID4B, RSF1, BCL11A, MSL2, RIF1, SETD5, MRGBP, KANSL3, YEATS2, NDC1, ASH1L, KMT2E, ZMIZ1, KMT2C, MEAF6, SETD6, NAA50, EPC1, WDR82, SEH1L, KAT8, SMYD1, KANSL1L, TET3, NUP43
BP	GO:1904018	positive regulation of vasculature development	53/2564	1.12E-03	ANXA1, BRCA1, BTG1, RUNX1, CYP1B1, EFNB2, EGR1, ETS1, PTK2B, FGF2, FLT1, GAB1, GATA6, HGF, IL6R, ITGB8, KIT, SMAD1, NFE2L2, SERPINE1, PIK3C2A, PKM, PLCG1, PRKCA, PRKCB, PTGS2, SFRP2, SOD2, SP1, STAT3, TGFBR2, THBS1, VEGFA, VEGFB, WNT5A, XBP1, ADAM12, HMGA2, FGF18, NRP1, SEMA5A, RAPGEF2, AKT3, PDCD6, SASH1, DDAH1, AGO2, HIPK2, ERAP1, AGGF1, VASH2, PDGFD, MTDH
BP	GO:0043970	histone H3-K9 acetylation	8/2564	1.12E-03	BRCA1, CHEK1, GATA3, SMAD4, KMT2A, NAP1L2, KAT2B, ZNF451
BP	GO:0008088	axo-dendritic transport	22/2564	1.14E-03	APP, DST, FMR1, HNRNPU, KIF5B, KIF5C, MAP2, OPA1, PAFAH1B1, PURA, RAB27B, SPAST, KIF3B, AP3M2, RAB21, KIF1B, SNAPIN, KIF4A, AP3M1, ARL8B, TRAK2, NDEL1
BP	GO:0032147	activation of protein kinase activity	71/2564	1.15E-03	ACVR2B, ADCY2, ADCY9, CRK, DUSP5, ECT2, F2R, PTK2B, FGF2, FGF13, MTOR, HGF, NRG1, IGF1, IL6R, INSR, JAK2, KIT, MAP3K1, MAP3K4, MAP3K5, MAP3K9, NTF3, PAK2, PIK3CB, PRKAA1, PRKACB, PRKAR1A, PRKAR2A, MAPK1, MAP2K3, PRLR, RET, RPS27A, MAP2K4, NEK4, STK3, STK4, TGFB2, TGFBR1, TGFBR2, THBS1, TLR4, VEGFA, WNT5A, TNFSF11, ADAM9, CDK5R1, SPAG9, MAP4K4, SLK, OXSR1, MAP3K2, FRS2, MALT1, ERP29, TPX2, TAB2, ADNP, GREM1, STK39, MINK1, CAB39, CCDC88A, TAOK1, WNK1, ZFP91, LRRK2, PRRC1, RICTOR, TAB3
BP	GO:0060479	lung cell differentiation	11/2564	1.16E-03	CREB1, GATA6, FOXA1, HOXA5, RBPJ, NFIB, SOX9, THRB, YAP1, TMEM38B, SAV1
BP	GO:0007254	JNK cascade	50/2564	1.20E-03	APP, EDN1, EPHA4, EPHB1, MECOM, F2RL1, PTK2B, FKTN, HMGB1, IGF1R, MAP3K4, MAP3K5, MAP3K9, PAFAH1B1, RAP2A, RPS27A, MAP2K4, SFRP2, SLAMF1, STK3, TIAM1, TLR4, WNT5A, FZD5, FZD4, FZD8, TNFSF11, SPAG9, MAP4K4, NCOR1, RB1CC1, ZEB2, PJA2, HIPK3, RASGRP1, TRIB1, MAP3K2, ZMYND11, TAB2, PLCB1, SASH1, PDCD4, HIPK2, MINK1, IRAK4, TAOK1, SH3RF1, TAB3, MAGI3, SAMD5

BP	GO:0043200	response to amino acid	31/2564	1.21E-03	RHOA, ATP7A, COL1A1, COL4A1, COL5A2, CREB1, EDN1, MTOR, FYN, GLRB, IPO5, MMP2, NTRK2, OPA1, PDGFRA, PIK3C3, SIX1, SLC1A2, ZEB1, TMBIM6, XBP1, CPEB3, SH3BP4, NSMF, SESN1, BCL11A, RRAGD, PDGFD, CPEB4, SESN2, SESN3
BP	GO:0003007	heart morphogenesis	58/2564	1.22E-03	JAG1, BMPR1A, BMPR2, ATF2, EPHB4, FGFR2, FKBP1A, MTOR, GATA3, GATA6, GJA1, HAS2, NRG1, ID2, RBPJ, INSR, SMAD4, SMAD7, MDM4, MEF2C, NOTCH2, PITX2, PKD2, MED1, PTCH1, RARA, ROBO1, SFRP2, SIX1, SNAI2, SOX4, SOX9, SRF, TBX3, TGFB2, TGFBR1, TGFBR2, TP53, KDM6A, VEGFA, WNT5A, FZD1, NRP1, SLIT2, SPRY1, YAP1, SEMA3C, FLRT2, NIPBL, PDCD4, AHI1, PARVA, RTN4, ZMIZ1, MIB1, SAV1, ARID2, ARL13B
BP	GO:0048199	vesicle targeting, to, from or within Golgi	23/2564	1.22E-03	AREG, GOLGA2, NSF, PPP6C, RAB1A, CUL3, USO1, SEC24C, SEC16A, PDCD6, CNIH1, TFG, TMED10, SEC23IP, PPP6R1, SEC31A, ANKRD28, TRAPPC4, PPP6R3, AP1AR, SAR1A, MCFD2, TBC1D20
BP	GO:0032872	regulation of stress-activated MAPK cascade	54/2564	1.29E-03	APP, EDN1, EPHA4, EPHB1, MECOM, F2RL1, PTK2B, FKTN, HGF, HMGB1, HMGCR, IGF1R, MAP3K4, MAP3K5, MID1, MAP3K9, PAFAH1B1, MAPK1, RAP2A, MAP2K4, SFRP2, SLAMF1, STK3, TGFB2, TIAM1, TLR4, VEGFA, EZR, WNT5A, FZD5, FZD4, FZD8, TNFSF11, SPAG9, MAP4K4, NCOR1, RB1CC1, ZEB2, PJA2, HIPK3, RASGRP1, MAP3K2, ZMYND11, PLCB1, SASH1, PDCD4, HIPK2, MINK1, SEMA4C, TAOK1, SH3RF1, MAGI3, SAMD5, RELL1
BP	GO:0003151	outflow tract morphogenesis	24/2564	1.29E-03	JAG1, BMPR1A, BMPR2, ATF2, FGFR2, GATA6, RBPJ, SMAD4, MEF2C, PITX2, RARA, ROBO1, SFRP2, SIX1, TBX3, TGFB2, TGFBR2, VEGFA, WNT5A, FZD1, NRP1, SEMA3C, NIPBL, PARVA
BP	GO:0006446	regulation of translational initiation	24/2564	1.29E-03	DDX3X, EIF2S1, EIF4EBP2, EIF4G2, FMR1, MTOR, GLE1, NPM1, DNAJC3, RPS6KB1, TPR, EIF4H, EIF4G3, CDC123, EIF2AK3, EIF1, KHDRBS1, LARP1, AGO2, PAIP2, YTHDF1, PPP1R15B, YTHDF3, PAIP2B
BP	GO:0003205	cardiac chamber development	42/2564	1.29E-03	JAG1, PRDM1, BMPR1A, BMPR2, FGFR2, FKBP1A, GATA3, GATA6, NRG1, ID2, RBPJ, SMAD4, SMAD7, MDM4, MEF2C, MYH10, NOTCH2, MED1, PTK7, RARA, ROBO1, SFRP2, SOX4, SRF, TBX3, TGFB2, TGFBR1, TGFBR2, TP53, WNT5A, LUZP1, ARID1A, FZD1, NRP1, SLIT2, SEMA3C, FRS2, HECTD1, PARVA, SAV1, DCTN5, TMEM65
BP	GO:0043616	keratinocyte proliferation	16/2564	1.32E-03	AREG, ZFP36L1, KLF9, EFNB2, EREG, HAS2, NOTCH2, MED1, PTCH1, PTPRK, SRSF6, SNAI2, TP63, YAP1, BCL11B, STXBP4
BP	GO:0045773	positive regulation of axon extension	16/2564	1.32E-03	BMPR2, DBN1, FN1, GDI1, GOLGA4, LRP1, MAP1B, PAFAH1B1, SRF, VEGFA, SEMA7A, RAB11A, NRP1, SEMA5A, ADNP, NDEL1
BP	GO:0003148	outflow tract septum morphogenesis	12/2564	1.32E-03	BMPR1A, BMPR2, FGFR2, GATA6, SMAD4, RARA, ROBO1, TGFB2, TGFBR2, NRP1, SEMA3C, PARVA
BP	GO:0002573	myeloid leukocyte differentiation	48/2564	1.34E-03	APP, ZFP36L1, CA2, RUNX1, CDC42, CDK6, CREB1, F2RL1, FASN, FBN1, MTOR, GATA3, GNAS, ID2, RBPJ, INHBA, IREB2, KIT, LBR, LIF, MEF2C, MITF, MYH9, NF1, NOTCH2, PAFAH1B1, PIK3R1, MED1, PRKCA, RARA, RB1, SP3, TFRC, TGFBR2, KLF10, TLR4, VEGFA, TNFSF11, SH3PXD2A, GAB2, MAFB, TSPAN2, TRIB1, TOB2, FOXP1, OSTM1, LEF1, TMEM64
BP	GO:0032412	regulation of ion transmembrane transporter activity	58/2564	1.34E-03	ANK3, APP, ATP1A2, ATP1B1, ATP7A, CACNA2D1, CALM1, CALM2, CALM3, CAMK2D, CLIC2, CTSS, DMD, STOM, EPHB2, PTK2B, FGF12, FGF14, FKBP1A, FMR1, GEM, GLRX, GRIA2, HSPA2, KCNC2, KIF5B, MEF2C, MYO5A, NEDD4, PDE4D, PKD2, PRKCE, RELN, PTEN, PTPN3, SLC9A1, TMSB4X, UTRN, SLMAP, OXSR1, AHCYL1, SHANK2, GPD1L, STK39, UBQLN1, MINK1, CAB39, KLHL24, JPH1, GOPC, JPH3, HECW2, WNK1, WNK3, OSR1, ALG10B, LRRC55, KCNRG
BP	GO:0008360	regulation of cell shape	38/2564	1.34E-03	ALDOA, ANXA1, RHOA, RND3, CDC42, CRK, DAG1, DIAPH1, EPS8, PTK2B, FN1, FYN, GNA12, KIT, MKLN1, MSN, MYH9, MYH10, MYO10, P2RY1, RASA1, VEGFA, EZR, PLXNC1, SEMA4D, CDC42EP3, GNA13, RHOQ, BAMBI, SH3KBP1, BRWD1, PHIP, PRPF40A, PARVA, CDC42SE1, CDC42SE2, STRIP2, BRWD3
BP	GO:0071774	response to fibroblast growth factor	38/2564	1.34E-03	ZFP36L1, ZFP36L2, RUNX2, CBL, CD44, CDC5L, COL1A1, FGF2, FGF12, FGFR3, FGFR2, GALNT3, GATA3, HNRNPF, HNRNPH1, TNC, MAPK1, PTBP1, THBS1, TIAL1, WNT5A, SHOC2, FGF18, SPRY1, SPRY2, KDM5B, FRS2, SETX, FLRT3, FLRT2, DSTYK, RAB14, ESRP1, HHIP, TRIM71, SPRED1, SPRED2, SHISA2
BP	GO:0060070	canonical Wnt signaling pathway	71/2564	1.34E-03	APC, XIAP, BCL9, CDH2, COL1A1, CTNND1, DDX3X, EGR1, FGFR2, FOXO3, GATA3, GNAQ, GSK3B, RBPJ, MITF, MLLT3, NFKB1, NR4A2, PPM1A, PSMD1, PTEN, PTK7, SFRP2, SNAI2, SOX2, SOX4, SOX9, STK3, STK4, KDM6A, VCP, WNT1, WNT5A, WNT2B, FZD5, FZD3, FZD1, FZD4, FZD8, RECK, CUL3, SEMA5A, USP34, MED12, YAP1, CTDNEP1, BAMBI, WWTR1, PYGO1, GREM1, DKK2, RBMS3, LEF1, UBR5, NLE1, GID8, USP47, RNF220, LGR4, SCYL2, PRDM15, SMURF2, WNK1, TBL1XR1, BICC1, ZNF703, TNKS2, LZTS2, DIXDC1, LRRK2, TMEM64
BP	GO:0000302	response to reactive oxygen species	53/2564	1.36E-03	ANXA1, AREG, ATP7A, AXL, BCL2, CCNA2, COL1A1, CRK, CYP1B1, ECT2, EDN1, ETS1, EZH2, FANCC, PTK2B, FER, FOXO3, FXN, FYN, HGF, KCNC2, KPNA4, MAP3K5, MET, MMP2, MTR, NFE2L2, PAWR, PDGFRA, PKD2, PRKAA1, MAPK1, PTPRK, SOD2, STAT1, TNFAIP3, UBE3A, PCGF2, FOSL1, ADAM9, NET1, CAMKK2, ZNF277, SETX, SZT2, SESN1, SMPD3, PLEKHA1, PDGFD, SESN2, PPP1R15B, LRRK2, SESN3

BP	GO:0032465	regulation of cytokinesis	26/2564	1.37E-03	RHOA, CALM1, CALM2, CALM3, CDC42, ECT2, PIK3C3, PRKCE, PKN2, SPAST, CUL3, PKP4, CDC14A, RAB11A, KIF3B, KIF23, CCP110, KLHL21, ZFYVE26, GIT1, PRPF40A, BIRC6, KIF13A, MAP9, RAB11FIP4, KLHL13
BP	GO:0033146	regulation of intracellular estrogen receptor signaling pathway	15/2564	1.37E-03	AR, BRCA1, RUNX1, CBFB, ESR1, FOXA1, CNOT2, MED1, SKP2, TP63, YAP1, CNOT1, STRN3, GPAM, KCTD6
BP	GO:0007612	learning	37/2564	1.38E-03	APP, ARF4, ATP1A2, CREB1, EN1, EPHB2, CLN8, FGF13, MTOR, FYN, HMGCR, INSR, KIT, MECP2, MEIS2, NF1, NTRK2, RELN, PTGS2, ATXN1, SLC6A1, SNAP25, SRF, BTG2, FOSL1, NRXN1, SHANK2, CIC, DDHD2, SLC7A11, SLC24A2, CNTNAP2, YTHDF1, JPH3, ATAD1, TANC1, FOXP2
BP	GO:0006901	vesicle coating	22/2564	1.38E-03	AREG, GOLGA2, NSF, PPP6C, RAB1A, CUL3, USO1, SEC24C, SEC16A, PDCD6, CNIH1, TFG, TMED10, SEC23IP, PPP6R1, SEC31A, ANKRD28, TRAPPC4, PPP6R3, SAR1A, MCFD2, TBC1D20
BP	GO:0033077	T cell differentiation in thymus	22/2564	1.38E-03	BCL2, ZFP36L1, ZFP36L2, CDK6, CCR6, ERBB2, GATA3, IL7R, JAG2, PRKDC, SRF, ADAM17, ZEB1, TP53, WNT1, FZD5, FZD8, DNAJA3, MAFB, RASGRP1, ZBTB1, BCL11B
BP	GO:0008543	fibroblast growth factor receptor signaling pathway	31/2564	1.38E-03	RUNX2, CBL, FGF2, FGF12, FGFR3, FGFR2, GALNT3, GATA3, HNRNPF, HNRNPH1, MAPK1, PTBP1, THBS1, TIAL1, WNT5A, SHOC2, FGF18, SPRY1, SPRY2, FRS2, SETX, FLRT3, FLRT2, DSTYK, RAB14, ESRP1, HHIP, TRIM71, SPRED1, SPRED2, SHISA2
BP	GO:0014812	muscle cell migration	29/2564	1.40E-03	ANXA1, ATP7A, BCL2, BMPR1A, CRK, HAS2, IGF1, IGFBP5, LRP1, MEF2C, NFE2L2, SERPINE1, PRKG1, ROCK1, SIX1, SORL1, NRP1, SLIT2, DOCK4, ARPC5, TRIB1, NET1, SIX4, SSH1, PARVA, AKIRIN1, DOCK5, PDGFD, DOCK7
BP	GO:2001237	negative regulation of extrinsic apoptotic signaling pathway	29/2564	1.40E-03	FASLG, AR, BCL2, BRCA1, EYA4, FYN, HGF, HMGB2, IGF1, ITGA6, ITGAV, MCL1, SERPINE1, SFRP2, SNAI2, TGFBR1, THBS1, TNFAIP3, SCG2, NRP1, RB1CC1, YAP1, ZMYND11, SGK3, PHIP, BIRC6, SH3RF1, ITPRIP, C8orf44-SGK3
BP	GO:1903829	positive regulation of cellular protein localization	69/2564	1.41E-03	ANK3, APC, ARF6, BCL2, BICD1, BID, E2F1, ECT2, STOM, EPHB2, ERBB2, ERBB4, ACSL3, FYN, GSK3B, HSP90AB1, ITGA3, KIF5B, IPO5, LIF, LRP1, MSN, PIK3R1, PPM1A, PPP3R1, PRKAA1, PRKCE, MAPK1, PTGS2, RAN, SORL1, SPTBN1, TFDP1, TFDP2, TP53, TP53BP2, TPR, UBE2D3, UBE2L3, EZR, YWHAB, FZD5, TP63, RAB11A, CDK5R1, EIF2AK3, ROCK2, NPEPPS, SEC16A, SORBS1, RAB11FIP2, GPD1L, SYT11, CD2AP, NIPBL, GPSM2, ABHD17B, UBR5, CTDSPL2, SSH1, RBM22, CCDC88A, TMEM30A, SAR1A, RTN4, XPO4, WNK3, SESN2, HPS4
BP	GO:0035725	sodium ion transmembrane transport	36/2564	1.42E-03	ANK3, SHROOM2, ARF1, ATP1A2, ATP1B1, ATP2B4, CAMK2D, DMD, STOM, FGF12, GLRX, KCNK1, KIF5B, NEDD4, PKD2, PRKCE, PTPN3, SCN3A, SCN8A, SCNN1A, SLC9A1, SLC12A2, SLC20A2, UTRN, SLMAP, SLC9A6, GPD1L, SLC24A2, STK39, KLHL24, HECW2, WNK1, WNK3, OSR1, ANO6, SLC41A1
BP	GO:0006998	nuclear envelope organization	18/2564	1.43E-03	PAFAH1B1, PPP2R2A, PRKCA, PRKCB, SPAST, NEK6, SUN1, CTDNEP1, TOR1AIP1, PARP11, TMEM43, REEP4, NDEL1, NEK9, TMEM170A, UBXN2B, REEP3, CNEP1R1
BP	GO:0007405	neuroblast proliferation	20/2564	1.44E-03	DAGLA, FGF13, FGFR2, ID4, NF1, PAFAH1B1, SOX5, TP53, VEGFA, FZD3, NUMB, NUMBL, FRS2, RAB10, LEF1, NDE1, HHIP, AKNA, DOCK7, LRRK2
BP	GO:0043371	negative regulation of CD4-positive, alpha-beta T cell differentiation	10/2564	1.44E-03	ANXA1, BCL6, RUNX1, RUNX3, CBFB, HMGB1, SMAD7, TNFSF4, SOCS5, RC3H1
BP	GO:1901673	regulation of mitotic spindle assembly	10/2564	1.44E-03	HNRNPU, TPR, SMC1A, STAG1, STAG2, CHMP2B, CHMP5, CHMP1B, CEP97, CCSAP
BP	GO:0051896	regulation of protein kinase B signaling	55/2564	1.44E-03	AREG, AXL, DAG1, ERBB2, ERBB3, ERBB4, EREG, ESR1, FGF2, FGFR3, FGFR2, MTOR, FYN, GAB1, GATA3, GCNT2, HGF, NRG1, HIP1, HSP90AA1, HSP90AB1, IGF1R, IGFBP5, INSR, KIT, MET, MTM1, NTRK2, PDGFRA, PIK3CB, PIK3CG, PIK3R1, PTEN, PTPRJ, RAC1, RET, STK3, TGFBR1, THBS1, TNFSF11, FGF18, SEMA5A, MAGI2, PDCD6, SPRY2, ARFGEF1, FRS2, PHLPP2, OTUD3, RTN4, PLEKHA1, MTDH, SESN3, RICTOR, FAM110C

BP	GO:1902115	regulation of organelle assembly	46/2564	1.46E-03	RHOA, BRCA1, EDN1, HNRNPU, SMAD4, MAP4, MEF2C, MSN, MTM1, CNOT2, NPM1, PIP4K2A, PRKAA1, RNF4, TPR, EZR, SMC1A, KAT2B, MTMR3, NRXN1, CCP110, G3BP2, PAN2, STAG1, PLK4, STAG2, AKAP13, RAB3GAP1, CNOT1, CHMP2B, SENP6, GPSM2, UBQLN2, ASAP1, DCDC2, CHMP5, CCDC88A, CHMP1B, CNOT6, CEP97, MYLK3, LRRK2, CCSAP, PIKFYVE, CNOT6L, PAN3
BP	GO:0050890	cognition	64/2564	1.53E-03	APP, ARF4, ATP1A2, BDNF, CREB1, EIF4EBP2, EN1, EP300, EPHB2, CLN8, FGF13, MTOR, FYN, HMGCR, HOXA1, INSR, ITGA3, KIT, LDLR, MECP2, MEF2C, MEIS2, MME, NF1, SLC11A2, NTF3, NTRK2, PAFAH1B1, MAPK1, RELN, PTEN, PTGS2, PTPRZ1, ATXN1, SGK1, SLC6A1, SNAP25, SRF, VLDLR, BTG2, FOSL1, PICALM, NRXN1, PJA2, CHL1, CPEB3, SHANK2, CIC, PLCB1, DDHD2, ADNP, SLC7A11, SLC24A2, NIPBL, CHMP2B, CNTNAP2, TMOD2, YTHDF1, JPH3, MAGT1, ATAD1, TANC1, FOXP2, GPR155
BP	GO:2000134	negative regulation of G1/S transition of mitotic cell cycle	33/2564	1.54E-03	ATM, CCND1, BCL2, CDK6, E2F1, EP300, EZH2, MDM4, CNOT2, CNOT4, PKD2, PRKDC, PTEN, RB1, RBL1, SOX4, TFDP1, TFDP2, TP53, WEE1, BTG2, CTDSPL, GPNMB, CNOT1, GIGYF2, CNOT7, TRIAP1, CNOT6, ZNF655, CDC73, DCUN1D3, NACC2, CNOT6L
BP	GO:0070302	regulation of stress-activated protein kinase signaling cascade	54/2564	1.54E-03	APP, EDN1, EPHA4, EPHB1, MECOM, F2RL1, PTK2B, FKTN, HGF, HMGB1, HMGCR, IGF1R, MAP3K4, MAP3K5, MID1, MAP3K9, PAFAH1B1, MAPK1, RAP2A, MAP2K4, SFRP2, SLAMF1, STK3, TGFB2, TIAM1, TLR4, VEGFA, EZR, WNT5A, FZD5, FZD4, FZD8, TNFSF11, SPAG9, MAP4K4, NCOR1, RB1CC1, ZEB2, PJA2, HIPK3, RASGRP1, MAP3K2, ZMYND11, PLCB1, SASH1, PDCD4, HIPK2, MINK1, SEMA4C, TAOK1, SH3RF1, MAGI3, SAMD5, RELL1
BP	GO:0071214	cellular response to abiotic stimulus	70/2564	1.54E-03	ATM, ATP1A2, ZFP36L1, CALM1, CDC25A, CHEK1, COL1A1, CREBBP, DAG1, DDX3X, ECT2, EGR1, EIF2S1, EP300, ERCC1, FMR1, GATA3, GJA1, GNB1, HUS1, KCNJ2, MAP3K1, MME, MYLK, NEDD4, NFKB1, NPM1, PIK3R1, PKD2, POLH, PTEN, PTGS2, PTPRK, RAC1, REST, MAP2K4, SFRP2, SLC9A1, SNAI2, SOX9, TLR4, TP53, TP53BP1, YY1, HMGA2, CUL4B, NMT2, CLOCK, N4BP1, OXSR1, SLC12A6, NAMPT, NET1, YAP1, RAD51AP1, POLD3, MAP3K2, ZBTB1, NIPBL, NSMF, STK39, TRIAP1, CAB39, ERRFI1, SLC38A2, USP47, LRRC8D, PIEZO2, TP53INP1, MTPN
BP	GO:0104004	cellular response to environmental stimulus	70/2564	1.54E-03	ATM, ATP1A2, ZFP36L1, CALM1, CDC25A, CHEK1, COL1A1, CREBBP, DAG1, DDX3X, ECT2, EGR1, EIF2S1, EP300, ERCC1, FMR1, GATA3, GJA1, GNB1, HUS1, KCNJ2, MAP3K1, MME, MYLK, NEDD4, NFKB1, NPM1, PIK3R1, PKD2, POLH, PTEN, PTGS2, PTPRK, RAC1, REST, MAP2K4, SFRP2, SLC9A1, SNAI2, SOX9, TLR4, TP53, TP53BP1, YY1, HMGA2, CUL4B, NMT2, CLOCK, N4BP1, OXSR1, SLC12A6, NAMPT, NET1, YAP1, RAD51AP1, POLD3, MAP3K2, ZBTB1, NIPBL, NSMF, STK39, TRIAP1, CAB39, ERRFI1, SLC38A2, USP47, LRRC8D, PIEZO2, TP53INP1, MTPN
BP	GO:0030850	prostate gland development	17/2564	1.55E-03	ANXA1, AR, ESR1, FGFR2, FOXA1, TNC, ID4, NKX3-1, PLAG1, PTCH1, PTEN, RARA, SOX9, UBE3A, WNT5A, TP63, FRS2
BP	GO:0061647	histone H3-K9 modification	17/2564	1.55E-03	ATRX, BRCA1, CHEK1, MECOM, GATA3, JARID2, SMAD4, MECP2, KMT2A, NAP1L2, ARID4A, KAT2B, ZNF451, ARID4B, RIF1, SETD5, ASH1L
BP	GO:0014031	mesenchymal cell development	25/2564	1.56E-03	JAG1, BCL2, BMPR1A, EDN1, ERBB4, FN1, NRG1, PITX2, MAPK1, RET, SNAI2, SOX9, SEMA7A, NRP1, SEMA5A, NOLC1, ZEB2, PDCD6, SEMA4D, SEMA3C, CORO1C, SEMA4C, SEMA6A, FAM172A, KBTBD8
BP	GO:0048864	stem cell development	25/2564	1.56E-03	JAG1, BMPR1A, EDN1, ERBB4, FN1, NRG1, PITX2, MAPK1, RET, SNAI2, SOX9, SEMA7A, NRP1, SEMA5A, NOLC1, ZEB2, PDCD6, SEMA4D, SEMA3C, CORO1C, SEMA4C, SEMA6A, FAM172A, KBTBD8, MSI2
BP	GO:1904375	regulation of protein localization to cell periphery	31/2564	1.58E-03	ACTB, ADAM10, AR, ARF6, CLTC, DAG1, EPHB2, ACSL3, GPC4, ITGA3, KIF5B, LRP1, PIK3R1, PPP2R5A, PRKCE, SPTBN1, EZR, PICALM, STX7, NUMB, RAB11A, TMEM59, VTI1B, SORBS1, RAB11FIP2, RHOQ, APPL1, GPSM2, LZTFL1, GOPC, WNK3
BP	GO:0031667	response to nutrient levels	98/2564	1.60E-03	ACACB, ADCYAP1, ADRB1, APAF1, ARSB, ATP2B1, CCND1, BCL2, BMPR2, CBL, COL1A1, CREB1, DSC2, EIF2S1, ENSA, ERCC1, ACSL1, ACSL3, ACSL4, FOXO3, MTOR, FYN, G6PD, GLUL, GNAI2, HFE, HLCS, HMGCR, TNC, FOXK2, LAMP2, LDLR, FADS1, MAP1B, MAP3K5, NFE2L2, OPA1, P2RY1, PIK3C3, PKM, PPARA, MED1, PRKAA1, MAPK1, PTEN, PTGS2, RARA, RPS6KB1, SFRP2, SRSF2, SNAI2, SORL1, SPARC, SRF, SSTR2, STAT1, TMBIM6, TGFBR2, KLF10, TP53, TSC1, WNT2B, XBP1, PPM1D, HAT1, STC2, NCOA1, MTMR3, EIF2AK3, ULK2, DNM1L, NAMPT, FSTL1, SIK2, SZT2, LARP1, GABARAPL1, SESN1, TNRC6A, DNAJC15, BCL11A, SLC38A2, SSH1, RRAGD, TMEM135, ADIPOR2, TBL1XR1, RMI1, CPEB4, SEH1L, SESN2, EIF2A, LRP11, LRRK2, ACVR1C, SESN3, C12orf66, SIK1
BP	GO:0010948	negative regulation of cell cycle process	75/2564	1.61E-03	APAF1, APC, ATM, ATRX, CCND1, BCL2, BCL6, BMI1, BRCA1, ZFP36L1, ZFP36L2, CDK6, CENPF, CHEK1, FOXN3, E2F1, EP300, EZH2, HSP90AB1, HUS1, LIF, MDM4, CNOT2, CNOT4, NPM1, PKD2, PRKAR1A, PRKDC, PSMD1, PTEN, RB1, RBBP4, RBL1, RRM2, SKP1, SOX4, TFDP1, TFDP2, TP53, TPR, WEE1, PCGF2, BTG2, HMGA2, SMC1A, KAT2B, BUB3, NME6, CTDSPL, GPNMB, STAG2, CBX3, CNOT1, MGA, RYBP, CBX5, SUZ12, SYF2, GIGYF2, CNOT7, DONSON, TRIAP1, DTL, USP47, CNOT6, TAOK1, ZNF655, CDC73, PHC3, EPC1, TICRR, DCUN1D3, NACC2, CNOT6L, GEN1

BP	GO:0035307	positive regulation of protein dephosphorylation	16/2564	1.68E-03	CALM1, CALM2, CALM3, MTOR, HSP90AB1, JAK2, PPP1R12A, PPP2R5A, PTBP1, MAGI2, CAMTA1, NSMF, SLC39A10, PPP1R15B, SPPL3, CNEP1R1
BP	GO:0060412	ventricular septum morphogenesis	16/2564	1.68E-03	BMPR2, FGFR2, ID2, RBPJ, SMAD4, SMAD7, ROBO1, SOX4, TBX3, TGFB2, TGFBR1, TGFBR2, WNT5A, FZD1, SLIT2, SAV1
BP	GO:0034629	cellular protein-containing complex localization	11/2564	1.70E-03	SMAD7, SGCD, EZR, WASL, KLHL21, SNAPIN, NDC1, CEP72, SEH1L, NACC2, MZT1
BP	GO:0046785	microtubule polymerization	23/2564	1.75E-03	DYRK1A, FGF13, GOLGA2, STMN1, MAP1B, MAP2, MECP2, MET, RAC1, CDK5R1, RANBP9, MAPRE1, CAMSAP2, EML2, NIN, TPPP3, NDE1, CEP192, SLAIN2, NDEL1, NAV3, CAMSAP1, MZT1
BP	GO:0072088	nephron epithelium morphogenesis	23/2564	1.75E-03	BCL2, FGF2, GATA3, LIF, SMAD4, PBX1, PKD2, PTCH1, SIX1, SOX9, STAT1, VEGFA, WNT1, WNT2B, MAGED1, KLHL3, SIX4, AHI1, LGR4, LZTS2, OSR1, NPNT, FMN1
BP	GO:0048706	embryonic skeletal system development	33/2564	1.76E-03	RUNX2, COL1A1, DLX2, FGFR2, GNAS, HOXA1, HOXA5, HOXA9, HOXC9, HOXC11, HOXD10, SMAD2, MEF2C, MMP16, PBX1, PDGFRA, SIX1, SP3, ZEB1, TGFBR1, TGFBR2, WNT5A, PCGF2, MED12, SLC35D1, SATB2, NIPBL, SLC39A1, FLVCR1, SIX4, KIAA1217, ALX4, OSR1
BP	GO:0050807	regulation of synapse organization	50/2564	1.77E-03	ADAM10, APP, ARF4, ARF6, RHOA, BDNF, CDH2, DAG1, DBN1, EPHA4, EPHB1, EPHB2, GPC4, FMR1, FYN, GPM6A, CAPRIN1, MEF2C, NEDD4, NRCAM, NTRK2, OPA1, PAFAH1B1, PCDH8, RELN, PTEN, SIX1, SPARC, TIAM1, UBE3A, VCP, WNT5A, FZD1, CDK5R1, NRXN1, DNM1L, ABI2, SEMA4D, PDLIM5, ADNP, SLC7A11, FLRT3, FLRT2, CHMP2B, ABHD17B, SIX4, SSH1, CTTNBP2, LRRK2, MDGA1
BP	GO:0032922	circadian regulation of gene expression	20/2564	1.77E-03	AHR, ZFHX3, EGR1, GFPT1, HNRNPU, ID2, KMT2A, NPAS2, PPARA, PPP1CC, KDM5A, RORA, NRIP1, MAGED1, CLOCK, NAMPT, NCOA2, KDM2A, MYCBP2, LGR4
BP	GO:0046621	negative regulation of organ growth	15/2564	1.79E-03	FXN, G6PD, GJA1, JARID2, MEIS1, PPARA, PTEN, STK3, STK4, TGFBR2, YY1, WWC1, WWC3, SAV1, WWC2
BP	GO:1903708	positive regulation of hemopoiesis	44/2564	1.80E-03	JAG1, ANXA1, RHOA, AXL, BCL6, ZFP36L1, CA2, RUNX1, RUNX3, CBFB, CREB1, ETS1, FOXO3, GATA3, GNAS, HMGB1, HMGB2, HOXA5, ID2, IL7R, IL12A, INHBA, LIF, CD46, MED1, PRKCA, RARA, RB1, STAT1, STAT3, TGFBR2, KLF10, TNFSF4, XBP1, TNFSF11, SOCS5, RASGRP1, TRIB1, MALT1, ZBTB1, LEF1, ZMIZ1, TMEM64, ATP11C
BP	GO:0014032	neural crest cell development	24/2564	1.81E-03	JAG1, BMPR1A, EDN1, ERBB4, FN1, NRG1, PITX2, MAPK1, RET, SNAI2, SOX9, SEMA7A, NRP1, SEMA5A, NOLC1, ZEB2, PDCD6, SEMA4D, SEMA3C, CORO1C, SEMA4C, SEMA6A, FAM172A, KBTBD8
BP	GO:0031503	protein-containing complex localization	61/2564	1.85E-03	ADAM10, ATM, DAG1, DBN1, EFNB2, GPC4, GLE1, HIP1, HNRNPA2B1, HNRNPU, AGFG1, KIF5C, TNPO1, SMAD7, RAB8A, NPM1, OPHN1, RELN, PURA, RAN, SRSF1, SRSF2, SRSF6, SRSF7, SGCD, SNAP25, TPR, TSC1, EZR, XPO1, SLBP, STX7, NUMB, RAB11A, WASL, KIF3B, ZC3H11A, SMG7, KLHL21, RBM8A, NXF1, SMG1, GRIP1, SNAPIN, ADAM22, CPSF2, NDC1, CEP72, ANKS1B, THOC2, IFT80, TTC21B, SEH1L, FYTTD1, LTV1, YTHDC1, TTC30A, NACC2, LCA5, NUP43, MZT1
BP	GO:0044774	mitotic DNA integrity checkpoint	29/2564	1.88E-03	ATM, CCND1, FOXN3, ATF2, E2F1, EP300, HUS1, MDM4, MSH2, CNOT2, CNOT4, PRKDC, SOX4, TFDP1, TFDP2, TP53, BTG2, HMGA2, CNOT1, SYF2, GIGYF2, CNOT7, DONSON, TRIAP1, TIPIN, CNOT6, TAOK1, TICRR, CNOT6L
BP	GO:1904029	regulation of cyclin-dependent protein kinase activity	29/2564	1.88E-03	ACTB, APC, CCND1, CCNA2, CCND2, CCNG1, CCNT1, CCNT2, CDC25A, CKS1B, GTF2H1, HSP90AB1, IPO5, PKD2, PTEN, ADAM17, NR2F2, TNFAIP3, KAT2B, CDK5R1, CCNE2, IPO7, HEXIM1, CCNI, GTPBP4, CCNJ, CAMK2N1, BCCIP, CCNYL1
BP	GO:0050779	RNA destabilization	13/2564	1.89E-03	ZFP36L1, ZFP36L2, ROCK1, ROCK2, PUM1, HNRNPR, CPEB3, GIGYF2, TRIM71, RC3H1, RBM24, CNOT6L, YTHDF3
BP	GO:1902806	regulation of cell cycle G1/S phase transition	47/2564	1.89E-03	ANXA1, ATM, ATP2B4, CCND1, BCL2, BID, CCND2, CDK6, DDX3X, E2F1, EP300, EZH2, ID2, MDM4, CNOT2, CNOT4, PKD2, PRKDC, PTEN, RB1, RBL1, SOX4, ADAM17, TFDP1, TFDP2, TP53, UBE2E2, WEE1, BTG2, CUL4B, CTDSPL, GPNMB, CNOT1, PLCB1, ANKRD17, GIGYF2, CNOT7, TRIAP1, KMT2E, MEPCE, CNOT6, ZNF655, CDC73, DCUN1D3, NACC2, CNOT6L, STXBP4

BP	GO:0031532	actin cytoskeleton reorganization	28/2564	1.89E-03	ABL2, ANXA1, RHOA, CDC42, CXADR, EPS8, PTK2B, FER, GAB1, KIT, MKLN1, MYH9, NOTCH2, NTF3, PDGFRA, PTK7, RALA, RAP2A, EZR, PIP5K1A, NRP1, CD2AP, AUTS2, MINK1, PARVA, ANTXR1, WHAMM, RICTOR
BP	GO:1905330	regulation of morphogenesis of an epithelium	43/2564	1.89E-03	AR, RHOA, CDC42, CLTC, ESR1, GPC4, MTOR, GATA3, HGF, LIF, MLLT3, PSMD1, PTEN, PTK7, RAC1, SFRP2, SIX1, SNAI2, SOX9, STAT1, TIAM1, VEGFA, WNT1, WNT5A, WNT2B, FZD5, FZD3, FZD1, FZD4, MAGED1, MAGI2, MED12, DAAM1, FOXP1, SIX4, AHI1, LGR4, BTBD7, NTN4, SMURF2, VANGL1, PHLDB2, PRICKLE2
BP	GO:1903391	regulation of adherens junction organization	21/2564	1.89E-03	ARF6, RHOA, GPM6B, LIMS1, LRP1, PTEN, PTPRJ, RAC1, ROCK1, SLC9A1, THBS1, TSC1, VEGFA, NRP1, MAP4K4, ROCK2, SLK, IQSEC1, CORO1C, PHLDB2, FMN1
BP	GO:0035306	positive regulation of dephosphorylation	19/2564	1.99E-03	CALM1, CALM2, CALM3, MTOR, HSP90AB1, JAK2, MEF2C, PPP1R12A, PPP2R5A, PTBP1, MAGI2, CAMTA1, NSMF, SLC39A10, MTMR9, PPP1R15B, SPPL3, NPNT, CNEP1R1
BP	GO:0061951	establishment of protein localization to plasma membrane	19/2564	1.99E-03	ANK3, ACSL3, GOLGA4, RAB8A, NSF, SPTBN1, BLZF1, RAB11A, VAMP3, SEC16A, OPTN, RAB10, GGA3, GRIP1, GOLGA7, GOLPH3L, GOPC, KIF13A, GOLPH3
BP	GO:0098930	axonal transport	19/2564	1.99E-03	DST, FMR1, KIF5B, KIF5C, MAP2, OPA1, PAFAH1B1, RAB27B, SPAST, KIF3B, AP3M2, RAB21, KIF1B, SNAPIN, KIF4A, AP3M1, ARL8B, TRAK2, NDEL1
BP	GO:0035270	endocrine system development	33/2564	1.99E-03	ADCYAP1, ANXA1, BMPR1A, CDK6, CREB1, ETS1, GATA3, GATA6, GSK3B, HOXA5, RBPJ, IL6R, INSR, SMAD2, NEUROD1, NF1, PBX1, PDGFRA, PITX1, PITX2, POU3F2, MAPK1, SIX1, SOX2, SOX4, SOX9, SRF, TGFBR1, THRB, WNT5A, EIF2AK3, ONECUT2, CLOCK
BP	GO:0036092	phosphatidylinositol-3-phosphate biosynthetic process	8/2564	1.99E-03	ATM, INPP4A, PIK3C2A, PIK3C3, PIK3CB, PIK3CG, PIK3R3, PIKFYVE
BP	GO:1902043	positive regulation of extrinsic apoptotic signaling pathway via death domain receptors	8/2564	1.99E-03	BMPR1B, PTEN, SKIL, STK3, STK4, THBS1, TIMP3, FAF1
BP	GO:0070371	ERK1 and ERK2 cascade	67/2564	2.03E-03	ADCYAP1, APP, ZFP36L1, ZFP36L2, CD44, DUSP4, EPHB1, EPHB2, ERBB2, ERBB4, F2R, F2RL1, PTK2B, FGF2, FGFR3, FGFR2, FLT1, FN1, GCNT2, GNAI2, HMGB1, HMGCR, IGF1, ITGAV, KIT, LIF, LRP1, SMAD4, NOTCH2, P2RY1, PDGFRA, MED1, PRKCA, MAPK1, PTEN, PTPRR, RAP1B, CCL20, SLAMF1, SOX9, TIAM1, TIMP3, TLR4, EZR, SEMA7A, TNFSF11, EIF3A, FGF18, NRP1, AKAP12, RAPGEF2, RANBP9, RASGRP1, SPRY1, SPRY2, TNIP1, GPNMB, FRS2, DSTYK, ERRFI1, CAMK2N1, SLC30A10, LMO3, SEMA6A, PDGFD, SPRED1, NPNT
BP	GO:0031056	regulation of histone modification	36/2564	2.05E-03	ATM, ATRX, BCL6, BRCA1, CAMK2D, CHEK1, FMR1, GATA3, JARID2, LIF, SMAD4, MECP2, KMT2A, MLLT6, NAP1L2, KDM5A, SKI, SNAI2, TP53, VEGFA, RPS6KA5, TRIP12, RNF40, CTCF, MTF2, NIPBL, ZNF451, AUTS2, PHF19, UBR5, RIF1, SETD5, KMT2E, TET1, LRRK2, JDP2
BP	GO:0045793	positive regulation of cell size	7/2564	2.07E-03	ATP7A, EDN1, HSP90AB1, RET, RB1CC1, AKT3, TMEM123
BP	GO:0060736	prostate gland growth	7/2564	2.07E-03	AR, ESR1, FGFR2, PLAG1, PTEN, SOX9, UBE3A
BP	GO:2000615	regulation of histone H3-K9 acetylation	7/2564	2.07E-03	BRCA1, CHEK1, GATA3, SMAD4, KMT2A, NAP1L2, ZNF451

BP	GO:0031109	microtubule polymerization or depolymerization	30/2564	2.14E-03	APC, DYRK1A, FGF13, GOLGA2, STMN1, MAP1B, MAP2, MECP2, MET, MID1, RAC1, SPAST, CDK5R1, RANBP9, MAPRE1, CAMSAP2, EML2, NIN, TPPP3, NDE1, CEP192, TAOK1, SLAIN2, MID1IP1, NDEL1, NAV3, CCSAP, TTBK2, CAMSAP1, MZT1
BP	GO:0031669	cellular response to nutrient levels	53/2564	2.15E-03	ATP2B1, BCL2, BMPR2, CBL, COL1A1, DSC2, EIF2S1, MTOR, FYN, GLUL, HFE, TNC, LAMP2, FADS1, MAP3K5, NFE2L2, OPA1, P2RY1, PIK3C3, MED1, PRKAA1, MAPK1, PTGS2, SNAI2, SRF, KLF10, TP53, TSC1, WNT2B, XBP1, PPM1D, NCOA1, MTMR3, EIF2AK3, DNM1L, NAMPT, SIK2, SZT2, GABARAPL1, SESN1, TNRC6A, DNAJC15, BCL11A, SLC38A2, SSH1, RRAGD, CPEB4, SEH1L, SESN2, LRRK2, SESN3, C12orf66, SIK1
BP	GO:0048701	embryonic cranial skeleton morphogenesis	16/2564	2.15E-03	RUNX2, DLX2, FGFR2, GNAS, HOXA1, SMAD2, MEF2C, MMP16, PDGFRA, SIX1, TGFBR1, TGFBR2, MED12, NIPBL, SLC39A1, SIX4
BP	GO:0010639	negative regulation of organelle organization	80/2564	2.19E-03	ADD3, APC, ATM, ATRX, BRCA1, CAPZA1, CAPZA2, CENPF, CHEK1, DYRK1A, EPS8, ERCC1, FGF13, FXN, HGF, HNRNPC, HNRNPU, IGF1, INSIG1, JARID2, STMN1, LIF, SMAD4, MAP1B, MAP2, MAP4, MET, MID1, MLLT6, MTM1, NPM1, OPA1, PRKAR1A, KDM5A, SKI, SPTAN1, SPTBN1, TMSB4X, TP53, TPR, KAT2B, BUB3, TRIP12, SLIT2, CCP110, TBC1D4, DNM1L, RAD50, WASF2, NME6, VAT1, ARFGEF1, MTF2, MAPRE1, SWAP70, PHF8, CAMSAP2, EML2, ZNF451, TMEM14A, ATAD2, TMOD3, TMOD2, UBR5, TRIAP1, TAOK1, FNIP2, MID1IP1, CEP97, TET1, TNKS2, ANKRD27, NAV3, PHLDB2, LRRK2, MTPN, TTBK2, CAMSAP1, DCP2, GEN1
BP	GO:0032516	positive regulation of phosphoprotein phosphatase activity	10/2564	2.19E-03	CALM1, CALM2, CALM3, MTOR, HSP90AB1, JAK2, PPP1R12A, MAGI2, SLC39A10, PPP1R15B
BP	GO:2000810	regulation of bicellular tight junction assembly	10/2564	2.19E-03	RUNX1, CBFB, GJA1, ROCK1, SNAI2, TJP1, FZD5, CLDN1, ROCK2, OCLN
BP	GO:0048167	regulation of synaptic plasticity	44/2564	2.22E-03	APP, ARF1, CREB1, DBN1, EIF4EBP2, EPHA4, EPHB2, PTK2B, FGF14, FMR1, GSK3B, KCNJ10, KIT, MAP1B, MECP2, MEF2C, RAB8A, MME, NF1, NTRK2, SERPINE2, MAPK1, RELN, PTEN, PTGS2, RARA, SNAP25, SRF, STAU1, STXBP1, RAB11A, RAPGEF2, RIMS3, CPEB3, RAB3GAP1, SHANK2, RIMS1, UNC13A, SLC24A2, NSMF, SSH1, YTHDF1, JPH3, TSHZ3
BP	GO:2000058	regulation of ubiquitin-dependent protein catabolic process	37/2564	2.22E-03	CSNK2A1, PTK2B, FOXF2, GNA12, GSK3B, HFE, UBE2K, HSP90AB1, SMAD7, MTM1, NFE2L2, PTEN, RAD23A, UBE3A, VCP, WNT1, USP7, RNF14, SOCS5, N4BP1, RNF144A, TRIB1, RNF139, RYBP, ARIH1, TRIB2, HIPK2, SENP1, UBQLN2, UBQLN1, UBXN1, WAC, LRRK2, SOCS4, RNF19B, RNF217, RNF144B
BP	GO:1904062	regulation of cation transmembrane transport	71/2564	2.27E-03	ANK3, APP, ARF1, ATP1A2, ATP1B1, ATP2B4, ATP7A, CACNA1C, CACNA2D1, CALM1, CALM2, CALM3, CAMK2D, CLIC2, CTSS, DIAPH1, DMD, STOM, EPHB2, F2R, PTK2B, FGF12, FGF14, FKBP1A, FMR1, FYN, G6PD, GEM, GLRX, GRIA2, HSPA2, KCNC2, KCNJ2, KIF5B, MEF2C, MYO5A, NEDD4, PDE4D, PIK3CG, PKD2, PLCG1, PRKCE, RELN, PTEN, PTPN3, SLC9A1, TMSB4X, UTRN, SLMAP, OXSR1, SHANK2, GPD1L, STK39, UBQLN1, KCNIP3, MINK1, CAB39, KLHL24, TMEM38B, JPH1, JPH3, HECW2, SLC30A5, WNK1, WNK3, SESTD1, OSR1, ALG10B, ANO6, LRRC55, KCNRG
BP	GO:0032868	response to insulin	59/2564	2.28E-03	APC, ATP2B1, ATP6V1A, ZFP36L1, EGR1, EIF4EBP2, FER, FOXO3, MTOR, GAB1, GNAI2, GRB14, GSK3B, IGF1R, INPPL1, INSR, RAB8A, MYO5A, OPA1, PIK3C2A, PIK3R1, PKM, PPARA, PRKAA1, PRKCB, PRKDC, PTEN, PTPRE, RPS6KB1, SRSF6, SLC9A1, SORL1, SP1, STAT1, TSC1, XBP1, PIK3R3, USO1, SOCS2, KAT2B, ATP6V1G1, EPM2AIP1, TBC1D4, SORBS1, RAB10, SIK2, RHOQ, APPL1, ATP6V1H, ERRFI1, PHIP, DENND4C, ZNF106, NDEL1, SESN2, ACVR1C, CPEB2, SESN3, STXBP4
BP	GO:0040019	positive regulation of embryonic development	15/2564	2.32E-03	AR, DAG1, GATA3, IGF1, PAFAH1B1, SIX1, NR2C2, WNT1, WNT2B, B4GALT5, PLCB1, SIX4, PHLDB2, OSR1, AMOT
BP	GO:0046578	regulation of Ras protein signal transduction	53/2564	2.36E-03	ABL2, ABR, ARF6, BCL6, CBL, CRK, ECT2, EPHB2, EPS8, F2R, F2RL1, LPAR4, NRG1, IGF1, ITGA3, JAK2, STMN1, MET, NF1, NOTCH2, OPHN1, RAC1, RASA1, ROBO1, SOS2, TGFB2, TIAM1, TRIO, SHOC2, CUL3, NRP1, MAP4K4, IQSEC1, MFN2, RASGRP1, RASA4, SPRY1, SPRY2, NET1, VAV3, ARFGEF1, AKAP13, PSD3, ARHGEF12, AUTS2, FBXO8, ITSN2, ARHGEF3, RALGPS2, CDC42SE1, CDC42SE2, PLEKHG1, ALS2
BP	GO:0060236	regulation of mitotic spindle organization	14/2564	2.48E-03	CLTC, HNRNPU, TPR, SMC1A, STAG1, STAG2, TPX2, CHMP2B, GPSM2, CHMP5, CHMP1B, CEP97, MAP9, CCSAP

BP	GO:0034599	cellular response to oxidative stress	64/2564	2.48E-03	ANXA1, ATP7A, AXL, BCL2, CCNA2, CRK, CYP1B1, ECT2, EIF2S1, ETS1, EZH2, FANCC, FER, FOXO3, FXN, FYN, G6PD, HGF, JAK2, KCNC2, MCL1, MAP3K5, MET, MMP2, MTR, NFE2L2, NR4A2, PAWR, PDGFRA, PKD2, PRKAA1, MAPK1, PTPRK, REST, SOD2, STAU1, TLR4, TNFAIP3, TP53, TSC1, WNT1, PCGF2, FZD1, PRKRA, NET1, LANCL1, CAMKK2, ZNF277, SETX, SZT2, SLC7A11, UBQLN1, OXR1, SMPD3, PLEKHA1, PDGFD, SESN2, CHD6, TP53INP1, LRRK2, CPEB2, NCOA7, VKORC1L1, MSRB3
BP	GO:0010171	body morphogenesis	17/2564	2.48E-03	ASPH, COL1A1, DAG1, EP300, GNAS, MMP2, PDGFRA, SKI, SGPL1, RAB3GAP1, NIPBL, TIPARP, FLVCR1, LEF1, PLEKHA1, GREM2, PHLDB2
BP	GO:0046854	phosphatidylinositol phosphorylation	17/2564	2.48E-03	PIK3C2A, PIK3C3, PIK3CB, PIK3CG, PIK3R1, PIP4K2A, PIP5K1A, PIK3R3, SOCS2, SOCS6, SOCS5, SMG1, EFR3A, SOCS7, PI4K2B, PIKFYVE, FAM126B
BP	GO:0032413	negative regulation of ion transmembrane transporter activity	23/2564	2.48E-03	ANK3, ATP1A2, CALM1, CALM2, CALM3, CAMK2D, CLIC2, EPHB2, FGF12, FMR1, GEM, NEDD4, PKD2, PRKCE, PTEN, OXSR1, STK39, UBQLN1, CAB39, GOPC, HECW2, OSR1, KCNRG
BP	GO:0061333	renal tubule morphogenesis	23/2564	2.48E-03	BCL2, COL4A1, FGF2, GATA3, SMAD4, MEF2C, PBX1, PKD2, PTCH1, SIX1, SOX9, VEGFA, WNT1, WNT2B, MAGED1, KLHL3, SIX4, AHI1, LGR4, LZTS2, OSR1, NPNT, FMN1
BP	GO:0072028	nephron morphogenesis	23/2564	2.48E-03	BCL2, FGF2, GATA3, LIF, SMAD4, PBX1, PKD2, PTCH1, SIX1, SOX9, STAT1, VEGFA, WNT1, WNT2B, MAGED1, KLHL3, SIX4, AHI1, LGR4, LZTS2, OSR1, NPNT, FMN1
BP	GO:1901879	regulation of protein depolymerization	24/2564	2.54E-03	ADD3, APC, ASPH, CAPZA1, CAPZA2, EPS8, F2RL1, FGF13, MAP1B, MID1, SPAST, SPTAN1, SPTBN1, SEMA5A, SWAP70, CAMSAP2, TMOD3, TMOD2, TAOK1, MID1IP1, NAV3, MTPN, TTBK2, CAMSAP1
BP	GO:2000515	negative regulation of CD4-positive, alpha-beta T cell activation	12/2564	2.57E-03	ANXA1, ARG2, BCL6, RUNX1, RUNX3, CBFB, HMGB1, SMAD7, TNFSF4, SOCS5, CD274, RC3H1
BP	GO:0043473	pigmentation	27/2564	2.57E-03	AP1G1, SHROOM2, ATP7A, BCL2, EN1, KIT, MEF2C, MITF, MYO5A, NF1, RAB1A, RAB27B, SNAI2, SPARC, RAB11A, USP13, ZEB2, BCL2L11, SZT2, SNAPIN, LEF1, KIF13A, VPS33A, VANGL1, ANKRD27, HPS4, MYSM1
BP	GO:0050848	regulation of calcium-mediated signaling	27/2564	2.57E-03	ATP2B4, CALM1, CALM2, CALM3, CAMK2D, CLIC2, DMD, ERBB3, PTK2B, FKBP1A, MTOR, GSK3B, NRG1, IGF1, ITPR1, MYO5A, PDE4D, PKD2, PTBP1, SLC9A1, NFAT5, CAMTA1, LMCD1, JPH1, JPH3, LRRK2, SPPL3
BP	GO:0048704	embryonic skeletal system morphogenesis	26/2564	2.57E-03	RUNX2, DLX2, FGFR2, GNAS, HOXA1, HOXA5, HOXC9, HOXC11, HOXD10, SMAD2, MEF2C, MMP16, PDGFRA, SIX1, ZEB1, TGFBR1, TGFBR2, PCGF2, MED12, SATB2, NIPBL, SLC39A1, FLVCR1, SIX4, ALX4, OSR1
BP	GO:0034504	protein localization to nucleus	57/2564	2.60E-03	CBLB, COL1A1, ECT2, FYN, GLUL, GSK3B, HNRNPU, KPNB1, KPNA3, KPNA4, TNPO1, IPO5, LIF, NF1, NFKBIA, PIK3R1, MED1, PPP3CA, MAPK1, PTGS2, RAN, SIX1, SKP1, SOX9, SP100, STAT3, TP53, TPR, XPO1, DCLK1, NOLC1, EIF2AK3, IPO7, SYNE1, SUN1, CTDNEP1, CD2AP, KPNA6, APPL1, TOR1AIP1, PYGO1, IPO11, ZBTB7A, UBR5, SIX4, RBM22, NXT2, OTUD7B, SESN2, RPAIN, LZTS2, TBRG1, LRRK2, TOR1AIP2, PIKFYVE, CNEP1R1, RGPD8
BP	GO:0045930	negative regulation of mitotic cell cycle	70/2564	2.62E-03	APC, ATM, ATRX, CCND1, BCL2, BCL6, BRCA1, ZFP36L1, ZFP36L2, BTG1, CDK6, CENPF, CHEK1, FOXN3, ATF2, E2F1, EP300, EZH2, HUS1, MDM4, MSH2, NKX3-1, CNOT2, CNOT4, PKD2, PRKDC, PSMD1, PTEN, PTPN3, RB1, RBL1, SKP1, SOX4, TFDP1, TFDP2, TP53, TPR, WEE1, BTG2, FZD3, HMGA2, CDC14A, BUB3, MAGI2, NME6, CTDSPL, GPNMB, BTG3, CNOT1, SYF2, GIGYF2, CNOT7, DONSON, TRIAP1, HECA, NLE1, TIPIN, USP47, CNOT6, TAOK1, YTHDC2, NABP1, ZNF655, CDC73, MCPH1, TICRR, DCUN1D3, NACC2, CNOT6L, GEN1
BP	GO:0043297	apical junction assembly	20/2564	2.62E-03	APC, RHOA, RUNX1, CBFB, ECT2, GJA1, PKN2, ROCK1, SNAI2, SRF, STRN, TJP1, VCL, FZD5, CLDN1, ROCK2, MPP5, PARD6B, MTDH, OCLN
BP	GO:0044783	G1 DNA damage checkpoint	20/2564	2.62E-03	ATM, CCND1, E2F1, EP300, MDM4, CNOT2, CNOT4, PRKDC, SOX4, TFDP1, TFDP2, TP53, BTG2, CNOT1, GIGYF2, CNOT7, WAC, TRIAP1, CNOT6, CNOT6L
BP	GO:0030856	regulation of epithelial cell differentiation	38/2564	2.69E-03	JAG1, CCND1, ZFP36L1, BTG1, RUNX1, CBFB, EZH2, GATA3, GSK3B, ID1, LIF, MAFG, SERPINE1, MED1, PTCH1, ROCK1, SRSF6, SOX9, STAT1, TBX3, ZEB1, VEGFA, VEZF1, NCOA3, KLF7, TP63, ROCK2, CLOCK, ZEB2, YAP1, WWTR1, GRHL1, ERRFI1, AHI1, ESRP1, APOLD1, KIAA1109, OSR1

BP	GO:1903364	positive regulation of cellular protein catabolic process	35/2564	2.73E-03	PTK2B, FMR1, GSK3B, HSP90AA1, LDLR, LRP1, SMAD7, MSN, NFE2L2, PTEN, RAD23A, TNFAIP3, VCP, EZR, USP13, RNF14, SOCS5, RNF144A, RNF40, TRIB1, FAF1, RNF139, ARIH1, FBXL5, TRIB2, UBQLN2, UBQLN1, RNFT1, TMEM259, LRRK2, SOCS4, RNF19B, RNF217, TMTC3, RNF144B
BP	GO:0007173	epidermal growth factor receptor signaling pathway	31/2564	2.75E-03	APP, FASLG, AREG, ARF4, CBL, CBLB, CDC42, DOK1, EREG, PTK2B, FER, GAB1, HIP1, PIK3C2A, PIK3R1, PLCG1, PTPN3, PTPN12, PTPRJ, SOX9, ADAM17, RPS6KA5, SOCS5, SPRY1, SPRY2, STAM2, SH3KBP1, ERRFI1, SLC30A10, MVB12B, SOCS4
BP	GO:0030282	bone mineralization	30/2564	2.84E-03	ACVR2B, ATP2B1, BMPR1A, BMPR1B, BMPR2, PTK2B, FBN2, FGFR3, FGFR2, GJA1, GPM6B, IGF1, LOX, MEF2C, NELL1, DDR2, PTGS2, SOX9, KLF10, EIF2AK3, MINPP1, GPNMB, GREM1, TMEM38B, LGR4, SMPD3, TXLNG, ANKH, OSR1, ANO6
BP	GO:0003231	cardiac ventricle development	33/2564	2.97E-03	JAG1, PRDM1, BMPR1A, BMPR2, FGFR2, FKBP1A, GATA3, NRG1, ID2, RBPJ, SMAD4, SMAD7, MDM4, MEF2C, MED1, PTK7, ROBO1, SFRP2, SOX4, TBX3, TGFB2, TGFBR1, TGFBR2, WNT5A, LUZP1, FZD1, SLIT2, SEMA3C, FRS2, HECTD1, SAV1, DCTN5, TMEM65
BP	GO:0060420	regulation of heart growth	24/2564	3.03E-03	ACACB, BMPR1A, EDN1, ERBB4, FGF2, FGFR2, MTOR, G6PD, GATA6, GJA1, IGF1, RBPJ, JARID2, MEF2C, MEIS1, PPARA, MAPK1, PTEN, TGFBR1, TGFBR2, YY1, BASP1, YAP1, SAV1
BP	GO:0051893	regulation of focal adhesion assembly	19/2564	3.03E-03	RHOA, GPM6B, LIMS1, LRP1, PTEN, PTPRJ, RAC1, ROCK1, SLC9A1, THBS1, TSC1, VEGFA, NRP1, MAP4K4, ROCK2, SLK, CORO1C, PHLDB2, FMN1
BP	GO:0090109	regulation of cell-substrate junction assembly	19/2564	3.03E-03	RHOA, GPM6B, LIMS1, LRP1, PTEN, PTPRJ, RAC1, ROCK1, SLC9A1, THBS1, TSC1, VEGFA, NRP1, MAP4K4, ROCK2, SLK, CORO1C, PHLDB2, FMN1
BP	GO:1901216	positive regulation of neuron death	26/2564	3.03E-03	FASLG, RHOA, ATM, ATF2, EFNB2, EGR1, EIF2S1, FOXO3, MTOR, FYN, GSK3B, MCL1, MAP3K5, NF1, REST, MAP2K4, TGFB2, TLR4, TP53, TP53BP2, WNT5A, PICALM, CDK5R1, BCL2L11, SSH1, DDIT4
BP	GO:0030326	embryonic limb morphogenesis	32/2564	3.07E-03	BMPR1A, CACNA1C, RUNX2, CREBBP, EN1, FBN2, GJA1, GNA12, GNAS, HOXA9, HOXC11, HOXD10, SMAD4, MBNL1, PBX1, PITX1, MED1, PTCH1, SFRP2, SKI, TBX3, TGFB2, WNT5A, RECK, TP63, BCL2L11, NIPBL, FLVCR1, LEF1, ALX4, LMBR1, OSR1
BP	GO:0035113	embryonic appendage morphogenesis	32/2564	3.07E-03	BMPR1A, CACNA1C, RUNX2, CREBBP, EN1, FBN2, GJA1, GNA12, GNAS, HOXA9, HOXC11, HOXD10, SMAD4, MBNL1, PBX1, PITX1, MED1, PTCH1, SFRP2, SKI, TBX3, TGFB2, WNT5A, RECK, TP63, BCL2L11, NIPBL, FLVCR1, LEF1, ALX4, LMBR1, OSR1
BP	GO:0006402	mRNA catabolic process	74/2564	3.11E-03	ATM, ZFP36L1, ZFP36L2, DDX5, DDX6, E2F1, ETF1, FMR1, MTOR, GSPT1, HNRNPC, HNRNPU, TNPO1, RPSA, CNOT2, CNOT4, NPM1, PPP2R2A, PRKCA, PSMD1, RNASEL, ROCK1, RPL22, RPL28, RPL37, RPS16, RPS27A, VIM, XPO1, YWHAB, BTG2, FXR1, PABPC4, ROCK2, PUM1, SMG7, PAN2, RBM8A, TOB1, HNRNPR, IGF2BP3, HBS1L, CPEB3, DIS3, CNOT1, SAMD4A, SMG1, TNRC6B, LARP1, PUM2, GIGYF2, SERBP1, AGO1, PABPC1, AGO2, TNRC6A, CNOT7, MYEF2, LSM7, DCP1A, ZC3HAV1, CNOT6, TNRC6C, TRIM71, NUDT16, RC3H1, DCP2, AGO3, AGO4, PDE12, RBM24, CNOT6L, YTHDF3, PAN3
BP	GO:0051236	establishment of RNA localization	45/2564	3.20E-03	ATM, ZFP36L1, FMR1, GLE1, HNRNPA2B1, HNRNPU, AGFG1, KIF5C, NPM1, PURA, RAN, SRSF1, SRSF2, SRSF6, SRSF7, TGFBR2, TPR, TSC1, XPO1, SLBP, QKI, ZC3H11A, SMG7, G3BP2, RBM8A, NXF1, IGF2BP3, KHDRBS1, XPO7, SMG1, BICD2, CPSF2, RBM27, NDC1, NXT2, PARP11, THOC2, XPO5, RBM26, SEH1L, FYTTD1, LTV1, YTHDC1, HNRNPA3, NUP43
BP	GO:0001825	blastocyst formation	14/2564	3.27E-03	GABPA, TM4SF1, MFNG, CNOT2, SKIL, SP3, SRF, CUL3, MFN2, RRP7A, NLE1, RTN4, TET1, RPL7L1
BP	GO:0032984	protein-containing complex disassembly	68/2564	3.29E-03	ADD3, APC, ASPH, CAPZA1, CAPZA2, EPS8, ETF1, F2RL1, FGF13, GLE1, GSK3B, GSPT1, IGF1R, INSR, KIF5B, LAMP2, STMN1, MAP1B, MID1, NSF, SH3GL1, SMARCC2, SMARCD1, SMARCE1, SPAST, SPTAN1, SPTBN1, VCP, WNT1, FZD5, ARID1A, FZD1, SEMA5A, IST1, MRPL19, IRAK3, SETX, SWAP70, CAMSAP2, SNAPIN, GABARAPL1, CHMP2B, TMOD3, TMOD2, UBQLN1, MRPL4, CHMP5, VTA1, MRPS33, MTRF1L, DDIT4, PBRM1, OGFOD1, CHMP1B, TAOK1, EPG5, MID1IP1, MRPS35, MRPS14, MRPL44, VPS33A, FYCO1, NAV3, CCSAP, MTPN, TTBK2, CAMSAP1, ARID2
BP	GO:0036119	response to platelet-derived growth factor	10/2564	3.29E-03	ATP7A, CBL, CCNA2, CREB1, FER, FYN, HAS2, YES1, ERRFI1, PDGFD

BP	GO:0051966	regulation of synaptic transmission, glutamatergic	21/2564	3.37E-03	ADCYAP1, ATP1A2, CDH2, PTK2B, GLUL, GRIK3, GRM3, MEF2C, OPHN1, SERPINE2, RELN, PTGS2, STXBP1, NRXN1, RAB3GAP1, SHANK2, UNC13A, TSHZ3, ATAD1, LRRK2, TPRG1L
BP	GO:0030183	B cell differentiation	33/2564	3.38E-03	ATM, BCL2, BCL6, ZFP36L1, ZFP36L2, CEBPG, KLF6, EP300, PTK2B, ID2, RBPJ, INHBA, KIT, MFNG, MSH2, NOTCH2, PIK3R1, PRKDC, PTPRJ, SP3, ADAM17, TP53, TPD52, XBP1, MALT1, ZBTB1, PLCL2, CLCF1, ZBTB7A, DOCK10, DOCK11, ATP11C, IRF2BP2
BP	GO:1902807	negative regulation of cell cycle G1/S phase transition	33/2564	3.38E-03	ATM, CCND1, BCL2, CDK6, E2F1, EP300, EZH2, MDM4, CNOT2, CNOT4, PKD2, PRKDC, PTEN, RB1, RBL1, SOX4, TFDP1, TFDP2, TP53, WEE1, BTG2, CTDSPL, GPNMB, CNOT1, GIGYF2, CNOT7, TRIAP1, CNOT6, ZNF655, CDC73, DCUN1D3, NACC2, CNOT6L
BP	GO:0031054	pre-miRNA processing	8/2564	3.42E-03	PRKRA, DICER1, AGO1, AGO2, MRPL44, AGO3, AGO4, LIN28B
BP	GO:0060688	regulation of morphogenesis of a branching structure	18/2564	3.43E-03	AR, ESR1, FGFR2, HGF, SIX1, SNAI2, SOX9, VEGFA, WNT5A, WNT2B, MAGED1, SIX4, BCL11A, LGR4, BTBD7, RTN4, NTN4, LRRK2
BP	GO:0070936	protein K48-linked ubiquitination	18/2564	3.43E-03	UBE2K, RNF4, SKP2, TNFAIP3, UBE2A, UBE2D1, UBE2D3, UBE2E2, UBE2H, UBE3A, KLHL3, UBR5, UBE2D4, TRIM44, PELI1, SYVN1, UBE2Q2, RNF187
BP	GO:0090183	regulation of kidney development	18/2564	3.43E-03	EGR1, GATA3, IL6R, LIF, RET, SIX1, SOX9, STAT1, VEGFA, WNT2B, MAGED1, BASP1, YAP1, WWTR1, SIX4, LGR4, PDGFD, OSR1
BP	GO:0010765	positive regulation of sodium ion transport	13/2564	3.43E-03	ANK3, ARF1, ATP1B1, DMD, FGF12, GLRX, KIF5B, MLLT6, SLC9A1, AHCYL1, GPD1L, WNK1, WNK3
BP	GO:0010922	positive regulation of phosphatase activity	13/2564	3.43E-03	CALM1, CALM2, CALM3, MTOR, HSP90AB1, JAK2, MEF2C, PPP1R12A, MAGI2, SLC39A10, MTMR9, PPP1R15B, NPNT
BP	GO:0120034	positive regulation of plasma membrane bounded cell projection assembly	27/2564	3.46E-03	APC, ATP7A, CDC42, EPS8, F2RL1, FMR1, MTOR, GPM6A, KIT, RAC1, RALA, SRF, TGFBR1, WNT1, NRP1, WASL, CCP110, WASF2, CDC42EP3, NCKAP1, RHOQ, AUTS2, FNBP1L, CCDC88A, AKIRIN1, NDEL1, DOCK11
BP	GO:0035722	interleukin-12-mediated signaling pathway	16/2564	3.46E-03	ARF1, CAPZA1, CDC42, HNRNPA2B1, HNRNPF, IL12A, JAK2, LMNB1, MSN, MTAP, PAK2, RALA, RAP1B, SOD2, PLCB1, PDCD4
BP	GO:0042551	neuron maturation	16/2564	3.46E-03	APP, BCL2, MTOR, MECP2, NRCAM, NR4A2, OPA1, RB1, RET, B4GALT6, B4GALT5, CNTNAP2, BCL11A, NTN4, LRRK2, GLDN
BP	GO:0047496	vesicle transport along microtubule	16/2564	3.46E-03	KIF5B, MAP2, PAFAH1B1, RAB1A, KIF3B, KIF23, RASGRP1, AP3M2, KIF1B, SNAPIN, AP3M1, NDE1, KIF13A, TRAK2, FYCO1, NDEL1
BP	GO:0070849	response to epidermal growth factor	16/2564	3.46E-03	ZFP36L1, ZFP36L2, CBL, COL1A1, EEF1A1, ERBB2, ERBB4, ID1, PLCG1, MED1, MAPK1, PTPN12, SNAI2, SOX9, TPR, ERRFI1
BP	GO:0031954	positive regulation of protein	11/2564	3.46E-03	CALM1, CALM2, CALM3, RAP2A, RAP2B, VEGFA, RAD50, GPNMB, GREM1, RAP2C, PDGFD

		autophosphorylation			
BP	GO:0060314	regulation of ryanodine-sensitive calcium-release channel activity	11/2564	3.46E-03	CALM1, CALM2, CALM3, CAMK2D, CLIC2, DMD, FKBP1A, PDE4D, PKD2, JPH1, JPH3
BP	GO:0060740	prostate gland epithelium morphogenesis	11/2564	3.46E-03	AR, ESR1, FGFR2, FOXA1, TNC, ID4, NKX3-1, SOX9, WNT5A, TP63, FRS2
BP	GO:0055006	cardiac cell development	26/2564	3.48E-03	JAG1, CXADR, EDN1, MTOR, G6PD, HNRNPU, IGF1, SMAD4, MEF2A, MYH10, PDGFRA, PPARA, MAP2K4, SGCB, SGCD, SRF, TBX3, VEGFA, YY1, SORBS2, SPRY1, NEBL, PDLIM5, AKAP13, PDCD4, MYLK3
BP	GO:1903076	regulation of protein localization to plasma membrane	26/2564	3.48E-03	ACTB, AR, ARF6, CLTC, EPHB2, ACSL3, ITGA3, KIF5B, LRP1, PIK3R1, PPP2R5A, PRKCE, SPTBN1, EZR, PICALM, STX7, NUMB, RAB11A, TMEM59, VTI1B, SORBS1, RAB11FIP2, RHOQ, APPL1, GOPC, WNK3
BP	GO:0010586	miRNA metabolic process	12/2564	3.49E-03	NFKB1, RAN, PRKRA, DICER1, AGO1, AGO2, DGCR8, XPO5, TRIM71, RC3H1, AGO4, LIN28B
BP	GO:0031058	positive regulation of histone modification	25/2564	3.49E-03	ATM, BCL6, BRCA1, FMR1, GATA3, JARID2, LIF, SMAD4, MECP2, KMT2A, NAP1L2, SNAI2, TP53, VEGFA, RPS6KA5, RNF40, MTF2, NIPBL, AUTS2, PHF19, RIF1, KMT2E, TET1, LRRK2, JDP2
BP	GO:1903050	regulation of proteolysis involved in cellular protein catabolic process	48/2564	3.50E-03	CSNK2A1, EPHA4, PTK2B, FOXF2, FMR1, GNA12, GSK3B, HFE, UBE2K, HSP90AB1, SMAD7, MTM1, NFE2L2, OPHN1, PTEN, RAD23A, TMF1, UBE3A, VCP, WNT1, USP7, USP13, RNF14, SOCS5, N4BP1, RNF144A, RNF40, TRIB1, RNF139, RYBP, ARIH1, TRIB2, HIPK2, USP25, SENP1, UBQLN2, UBQLN1, UBXN1, RNFT1, WAC, YOD1, TMEM259, LRRK2, SOCS4, RNF19B, RNF217, TMTC3, RNF144B
BP	GO:2001020	regulation of response to DNA damage stimulus	48/2564	3.50E-03	ATM, BCL2, BID, BRCA1, CD44, CEBPG, CHEK1, DDX5, DYRK1A, ERCC1, EYA4, FMR1, HMGB1, HNRNPK, MCL1, NKX3-1, NPAS2, POLH, PRKDC, SFRP2, SKIL, SNAI2, NEK4, TP53, TP53BP1, TPT1, UBE2V2, USP1, DEK, HMGA2, TRIP12, RAD51AP1, SMG1, SMCHD1, UBR5, TRIAP1, USP47, FIGN, RIF1, SPIRE1, KLHL15, NUDT16, NACC2, PPP4R2, SPRED1, RNF168, SPRED2, RNF169
BP	GO:0051271	negative regulation of cellular component movement	77/2564	3.52E-03	ABR, ACTN1, ADARB1, JAG1, RHOA, BCL2, BMPR1A, KRIT1, CRK, CYP1B1, DAG1, ERBB4, FGF2, FOXO3, GATA3, NRG1, HMGB1, IGFBP5, LRP1, SMAD7, MECP2, MEF2C, MITF, NF1, NFE2L2, SERPINE1, PRKG1, PTEN, PTPRG, PTPRJ, PTPRK, PTPRM, PTPRR, RAP2A, RAP2B, ROBO1, SFRP2, SP100, SRF, STAT3, NR2F2, THBS1, VCL, WNT5A, RECK, SEMA7A, NRP1, WASL, SEMA5A, SLIT2, MAGI2, TRIB1, SEMA4D, SEMA3C, IL24, ABHD2, PTPRT, LRCH1, PLCB1, SRGAP2, GTPBP4, CORO1C, CLIC4, GREM1, SPOCK3, SEMA4C, AP1AR, SEMA6A, RAP2C, MMRN2, NAV3, PHLDB2, TP53INP1, ACVR1C, SPRED1, ARID2, MIA3
BP	GO:0006661	phosphatidylinositol biosynthetic process	30/2564	3.69E-03	ARF1, ARF3, ATM, CDS1, FGF2, INPP4A, INPPL1, MTM1, OCRL, PIK3C2A, PIK3C3, PIK3CB, PIK3CG, PIK3R1, PIP4K2A, PTEN, PIP5K1A, PIK3R3, MTMR3, MTMR6, SACM1L, RAB14, MTMR12, PIGX, PI4K2B, PLEKHA1, MTMR9, PGAP1, PLEKHA8, PIKFYVE
BP	GO:0035148	tube formation	36/2564	3.71E-03	APAF1, FGFR2, GATA3, HOXA1, NFIB, PRKACB, PTCH1, PTK7, RALA, RARA, RET, SFRP2, SIX1, SKI, SOX4, SOX9, STK3, STK4, TGFB2, TSC1, KDM6A, VEGFA, WNT5A, LUZP1, FZD3, ARID1A, FZD1, ZEB2, MED12, BCL2L11, DICER1, SIX4, SEMA4C, MIB1, OSR1, TRIM71
BP	GO:0051216	cartilage development	47/2564	3.74E-03	ATP7A, BMPR1A, BMPR1B, BMPR2, RUNX2, RUNX3, CD44, COL1A1, COL12A1, DLX2, EDN1, FGF2, FGFR3, GLG1, GNAS, HOXA5, ITGB8, LUM, SMAD1, SMAD5, MEF2C, MEF2D, NFIB, PITX1, RARA, SFRP2, SNAI2, SOX5, SOX9, SRF, ZEB1, TGFBI, TGFBR1, TGFBR2, TRPS1, WNT5A, WNT2B, HMGA2, FGF18, EIF2AK3, SATB2, GREM1, SCARA3, SMPD3, SOX6, IFT80, OSR1
BP	GO:0045598	regulation of fat cell differentiation	33/2564	3.76E-03	JAG1, ZFP36L1, ZFP36L2, KLF5, CREB1, E2F1, MTOR, GATA3, HNRNPU, ID2, ID4, INSIG1, PTGS2, RORA, SFRP2, SNAI2, STK3, STK4, TRIO, WNT1, WNT5A, XBP1, ANKRD26, WWTR1, TRIB2, ASXL2, LMO3, SAV1, JDP2, TMEM64, NAPEPLD, ZADH2, SH3PXD2B

BP	GO:0033173	calcineurin-NFAT signaling cascade	15/2564	3.81E-03	ATP2B4, ERBB3, MTOR, GSK3B, NRG1, IGF1, NFATC3, PPP3CA, PPP3R1, PTBP1, SLC9A1, NFAT5, CAMTA1, LMCD1, SPPL3
BP	GO:0006513	protein monoubiquitination	20/2564	3.81E-03	BMI1, CBL, SKP1, UBE2D3, PCGF2, CUL4B, CUL3, RNF40, PDCD6, RYBP, FBXL2, WAC, DTL, UBE2W, FANCM, UBE2O, CDC73, PCGF5, KBTBD8, RNF168
BP	GO:1901880	negative regulation of protein depolymerization	20/2564	3.81E-03	ADD3, APC, CAPZA1, CAPZA2, EPS8, FGF13, MAP1B, MID1, SPTAN1, SPTBN1, SWAP70, CAMSAP2, TMOD3, TMOD2, TAOK1, MID1IP1, NAV3, MTPN, TTBK2, CAMSAP1
BP	GO:0007626	locomotory behavior	45/2564	3.81E-03	APP, ZFHX3, ATP1A2, ATP7A, EGR1, EN1, EPHA4, CLN8, EPS8, FGF12, FXN, MTOR, GAD1, GLRB, NRG1, HOXD10, ID2, KCNJ10, MECP2, MEIS1, MYO5A, NOVA1, NR4A2, PAFAH1B1, PEX13, PRKCE, PTEN, SNAP25, STRN, TSC1, FZD4, NCOR1, PUM1, NCOA2, CHL1, DDHD2, GIGYF2, HIPK2, ADAM22, CLN6, OXR1, ANKH, ARRDC3, ALS2, LRRK2
BP	GO:0030514	negative regulation of BMP signaling pathway	17/2564	3.81E-03	FBN1, SMAD7, PPM1A, SFRP2, SKI, SKIL, SORL1, WNT1, WNT5A, FZD1, TOB1, GREM1, HIPK2, CTDSPL2, TRIM33, GREM2, SMURF2
BP	GO:0032252	secretory granule localization	7/2564	3.81E-03	KIF5B, MAP2, MYO5A, PIK3CG, USO1, RASGRP1, KIF1B
BP	GO:0071679	commissural neuron axon guidance	7/2564	3.81E-03	DAG1, EPHB2, NFIB, PTCH1, VEGFA, FZD3, NRP1
BP	GO:2000650	negative regulation of sodium ion transmembrane transporter activity	7/2564	3.81E-03	ATP1A2, CAMK2D, NEDD4, PRKCE, STK39, HECW2, OSR1
BP	GO:1901342	regulation of vasculature development	83/2564	3.94E-03	ADAM10, ANXA1, FASLG, RHOA, BRCA1, BTG1, RUNX1, KRIT1, ATF2, CYP1B1, EFNB2, EGR1, ERBB2, ETS1, PTK2B, FGF2, FLT1, GAB1, GATA6, GLUL, GTF2I, HGF, HOXA5, ID1, IL6R, ITGB8, KIT, SMAD1, MECP2, NF1, NFATC3, NFE2L2, SERPINE1, PIK3C2A, PKM, PLCG1, PRKCA, PRKCB, PTGS2, PTPRM, ROCK1, SFRP2, SOD2, SP1, SP100, SPARC, STAT1, STAT3, TGFB2, TGFBR2, THBS1, TNFAIP3, VEGFA, VEGFB, WNT5A, XBP1, ADAM12, HMGA2, RECK, FGF18, NRP1, SEMA5A, ROCK2, RAPGEF2, AKT3, PDCD6, SPRY2, GPNMB, SASH1, DDAH1, AGO1, AGO2, PDCD4, HIPK2, ERAP1, AGGF1, SEMA6A, VASH2, MMRN2, PDGFD, MTDH, AMOT, SPRED1
BP	GO:0046632	alpha-beta T cell differentiation	27/2564	3.95E-03	ANXA1, RHOA, ATP7A, BCL2, BCL6, PRDM1, RUNX1, RUNX3, CBFB, MTOR, GATA3, HMGB1, SMAD7, RARA, RORA, RPL22, SATB1, STAT3, TGFBR2, TNFSF4, SOCS5, MALT1, FOXP1, LEF1, SH3RF1, BCL11B, RC3H1
BP	GO:0045766	positive regulation of angiogenesis	46/2564	3.95E-03	ANXA1, BRCA1, BTG1, RUNX1, CYP1B1, ETS1, PTK2B, FGF2, FLT1, GAB1, GATA6, HGF, ITGB8, SMAD1, NFE2L2, SERPINE1, PIK3C2A, PKM, PLCG1, PRKCA, PRKCB, PTGS2, SFRP2, SP1, STAT3, TGFBR2, THBS1, VEGFA, VEGFB, WNT5A, XBP1, ADAM12, HMGA2, FGF18, NRP1, SEMA5A, AKT3, PDCD6, SASH1, DDAH1, AGO2, HIPK2, ERAP1, AGGF1, VASH2, MTDH
BP	GO:0050680	negative regulation of epithelial cell proliferation	39/2564	3.95E-03	AR, KLF9, RUNX3, KRIT1, CDK6, ATF2, EFNB2, EREG, FGFR2, FLT1, GATA3, GJA1, MEF2C, NF1, NFIB, NKX3-1, MED1, PTCH1, PTEN, PTPRK, PTPRM, RB1, ROBO1, SFRP2, SNAI2, SOX2, SOX9, SPARC, STAT1, NR2F2, TGFB2, TGFBR1, THBS1, WNT5A, SCG2, MAGED1, IFT80, SAV1, CDC73
BP	GO:0043542	endothelial cell migration	58/2564	3.98E-03	ANXA1, RHOA, BMPR2, KRIT1, CYP1B1, EDN1, EFNB2, EPHB4, ETS1, PTK2B, FGF2, GATA3, GLUL, HMGB1, ID1, LGALS8, MECP2, MEF2C, MET, MYH9, NF1, NFE2L2, PIK3C2A, PLCG1, PRKCA, MAP2K3, PTEN, PTGS2, PTPRM, ROBO1, SP1, SP100, SPARC, SRF, ADAM17, NR2F2, TGFBR1, THBS1, TMSB4X, VEGFA, WNT5A, SCG2, PIK3R3, FGF18, NRP1, SEMA5A, SLIT2, ROCK2, AKT3, PDCD6, SASH1, GREM1, FOXP1, MMRN2, AMOT, AMOTL1, SPRED1, MIA3
BP	GO:0030219	megakaryocyte differentiation	26/2564	4.00E-03	RUNX1, CBFB, EP300, GABPA, HMGB2, KIT, LOX, MEF2C, MEIS1, KMT2A, CNOT4, PIP4K2A, MED1, SP3, SRF, THBS1, KAT2B, WASF2, TNRC6B, AGO1, TNRC6A, KMT2E, TNRC6C, KMT2C, AGO3, AGO4

BP	GO:0050657	nucleic acid transport	44/2564	4.04E-03	ZFP36L1, FMR1, GLE1, HNRNPA2B1, HNRNPU, AGFG1, KIF5C, NPM1, PURA, RAN, SRSF1, SRSF2, SRSF6, SRSF7, TGFBR2, TPR, TSC1, XPO1, SLBP, QKI, ZC3H11A, SMG7, G3BP2, RBM8A, NXF1, IGF2BP3, KHDRBS1, XPO7, SMG1, BICD2, CPSF2, RBM27, NDC1, NXT2, PARP11, THOC2, XPO5, RBM26, SEH1L, FYTTD1, LTV1, YTHDC1, HNRNPA3, NUP43
BP	GO:0050658	RNA transport	44/2564	4.04E-03	ZFP36L1, FMR1, GLE1, HNRNPA2B1, HNRNPU, AGFG1, KIF5C, NPM1, PURA, RAN, SRSF1, SRSF2, SRSF6, SRSF7, TGFBR2, TPR, TSC1, XPO1, SLBP, QKI, ZC3H11A, SMG7, G3BP2, RBM8A, NXF1, IGF2BP3, KHDRBS1, XPO7, SMG1, BICD2, CPSF2, RBM27, NDC1, NXT2, PARP11, THOC2, XPO5, RBM26, SEH1L, FYTTD1, LTV1, YTHDC1, HNRNPA3, NUP43
BP	GO:0050803	regulation of synapse structure or activity	50/2564	4.04E-03	ADAM10, APP, ARF4, ARF6, RHOA, BDNF, CDH2, DAG1, DBN1, EPHA4, EPHB1, EPHB2, GPC4, FMR1, FYN, GPM6A, CAPRIN1, MEF2C, NEDD4, NRCAM, NTRK2, OPA1, PAFAH1B1, PCDH8, RELN, PTEN, SIX1, SPARC, TIAM1, UBE3A, VCP, WNT5A, FZD1, CDK5R1, NRXN1, DNM1L, ABI2, SEMA4D, PDLIM5, ADNP, SLC7A11, FLRT3, FLRT2, CHMP2B, ABHD17B, SIX4, SSH1, CTTNBP2, LRRK2, MDGA1
BP	GO:0021766	hippocampus development	23/2564	4.04E-03	ATP2B4, CDK6, CRK, DLX2, EPHA5, EZH2, FGF13, GSK3B, ID4, KIF5B, NEUROD1, PAFAH1B1, RELN, PTEN, RARA, SRF, TSC1, BTG2, NCOA1, CDK5R1, ZEB2, PHLPP2, LEF1
BP	GO:0009267	cellular response to starvation	36/2564	4.11E-03	BCL2, BMPR2, DSC2, EIF2S1, MTOR, GLUL, HFE, LAMP2, FADS1, MAP3K5, NFE2L2, PIK3C3, PRKAA1, MAPK1, KLF10, TP53, WNT2B, XBP1, PPM1D, MTMR3, EIF2AK3, SIK2, SZT2, GABARAPL1, SESN1, TNRC6A, DNAJC15, SLC38A2, RRAGD, CPEB4, SEH1L, SESN2, LRRK2, SESN3, C12orf66, SIK1
BP	GO:0048592	eye morphogenesis	36/2564	4.11E-03	JAG1, FASLG, SHROOM2, BCL2, PRDM1, COL5A2, EPHB1, EPHB2, FBN1, FBN2, FOXF2, MEIS1, NF1, NTRK2, PITX2, PTPRM, RORB, SKI, SOX9, SP3, STAT3, ZEB1, THRB, VEGFA, WNT5A, WNT2B, YY1, FZD5, ARID1A, MFN2, ABI2, FRS2, NIPBL, HIPK2, AHI1, TBC1D20
BP	GO:0051052	regulation of DNA metabolic process	84/2564	4.15E-03	APAF1, ATM, ATRX, BCL6, BMPR2, BRCA1, CCNA2, CEBPG, CHEK1, ERCC1, EREG, EYA4, PTK2B, FGF2, GATA3, GJA1, HGF, HMGB1, HNRNPA2B1, HNRNPC, HNRNPU, HSP90AA1, HSP90AB1, HUS1, IL7R, MECP2, MAP3K4, KMT2A, MSH2, NPAS2, NPM1, POLH, PRKDC, MAPK1, RAC1, MAP2K4, TFDP1, TFRC, TP53, TP53BP1, TNFSF4, UBE2V2, USP1, USP7, DEK, HMGA2, USP9X, SMC1A, TRIP12, SMG7, RAD50, RAD51AP1, STAG2, FAF1, SMG1, PDS5A, SMCHD1, CLCF1, GTPBP4, ANKRD17, GREM1, CACYBP, DONSON, UBR5, OTUD4, TIPIN, FIGN, RIF1, CCDC88A, ATF7IP, SPIRE1, USP37, NMNAT1, KLHL15, TET1, TNKS2, TICRR, NUDT16, NEK7, PPP4R2, RNF168, DCP2, ZBTB38, RNF169
BP	GO:0045947	negative regulation of translational initiation	9/2564	4.17E-03	EIF2S1, EIF4EBP2, FMR1, TPR, EIF2AK3, LARP1, AGO2, PAIP2, PAIP2B
BP	GO:0007528	neuromuscular junction development	16/2564	4.27E-03	ANK3, APP, COL4A1, COL4A5, ERBB2, F2R, TNC, NEDD4, SIX1, UTRN, DNAJA3, SHANK2, UNC13A, SIX4, ALS2, LRRK2
BP	GO:0060324	face development	16/2564	4.27E-03	ASPH, COL1A1, EP300, MMP2, PDGFRA, MAPK1, RARA, SKI, SRF, WNT5A, SGPL1, RAB3GAP1, NIPBL, TIPARP, LEF1, PLEKHA1
BP	GO:0098693	regulation of synaptic vesicle cycle	29/2564	4.29E-03	CALM3, CDH2, FGF14, FMR1, GSK3B, P2RY1, PLD1, PRKCB, PTEN, RAB3B, RAP1B, ROCK1, SH3GL1, STXBP1, VAMP1, VAMP4, CDK5R1, NRXN1, RIMS3, MAGI2, DNM1L, RAPGEF4, RAB3GAP1, RIMS1, SYT11, SNAPIN, PCDH17, GIT1, LRRK2
BP	GO:0006260	DNA replication	58/2564	4.29E-03	ATM, ATRX, BCL6, BRCA1, CCNA2, CHEK1, DUT, EREG, HUS1, MCM3, NAP1L1, NASP, NFIA, NFIB, NFIC, ORC2, ORC4, ORC5, POLH, PURA, RAC1, RBBP4, REV3L, RFC1, RRM2, MAP2K4, TP53, SLBP, CDK2AP1, CHAF1B, SMC1A, DNAJA3, CCNE2, EXO1, RAD50, POLD3, STAG2, FAF1, WDHD1, PDS5A, GTPBP4, ANKRD17, CACYBP, DONSON, RRM2B, DTL, TIPIN, CCDC88A, USP37, FANCM, FAM111A, RMI1, RPAIN, GINS4, TBRG1, TICRR, ZBTB38, GEN1
BP	GO:1902107	positive regulation of leukocyte differentiation	35/2564	4.31E-03	ANXA1, RHOA, AXL, BCL6, ZFP36L1, CA2, RUNX1, RUNX3, CBFB, CREB1, GATA3, GNAS, HMGB1, ID2, IL7R, IL12A, LIF, CD46, PRKCA, RARA, RB1, TGFBR2, KLF10, TNFSF4, XBP1, TNFSF11, SOCS5, RASGRP1, TRIB1, MALT1, ZBTB1, LEF1, ZMIZ1, TMEM64, ATP11C
BP	GO:0051168	nuclear export	44/2564	4.45E-03	GLE1, GSK3B, HNRNPA2B1, AGFG1, NPM1, PPM1A, PTPN14, RAN, ATXN1, SRSF1, SRSF2, SRSF6, SRSF7, SP100, TP53, TPR, TSC1, XPO1, SLBP, ZC3H11A, SMG7, RBM8A, NXF1, KHDRBS1, AHCYL1, MALT1, AKAP13, XPO7, SMG1, CTDSPL2, CPSF2, RBM27, RBM22, NDC1, THOC2, XPO5, RBM26, XPO4, SEH1L, FYTTD1, LZTS2, LTV1, YTHDC1, NUP43
BP	GO:0099504	synaptic vesicle cycle	44/2564	4.45E-03	ACTB, ARF6, CALM3, CANX, CDH2, CLCN3, FGF14, FMR1, GSK3B, OPHN1, P2RY1, PLD1, PRKCB, PTEN, RAB3B, RAB27B, RAP1B, ROCK1, SH3GL1, SNAP25, STXBP1, VAMP1, PICALM, EEA1, VAMP4, CDK5R1, NRXN1, RIMS3, MAGI2, SV2A, DNM1L, RAPGEF4, RAB3GAP1, RIMS1, UNC13A, SYT11, SNAPIN, PCDH17, PCLO, GIT1, KIAA1109, FCHO2, LRRK2, STXBP5
BP	GO:0000079	regulation of cyclin-dependent	27/2564	4.53E-03	ACTB, APC, CCND1, CCNA2, CCND2, CCNG1, CCNT1, CCNT2, CDC25A, CKS1B, GTF2H1, IPO5, PKD2, PTEN, ADAM17, NR2F2, TNFAIP3, KAT2B, CDK5R1, CCNE2, IPO7, HEXIM1, CCNI, GTPBP4, CCNJ, BCCIP, CCNYL1

		protein serine/threonine kinase activity			
BP	GO:0043967	histone H4 acetylation	20/2564	4.53E-03	BRCA1, EP300, HCFC1, KMT2A, KAT6A, YEATS4, HAT1, NCOA1, BRD8, KAT6B, AUTS2, LEF1, PHF20, MSL2, KANSL3, MEAF6, NAA50, EPC1, KAT8, KANSL1L
BP	GO:0060038	cardiac muscle cell proliferation	20/2564	4.53E-03	BMPR1A, ERBB4, FGF2, FGFR2, GATA6, GJA1, RBPJ, JARID2, SMAD1, MEF2C, MEIS1, PRKAR1A, MAPK1, PTEN, TGFB2, TGFBR1, TGFBR2, YAP1, SAV1, ARID2
BP	GO:0016331	morphogenesis of embryonic epithelium	36/2564	4.62E-03	APAF1, AR, FGFR2, GATA3, JAG2, PCDH8, PRKACB, PTCH1, PTK7, RALA, RARA, RET, SFRP2, SIX1, SKI, SOX4, SOX9, STK3, STK4, TGFB2, TSC1, KDM6A, WNT5A, WNT2B, LUZP1, FZD3, ARID1A, FZD1, TP63, ZEB2, MED12, SIX4, SEMA4C, MIB1, OSR1, TRIM71
BP	GO:0060055	angiogenesis involved in wound healing	10/2564	4.62E-03	DAG1, ETS1, B4GALT1, MCAM, SERPINE1, PIK3CB, SRF, TNFAIP3, XBP1, ADIPOR2
BP	GO:0035967	cellular response to topologically incorrect protein	38/2564	4.63E-03	CCND1, CANX, EIF2S1, EP300, EXTL3, GFPT1, HSPA2, NFE2L2, PIK3R1, DNAJC3, SSR1, HSPA13, TMBIM6, VCP, XBP1, CUL3, STC2, VAPB, EIF2AK3, TATDN2, BCL2L11, OPTN, SEC31A, ATF6, SERP1, HSPA14, MBTPS2, TMEM33, UBE2W, YOD1, HERPUD2, DERL1, DNAJB14, KLHL15, SYVN1, PPP1R15B, CREBRF, DNAJC18
BP	GO:0035710	CD4-positive, alpha-beta T cell activation	25/2564	4.69E-03	ANXA1, ARG2, ATP7A, BCL6, RUNX1, RUNX3, CBFB, MTOR, GATA3, HMGB1, IL12A, SMAD7, RARA, RORA, SATB1, STAT3, TGFBR2, TNFSF4, SOCS5, MALT1, FOXP1, CD274, LEF1, SH3RF1, RC3H1
BP	GO:0045444	fat cell differentiation	49/2564	4.71E-03	ADRB1, JAG1, CCND1, ZFP36L1, ZFP36L2, KLF5, CREB1, ATF2, E2F1, EP300, MTOR, GATA3, HNRNPU, ID2, ID4, INSIG1, ITGA6, NR4A2, MED1, PTGS2, RNASEL, RORA, SFRP2, SNAI2, STK3, STK4, TRIO, WNT1, WNT5A, XBP1, HMGA2, ANKRD26, PLCB1, NIPBL, WWTR1, TRIB2, ZBTB7A, ERAP1, ASXL2, LMO3, SAV1, STEAP4, TBL1XR1, OSBPL11, JDP2, TMEM64, NAPEPLD, ZADH2, SH3PXD2B
BP	GO:0008344	adult locomotory behavior	22/2564	4.72E-03	APP, ATP1A2, EN1, EPHA4, CLN8, EPS8, FGF12, FXN, GLRB, HOXD10, ID2, KCNJ10, MECP2, NR4A2, PAFAH1B1, TSC1, PUM1, CHL1, GIGYF2, HIPK2, ADAM22, OXR1
BP	GO:0034644	cellular response to UV	23/2564	4.74E-03	CDC25A, CHEK1, CREBBP, EIF2S1, EP300, ERCC1, FMR1, MME, NEDD4, NPM1, PIK3R1, POLH, PTGS2, PTPRK, TP53, YY1, CUL4B, N4BP1, POLD3, ZBTB1, TRIAP1, USP47, TP53INP1
BP	GO:0061001	regulation of dendritic spine morphogenesis	15/2564	4.75E-03	ADAM10, DBN1, EPHA4, CAPRIN1, OPA1, PAFAH1B1, RELN, PTEN, TIAM1, UBE3A, CDK5R1, DNM1L, ABI2, PDLIM5, LRRK2
BP	GO:0090311	regulation of protein deacetylation	15/2564	4.75E-03	BCL6, CAMK2D, DYRK1A, EP300, PRKAA1, KDM5A, SKI, TP53, VEGFA, FRY, NIPBL, LRRK2, JDP2, SPRED1, SPRED2
BP	GO:0000077	DNA damage checkpoint	35/2564	4.83E-03	ATM, CCND1, BRCA1, CDC5L, CHEK1, FOXN3, ATF2, E2F1, EP300, HUS1, MDM4, MSH2, CNOT2, CNOT4, PRKDC, SOX4, TFDP1, TFDP2, TP53, TP53BP1, BTG2, HMGA2, CLOCK, CNOT1, SYF2, GIGYF2, CNOT7, DONSON, WAC, TRIAP1, DTL, TIPIN, CNOT6, TAOK1, CNOT6L
BP	GO:0006469	negative regulation of protein kinase activity	51/2564	4.93E-03	ADARB1, APC, CBL, CBLB, DUSP4, DUSP5, DUSP8, EPHB2, GNAQ, HMGCR, IGF1R, IPO5, NF1, NPM1, PAK2, PRKAR1A, PRKAR2A, DNAJC3, PTEN, PTPRJ, RB1, SFRP2, SORL1, NR2F2, TNFAIP3, KAT2B, SOCS5, HIPK3, TRIB1, SPRY1, SPRY2, IPO7, HEXIM1, DUSP14, PTPRT, IRAK3, CORO1C, WWTR1, IBTK, PDCD4, TRIB2, ERRFI1, CAMK2N1, WNK1, GGNBP2, ITPRIP, SOCS4, DUSP18, PAQR3, SPRED1, SPRED2
BP	GO:1901990	regulation of mitotic cell cycle phase transition	86/2564	4.93E-03	ANXA1, APC, APP, ATM, CCND1, BCL2, BID, BRCA1, ZFP36L1, ZFP36L2, CCND2, CDC25A, CDC27, CDK6, CENPF, FOXN3, DDX3X, E2F1, EP300, EZH2, HSPA2, HSP90AA1, HUS1, ID2, MDM4, MECP2, CNOT2, CNOT4, PAFAH1B1, PBX1, PKD2, PRKDC, PSMD1, PTEN, RB1, RBL1, SKP1, SOX4, ADAM17, TFDP1, TFDP2, TP53, TPR, UBE2D1, UBE2E2, WEE1, BTG2, HMGA2, CUL4B, CUL3, CDC14A, RAB11A, BUB3, CCP110, CTDSPL, GPNMB, PLK4, NEK6, MAPRE1, TPX2, CNOT1, PLCB1, SYF2, ANKRD17, GIGYF2, TMOD3, CNOT7, DONSON, TRIAP1, DTL, NDE1, USP47, CEP192, CEP72, KMT2E, MEPCE, CNOT6, HECW2, TAOK1, ZNF655, CDC73, TICRR, DCUN1D3, NACC2, CNOT6L, GEN1
BP	GO:0003206	cardiac chamber morphogenesis	32/2564	4.94E-03	JAG1, BMPR1A, BMPR2, FGFR2, FKBP1A, GATA3, GATA6, NRG1, ID2, RBPJ, SMAD4, SMAD7, MEF2C, NOTCH2, MED1, RARA, ROBO1, SFRP2, SOX4, SRF, TBX3, TGFB2, TGFBR1, TGFBR2, TP53, WNT5A, FZD1, NRP1, SLIT2, SEMA3C, PARVA, SAV1
BP	GO:0035904	aorta development	18/2564	4.99E-03	JAG1, PRDM1, BMPR1A, EFNB2, RBPJ, LOX, LRP1, MYH10, MYLK, NKX3-1, PKD2, ROBO1, SIX1, SOX4, SRF, TGFB2, HECTD1, DCTN5

BP	GO:0071385	cellular response to glucocorticoid stimulus	18/2564	4.99E-03	ADCYAP1, ANXA1, ATP2B1, ZFP36L1, ZFP36L2, KLF9, EDN1, FOXO3, NR3C1, HNRNPU, REST, SSTR2, UBE2L3, BCL2L11, AKAP13, ERRFI1, DDIT4, CREBRF
BP	GO:0010001	glial cell differentiation	48/2564	5.00E-03	APP, RHOA, MYRF, CDH2, CDK6, DAG1, DLX2, EPHA4, ERBB2, ERBB3, MTOR, NRG1, ID2, ID4, IL6ST, KCNJ10, LDLR, LIF, LRP1, NF1, NFIB, NTRK2, SERPINE2, POU3F2, MAPK1, RELN, PTEN, PTPRZ1, SKI, SOX2, SOX4, SOX9, STAT3, TLR4, VIM, B4GALT6, B4GALT5, MED12, TSPAN2, OLIG2, DICER1, CLCF1, LEF1, ADAM22, SOX6, MPP5, FA2H, SLC45A3
BP	GO:0048562	embryonic organ morphogenesis	60/2564	5.14E-03	ABR, RUNX2, DLX2, EDN1, EPHB2, FBN1, FBN2, FGFR2, FOXF2, GATA3, GJA1, GNAS, HOXA1, HOXA5, HOXC9, HOXC11, HOXD10, ID2, INSIG1, SMAD2, MEF2C, MMP16, NEUROD1, PDGFRA, PKD2, MAPK1, PTK7, SIX1, SOX9, SP3, SRF, TBX3, ZEB1, TGFBR1, TGFBR2, KDM6A, WNT1, WNT5A, PCGF2, FZD5, FZD3, ARID1A, PRKRA, MAFB, MED12, SPRY2, YAP1, FRS2, SATB2, NIPBL, LRIG1, SLC39A1, FLVCR1, HIPK2, SIX4, AHI1, MIB1, ALX4, OSR1, ARL13B
BP	GO:0034766	negative regulation of ion transmembrane transport	27/2564	5.19E-03	ANK3, ATP1A2, ATP7A, CALM1, CALM2, CALM3, CAMK2D, CLIC2, EPHB2, FGF12, FMR1, MTOR, GEM, NEDD4, PKD2, PRKCE, PTEN, THBS1, OXSR1, STK39, UBQLN1, CAB39, GOPC, HECW2, SESTD1, OSR1, KCNRG
BP	GO:1905269	positive regulation of chromatin organization	27/2564	5.19E-03	ATM, BCL6, BRCA1, FMR1, GATA3, JARID2, LIF, SMAD4, MECP2, KMT2A, NAP1L2, SNAI2, TP53, TPR, VEGFA, RPS6KA5, RNF40, MTF2, NIPBL, AUTS2, PHF19, RIF1, ATF7IP, KMT2E, TET1, LRRK2, JDP2
BP	GO:0031571	mitotic G1 DNA damage checkpoint	19/2564	5.22E-03	ATM, CCND1, E2F1, EP300, MDM4, CNOT2, CNOT4, PRKDC, SOX4, TFDP1, TFDP2, TP53, BTG2, CNOT1, GIGYF2, CNOT7, TRIAP1, CNOT6, CNOT6L
BP	GO:0042982	amyloid precursor protein metabolic process	19/2564	5.22E-03	ADAM10, APP, DYRK1A, EPHA4, FKBP1A, IGF1, PAWR, ROCK1, SOAT1, SORL1, PICALM, ITM2B, ROCK2, TMED10, UNC13A, GGA3, AGO2, APH1A, ITM2C
BP	GO:0044819	mitotic G1/S transition checkpoint	19/2564	5.22E-03	ATM, CCND1, E2F1, EP300, MDM4, CNOT2, CNOT4, PRKDC, SOX4, TFDP1, TFDP2, TP53, BTG2, CNOT1, GIGYF2, CNOT7, TRIAP1, CNOT6, CNOT6L
BP	GO:0090184	positive regulation of kidney development	14/2564	5.25E-03	EGR1, GATA3, IL6R, LIF, RET, SIX1, SOX9, VEGFA, WNT2B, MAGED1, BASP1, SIX4, LGR4, PDGFD
BP	GO:0071349	cellular response to interleukin-12	16/2564	5.25E-03	ARF1, CAPZA1, CDC42, HNRNPA2B1, HNRNPF, IL12A, JAK2, LMNB1, MSN, MTAP, PAK2, RALA, RAP1B, SOD2, PLCB1, PDCD4
BP	GO:1903018	regulation of glycoprotein metabolic process	16/2564	5.25E-03	BCL2, FKTN, GOLGA2, IGF1, PAWR, PTX3, RAB1A, SOAT1, ITM2B, TMEM59, ARFGEF1, PLCB1, AGO2, ITM2C, ALG10B, ACER2
BP	GO:0030397	membrane disassembly	8/2564	5.25E-03	PAFAH1B1, PRKCA, PRKCB, NEK6, CTDNEP1, NDEL1, NEK9, CNEP1R1
BP	GO:0051081	nuclear envelope disassembly	8/2564	5.25E-03	PAFAH1B1, PRKCA, PRKCB, NEK6, CTDNEP1, NDEL1, NEK9, CNEP1R1
BP	GO:0070886	positive regulation of calcineurin-NFAT signaling cascade	8/2564	5.25E-03	ERBB3, NRG1, IGF1, PTBP1, SLC9A1, CAMTA1, LMCD1, SPPL3
BP	GO:0106058	positive regulation of calcineurin-mediated signaling	8/2564	5.25E-03	ERBB3, NRG1, IGF1, PTBP1, SLC9A1, CAMTA1, LMCD1, SPPL3

BP	GO:2000651	positive regulation of sodium ion transmembrane transporter activity	8/2564	5.25E-03	ANK3, ATP1B1, DMD, GLRX, KIF5B, SLC9A1, WNK1, WNK3
BP	GO:0030177	positive regulation of Wnt signaling pathway	41/2564	5.25E-03	XIAP, COL1A1, CSNK2A1, DDX3X, FGFR2, RBPJ, MLLT3, NFKB1, PPM1A, PSMD1, PTK7, SFRP2, SKI, SOX4, TNFAIP3, VCP, WNT5A, RECK, SEMA5A, USP34, ZEB2, YAP1, SPIN1, CTDNEP1, BAMBI, DKK2, UBR5, NLE1, ZRANB1, GID8, USP47, RNF220, LGR4, PRDM15, SMURF2, WNK1, CDC73, TBL1XR1, TNKS2, DIXDC1, LRRK2
BP	GO:0050921	positive regulation of chemotaxis	33/2564	5.25E-03	ADAM10, BMPR2, CCR6, EDN1, F2RL1, PTK2B, FGF2, HMGB1, IL6R, IL12A, MET, NTF3, SERPINE1, RAC1, ADAM17, THBS1, TIAM1, TMSB4X, VEGFA, VEGFB, WNT5A, SCG2, FGF18, NRP1, SEMA5A, SLIT2, OXSR1, SWAP70, STK39, WNK1, AKIRIN1, PDGFD, ANO6
BP	GO:0035914	skeletal muscle cell differentiation	20/2564	5.33E-03	BCL9, KLF5, DDX5, EGR1, EPHB1, HLF, FOXN2, MEF2C, MEF2D, RB1, SIX1, BTG2, COPS2, NR1D2, SIX4, NLN, HIVEP3, AKIRIN1, SMYD1, RBM24
BP	GO:0042542	response to hydrogen peroxide	35/2564	5.33E-03	ANXA1, AREG, AXL, BCL2, COL1A1, CRK, CYP1B1, ECT2, ETS1, EZH2, PTK2B, FOXO3, FXN, FYN, HGF, KPNA4, MAP3K5, MET, NFE2L2, PAWR, PRKAA1, STAT1, TNFAIP3, UBE3A, PCGF2, FOSL1, ADAM9, NET1, ZNF277, SETX, SMPD3, PLEKHA1, PDGFD, PPP1R15B, LRRK2
BP	GO:0006903	vesicle targeting	25/2564	5.33E-03	AREG, GOLGA2, NSF, PPP6C, RAB1A, CUL3, USO1, SEC24C, SEC16A, PDCD6, CNIH1, TFG, TMED10, SEC23IP, PPP6R1, SEC31A, ANKRD28, TRAPPC4, PPP6R3, AP1AR, WDR11, SAR1A, MCFD2, TBC1D20, FAM91A1
BP	GO:1901184	regulation of ERBB signaling pathway	25/2564	5.33E-03	APP, FASLG, AREG, CBL, CBLB, CDC42, DOK1, ERBB2, EREG, FER, HIP1, RBPJ, PTPN3, PTPN12, PTPRJ, ADAM17, SOCS5, SPRY1, SPRY2, STAM2, SH3KBP1, ERRFI1, RTN4, MVB12B, SOCS4
BP	GO:0072401	signal transduction involved in DNA integrity checkpoint	21/2564	5.41E-03	ATM, BRCA1, CDC5L, CHEK1, E2F1, EP300, MDM4, CNOT2, CNOT4, PRKDC, SOX4, TFDP1, TFDP2, TP53, BTG2, CNOT1, CNOT7, TRIAP1, DTL, CNOT6, CNOT6L
BP	GO:0072422	signal transduction involved in DNA damage checkpoint	21/2564	5.41E-03	ATM, BRCA1, CDC5L, CHEK1, E2F1, EP300, MDM4, CNOT2, CNOT4, PRKDC, SOX4, TFDP1, TFDP2, TP53, BTG2, CNOT1, CNOT7, TRIAP1, DTL, CNOT6, CNOT6L
BP	GO:1902275	regulation of chromatin organization	42/2564	5.43E-03	ATM, ATRX, BCL6, BRCA1, CAMK2D, CHEK1, FMR1, GATA3, HNRNPU, JARID2, LIF, SMAD4, MECP2, KMT2A, MLLT6, NAP1L2, KDM5A, SKI, SNAI2, TP53, TPR, VEGFA, RPS6KA5, TRIP12, RNF40, CTCF, MTF2, PHF8, NIPBL, ZNF451, AUTS2, PHF19, ATAD2, UBR5, RIF1, SETD5, ATF7IP, KMT2E, TET1, LRRK2, JDP2, SPTY2D1
BP	GO:0048145	regulation of fibroblast proliferation	23/2564	5.43E-03	BMI1, CCNA2, CDK6, CREB1, E2F1, EREG, ESR1, FN1, FOSL2, IGF1, NF1, DDR2, PAWR, PDGFRA, PRKDC, SKI, TP53, WNT1, WNT5A, ZMIZ1, CDC73, PDGFD, TP53INP1
BP	GO:0014743	regulation of muscle hypertrophy	22/2564	5.43E-03	ATP2B4, CAMK2D, EDN1, MTOR, G6PD, IGF1, IGFBP5, IL6ST, JARID2, SMAD4, MEF2A, PPARA, PPP3CA, PRKCA, ROCK1, SLC9A1, YY1, PDE5A, ROCK2, LMCD1, ERRFI1, MTPN
BP	GO:0055021	regulation of cardiac muscle tissue growth	22/2564	5.43E-03	BMPR1A, EDN1, ERBB4, FGF2, FGFR2, MTOR, G6PD, GATA6, GJA1, IGF1, RBPJ, JARID2, MEF2C, MEIS1, PPARA, MAPK1, PTEN, TGFBR1, TGFBR2, YY1, YAP1, SAV1
BP	GO:0071634	regulation of transforming growth factor beta production	13/2564	5.66E-03	CREB1, ATF2, GATA6, HSP90AB1, ITGAV, ITGB8, LUM, SMAD4, CD46, PTGS2, TGFB2, THBS1, CD2AP
BP	GO:0048538	thymus development	15/2564	5.92E-03	ATM, BCL2, GATA3, JARID2, PBX1, PRKDC, MAPK1, SIX1, SRF, TGFBR1, MAFB, BCL2L11, ZBTB1, SIX4, BCL11B

BP	GO:0048660	regulation of smooth muscle cell proliferation	39/2564	5.92E-03	BMPR1A, EDN1, EREG, FGF2, FGFR2, MTOR, GNAI2, GNAI3, HMGCR, HPGD, ID2, IGF1, IGFBP5, IL6R, IL12A, JAK2, MEF2C, MEF2D, MAP3K5, MMP2, NPR3, PRKDC, PRKG1, PTEN, PTGS2, SKP2, SOD2, STAT1, TGFBR2, THBS1, TNFAIP3, MFN2, NAMPT, TRIB1, FOXP1, PDCD4, IRAK4, SMPD3, PDGFD
BP	GO:0071236	cellular response to antibiotic	35/2564	5.99E-03	ADCY2, AHR, ANXA1, ATP7A, AXL, CYP1B1, ECT2, EGR1, ETS1, EZH2, FDX1, FOXO3, FXN, HGF, MEF2C, MAP3K5, MET, NFE2L2, PAWR, PRKAA1, PRKCE, PTEN, SLC9A1, TNFAIP3, TP53, PCGF2, NET1, ZNF277, SETX, LARP1, SMPD3, PLEKHA1, PDGFD, TP53INP1, LRRK2
BP	GO:0009416	response to light stimulus	64/2564	6.03E-03	APP, ATP1A2, CCND1, BCL2, CALM1, CDC25A, CDS1, CHEK1, CREB1, CREBBP, EIF2S1, EP300, ERCC1, FMR1, MTOR, GNAQ, GNB1, HMGCR, HOXA1, HUS1, ID2, IL12A, KCNC2, KIT, MECP2, MEIS2, MAP3K4, MME, MSH2, NEDD4, NF1, NPM1, PIK3R1, POLH, PPP1CC, PRKAA1, PTGS2, PTPRK, SLC1A2, ELOVL4, TP53, UBE2A, USP1, YY1, CUL4B, COPS3, NMT2, CLOCK, N4BP1, POLD3, ZBTB1, DDHD2, SLC7A11, FBXL3, SCARA3, TRIAP1, DTL, TIPIN, USP47, SPRTN, TANC1, TP53INP1, DCUN1D3, SIK1
BP	GO:0038128	ERBB2 signaling pathway	12/2564	6.08E-03	ERBB2, ERBB3, ERBB4, EREG, GAB1, NRG1, HSP90AA1, PIK3R1, PRKCA, PTPN12, PTPRR, CUL5
BP	GO:0060325	face morphogenesis	12/2564	6.08E-03	ASPH, COL1A1, EP300, MMP2, PDGFRA, SKI, SGPL1, RAB3GAP1, NIPBL, TIPARP, LEF1, PLEKHA1
BP	GO:0010592	positive regulation of lamellipodium assembly	9/2564	6.08E-03	ATP7A, CDC42, MTOR, RAC1, WNT1, WASF2, NCKAP1, AUTS2, AKIRIN1
BP	GO:0048745	smooth muscle tissue development	9/2564	6.08E-03	MYLK, NF1, PKD2, SIX1, SOX9, SRF, TIPARP, FOXP2, OSR1
BP	GO:0072234	metanephric nephron tubule development	9/2564	6.08E-03	LIF, PKD2, POU3F3, SOX9, STAT1, YAP1, WWTR1, LGR4, OSR1
BP	GO:0046834	lipid phosphorylation	19/2564	6.19E-03	PIK3C2A, PIK3C3, PIK3CB, PIK3CG, PIK3R1, PIP4K2A, PIP5K1A, PIK3R3, DGKE, SOCS2, SOCS6, SOCS5, SMG1, EFR3A, SOCS7, PI4K2B, AGK, PIKFYVE, FAM126B
BP	GO:0009314	response to radiation	86/2564	6.19E-03	ANXA1, APP, ATM, ATP1A2, CCND1, BCL2, BRCA1, CALM1, CBL, CDC25A, CDS1, CHEK1, CREB1, CREBBP, ECT2, EGR1, EIF2S1, EP300, ERCC1, FMR1, MTOR, GATA3, GNAQ, GNB1, HMGCR, HOXA1, HUS1, ID2, IL12A, KCNC2, KIT, MECP2, MEIS2, MAP3K4, MME, MSH2, NEDD4, NF1, NPM1, PIK3R1, POLH, PPP1CC, PRKAA1, PRKDC, PTGS2, PTPRK, SFRP2, SLC1A2, SNAI2, ELOVL4, TP53, TP53BP1, UBE2A, USP1, YY1, HMGA2, SMC1A, CUL4B, PPM1D, COPS3, NMT2, CLOCK, N4BP1, NAMPT, NET1, YAP1, RAD51AP1, POLD3, ZBTB1, DDHD2, SLC7A11, NIPBL, FBXL3, SCARA3, TRIAP1, DTL, TIPIN, USP47, NABP1, SPRTN, TANC1, TICRR, TP53INP1, DCUN1D3, SIK1, RNF168
BP	GO:0032410	negative regulation of transporter activity	24/2564	6.29E-03	ANK3, ATP1A2, CALM1, CALM2, CALM3, CAMK2D, CLIC2, EPHB2, FGF12, FMR1, GEM, NEDD4, PKD2, PRKCE, PTEN, OXSR1, STK39, UBQLN1, CAB39, CTTNBP2NL, GOPC, HECW2, OSR1, KCNRG
BP	GO:0051865	protein autoubiquitinatio n	20/2564	6.29E-03	BRCA1, CNOT4, RNF4, UBE2A, UBE2D3, UBE3A, SASH1, LTN1, RNF11, RNFT1, KLHL24, RNF220, SH3RF1, RNF213, RNF122, RNF157, LRRK2, RNF19B, TRIM71, RNF187
BP	GO:0001958	endochondral ossification	11/2564	6.29E-03	RUNX2, COL1A1, COL13A1, FGFR3, GNAS, INPPL1, MEF2C, MEF2D, MMP16, FGF18, SMPD3
BP	GO:0036075	replacement ossification	11/2564	6.29E-03	RUNX2, COL1A1, COL13A1, FGFR3, GNAS, INPPL1, MEF2C, MEF2D, MMP16, FGF18, SMPD3
BP	GO:0060512	prostate gland morphogenesis	11/2564	6.29E-03	AR, ESR1, FGFR2, FOXA1, TNC, ID4, NKX3-1, SOX9, WNT5A, TP63, FRS2
BP	GO:0045445	myoblast differentiation	23/2564	6.29E-03	JAG1, ZFP36L1, BTG1, DDX5, NRG1, HMGCR, IGF1, RBPJ, MBNL1, MEF2C, MAP3K5, PITX1, RB1, REST, SOX9, SRF, TBX3, SRA1, PLCB1, GREM1, AKIRIN1, SMYD1, RBM24
BP	GO:0048144	fibroblast proliferation	23/2564	6.29E-03	BMI1, CCNA2, CDK6, CREB1, E2F1, EREG, ESR1, FN1, FOSL2, IGF1, NF1, DDR2, PAWR, PDGFRA, PRKDC, SKI, TP53, WNT1, WNT5A, ZMIZ1, CDC73, PDGFD, TP53INP1

BP	GO:1905897	regulation of response to endoplasmic reticulum stress	23/2564	6.29E-03	NFE2L2, OPA1, PIK3R1, DNAJC3, TMBIM6, XBP1, USP13, EIF2AK3, BCL2L11, SERINC3, ERP29, ATF6, USP25, UBQLN2, UBQLN1, UBXN1, RNFT1, TMEM33, YOD1, SYVN1, PPP1R15B, TMEM259, LRRK2
BP	GO:0051147	regulation of muscle cell differentiation	41/2564	6.29E-03	BCL2, BDNF, BNIP2, CDC42, CDH2, EDN1, EFNB2, EREG, EZH2, FGFR2, MTOR, G6PD, NRG1, IGF1, RBPJ, KIT, SMAD4, MECP2, MEF2A, MEF2C, NFATC3, PPARA, PTBP1, SOD2, SRF, ZEB1, XBP1, YY1, SPAG9, FRS2, EHD1, AKAP13, ANKRD17, GREM1, PDCD4, SOX6, NLN, MYLK3, SIK1, SMYD1, RBM24
BP	GO:0033119	negative regulation of RNA splicing	10/2564	6.29E-03	DYRK1A, HNRNPA2B1, HNRNPK, PTBP1, SRSF6, SRSF7, TMBIM6, PTBP3, SRSF10, SRSF12
BP	GO:0046639	negative regulation of alpha-beta T cell differentiation	10/2564	6.29E-03	ANXA1, BCL6, RUNX1, RUNX3, CBFB, HMGB1, SMAD7, TNFSF4, SOCS5, RC3H1
BP	GO:0060148	positive regulation of posttranscriptional gene silencing	10/2564	6.29E-03	DDX5, FMR1, STAT3, TP53, FXR1, PUM1, PUM2, AGO2, XPO5, TRIM71
BP	GO:0099563	modification of synaptic structure	10/2564	6.29E-03	RHOA, CDC42, EPHA4, FMR1, MYH10, REST, STAU1, TIAM1, CHMP2B, CTTNBP2
BP	GO:0046890	regulation of lipid biosynthetic process	44/2564	6.29E-03	ACACB, ANXA1, BRCA1, CREB1, CYP51A1, EGR1, ACSL3, FASN, MTOR, HMGCR, INSIG1, KPNB1, LDLR, NFKB1, NFYB, PRKAA1, PTGS2, RAN, REST, SC5D, SCD, SNAI2, SP1, LPGAT1, SORBS1, ERLIN1, ERLIN2, DDX20, CTDNEP1, ZBTB20, MBTPS2, SMPD3, GPAM, MID1IP1, ELOVL5, ELOVL6, ADIPOR2, LPCAT1, SLC45A3, ORMDL1, STARD4, SAMD8, SIK1, CNEP1R1
BP	GO:0043367	CD4-positive, alpha-beta T cell differentiation	21/2564	6.29E-03	ANXA1, ATP7A, BCL6, RUNX1, RUNX3, CBFB, MTOR, GATA3, HMGB1, SMAD7, RARA, RORA, SATB1, STAT3, TNFSF4, SOCS5, MALT1, FOXP1, LEF1, SH3RF1, RC3H1
BP	GO:0072078	nephron tubule morphogenesis	21/2564	6.29E-03	BCL2, FGF2, GATA3, SMAD4, PBX1, PKD2, PTCH1, SIX1, SOX9, VEGFA, WNT1, WNT2B, MAGED1, KLHL3, SIX4, AHI1, LGR4, LZTS2, OSR1, NPNT, FMN1
BP	GO:0072395	signal transduction involved in cell cycle checkpoint	21/2564	6.29E-03	ATM, BRCA1, CDC5L, CHEK1, E2F1, EP300, MDM4, CNOT2, CNOT4, PRKDC, SOX4, TFDP1, TFDP2, TP53, BTG2, CNOT1, CNOT7, TRIAP1, DTL, CNOT6, CNOT6L
BP	GO:0031110	regulation of microtubule polymerization or depolymerization	22/2564	6.29E-03	APC, DYRK1A, FGF13, STMN1, MAP1B, MAP2, MECP2, MET, MID1, RAC1, SPAST, CDK5R1, MAPRE1, CAMSAP2, EML2, NIN, TAOK1, SLAIN2, MID1IP1, NAV3, TTBK2, CAMSAP1
BP	GO:1902306	negative regulation of sodium ion transmembrane transport	7/2564	6.30E-03	ATP1A2, CAMK2D, NEDD4, PRKCE, STK39, HECW2, OSR1
BP	GO:0045540	regulation of cholesterol biosynthetic process	16/2564	6.30E-03	ACACB, CYP51A1, FASN, HMGCR, KPNB1, NFYB, PRKAA1, RAN, SC5D, SCD, SP1, ERLIN1, ERLIN2, MBTPS2, GPAM, ELOVL6
BP	GO:0070671	response to interleukin-12	16/2564	6.30E-03	ARF1, CAPZA1, CDC42, HNRNPA2B1, HNRNPF, IL12A, JAK2, LMNB1, MSN, MTAP, PAK2, RALA, RAP1B, SOD2, PLCB1, PDCD4
BP	GO:0106118	regulation of sterol biosynthetic process	16/2564	6.30E-03	ACACB, CYP51A1, FASN, HMGCR, KPNB1, NFYB, PRKAA1, RAN, SC5D, SCD, SP1, ERLIN1, ERLIN2, MBTPS2, GPAM, ELOVL6

BP	GO:0090596	sensory organ morphogenesis	54/2564	6.40E-03	ABR, JAG1, FASLG, SHROOM2, BCL2, PRDM1, COL5A2, EDN1, EPHB1, EPHB2, FBN1, FBN2, FGFR2, FOXF2, GATA3, HOXA1, HOXC13, INSIG1, MEIS1, NF1, NTRK2, PITX2, MAPK1, PTK7, PTPRM, RORB, SIX1, SKI, SOX9, SP3, STAT3, ZEB1, THRB, VEGFA, WNT1, WNT5A, WNT2B, YY1, FZD5, FZD3, ARID1A, PRKRA, MFN2, MAFB, ABI2, SPRY2, FRS2, NIPBL, LRIG1, HIPK2, SIX4, AHI1, TBC1D20, OSR1
BP	GO:0035136	forelimb morphogenesis	14/2564	6.43E-03	ATRX, CACNA1C, RUNX2, EN1, HOXA9, HOXD10, TBX3, RECK, TP63, NIPBL, ALX4, OSR1, FMN1, RNF165
BP	GO:1902893	regulation of pri-miRNA transcription by RNA polymerase II	14/2564	6.43E-03	BMPR1A, KLF5, NR3C1, SMAD1, NFATC3, NFIB, PPARA, SOX9, SRF, STAT3, TEAD1, TGFB2, TP53, YY1
BP	GO:0051494	negative regulation of cytoskeleton organization	35/2564	6.50E-03	ADD3, APC, BRCA1, CAPZA1, CAPZA2, DYRK1A, EPS8, FGF13, STMN1, SMAD4, MAP1B, MAP2, MET, MID1, NPM1, SPTAN1, SPTBN1, TMSB4X, KAT2B, SLIT2, WASF2, ARFGEF1, MAPRE1, SWAP70, CAMSAP2, EML2, TMOD3, TMOD2, TAOK1, MID1IP1, NAV3, PHLDB2, MTPN, TTBK2, CAMSAP1
BP	GO:0051668	localization within membrane	35/2564	6.50E-03	ADAM10, ATP1B1, CDH2, DAG1, DBN1, EFNB2, GPC4, GLRB, HIP1, INSIG1, KIF5C, RAB8A, OPHN1, RELN, RAB1A, RAC1, RALA, SNAP25, STX7, NUMB, RAB11A, DNAJA3, NRXN1, SEC24C, MAGI2, SEC31A, GRIP1, SLC7A11, ADAM22, SSH1, NDC1, SAR1A, ANKS1B, TBC1D20, MIA3
BP	GO:0010959	regulation of metal ion transport	77/2564	6.50E-03	ADCYAP1, ANK3, ARF1, RHOA, ATP1A2, ATP1B1, ATP2B1, ATP2B4, ATP7A, BCL2, CACNA1C, CACNA2D1, CALM1, CALM2, CALM3, CAMK2D, CLIC2, DIAPH1, DMD, STOM, F2R, PTK2B, FGF12, FGF14, FKBP1A, FMR1, FYN, G6PD, GEM, GJA1, GLRX, GNAI2, HFE, HSPA2, KCNC2, KCNJ2, KIF5B, MLLT6, MYLK, MYO5A, NEDD4, PDE4D, SERPINE2, PIK3CG, PKD2, PLCG1, PRKCE, PTEN, PTGS2, PTPN3, SLC9A1, TMBIM6, UTRN, SLMAP, STC2, OXSR1, AHCYL1, GPD1L, STK39, UBQLN1, KCNIP3, CAB39, KLHL24, TMEM38B, SLC30A10, JPH1, JPH3, HECW2, WNK1, WNK3, SESTD1, OSR1, ALG10B, SIK1, ANO6, LRRC55, KCNRG
BP	GO:0009612	response to mechanical stimulus	46/2564	6.59E-03	RHOA, ATP1A2, CHEK1, COL1A1, DAG1, DMD, EDN1, ETS1, ETV1, PTK2B, FYN, GJA1, TNC, KCNJ2, KIT, MAP1B, MEIS2, MAP3K1, NFKB1, NFKBIA, P2RY1, SERPINE2, PKD2, PTCH1, PTGS2, RAC1, MAP2K4, SLC9A1, SOX9, STAT1, TGFBR2, THBS1, TLR4, BTG2, FOSL1, NRXN1, MAP3K2, SUN1, CNTNAP2, SLC38A2, USP53, STRBP, PIEZO2, LRP11, FOXP2, MTPN
BP	GO:0048016	inositol phosphate-mediated signaling	17/2564	6.72E-03	ATP2B4, EDN1, ERBB3, MTOR, GSK3B, NRG1, IGF1, ITPR1, NFATC3, PPP3CA, PPP3R1, PTBP1, SLC9A1, NFAT5, CAMTA1, LMCD1, SPPL3
BP	GO:0070830	bicellular tight junction assembly	17/2564	6.72E-03	APC, RUNX1, CBFB, ECT2, GJA1, ROCK1, SNAI2, SRF, STRN, TJP1, FZD5, CLDN1, ROCK2, MPP5, PARD6B, MTDH, OCLN
BP	GO:0061640	cytoskeleton-dependent cytokinesis	26/2564	6.75E-03	ANK3, APC, ARF1, RHOA, ECT2, STMN1, MYH10, RASA1, ROCK1, SPAST, SPTBN1, ROCK2, KIF23, IST1, ACTR3, ZFYVE26, KIF4A, CHMP2B, CHMP5, TTC19, CEP55, SPIRE1, CHMP1B, MAP9, LZTS2, EFHC1
BP	GO:0007093	mitotic cell cycle checkpoint	38/2564	6.77E-03	APC, ATM, CCND1, BRCA1, CENPF, FOXN3, ATF2, E2F1, EP300, HUS1, MDM4, MSH2, CNOT2, CNOT4, PRKDC, RB1, SOX4, TFDP1, TFDP2, TP53, TPR, WEE1, BTG2, HMGA2, BUB3, CNOT1, SYF2, GIGYF2, CNOT7, DONSON, TRIAP1, TIPIN, CNOT6, TAOK1, NABP1, TICRR, CNOT6L, GEN1
BP	GO:0042552	myelination	32/2564	6.78E-03	MYRF, DAG1, ERBB2, MTOR, HGF, NRG1, ID4, KCNJ10, MYO5A, NF1, NTRK2, PMP22, POU3F2, PTEN, PTPRZ1, RARA, SCN8A, SKI, TSC1, UGT8, ZNF24, B4GALT6, B4GALT5, QKI, EIF2AK3, TSPAN2, OLIG2, DICER1, ADAM22, MPP5, FA2H, PIKFYVE
BP	GO:1990845	adaptive thermogenesis	36/2564	6.84E-03	ACVR2B, ADCYAP1, ADRB1, ALDH1A1, APC, ESRRG, ACSL1, GJA1, GNAS, HNRNPU, ID1, IGF1R, RBPJ, JAK2, LNPEP, NOVA1, NOVA2, NPR3, PLCL1, PRLR, RB1, SCD, SORL1, ADAM17, TLR4, VEGFA, MFN2, ADAMTS5, PLCL2, LGR4, ACOT13, ARRDC3, ELOVL6, ADIPOR2, DOCK7, KSR2
BP	GO:0106106	cold-induced thermogenesis	34/2564	6.84E-03	ACVR2B, ADCYAP1, ADRB1, ALDH1A1, APC, ESRRG, ACSL1, GJA1, GNAS, ID1, IGF1R, RBPJ, JAK2, LNPEP, NOVA1, NOVA2, NPR3, PLCL1, PRLR, RB1, SCD, ADAM17, TLR4, VEGFA, MFN2, ADAMTS5, PLCL2, LGR4, ACOT13, ARRDC3, ELOVL6, ADIPOR2, DOCK7, KSR2
BP	GO:0120161	regulation of cold-induced thermogenesis	34/2564	6.84E-03	ACVR2B, ADCYAP1, ADRB1, ALDH1A1, APC, ESRRG, ACSL1, GJA1, GNAS, ID1, IGF1R, RBPJ, JAK2, LNPEP, NOVA1, NOVA2, NPR3, PLCL1, PRLR, RB1, SCD, ADAM17, TLR4, VEGFA, MFN2, ADAMTS5, PLCL2, LGR4, ACOT13, ARRDC3, ELOVL6, ADIPOR2, DOCK7, KSR2

BP	GO:0045069	regulation of viral genome replication	25/2564	6.92E-03	ADARB1, BCL2, DDX3X, DDX5, STOM, FMR1, IFIT1, PLSCR1, PKN2, RAD23A, RNASEL, STAU1, HMGA2, VAPB, VAPA, TNIP1, LARP1, FBXL2, PABPC1, CNOT7, ZC3HAV1, FAM111A, YTHDC2, TBC1D20, PDE12
BP	GO:0043966	histone H3 acetylation	18/2564	6.99E-03	BRCA1, CHEK1, GATA3, LIF, SMAD4, KMT2A, NAP1L2, BRPF1, KAT6A, KAT2B, KAT6B, BRD1, ZNF451, TAF5L, BRPF3, LEF1, YEATS2, MEAF6
BP	GO:0120193	tight junction organization	18/2564	6.99E-03	APC, RUNX1, CBFB, ECT2, GJA1, ROCK1, SNAI2, SRF, STRN, TGFBR1, TJP1, FZD5, CLDN1, ROCK2, MPP5, PARD6B, MTDH, OCLN
BP	GO:0048659	smooth muscle cell proliferation	39/2564	7.03E-03	BMPR1A, EDN1, EREG, FGF2, FGFR2, MTOR, GNAI2, GNAI3, HMGCR, HPGD, ID2, IGF1, IGFBP5, IL6R, IL12A, JAK2, MEF2C, MEF2D, MAP3K5, MMP2, NPR3, PRKDC, PRKG1, PTEN, PTGS2, SKP2, SOD2, STAT1, TGFBR2, THBS1, TNFAIP3, MFN2, NAMPT, TRIB1, FOXP1, PDCD4, IRAK4, SMPD3, PDGFD
BP	GO:0043902	positive regulation of multi-organism process	42/2564	7.05E-03	ADARB1, CCNT1, CHD1, DDX3X, EP300, STOM, F2RL1, FMR1, IFIT1, IGF2R, INHBA, P2RY1, PDE3A, PRKCA, PKN2, RAD23A, SP1, STAU1, TAF11, PDE5A, VAPB, VAPA, PUM1, BCL2L11, OPTN, PLCB1, SASH1, LARP1, PUM2, KPNA6, CHMP2B, ANKRD17, PABPC1, AGO2, CNOT7, LEF1, RSF1, SMURF2, YTHDC2, ZCCHC3, TBC1D20, PDE12
BP	GO:0034405	response to fluid shear stress	13/2564	7.05E-03	CA2, ETS1, PTK2B, GJA1, HAS2, SMAD7, MEF2C, NFE2L2, PKD2, PTGS2, TFPI2, ADAM9, SOCS5
BP	GO:0060323	head morphogenesis	13/2564	7.05E-03	ASPH, COL1A1, EP300, MMP2, PDGFRA, SKI, SGPL1, RAB3GAP1, NIPBL, TIPARP, FLVCR1, LEF1, PLEKHA1
BP	GO:1905314	semi-lunar valve development	13/2564	7.05E-03	JAG1, BMPR2, GATA3, RBPJ, NOTCH2, RB1, ROBO1, ROCK1, SNAI2, SOX9, TGFB2, SLIT2, ROCK2
BP	GO:0010603	regulation of cytoplasmic mRNA processing body assembly	6/2564	7.05E-03	CNOT2, PAN2, CNOT1, CNOT6, CNOT6L, PAN3
BP	GO:0014041	regulation of neuron maturation	6/2564	7.05E-03	BCL2, MTOR, OPA1, RET, BCL11A, LRRK2
BP	GO:0006984	ER-nucleus signaling pathway	15/2564	7.06E-03	EIF2S1, GSK3B, INSIG1, NFE2L2, TP53, XBP1, EIF2AK3, BCL2L11, ERLIN1, ERLIN2, ATF6, MBTPS2, TMEM33, EIF2A, PPP1R15B
BP	GO:0050919	negative chemotaxis	15/2564	7.06E-03	RHOA, NRG1, ITGAV, ROBO1, WNT5A, SEMA7A, UNC5C, SEMA5A, SLIT2, SEMA4D, SEMA3C, FLRT3, FLRT2, SEMA4C, SEMA6A
BP	GO:0097720	calcineurin-mediated signaling	15/2564	7.06E-03	ATP2B4, ERBB3, MTOR, GSK3B, NRG1, IGF1, NFATC3, PPP3CA, PPP3R1, PTBP1, SLC9A1, NFAT5, CAMTA1, LMCD1, SPPL3
BP	GO:1990928	response to amino acid starvation	15/2564	7.06E-03	EIF2S1, MTOR, MAP3K5, MAPK1, EIF2AK3, SZT2, LARP1, SESN1, SLC38A2, RRAGD, SEH1L, SESN2, EIF2A, SESN3, C12orf66
BP	GO:0043488	regulation of mRNA stability	40/2564	7.24E-03	ZFP36L1, ZFP36L2, E2F1, FMR1, MTOR, HNRNPC, HNRNPU, TNPO1, NPM1, PRKCA, PSMD1, RNASEL, ROCK1, RPS27A, VIM, XPO1, YWHAB, FXR1, PABPC4, ROCK2, PUM1, HNRNPR, IGF2BP3, CPEB3, DIS3, SAMD4A, LARP1, PUM2, GIGYF2, SERBP1, PABPC1, MYEF2, DCP1A, TRIM71, RC3H1, DCP2, PDE12, RBM24, CNOT6L, YTHDF3
BP	GO:0006695	cholesterol biosynthetic process	21/2564	7.24E-03	ACACB, CYP51A1, FASN, G6PD, HMGCR, INSIG1, KPNB1, LBR, NFYB, PRKAA1, RAN, SC5D, SCD, SP1, CNBP, ERLIN1, ERLIN2, NPC1L1, MBTPS2, GPAM, ELOVL6
BP	GO:0010611	regulation of cardiac muscle hypertrophy	21/2564	7.24E-03	ATP2B4, CAMK2D, EDN1, MTOR, G6PD, IGF1, IL6ST, JARID2, SMAD4, MEF2A, PPARA, PPP3CA, PRKCA, ROCK1, SLC9A1, YY1, PDE5A, ROCK2, LMCD1, ERRFI1, MTPN
BP	GO:0043242	negative regulation of	21/2564	7.24E-03	ADD3, APC, CAPZA1, CAPZA2, EPS8, FGF13, MAP1B, MID1, SPTAN1, SPTBN1, IRAK3, SWAP70, CAMSAP2, TMOD3, TMOD2, TAOK1, MID1IP1, NAV3, MTPN, TTBK2, CAMSAP1

		protein complex disassembly			
BP	GO:0040013	negative regulation of locomotion	77/2564	7.28E-03	ABR, ADARB1, JAG1, RHOA, BCL2, BMPR1A, KRIT1, CRK, CYP1B1, DAG1, ERBB4, FGF2, FOXO3, GATA3, NRG1, HMGB1, IGFBP5, LRP1, SMAD7, MECP2, MEF2C, MITF, NF1, NFE2L2, SERPINE1, PRKG1, PTEN, PTPRG, PTPRJ, PTPRK, PTPRM, PTPRR, RAP2A, RAP2B, ROBO1, SFRP2, SP100, SRF, STAT3, NR2F2, THBS1, VCL, WNT5A, RECK, SEMA7A, NRP1, WASL, SEMA5A, SLIT2, MAGI2, TRIB1, SEMA4D, SEMA3C, IL24, ABHD2, PTPRT, LRCH1, PLCB1, SRGAP2, GTPBP4, CORO1C, CLIC4, GREM1, SPOCK3, SEMA4C, AP1AR, SEMA6A, ARRDC3, RAP2C, MMRN2, NAV3, PHLDB2, TP53INP1, ACVR1C, SPRED1, ARID2, MIA3
BP	GO:0032434	regulation of proteasomal ubiquitin-dependent protein catabolic process	30/2564	7.35E-03	FOXF2, GNA12, GSK3B, HFE, UBE2K, HSP90AB1, SMAD7, MTM1, NFE2L2, RAD23A, VCP, USP7, RNF14, SOCS5, N4BP1, RNF144A, TRIB1, RYBP, ARIH1, TRIB2, SENP1, UBQLN2, UBQLN1, UBXN1, WAC, LRRK2, SOCS4, RNF19B, RNF217, RNF144B
BP	GO:1905477	positive regulation of protein localization to membrane	30/2564	7.35E-03	ANK3, ARF6, BCL2, BID, E2F1, STOM, EPHB2, ERBB2, ACSL3, FYN, ITGA3, KIF5B, LRP1, PIK3R1, PPP3R1, PRKCE, SPTBN1, TFDP1, TFDP2, TP53, TP53BP2, EZR, YWHAB, TP63, RAB11A, CDK5R1, SORBS1, RAB11FIP2, SSH1, WNK3
BP	GO:0032007	negative regulation of TOR signaling	16/2564	7.62E-03	ATM, MTM1, PRKAA1, TSC1, EPM2A, PDCD6, SIK2, SZT2, SH3BP4, SESN1, DDIT4, FNIP2, SESN2, SESN3, C12orf66, SIK1
BP	GO:0048146	positive regulation of fibroblast proliferation	16/2564	7.62E-03	BMI1, CCNA2, CDK6, E2F1, EREG, ESR1, FN1, FOSL2, IGF1, DDR2, PDGFRA, PRKDC, WNT1, WNT5A, ZMIZ1, PDGFD
BP	GO:0048260	positive regulation of receptor-mediated endocytosis	16/2564	7.62E-03	BICD1, CBL, FMR1, HFE, HIP1, HNRNPK, NTF3, SERPINE1, VEGFA, WASL, MAGI2, RAB21, GREM1, AHI1, SCYL2, ATAD1
BP	GO:0010464	regulation of mesenchymal cell proliferation	12/2564	7.64E-03	BMPR1A, FGFR2, NFIB, SIX1, SOX9, STAT1, ZEB1, TGFBR2, VEGFA, WNT5A, PHF14, FOXP2
BP	GO:0048821	erythrocyte development	12/2564	7.64E-03	BCL6, BPGM, G6PD, SLC11A2, MED1, ARID4A, SRF, PTBP3, FLVCR1, TMOD3, ZBTB7A, SOX6
BP	GO:0022407	regulation of cell-cell adhesion	78/2564	7.69E-03	JAG1, ANK3, ANXA1, ARG2, RHOA, BCL6, RUNX1, RUNX3, CBFB, CD44, CDC42, EFNB2, ERBB2, ETS1, FYN, GATA3, GCNT2, HAS2, HFE, HMGB1, FOXA1, IGF1, IL6R, IL6ST, IL7R, IL12A, ITGA6, JAK2, SMAD7, CD46, MYO10, PAK2, PAWR, PCDH8, SERPINE2, PIK3R1, PPARA, PRKAR1A, PRKCA, PRKG1, RAC1, RARA, SNAI2, SOX2, TFRC, TGFBR2, TNFSF4, VEGFA, WNT1, WNT5A, XBP1, YES1, TNFSF11, PDE5A, ADAM19, DNAJA3, SOCS6, SOCS5, RASGRP1, GPNMB, NFAT5, MALT1, ZBTB1, SWAP70, GTPBP4, CD274, MINK1, LEF1, PAG1, PELI1, ZMIZ1, WNK1, VTCN1, ZNF703, AKNA, RC3H1, MDGA1, MIA3
BP	GO:0031398	positive regulation of protein ubiquitination	29/2564	7.69E-03	BIRC3, XIAP, BMI1, BRCA1, FKBP1A, GOLGA2, SMAD7, PTEN, RAB1A, SKP2, UBE2D1, UBE2L3, UBE3A, CUL3, RNF40, PDCD6, MALT1, MYCBP2, UBQLN1, DCUN1D1, RNF111, FANCI, PELI1, ARRDC3, FANCM, DERL1, SPRTN, LRRK2, DCUN1D3
BP	GO:0006474	N-terminal protein amino acid acetylation	8/2564	7.70E-03	CREBBP, EP300, SOX4, KAT2B, NAA25, NAA15, NAA50, NAA30
BP	GO:0015693	magnesium ion transport	8/2564	7.70E-03	KCNJ2, ZDHHC13, MRS2, MAGT1, MMGT1, NIPA1, NIPAL1, SLC41A1
BP	GO:0015931	nucleobase-containing	51/2564	7.70E-03	SLC25A4, ZFP36L1, FMR1, GJA1, GLE1, HNRNPA2B1, HNRNPU, AGFG1, KIF5C, NPM1, PURA, RAN, SRSF1, SRSF2, SRSF6, SRSF7, TGFBR2, TPR, TSC1, XPO1, SLBP, QKI, ZC3H11A, SMG7, G3BP2, RBM8A, NXF1, IGF2BP3, KHDRBS1, XPO7, SMG1,

		compound transport			SLC35D1, BICD2, SLC35A3, CPSF2, RBM27, SLC35A5, SLC25A36, NDC1, NXT2, PARP11, THOC2, XPO5, EPG5, RBM26, SEH1L, FYTTD1, LTV1, YTHDC1, HNRNPA3, NUP43
BP	GO:0010595	positive regulation of endothelial cell migration	31/2564	7.88E-03	ANXA1, BMPR2, EDN1, ETS1, PTK2B, FGF2, GATA3, HMGB1, MET, NFE2L2, PIK3C2A, PLCG1, PRKCA, MAP2K3, PTGS2, SP1, SPARC, ADAM17, THBS1, TMSB4X, VEGFA, WNT5A, FGF18, NRP1, SEMA5A, ROCK2, AKT3, PDCD6, SASH1, FOXP1, AMOTL1
BP	GO:0010559	regulation of glycoprotein biosynthetic process	14/2564	7.95E-03	BCL2, FKTN, GOLGA2, IGF1, PAWR, SOAT1, ITM2B, TMEM59, ARFGEF1, PLCB1, AGO2, ITM2C, ALG10B, ACER2
BP	GO:0120192	tight junction assembly	17/2564	8.00E-03	APC, RUNX1, CBFB, ECT2, GJA1, ROCK1, SNAI2, SRF, STRN, TJP1, FZD5, CLDN1, ROCK2, MPP5, PARD6B, MTDH, OCLN
BP	GO:0043687	post-translational protein modification	71/2564	8.04E-03	ADAM10, APLP2, APP, CALU, CDH2, CHM, CHML, FBN1, FN1, TNC, IGFBP5, KTN1, LAMC1, LMO7, RAB8A, DNAJC3, PSMD1, RAB1A, RAB2A, SDC2, SKP1, SKP2, VHL, SCG2, CUL5, PTP4A2, GAN, CUL4B, CUL3, COPS3, STC2, RAB11A, DCAF5, SOCS2, SOCS6, COPS2, SOCS5, KLHL21, DCAF7, TGOLN2, PRSS23, FSTL1, MGAT4A, FBXW11, SUMF2, FBXW2, FBXL3, FBXL5, KLHL3, KLHL20, KLHL5, DTL, BTBD1, DCUN1D1, CAND1, FEM1C, TULP4, KLHL42, COPS7B, DCAF10, SPSB1, FBXO11, KBTBD8, KBTBD6, KLHL13, DCUN1D3, ASB7, TTL, FBXO41, KCTD6, MIA3
BP	GO:1904063	negative regulation of cation transmembrane transport	24/2564	8.04E-03	ANK3, ATP1A2, ATP7A, CALM1, CALM2, CALM3, CAMK2D, CLIC2, EPHB2, FGF12, FMR1, GEM, NEDD4, PKD2, PRKCE, PTEN, OXSR1, STK39, UBQLN1, CAB39, HECW2, SESTD1, OSR1, KCNRG
BP	GO:0010644	cell communication by electrical coupling	11/2564	8.07E-03	ANK3, ATP1A2, ATP1B1, CACNA1C, CALM1, CALM2, CALM3, CAMK2D, DBN1, GJA1, PDE4D
BP	GO:0010882	regulation of cardiac muscle contraction by calcium ion signaling	11/2564	8.07E-03	ATP1A2, ATP1B1, CACNA1C, CALM1, CALM2, CALM3, CAMK2D, CLIC2, DMD, SLC9A1, TMEM38B
BP	GO:0014044	Schwann cell development	11/2564	8.07E-03	DAG1, NRG1, NF1, NTRK2, POU3F2, SKI, MED12, DICER1, ADAM22, MPP5, FA2H
BP	GO:0021799	cerebral cortex radially oriented cell migration	11/2564	8.07E-03	PAFAH1B1, POU3F2, POU3F3, RELN, CDK5R1, SUN1, SRGAP2, RTN4, NDEL1, DIXDC1, FBXO45
BP	GO:0031114	regulation of microtubule depolymerization	11/2564	8.07E-03	APC, FGF13, MAP1B, MID1, SPAST, CAMSAP2, TAOK1, MID1IP1, NAV3, TTBK2, CAMSAP1
BP	GO:0060441	epithelial tube branching involved in lung morphogenesis	11/2564	8.07E-03	DAG1, FGFR2, FOXA1, HOXA5, TNC, SOX9, WNT2B, SPRY1, SPRY2, YAP1, HHIP
BP	GO:0090162	establishment of epithelial cell polarity	11/2564	8.07E-03	ARF6, RHOA, CDC42, MSN, MYO9A, OPHN1, PTK7, WNT5A, FRMD4A, GOLPH3, MPP5
BP	GO:0006403	RNA localization	49/2564	8.07E-03	ATM, BICD1, ZFP36L1, FMR1, GLE1, HNRNPA2B1, HNRNPU, AGFG1, KIF5C, NPM1, PURA, RAN, SRSF1, SRSF2, SRSF6, SRSF7, TGFBR2, TPR, TSC1, XPO1, YY1, SLBP, QKI, ZC3H11A, SMG7, G3BP2, RBM8A, NXF1, IGF2BP3, KHDRBS1, XPO7, SMG1, BICD2, A1CF, CPSF2, RBM27, NDC1, NXT2, PARP11, THOC2, XPO5, RBM26, SEH1L, FYTTD1, LTV1, YTHDC1, DCP2, HNRNPA3, NUP43
BP	GO:0009743	response to carbohydrate	49/2564	8.07E-03	ACVR2B, RHOA, ZFP36L1, EGR1, ENSA, EPHA5, ERCC1, PTK2B, FOXO3, GJA1, GLUL, HMGCR, IGF1R, KIF5B, LRP1, SMAD2, MAP1B, ME1, NEUROD1, OPA1, PPP3CA, PRKAA1, PRKCB, PRKCE, PTEN, PTGS2, RAC1, RAP1B, MAP2K4, TRA2B,

					SLC6A1, SOX4, SPARC, SRF, TGFBR2, THBS1, TIAM1, VSNL1, XBP1, KLF7, MAP4K4, NAMPT, RAB11FIP2, ADNP, ZBTB20, RMI1, SESN2, ACVR1C, STXBP4
BP	GO:0071384	cellular response to corticosteroid stimulus	18/2564	8.18E-03	ADCYAP1, ANXA1, ATP2B1, ZFP36L1, ZFP36L2, KLF9, EDN1, FOXO3, NR3C1, HNRNPU, REST, SSTR2, UBE2L3, BCL2L11, AKAP13, ERRFI1, DDIT4, CREBRF
BP	GO:1903902	positive regulation of viral life cycle	18/2564	8.18E-03	ADARB1, DDX3X, STOM, FMR1, IFIT1, PKN2, RAD23A, STAU1, VAPB, VAPA, LARP1, KPNA6, CHMP2B, PABPC1, CNOT7, YTHDC2, TBC1D20, PDE12
BP	GO:0045216	cell-cell junction organization	36/2564	8.19E-03	APC, RHOA, RUNX1, CBFB, CDH2, CDH6, CDH11, CTNND1, CXADR, DSG2, ECT2, F2R, F2RL1, GJA1, LIMS1, PRKCA, PKN2, ROCK1, SNAI2, SRF, STRN, TGFB2, TGFBR1, TJP1, UGT8, VCL, FZD5, PKP4, CLDN1, ROCK2, GRHL1, PERP, MPP5, PARD6B, MTDH, OCLN
BP	GO:0030512	negative regulation of transforming growth factor beta receptor signaling pathway	22/2564	8.19E-03	FBN1, FBN2, GLG1, SMAD2, SMAD7, PPM1A, RPS27A, SKI, SKIL, ADAM17, TGFBR1, TGFBR2, TP53, WNT1, ONECUT2, PEG10, BAMBI, ZNF451, ZBTB7A, PMEPA1, SMURF2, VASN
BP	GO:0031290	retinal ganglion cell axon guidance	9/2564	8.19E-03	ALCAM, BMPR1B, EPHB1, EPHB2, NRCAM, PTPRM, VEGFA, NRP1, SLIT2
BP	GO:0033962	cytoplasmic mRNA processing body assembly	9/2564	8.19E-03	DDX6, CNOT2, PAN2, CNOT1, CNOT7, CNOT6, RC3H1, CNOT6L, PAN3
BP	GO:0035162	embryonic hemopoiesis	9/2564	8.19E-03	GATA3, KIT, KMT2A, PBX1, MED1, STK3, STK4, TGFBR2, VEGFA
BP	GO:0036120	cellular response to platelet-derived growth factor stimulus	9/2564	8.19E-03	ATP7A, CBL, CCNA2, CREB1, FYN, HAS2, YES1, ERRFI1, PDGFD
BP	GO:0043984	histone H4-K16 acetylation	9/2564	8.19E-03	BRCA1, HCFC1, KMT2A, AUTS2, PHF20, MSL2, KANSL3, KAT8, KANSL1L
BP	GO:0061213	positive regulation of mesonephros development	9/2564	8.19E-03	GATA3, SIX1, SOX9, VEGFA, WNT2B, MAGED1, BASP1, SIX4, LGR4
BP	GO:0071498	cellular response to fluid shear stress	9/2564	8.19E-03	CA2, PTK2B, HAS2, MEF2C, NFE2L2, PKD2, PTGS2, TFPI2, SOCS5
BP	GO:1902307	positive regulation of sodium ion transmembrane transport	9/2564	8.19E-03	ANK3, ARF1, ATP1B1, DMD, GLRX, KIF5B, SLC9A1, WNK1, WNK3
BP	GO:2001014	regulation of skeletal muscle cell differentiation	9/2564	8.19E-03	DDX5, EPHB1, MEF2C, SIX1, NR1D2, SIX4, NLN, AKIRIN1, RBM24
BP	GO:0007272	ensheathment of neurons	32/2564	8.19E-03	MYRF, DAG1, ERBB2, MTOR, HGF, NRG1, ID4, KCNJ10, MYO5A, NF1, NTRK2, PMP22, POU3F2, PTEN, PTPRZ1, RARA, SCN8A, SKI, TSC1, UGT8, ZNF24, B4GALT6, B4GALT5, QKI, EIF2AK3, TSPAN2, OLIG2, DICER1, ADAM22, MPP5, FA2H, PIKFYVE

BP	GO:0008366	axon ensheathment	32/2564	8.19E-03	MYRF, DAG1, ERBB2, MTOR, HGF, NRG1, ID4, KCNJ10, MYO5A, NF1, NTRK2, PMP22, POU3F2, PTEN, PTPRZ1, RARA, SCN8A, SKI, TSC1, UGT8, ZNF24, B4GALT6, B4GALT5, QKI, EIF2AK3, TSPAN2, OLIG2, DICER1, ADAM22, MPP5, FA2H, PIKFYVE
BP	GO:0072171	mesonephric tubule morphogenesis	19/2564	8.21E-03	BCL2, FGF2, GATA3, SMAD4, PBX1, PKD2, PTCH1, SIX1, SOX9, VEGFA, WNT1, WNT2B, MAGED1, SIX4, LGR4, LZTS2, OSR1, NPNT, FMN1
BP	GO:0001659	temperature homeostasis	39/2564	8.21E-03	ACVR2B, ADCYAP1, ADRB1, ALDH1A1, APC, EGR1, ESRRG, ACSL1, GJA1, GNAS, ID1, IGF1R, RBPJ, JAK2, LNPEP, NOVA1, NOVA2, NPR3, PLCL1, PRLR, PTGS2, RB1, SCD, STAT3, ADAM17, TLR4, VEGFA, TNFSF11, MFN2, ADAMTS5, PLCL2, LGR4, ACOT13, ARRDC3, ELOVL6, ADIPOR2, DOCK7, NAPEPLD, KSR2
BP	GO:1902653	secondary alcohol biosynthetic process	21/2564	8.21E-03	ACACB, CYP51A1, FASN, G6PD, HMGCR, INSIG1, KPNB1, LBR, NFYB, PRKAA1, RAN, SC5D, SCD, SP1, CNBP, ERLIN1, ERLIN2, NPC1L1, MBTPS2, GPAM, ELOVL6
BP	GO:0007026	negative regulation of microtubule depolymerization	10/2564	8.21E-03	APC, FGF13, MAP1B, MID1, CAMSAP2, TAOK1, MID1IP1, NAV3, TTBK2, CAMSAP1
BP	GO:0033522	histone H2A ubiquitination	10/2564	8.21E-03	BMI1, SKP1, UBE2A, PCGF2, CUL4B, TRIP12, RYBP, UBR5, PCGF5, RNF168
BP	GO:0035459	cargo loading into vesicle	10/2564	8.21E-03	INSIG1, RAB1A, PICALM, SEC24C, TMED10, SEC31A, SAR1A, KIF13A, TBC1D20, MIA3
BP	GO:0045646	regulation of erythrocyte differentiation	15/2564	8.47E-03	ZFP36L1, CDK6, ETS1, FOXO3, HMGB2, HOXA5, ID2, INHBA, MED1, STAT1, STAT3, MAFB, SENP1, KLF13, NCAPG2
BP	GO:0034620	cellular response to unfolded protein	33/2564	8.67E-03	CCND1, CANX, EIF2S1, EP300, EXTL3, GFPT1, HSPA2, NFE2L2, PIK3R1, DNAJC3, SSR1, HSPA13, TMBIM6, VCP, XBP1, STC2, VAPB, EIF2AK3, TATDN2, BCL2L11, OPTN, SEC31A, ATF6, SERP1, HSPA14, MBTPS2, TMEM33, YOD1, HERPUD2, DERL1, SYVN1, PPP1R15B, CREBRF
BP	GO:0046636	negative regulation of alpha-beta T cell activation	13/2564	8.67E-03	ANXA1, ARG2, BCL6, RUNX1, RUNX3, CBFB, HFE, HMGB1, SMAD7, TNFSF4, SOCS5, CD274, RC3H1
BP	GO:0048009	insulin-like growth factor receptor signaling pathway	13/2564	8.67E-03	AR, IGF1, IGF1R, IGF2R, IGFBP5, NKX3-1, PIK3R1, WNT1, EIF2AK3, PLCB1, GIGYF2, PHIP, GIGYF1
BP	GO:0071604	transforming growth factor beta production	13/2564	8.67E-03	CREB1, ATF2, GATA6, HSP90AB1, ITGAV, ITGB8, LUM, SMAD4, CD46, PTGS2, TGFB2, THBS1, CD2AP
BP	GO:0010771	negative regulation of cell morphogenesis involved in differentiation	25/2564	8.74E-03	RHOA, EPHB2, FGF13, GDI1, ID1, MAP2, PPP3CA, PTEN, UBE3A, WNT5A, SEMA7A, NRP1, CDK5R1, SEMA5A, SLIT2, RAPGEF2, ULK2, SEMA4D, SEMA3C, CORO1C, SEMA4C, AP1AR, RTN4, SEMA6A, TRAK2
BP	GO:0034614	cellular response to reactive oxygen species	38/2564	8.75E-03	ANXA1, ATP7A, AXL, CCNA2, CRK, CYP1B1, ECT2, ETS1, EZH2, FANCC, FER, FOXO3, FXN, HGF, KCNC2, MAP3K5, MET, MMP2, MTR, NFE2L2, PAWR, PDGFRA, PKD2, PRKAA1, MAPK1, PTPRK, SOD2, TNFAIP3, PCGF2, NET1, CAMKK2, ZNF277, SETX, SZT2, SMPD3, PLEKHA1, PDGFD, LRRK2
BP	GO:1901987	regulation of cell cycle phase transition	90/2564	8.77E-03	ANXA1, APC, APP, ATM, ATP2B4, CCND1, BCL2, BID, BRCA1, ZFP36L1, ZFP36L2, CCND2, CDC25A, CDC27, CDK6, CENPF, CHEK1, FOXN3, DDX3X, E2F1, EP300, EZH2, HSPA2, HSP90AA1, HUS1, ID2, MDM4, MECP2, CNOT2, CNOT4, NPM1, PAFAH1B1, PBX1, PKD2, PRKDC, PSMD1, PTEN, RB1, RBL1, SKP1, SOX4, ADAM17, TFDP1, TFDP2, TP53, TPR, UBE2D1, UBE2E2, WEE1, BTG2, HMGA2, CUL4B, CUL3, CDC14A, RAB11A, BUB3, CCP110, CTDSPL, GPNMB, PLK4, NEK6, MAPRE1, TPX2, CNOT1, PLCB1, SYF2, ANKRD17, GIGYF2, TMOD3, CNOT7, DONSON, TRIAP1, DTL, NDE1, USP47, CEP192, CEP72, KMT2E, MEPCE, CNOT6, HECW2, TAOK1, ZNF655, CDC73, TICRR, DCUN1D3, NACC2, CNOT6L, STXBP4, GEN1

BP	GO:0031570	DNA integrity checkpoint	36/2564	8.96E-03	ATM, CCND1, BRCA1, CDC5L, CHEK1, FOXN3, ATF2, E2F1, EP300, HUS1, MDM4, MSH2, CNOT2, CNOT4, PRKDC, SOX4, TFDP1, TFDP2, TP53, TP53BP1, BTG2, HMGA2, CLOCK, CNOT1, SYF2, GIGYF2, CNOT7, DONSON, WAC, TRIAP1, DTL, TIPIN, CNOT6, TAOK1, TICRR, CNOT6L
BP	GO:0043271	negative regulation of ion transport	36/2564	8.96E-03	ADCYAP1, ANK3, ATP1A2, ATP7A, BCL2, CALM1, CALM2, CALM3, CAMK2D, CLIC2, EPHB2, PTK2B, FGF12, FMR1, MTOR, GEM, GPM6B, NEDD4, SERPINE2, PKD2, PRKCE, PTEN, PTGS2, TMBIM6, THBS1, OXSR1, STK39, UBQLN1, CAB39, GOPC, HECW2, WNK1, WNK3, SESTD1, OSR1, KCNRG
BP	GO:0001838	embryonic epithelial tube formation	30/2564	9.06E-03	APAF1, GATA3, PRKACB, PTCH1, PTK7, RALA, RARA, RET, SFRP2, SIX1, SKI, SOX4, SOX9, STK3, STK4, TGFB2, TSC1, KDM6A, WNT5A, LUZP1, FZD3, ARID1A, FZD1, ZEB2, MED12, SIX4, SEMA4C, MIB1, OSR1, TRIM71
BP	GO:0007015	actin filament organization	77/2564	9.06E-03	ACTN1, ADD3, ALDOA, SHROOM2, ARF1, ARF6, RHOA, RND3, BCL2, CAPZA1, CAPZA2, CDC42, DBN1, DIAPH1, EPS8, F2RL1, PTK2B, FER, MTOR, HIP1, ID1, INPPL1, JAK2, STMN1, MARCKS, MET, MYO1B, PAWR, PIK3R1, PRKCE, RAC1, RASA1, ROCK1, SLC9A1, SPTAN1, SPTBN1, SRF, TGFBR1, TMSB4X, TPM3, TSC1, EZR, CUL3, SORBS2, NRP1, WASL, SEMA5A, SLIT2, ROCK2, ARPC5, ACTR3, ABI2, WASF2, NEBL, ARPC1A, ARFGEF1, SORBS1, CDC42EP3, NCKAP1, SWAP70, RHOQ, CORO1C, CD2AP, TMOD3, TMOD2, SH3KBP1, ARHGAP17, AP1AR, ENAH, SPIRE1, PHLDB2, WHAMM, JMY, MTPN, RICTOR, SH3PXD2B, FMN1
BP	GO:1903322	positive regulation of protein modification by small protein conjugation or removal	32/2564	9.13E-03	BIRC3, XIAP, BMI1, BRCA1, FKBP1A, GOLGA2, SMAD7, PTEN, RAB1A, SKP2, UBE2D1, UBE2I, UBE2L3, UBE3A, VCP, CUL3, RNF40, PDCD6, TNIP1, MALT1, MYCBP2, UBQLN1, DCUN1D1, RNF111, FANCI, PELI1, ARRDC3, FANCM, DERL1, SPRTN, LRRK2, DCUN1D3
BP	GO:0045844	positive regulation of striated muscle tissue development	23/2564	9.25E-03	BCL2, BMPR1A, CREB1, EDN1, EFNB2, ERBB3, ERBB4, FGF2, FGFR2, MTOR, GATA6, GJA1, NRG1, HMGCR, IGF1, RBPJ, MEF2C, MTM1, PRKAA1, MAPK1, YAP1, GREM1, RBM24
BP	GO:0048636	positive regulation of muscle organ development	23/2564	9.25E-03	BCL2, BMPR1A, CREB1, EDN1, EFNB2, ERBB3, ERBB4, FGF2, FGFR2, MTOR, GATA6, GJA1, NRG1, HMGCR, IGF1, RBPJ, MEF2C, MTM1, PRKAA1, MAPK1, YAP1, GREM1, RBM24
BP	GO:1901796	regulation of signal transduction by p53 class mediator	40/2564	9.35E-03	ATM, BCL2, BRCA1, CD44, CHD4, CHEK1, CSNK2A1, DDX5, DYRK1A, EP300, HNRNPK, HUS1, MDM4, PRKAA1, RBBP4, SNAI2, TAF5, TAF11, TAF13, TP53, TP53BP2, BRPF1, KAT6A, TP63, CDK5R1, EXO1, RAD50, HEXIM1, TPX2, HIPK2, RRM2B, PHF20, TRIAP1, RRN3, MEAF6, RMI1, TP53INP1, JMY, SPRED1, SPRED2
BP	GO:0072431	signal transduction involved in mitotic G1 DNA damage checkpoint	17/2564	9.35E-03	ATM, E2F1, EP300, MDM4, CNOT2, CNOT4, PRKDC, SOX4, TFDP1, TFDP2, TP53, BTG2, CNOT1, CNOT7, TRIAP1, CNOT6, CNOT6L
BP	GO:1902400	intracellular signal transduction involved in G1 DNA damage checkpoint	17/2564	9.35E-03	ATM, E2F1, EP300, MDM4, CNOT2, CNOT4, PRKDC, SOX4, TFDP1, TFDP2, TP53, BTG2, CNOT1, CNOT7, TRIAP1, CNOT6, CNOT6L
BP	GO:0051702	interaction with symbiont	22/2564	9.42E-03	CALM1, CALM2, CALM3, CCNT1, CHD1, EP300, STOM, F2RL1, FMR1, FN1, IGF2R, PTX3, REST, SP1, TAF11, HMGA2, VAPA, FBXL2, LEF1, YTHDC2, TBC1D20, NAPEPLD
BP	GO:0071158	positive regulation of cell cycle arrest	22/2564	9.42E-03	ATM, BRCA1, E2F1, EP300, GATA6, ID2, MDM4, CNOT2, CNOT4, PKD2, SOX4, TFDP1, TFDP2, TP53, BTG2, HMGA2, CDK5R1, CNOT1, CNOT7, TRIAP1, CNOT6, CNOT6L

BP	GO:0097581	lamellipodium organization	22/2564	9.42E-03	ATP7A, CD44, CDC42, FER, MTOR, KIT, RAC1, SNX1, VCL, WNT1, SLIT2, ARPC5, WASF2, VAV3, NCKAP1, SRGAP2, CORO1C, AUTS2, CCDC88A, GOLPH3, AKIRIN1, WHAMM
BP	GO:0002562	somatic diversification of immune receptors via germline recombination within a single locus	18/2564	9.48E-03	ATM, BCL6, CCR6, ERCC1, HMGB1, HMGB2, MSH2, PRKDC, TFRC, TP53BP1, TNFSF4, EXO1, SWAP70, CLCF1, LEF1, RIF1, BCL11B, RNF168
BP	GO:0009880	embryonic pattern specification	18/2564	9.48E-03	ERBB4, FGFR2, SMAD1, SMAD2, SMAD4, SMAD5, PCSK6, PTCH1, TBX3, KDM6A, WNT1, WNT5A, FZD5, NRP1, BASP1, FRS2, SATB2, PGAP1
BP	GO:0016444	somatic cell DNA recombination	18/2564	9.48E-03	ATM, BCL6, CCR6, ERCC1, HMGB1, HMGB2, MSH2, PRKDC, TFRC, TP53BP1, TNFSF4, EXO1, SWAP70, CLCF1, LEF1, RIF1, BCL11B, RNF168
BP	GO:0046824	positive regulation of nucleocytoplasmic transport	18/2564	9.48E-03	ECT2, GSK3B, IPO5, NEDD4, PIK3R1, PPM1A, MAPK1, PTGS2, RAN, TP53, TPR, KHDRBS1, UBR5, CTDSPL2, RBM27, RBM22, RBM26, XPO4
BP	GO:0048857	neural nucleus development	18/2564	9.48E-03	ACTB, RHOA, BCL2, CALM1, CALM2, CALM3, CDC42, G6PD, GLUD1, KCNC2, NFIB, ZNF148, CDK5R1, SEC16A, BASP1, GNB4, ZNF430, FOXP2
BP	GO:1901862	negative regulation of muscle tissue development	18/2564	9.48E-03	EPHB1, G6PD, GJA1, IGFBP5, JARID2, SMAD4, MEIS1, PPARA, PTEN, TGFBR2, YY1, FRS2, LEF1, SIX4, SOX6, LUC7L, SAV1, AKIRIN1
BP	GO:0034205	amyloid-beta formation	12/2564	9.48E-03	ADAM10, APP, DYRK1A, EPHA4, IGF1, ROCK1, SORL1, PICALM, ROCK2, TMED10, GGA3, APH1A
BP	GO:0070884	regulation of calcineurin-NFAT signaling cascade	12/2564	9.48E-03	ATP2B4, ERBB3, MTOR, GSK3B, NRG1, IGF1, PTBP1, SLC9A1, NFAT5, CAMTA1, LMCD1, SPPL3
BP	GO:0106056	regulation of calcineurin-mediated signaling	12/2564	9.48E-03	ATP2B4, ERBB3, MTOR, GSK3B, NRG1, IGF1, PTBP1, SLC9A1, NFAT5, CAMTA1, LMCD1, SPPL3
BP	GO:0030308	negative regulation of cell growth	41/2564	9.48E-03	APBB2, BCL2, BCL6, BMPR2, BTG1, DDX3X, FGF13, G6PD, GJA1, INHBA, SMAD4, MAP2, SERPINE2, PPARA, PTPRJ, SFRP2, TGFB2, TP53, WNT5A, YY1, SEMA7A, NRP1, CDK5R1, SEMA5A, SLIT2, ULK2, SERTAD2, NME6, SEMA4D, SEMA3C, SH3BP4, BCL11A, SEMA4C, CDKN2AIP, RTN4, NDRG3, SEMA6A, ADIPOR2, SESN2, DCUN1D3, DCBLD2
BP	GO:0051851	modification by host of symbiont morphology or physiology	21/2564	9.48E-03	CALM1, CALM2, CALM3, CCNT1, CHD1, EP300, STOM, F2RL1, FMR1, IGF2R, PTX3, REST, SP1, TAF11, HMGA2, VAPA, FBXL2, LEF1, YTHDC2, TBC1D20, NAPEPLD
BP	GO:0008286	insulin receptor signaling pathway	33/2564	9.49E-03	APC, ATP6V1A, EIF4EBP2, FER, FOXO3, GAB1, GNAI2, GRB14, GSK3B, IGF1R, INSR, OPA1, PIK3C2A, PIK3R1, PRKAA1, PRKCB, PTPRE, RPS6KB1, SORL1, TSC1, PIK3R3, SOCS2, ATP6V1G1, SORBS1, SIK2, RHOQ, APPL1, ATP6V1H, PHIP, ZNF106, NDEL1, SESN3, STXBP4
BP	GO:0071364	cellular response to epidermal growth factor stimulus	14/2564	9.49E-03	ZFP36L1, ZFP36L2, CBL, COL1A1, EEF1A1, ERBB2, ERBB4, ID1, PLCG1, MED1, PTPN12, SNAI2, SOX9, ERRFI1
BP	GO:0007100	mitotic centrosome separation	7/2564	9.49E-03	CHEK1, KIF11, KIF3B, NDE1, MAP9, NDEL1, UBXN2B

BP	GO:0045198	establishment of epithelial cell apical/basal polarity	7/2564	9.49E-03	RHOA, CDC42, MSN, MYO9A, OPHN1, PTK7, WNT5A
BP	GO:0051547	regulation of keratinocyte migration	7/2564	9.49E-03	ARF6, MTOR, HAS2, PTEN, ADAM9, MAP4K4, IQSEC1
BP	GO:0090110	cargo loading into COPII-coated vesicle	7/2564	9.49E-03	INSIG1, RAB1A, SEC24C, SEC31A, SAR1A, TBC1D20, MIA3
BP	GO:0061180	mammary gland epithelium development	20/2564	9.49E-03	AR, AREG, CCND1, ERBB4, ESR1, FGFR2, GATA3, HOXA5, ID2, JAK2, MED1, MAPK1, PTCH1, ROBO1, TBX3, WNT5A, TNFSF11, KDM5B, RTN4, ZNF703
BP	GO:0051090	regulation of DNA-binding transcription factor activity	82/2564	9.49E-03	ANXA4, APP, AR, CEBPG, ATF2, CYP1B1, EDN1, EP300, EPHA5, ESR1, EZH2, FANCA, FER, FOXA1, ID1, ID2, JAK2, KIT, SMAD7, MXI1, NEUROD1, NFKB1, NFKBIA, NKX3-1, NPM1, DDR2, PKD2, PPP3CA, PRKCB, MAPK1, RELN, PTCH1, PTEN, RB1, KDM5A, RPS27A, SGK1, SP100, SRF, STAT3, STK3, TLR4, TMSB4X, TNFAIP3, TP53BP1, TNFSF4, VEGFA, WNT1, WNT5A, USP7, FOSL1, FZD1, FZD4, TNFSF11, LRRFIP1, RPS6KA5, CLOCK, G3BP2, MED13, TRIB1, MALT1, FAF1, IRAK3, CARD8, TAB2, SGK3, HIPK2, RLIM, IRAK4, ZBTB7A, MBTPS2, PELI1, CREBZF, SAV1, SETD6, MTDH, JMY, MTPN, SIK1, TAB3, NWD1, C8orf44-SGK3
BP	GO:0007565	female pregnancy	42/2564	9.65E-03	ADCYAP1, AR, BCL2, PRDM1, BMPR2, DSG2, ESR1, ETS1, ACSL4, MTOR, GJA1, HFE, HPGD, IGFBP5, ITGA3, LIF, LNPEP, MMP2, MED1, MAPK1, PRLR, PTGS2, RARA, SP3, NR2F2, TGFBR2, UBE2A, FOSL1, ARID1A, RECK, STC2, NAMPT, KPNA6, DAZAP1, AGO2, SLC38A2, ASH1L, SMURF2, ADIPOR2, VMP1, POLR1B, ACVR1C
BP	GO:0099175	regulation of postsynapse organization	25/2564	9.80E-03	ADAM10, ARF4, CDH2, DBN1, EPHA4, FYN, CAPRIN1, NRCAM, OPA1, PAFAH1B1, RELN, PTEN, TIAM1, UBE3A, WNT5A, CDK5R1, NRXN1, DNM1L, ABI2, PDLIM5, SLC7A11, CHMP2B, ABHD17B, SSH1, LRRK2
BP	GO:0002285	lymphocyte activation involved in immune response	40/2564	1.01E-02	AP1G1, ANXA1, ATP7A, BCL6, CCR6, ERCC1, F2RL1, PTK2B, MTOR, GATA3, HMGB1, LAMP1, SMAD7, CD46, MFNG, MSH2, NOTCH2, RARA, RORA, STAT3, TFRC, TLR4, TP53, TP53BP1, TSC1, TNFSF4, XBP1, EXO1, SOCS5, MALT1, SWAP70, PLCL2, CLCF1, FOXP1, LEF1, RIF1, DOCK10, DOCK11, RC3H1, RNF168
BP	GO:1902905	positive regulation of supramolecular fiber organization	44/2564	1.01E-02	APP, ARF1, ARF6, RHOA, CDC42, EDN1, F2RL1, PTK2B, FER, MTOR, ID1, MAP1B, MECP2, MET, PRKCE, RAC1, RB1, SPAST, TGFBR1, TSC1, NRP1, CDK5R1, WASL, SEMA5A, ROCK2, ARPC5, ACTR3, ABI2, ARPC1A, CDC42EP3, NCKAP1, MAPRE1, SWAP70, NIN, AP1AR, SPIRE1, SLAIN2, NAV3, MYLK3, WHAMM, JMY, RICTOR, SH3PXD2B, FMN1
BP	GO:0035249	synaptic transmission, glutamatergic	24/2564	1.02E-02	ADCYAP1, ATP1A2, CDH2, PTK2B, GLUL, GRIA2, GRIK3, GRM3, MEF2C, NF1, OPHN1, SERPINE2, RELN, PTGS2, STXBP1, NRXN1, RAB3GAP1, SHANK2, UNC13A, TSHZ3, ALS2, ATAD1, LRRK2, TPRG1L
BP	GO:0008089	anterograde axonal transport	15/2564	1.02E-02	FMR1, KIF5B, KIF5C, MAP2, RAB27B, SPAST, KIF3B, AP3M2, RAB21, KIF1B, SNAPIN, KIF4A, AP3M1, ARL8B, TRAK2
BP	GO:0051653	spindle localization	15/2564	1.02E-02	KPNB1, MAP4, MYH9, PAFAH1B1, WASL, ACTR3, SPRY1, SPRY2, GPSM2, NDE1, BCCIP, SPIRE1, MCPH1, NDEL1, UBXN2B
BP	GO:0045017	glycerolipid biosynthetic process	52/2564	1.02E-02	ARF1, ARF3, ATM, CDS1, CHKA, CSNK2A1, ACSL1, ACSL3, ACSL4, FGF2, INPP4A, INPPL1, LDLR, MTM1, OCRL, PIK3C2A, PIK3C3, PIK3CB, PIK3CG, PIK3R1, PIP4K2A, PLD1, PLSCR1, PTEN, PIP5K1A, PIK3R3, CDS2, MTMR3, MTMR6, SACM1L, GPD1L, DDHD2, CTDNEP1, SLC44A1, RAB14, MTMR12, PIGX, PI4K2B, AGPAT5, ETNK1, AGK, AGPAT3, GPAM, PLEKHA1, MTMR9, LPCAT1, PGAP1, PLEKHA8, SIK1, PIKFYVE, SLC44A5, CNEP1R1
BP	GO:0006493	protein O-linked glycosylation	27/2564	1.02E-02	FKTN, GALNT1, GALNT2, GALNT3, MFNG, ST6GAL1, ST3GAL1, VEGFB, GALNT4, B4GALT5, B3GNT2, ST6GALNAC4, C1GALT1C1, GCNT4, GALNT7, GALNT10, POGLUT1, TRAK2, TET1, TMTC1, B3GNT5, TMTC4, B3GALNT2, TMTC3, TET3, GXYLT1, EOGT
BP	GO:0051261	protein depolymerization	27/2564	1.02E-02	ADD3, APC, ASPH, CAPZA1, CAPZA2, EPS8, F2RL1, FGF13, STMN1, MAP1B, MID1, SH3GL1, SPAST, SPTAN1, SPTBN1, SEMA5A, SWAP70, CAMSAP2, TMOD3, TMOD2, TAOK1, MID1IP1, NAV3, CCSAP, MTPN, TTBK2, CAMSAP1
BP	GO:0001844	protein insertion into	11/2564	1.02E-02	BCL2, BID, E2F1, PPP3R1, TFDP1, TFDP2, TP53, TP53BP2, YWHAB, TP63, BCL2L11

		mitochondrial membrane involved in apoptotic signaling pathway			
BP	GO:0051491	positive regulation of filopodium assembly	11/2564	1.02E-02	CDC42, FMR1, GPM6A, RALA, SRF, TGFBR1, NRP1, WASL, RHOQ, FNBP1L, DOCK11
BP	GO:0061842	microtubule organizing center localization	11/2564	1.02E-02	DYNC1LI2, KIF5B, PAFAH1B1, EZR, ARPC5, BICD2, SUN1, GPSM2, NIN, NDE1, NDEL1
BP	GO:0033673	negative regulation of kinase activity	53/2564	1.03E-02	ADARB1, APC, CBL, CBLB, DUSP4, DUSP5, DUSP8, EPHB2, GNAQ, HMGCR, HNRNPU, IGF1R, IPO5, NF1, NPM1, PAK2, PPP2R5A, PRKAR1A, PRKAR2A, DNAJC3, PTEN, PTPRJ, RB1, SFRP2, SORL1, NR2F2, TNFAIP3, KAT2B, SOCS5, HIPK3, TRIB1, SPRY1, SPRY2, IPO7, HEXIM1, DUSP14, PTPRT, IRAK3, CORO1C, WWTR1, IBTK, PDCD4, TRIB2, ERRFI1, CAMK2N1, WNK1, GGNBP2, ITPRIP, SOCS4, DUSP18, PAQR3, SPRED1, SPRED2
BP	GO:0034250	positive regulation of cellular amide metabolic process	35/2564	1.03E-02	APP, RHOA, DDX3X, EPHA4, ERBB2, PTK2B, FMR1, MTOR, NFE2L2, NPM1, MAPK1, DNAJC3, RBM3, RPS6KB1, SOX4, THBS1, VIM, CNBP, FXR1, PICALM, CDC123, ROCK2, KHDRBS1, CPEB3, SAMD4A, LARP4B, LARP1, PABPC1, SERP1, RBMS3, YTHDF1, LARP6, SMPD3, LARP4, YTHDF3
BP	GO:1901863	positive regulation of muscle tissue development	23/2564	1.04E-02	BCL2, BMPR1A, CREB1, EDN1, EFNB2, ERBB3, ERBB4, FGF2, FGFR2, MTOR, GATA6, GJA1, NRG1, HMGCR, IGF1, RBPJ, MEF2C, MTM1, PRKAA1, MAPK1, YAP1, GREM1, RBM24
BP	GO:1902904	negative regulation of supramolecular fiber organization	33/2564	1.05E-02	ADD3, APC, CAPZA1, CAPZA2, DYRK1A, EPS8, FGF13, STMN1, LDLR, SMAD4, MAP1B, MAP2, MET, MID1, SPTAN1, SPTBN1, TMSB4X, SLIT2, WASF2, ARFGEF1, MAPRE1, SWAP70, CAMSAP2, EML2, TMOD3, TMOD2, TAOK1, MID1IP1, NAV3, PHLDB2, MTPN, TTBK2, CAMSAP1
BP	GO:0007219	Notch signaling pathway	42/2564	1.05E-02	ADAM10, JAG1, ANXA4, APP, BCL6, CDH6, CDK6, CREBBP, DLX2, EP300, FOXA1, RBPJ, IL6ST, JAG2, KIT, CD46, MFNG, NFKBIA, NOTCH2, PBX1, ROBO1, SNAI2, SOX9, STAT1, STAT3, ADAM17, TGFB2, TGFBR2, WNT1, SORBS2, TP63, KAT2B, AAK1, SPEN, WWC1, APH1A, ZBTB7A, NLE1, POGLUT1, ZMIZ1, MIB1, PERP
BP	GO:1901185	negative regulation of ERBB signaling pathway	16/2564	1.06E-02	AREG, CBL, CBLB, CDC42, ERBB2, EREG, PTPN3, PTPN12, PTPRJ, SOCS5, SPRY1, SPRY2, STAM2, SH3KBP1, ERRFI1, SOCS4
BP	GO:0008630	intrinsic apoptotic signaling pathway in response to DNA damage	26/2564	1.06E-02	ATM, BCL2, BCL2L2, BID, BRCA1, CD44, E2F1, EP300, HNRNPK, MCL1, MSH2, PIK3R1, PRKDC, SFRP2, SKIL, SNAI2, TP53, TPT1, TP63, BCL2L11, HIPK2, TRIAP1, DDIT4, USP47, FNIP2, NACC2
BP	GO:0046822	regulation of nucleocytoplasmic transport	26/2564	1.06E-02	ECT2, GSK3B, IPO5, PPP1R12A, NEDD4, NF1, PIK3R1, PPM1A, PPP1CC, MAPK1, PTGS2, PTPN14, RAN, SP100, TP53, TPR, XPO1, NOLC1, KHDRBS1, UBR5, CTDSPL2, RBM27, RBM22, XPO5, RBM26, XPO4
BP	GO:1903845	negative regulation of cellular response to transforming growth factor beta stimulus	22/2564	1.07E-02	FBN1, FBN2, GLG1, SMAD2, SMAD7, PPM1A, RPS27A, SKI, SKIL, ADAM17, TGFBR1, TGFBR2, TP53, WNT1, ONECUT2, PEG10, BAMBI, ZNF451, ZBTB7A, PMEPA1, SMURF2, VASN
BP	GO:0007020	microtubule nucleation	10/2564	1.08E-02	GOLGA2, MECP2, RANBP9, EML2, NIN, NDE1, CEP192, SLAIN2, NDEL1, MZT1

BP	GO:0022011	myelination in peripheral nervous system	10/2564	1.08E-02	DAG1, NRG1, NF1, NTRK2, POU3F2, SKI, DICER1, ADAM22, MPP5, FA2H
BP	GO:0032292	peripheral nervous system axon ensheathment	10/2564	1.08E-02	DAG1, NRG1, NF1, NTRK2, POU3F2, SKI, DICER1, ADAM22, MPP5, FA2H
BP	GO:1900739	regulation of protein insertion into mitochondrial membrane involved in apoptotic signaling pathway	10/2564	1.08E-02	BCL2, BID, E2F1, PPP3R1, TFDP1, TFDP2, TP53, TP53BP2, YWHAB, TP63
BP	GO:1900740	positive regulation of protein insertion into mitochondrial membrane involved in apoptotic signaling pathway	10/2564	1.08E-02	BCL2, BID, E2F1, PPP3R1, TFDP1, TFDP2, TP53, TP53BP2, YWHAB, TP63
BP	GO:1903203	regulation of oxidative stress-induced neuron death	10/2564	1.08E-02	MCL1, REST, TLR4, TSC1, WNT1, FZD1, LANCL1, SLC7A11, OXR1, NCOA7
BP	GO:0030520	intracellular estrogen receptor signaling pathway	17/2564	1.09E-02	AR, BRCA1, RUNX1, CBFB, DDX5, ESR1, FOXA1, CNOT2, MED1, SKP2, ARID1A, TP63, YAP1, CNOT1, STRN3, GPAM, KCTD6
BP	GO:1902041	regulation of extrinsic apoptotic signaling pathway via death domain receptors	17/2564	1.09E-02	FASLG, BMPR1B, BRCA1, HGF, HMGB2, SERPINE1, PTEN, SFRP2, SKIL, SP100, STK3, STK4, THBS1, TIMP3, TNFAIP3, FAF1, ITPRIP
BP	GO:0002312	B cell activation involved in immune response	20/2564	1.10E-02	BCL6, CCR6, ERCC1, PTK2B, MFNG, MSH2, NOTCH2, TFRC, TLR4, TP53BP1, TNFSF4, XBP1, EXO1, SWAP70, PLCL2, CLCF1, RIF1, DOCK10, DOCK11, RNF168
BP	GO:0006486	protein glycosylation	53/2564	1.10E-02	EXTL3, FKTN, GALNT1, GALNT2, GALNT3, GCNT2, GFPT1, B4GALT1, GOLGA2, MFNG, MGAT5, ST6GAL1, ST3GAL1, VCP, VEGFB, GALNT4, B4GALT4, B4GALT6, B4GALT5, TMEM59, GFPT2, ARFGEF1, B3GNT2, FUT9, MAN1A2, MGAT4A, ST6GALNAC4, SERP1, C1GALT1C1, ST8SIA3, GCNT4, GALNT7, GALNT10, POGLUT1, TRAK2, SRD5A3, EDEM3, TET1, TMTC1, B3GNT5, MAGT1, SYVN1, TMTC4, MCFD2, B3GAT2, ALG10B, B3GALNT2, TMTC3, TET3, GXYLT1, EOGT, DPY19L4, ACER2
BP	GO:0043413	macromolecule glycosylation	53/2564	1.10E-02	EXTL3, FKTN, GALNT1, GALNT2, GALNT3, GCNT2, GFPT1, B4GALT1, GOLGA2, MFNG, MGAT5, ST6GAL1, ST3GAL1, VCP, VEGFB, GALNT4, B4GALT4, B4GALT6, B4GALT5, TMEM59, GFPT2, ARFGEF1, B3GNT2, FUT9, MAN1A2, MGAT4A, ST6GALNAC4, SERP1, C1GALT1C1, ST8SIA3, GCNT4, GALNT7, GALNT10, POGLUT1, TRAK2, SRD5A3, EDEM3, TET1,

					TMTC1, B3GNT5, MAGT1, SYVN1, TMTC4, MCFD2, B3GAT2, ALG10B, B3GALNT2, TMTC3, TET3, GXYLT1, EOGT, DPY19L4, ACER2
BP	GO:0010812	negative regulation of cell-substrate adhesion	19/2564	1.10E-02	JAG1, RHOA, BCL6, COL1A1, GCNT2, LRP1, NF1, SERPINE1, PIK3R1, PTEN, RASA1, THBS1, WNT1, FZD4, MAP4K4, CORO1C, AP1AR, PHLDB2, ACER2
BP	GO:0060065	uterus development	9/2564	1.11E-02	ESR1, GATA3, HOXA9, SMAD4, TGFB2, WNT5A, KDM5B, NIPBL, ASH1L
BP	GO:0070372	regulation of ERK1 and ERK2 cascade	60/2564	1.11E-02	ADCYAP1, APP, CD44, DUSP4, EPHB1, EPHB2, ERBB2, ERBB4, F2R, F2RL1, PTK2B, FGF2, FGFR3, FGFR2, FLT1, FN1, GCNT2, GNAI2, HMGB1, HMGCR, KIT, LIF, LRP1, SMAD4, NOTCH2, P2RY1, PDGFRA, PRKCA, PTEN, PTPRR, RAP1B, CCL20, SLAMF1, TIAM1, TIMP3, TLR4, EZR, SEMA7A, TNFSF11, EIF3A, FGF18, NRP1, AKAP12, RAPGEF2, RANBP9, RASGRP1, SPRY1, SPRY2, TNIP1, GPNMB, FRS2, DSTYK, ERRFI1, CAMK2N1, SLC30A10, LMO3, SEMA6A, PDGFD, SPRED1, NPNT
BP	GO:0051783	regulation of nuclear division	41/2564	1.11E-02	APC, ATM, ATRX, CDC27, CENPF, RCC1, CHEK1, EDN1, EREG, HNRNPU, IGF1, INSR, KIF11, LIF, PDE3A, PRKAR1A, RB1, TPR, WNT5A, SMC1A, CUL3, CDC14A, CDK13, BUB3, NME6, STAG1, STAG2, NEK6, PLCB1, NIPBL, CHMP2B, CHMP5, PHIP, SMPD3, CHMP1B, HECW2, CEP97, MAP9, CCSAP, UBXN2B, GEN1
BP	GO:0036294	cellular response to decreased oxygen levels	46/2564	1.11E-02	AK4, ATP7A, BCL2, ZFP36L1, CBL, CCNA2, CREBBP, E2F1, EDN1, EGR1, EP300, FOXO3, MTOR, GATA6, GNB1, RBPJ, MDM4, NFE2L2, NKX3-1, OPA1, PRKAA1, PRKCE, PSMD1, PTEN, PTGS2, RORA, RPS27A, SLC9A1, TMBIM6, TP53, TSC1, VEGFA, VHL, STC2, ROCK2, NPEPPS, DNM1L, NAMPT, DDAH1, HIPK2, UBQLN1, HP1BP3, CPEB4, EGLN3, VASN, CPEB2
BP	GO:0046474	glycerophospholipid biosynthetic process	46/2564	1.11E-02	ARF1, ARF3, ATM, CDS1, CHKA, CSNK2A1, ACSL3, FGF2, INPP4A, INPPL1, MTM1, OCRL, PIK3C2A, PIK3C3, PIK3CB, PIK3CG, PIK3R1, PIP4K2A, PLD1, PLSCR1, PTEN, PIP5K1A, PIK3R3, CDS2, MTMR3, MTMR6, SACM1L, GPD1L, DDHD2, SLC44A1, RAB14, MTMR12, PIGX, PI4K2B, AGPAT5, ETNK1, AGK, AGPAT3, GPAM, PLEKHA1, MTMR9, LPCAT1, PGAP1, PLEKHA8, PIKFYVE, SLC44A5
BP	GO:0050920	regulation of chemotaxis	46/2564	1.11E-02	ADAM10, BMPR2, CCR6, EDN1, EFNB2, F2RL1, PTK2B, FGF2, HMGB1, IL6R, IL12A, MET, NTF3, SERPINE1, PDGFRA, RAC1, ROBO1, ADAM17, THBS1, TIAM1, TMSB4X, VEGFA, VEGFB, WNT5A, SCG2, SEMA7A, FGF18, NRP1, SEMA5A, SLIT2, OXSR1, SEMA4D, SEMA3C, SWAP70, MYCBP2, GREM1, STK39, SEMA4C, YTHDF1, MTUS1, SEMA6A, ZSWIM6, WNK1, AKIRIN1, PDGFD, ANO6
BP	GO:2000146	negative regulation of cell motility	68/2564	1.14E-02	ABR, ADARB1, JAG1, RHOA, BCL2, BMPR1A, KRIT1, CRK, CYP1B1, DAG1, ERBB4, FGF2, FOXO3, GATA3, NRG1, HMGB1, IGFBP5, LRP1, SMAD7, MECP2, MEF2C, MITF, NF1, NFE2L2, SERPINE1, PRKG1, PTEN, PTPRG, PTPRJ, PTPRK, PTPRM, PTPRR, RAP2A, RAP2B, ROBO1, SFRP2, SP100, SRF, STAT3, NR2F2, THBS1, VCL, RECK, WASL, SLIT2, MAGI2, TRIB1, IL24, ABHD2, PTPRT, LRCH1, PLCB1, SRGAP2, GTPBP4, CORO1C, CLIC4, GREM1, SPOCK3, AP1AR, RAP2C, MMRN2, NAV3, PHLDB2, TP53INP1, ACVR1C, SPRED1, ARID2, MIA3
BP	GO:0003197	endocardial cushion development	14/2564	1.15E-02	JAG1, BMPR1A, BMPR2, ERBB3, RBPJ, SMAD4, MDM4, ROBO1, SNAI2, SOX9, TGFB2, TGFBR1, TGFBR2, RBM24
BP	GO:0042987	amyloid precursor protein catabolic process	14/2564	1.15E-02	ADAM10, APP, DYRK1A, EPHA4, FKBP1A, IGF1, ROCK1, SORL1, PICALM, ROCK2, TMED10, UNC13A, GGA3, APH1A
BP	GO:1902667	regulation of axon guidance	14/2564	1.15E-02	BMPR2, VEGFA, WNT5A, SEMA7A, NRP1, SEMA5A, SLIT2, SEMA4D, SEMA3C, MYCBP2, SEMA4C, YTHDF1, SEMA6A, ZSWIM6
BP	GO:0031915	positive regulation of synaptic plasticity	6/2564	1.15E-02	DBN1, EPHB2, MAP1B, PTGS2, UNC13A, SSH1
BP	GO:0033327	Leydig cell differentiation	6/2564	1.15E-02	AR, CCND1, PDGFRA, TMF1, SGPL1, PLEKHA1
BP	GO:0033629	negative regulation of cell adhesion mediated by integrin	6/2564	1.15E-02	CYP1B1, SERPINE1, SNAI2, SWAP70, WNK1, ACER2

BP	GO:0070757	interleukin-35-mediated signaling pathway	6/2564	1.15E-02	CANX, IL6ST, IL12A, JAK2, STAT1, STAT3
BP	GO:0010811	positive regulation of cell-substrate adhesion	29/2564	1.15E-02	CDC42, CDK6, CRK, DAG1, DOCK1, PTK2B, FN1, GSK3B, HAS2, ITGA6, ITGA3, JAK2, LIMS1, PRKCE, PTPRJ, RAC1, ROCK1, TSC1, UTRN, VEGFA, NRP1, MAP4K4, EDIL3, ABI3BP, MMRN2, DOCK5, CCDC80, NPNT, FMN1
BP	GO:0030968	endoplasmic reticulum unfolded protein response	29/2564	1.15E-02	CCND1, CANX, EIF2S1, EP300, EXTL3, GFPT1, NFE2L2, PIK3R1, DNAJC3, SSR1, HSPA13, VCP, XBP1, STC2, VAPB, EIF2AK3, TATDN2, BCL2L11, SEC31A, ATF6, SERP1, MBTPS2, TMEM33, YOD1, HERPUD2, DERL1, SYVN1, PPP1R15B, CREBRF
BP	GO:0060491	regulation of cell projection assembly	39/2564	1.15E-02	APC, ARF6, ATP7A, KLF5, CDC42, EPS8, F2RL1, FER, FMR1, MTOR, GPM6A, KIT, MAP4, MYO10, ATP8B1, PLD1, RAC1, RALA, SRF, TGFBR1, WNT1, NRP1, WASL, SLIT2, CCP110, WASF2, CDC42EP3, NCKAP1, RHOQ, CORO1C, AUTS2, DCDC2, FNBP1L, CCDC88A, CEP97, AKIRIN1, NDEL1, DOCK11, FAM110C
BP	GO:0072175	epithelial tube formation	31/2564	1.15E-02	APAF1, FGFR2, GATA3, PRKACB, PTCH1, PTK7, RALA, RARA, RET, SFRP2, SIX1, SKI, SOX4, SOX9, STK3, STK4, TGFB2, TSC1, KDM6A, WNT5A, LUZP1, FZD3, ARID1A, FZD1, ZEB2, MED12, SIX4, SEMA4C, MIB1, OSR1, TRIM71
BP	GO:0007519	skeletal muscle tissue development	36/2564	1.16E-02	RHOA, BCL2, BCL9, KLF5, CCNT2, DDX5, EGR1, EP300, EPHB1, FLNB, HLF, HMGCR, HOXD10, FOXN2, MEF2C, MEF2D, MTM1, NF1, PITX1, PPP3CA, PRKAA1, RB1, SIX1, SKI, NR2F2, BTG2, COPS2, NR1D2, ZBTB18, SIX4, NLN, HIVEP3, AKIRIN1, FOXP2, SMYD1, RBM24
BP	GO:0006650	glycerophospholipid metabolic process	63/2564	1.16E-02	ARF1, ARF3, ATM, CDS1, CHKA, CSNK2A1, ACSL3, FGF2, HADHB, INPP4A, INPPL1, LDLR, MECP2, MTM1, OCRL, PAFAH1B1, PIK3C2A, PIK3C3, PIK3CB, PIK3CG, PIK3R1, PIP4K2A, PLD1, PLSCR1, PTEN, PIP5K1A, PIK3R3, CDS2, SOCS2, MTMR3, MTMR6, SOCS6, SOCS5, LPGAT1, SERINC3, SACM1L, SMG1, EFR3A, GPD1L, PLCB1, DDHD2, SLC44A1, SOCS7, RAB14, GDE1, MTMR12, PIGX, PI4K2B, AGPAT5, ETNK1, AGK, AGPAT3, GPAM, PLEKHA1, MTMR9, LPCAT1, PGAP1, PLEKHA8, OSBPL10, PIKFYVE, SLC44A5, NAPEPLD, FAM126B
BP	GO:0090257	regulation of muscle system process	53/2564	1.17E-02	RHOA, ATP1A2, ATP1B1, ATP2B1, ATP2B4, CACNA1C, CALM1, CALM2, CALM3, CAMK2D, CLIC2, DAG1, DMD, DSC2, DSG2, EDN1, F2R, FGF13, FOXO3, MTOR, G6PD, IGF1, IGFBP5, IL6ST, JARID2, KCNJ2, KIT, SMAD4, SMAD7, MEF2A, PPP1R12B, PDE4D, PIK3CG, PPARA, PPP3CA, PRKCA, PRKG1, PTGS2, ROCK1, SLC9A1, SRF, SSTR2, UTRN, YY1, PDE5A, ROCK2, DOCK4, LMCD1, ERRFI1, TMEM38B, DOCK5, MTPN, NPNT
BP	GO:0055013	cardiac muscle cell development	23/2564	1.17E-02	CXADR, EDN1, MTOR, G6PD, HNRNPU, IGF1, SMAD4, MEF2A, MYH10, PDGFRA, PPARA, MAP2K4, SGCB, SGCD, SRF, TBX3, VEGFA, YY1, SORBS2, NEBL, PDLIM5, AKAP13, MYLK3
BP	GO:0061053	somite development	23/2564	1.17E-02	ATM, BMPR1A, EP300, RBPJ, SMAD4, NKX3-1, PCDH8, PRKDC, PTCH1, SFRP2, SIX1, TP53, KDM6A, WNT1, WNT5A, ZEB2, MED12, SEMA3C, LEF1, SIX4, NLE1, POGLUT1, MIB1
BP	GO:0098751	bone cell development	12/2564	1.17E-02	EP300, FBN1, KIT, MEIS1, NOTCH2, PAFAH1B1, PIP4K2A, MED1, SRF, TNFSF11, WASF2, FOXP1
BP	GO:1905332	positive regulation of morphogenesis of an epithelium	12/2564	1.17E-02	AR, MTOR, GATA3, LIF, SIX1, SOX9, VEGFA, WNT2B, MAGED1, SIX4, AHI1, LGR4
BP	GO:0043487	regulation of RNA stability	40/2564	1.17E-02	ZFP36L1, ZFP36L2, E2F1, FMR1, MTOR, HNRNPC, HNRNPU, TNPO1, NPM1, PRKCA, PSMD1, RNASEL, ROCK1, RPS27A, VIM, XPO1, YWHAB, FXR1, PABPC4, ROCK2, PUM1, HNRNPR, IGF2BP3, CPEB3, DIS3, SAMD4A, LARP1, PUM2, GIGYF2, SERBP1, PABPC1, MYEF2, DCP1A, TRIM71, RC3H1, DCP2, PDE12, RBM24, CNOT6L, YTHDF3
BP	GO:0061136	regulation of proteasomal protein catabolic process	40/2564	1.17E-02	FOXF2, FMR1, GNA12, GSK3B, HFE, UBE2K, HSP90AB1, SMAD7, MTM1, NFE2L2, OPHN1, RAD23A, TMF1, VCP, USP7, USP13, RNF14, SOCS5, N4BP1, RNF144A, RNF40, TRIB1, RYBP, ARIH1, TRIB2, USP25, SENP1, UBQLN2, UBQLN1, UBXN1, RNFT1, WAC, YOD1, TMEM259, LRRK2, SOCS4, RNF19B, RNF217, TMTC3, RNF144B
BP	GO:0034260	negative regulation of GTPase activity	15/2564	1.21E-02	ADCYAP1, IPO5, TSC1, SLIT2, RASA4, SPRY1, SPRY2, ARFGEF1, LRCH1, SH3BP4, CDC42SE1, WNK1, LRRK2, CPEB2, AMOT
BP	GO:2001238	positive regulation of extrinsic	15/2564	1.21E-02	BID, BMPR1B, INHBA, NF1, PAK2, PPP2R1B, PTEN, RET, SKIL, STK3, STK4, THBS1, TIMP3, FAF1, ITM2C

		apoptotic signaling pathway			
BP	GO:0046631	alpha-beta T cell activation	32/2564	1.21E-02	ANXA1, ARG2, RHOA, ATP7A, BCL2, BCL6, PRDM1, RUNX1, RUNX3, CBFB, MTOR, GATA3, HFE, HMGB1, IL6R, IL12A, SMAD7, RARA, RORA, RPL22, SATB1, STAT3, TGFBR2, TNFSF4, SOCS5, MALT1, FOXP1, CD274, LEF1, SH3RF1, BCL11B, RC3H1
BP	GO:0032874	positive regulation of stress-activated MAPK cascade	38/2564	1.23E-02	APP, EDN1, EPHA4, F2RL1, PTK2B, HMGB1, HMGCR, MAP3K4, MAP3K5, MID1, MAP3K9, MAP2K4, SLAMF1, STK3, TGFB2, TIAM1, TLR4, VEGFA, WNT5A, FZD5, FZD4, FZD8, TNFSF11, SPAG9, RB1CC1, ZEB2, PJA2, RASGRP1, MAP3K2, PLCB1, SASH1, HIPK2, MINK1, SEMA4C, TAOK1, SH3RF1, SAMD5, RELL1
BP	GO:0036503	ERAD pathway	25/2564	1.23E-02	NFE2L2, HSPA13, VCP, RNF103, USP13, UBE4A, ERLIN1, ERLIN2, RNF139, UBXN4, FAF2, USP25, UBQLN2, UBQLN1, UBXN1, RNFT1, JKAMP, SGTB, YOD1, DERL1, DNAJB14, EDEM3, SYVN1, TMEM259, DNAJC18
BP	GO:0021675	nerve development	21/2564	1.23E-02	ADARB1, BDNF, DAG1, EPHB1, EPHB2, ERBB3, GABRB2, HOXA1, NTF3, ATP8B1, SERPINE2, RET, SIX1, NRP1, MAFB, UNC13A, DICER1, LRIG1, SIX4, FBXO45, RNF165
BP	GO:1901991	negative regulation of mitotic cell cycle phase transition	51/2564	1.25E-02	APC, ATM, CCND1, BCL2, BRCA1, ZFP36L1, ZFP36L2, CDK6, CENPF, FOXN3, E2F1, EP300, EZH2, HUS1, MDM4, CNOT2, CNOT4, PKD2, PRKDC, PSMD1, PTEN, RB1, RBL1, SKP1, SOX4, TFDP1, TFDP2, TP53, TPR, WEE1, BTG2, HMGA2, BUB3, CTDSPL, GPNMB, CNOT1, SYF2, GIGYF2, CNOT7, DONSON, TRIAP1, USP47, CNOT6, TAOK1, ZNF655, CDC73, TICRR, DCUN1D3, NACC2, CNOT6L, GEN1
BP	GO:0009895	negative regulation of catabolic process	61/2564	1.25E-02	ACACB, ATP2B4, BCL2, CSNK2A1, CYP51A1, E2F1, EIF4G2, EPHA4, FMR1, MTOR, FYN, GOLGA2, HFE, HGF, NRG1, HMGCR, HNRNPC, HNRNPU, HSP90AB1, FOXK2, MCL1, MDM4, MET, MTM1, NELL1, OPHN1, SERPINE2, PIK3CG, PPARA, PRKAA1, PTPN3, ROCK1, SORL1, STAT3, TIMP3, TP53, TSC1, WNT1, USP7, N4BP1, NAMPT, TOB1, IRAK3, MYCBP2, TAB2, LARP1, RYBP, PABPC1, HIPK2, USP25, SENP1, UBXN1, WAC, AZIN1, DDIT4, YOD1, NMNAT1, MTMR9, LRRK2, RBM24, TAB3
BP	GO:0045747	positive regulation of Notch signaling pathway	16/2564	1.25E-02	JAG1, CREBBP, EP300, RBPJ, JAG2, KIT, MFNG, ROBO1, STAT3, TGFB2, WNT1, TP63, KAT2B, AAK1, POGLUT1, ZMIZ1
BP	GO:0008654	phospholipid biosynthetic process	53/2564	1.26E-02	ARF1, ARF3, ATM, CDS1, CHKA, CSNK2A1, ACSL3, FGF2, INPP4A, INPPL1, FADS1, MTM1, OCRL, PIK3C2A, PIK3C3, PIK3CB, PIK3CG, PIK3R1, PIP4K2A, PLD1, PLSCR1, PTEN, PIP5K1A, PIK3R3, DGKE, CDS2, MTMR3, MTMR6, LPGAT1, SACM1L, GPD1L, DDHD2, SLC44A1, RAB14, MTMR12, PIGX, TMEM38B, PI4K2B, AGPAT5, ETNK1, AGK, AGPAT3, GPAM, PLEKHA1, MTMR9, SRD5A3, LPCAT1, PGAP1, PLEKHA8, SAMD8, SGMS2, PIKFYVE, SLC44A5
BP	GO:1900006	positive regulation of dendrite development	20/2564	1.26E-02	ARF1, DBN1, EPHA4, EZH2, FMR1, MTOR, CAPRIN1, OPA1, PAFAH1B1, MAPK6, RELN, TIAM1, VLDLR, DNM1L, CPEB3, SHANK2, RAB21, SS18L1, TMEM106B, ANKRD27
BP	GO:1902105	regulation of leukocyte differentiation	55/2564	1.26E-02	ANXA1, RHOA, AXL, BCL6, PRDM1, ZFP36L1, ZFP36L2, CA2, RUNX1, RUNX3, CBFB, CDK6, CREB1, ERBB2, FANCA, FBN1, MTOR, GATA3, GNAS, HMGB1, ID2, IL7R, IL12A, INHBA, LIF, SMAD7, CD46, MITF, NF1, NOTCH2, PIK3R1, PRKCA, RARA, RB1, ZEB1, TGFBR2, KLF10, TLR4, TNFSF4, XBP1, TNFSF11, SOCS5, MAFB, RASGRP1, TRIB1, TOB2, MALT1, ZBTB1, FOXP1, LEF1, ZMIZ1, SH3RF1, RC3H1, TMEM64, ATP11C
BP	GO:0070482	response to oxygen levels	75/2564	1.26E-02	AK4, APAF1, RHOA, ATM, ATP1B1, ATP6V1A, ATP7A, BCL2, ZFP36L1, CBL, CCNA2, COL1A1, CREB1, CREBBP, E2F1, EDN1, EGR1, EP300, ETS1, PTK2B, FOXO3, MTOR, GATA6, GNB1, RBPJ, ITPR1, SMAD4, MDM4, MECP2, MMP2, NF1, NFE2L2, NKX3-1, SLC11A2, NR4A2, OPA1, PKM, PPARA, PRKAA1, PRKCE, PSMD1, PTEN, PTGS2, REST, RORA, RPS27A, SLC9A1, SRF, ADAM17, TMBIM6, TGFB2, TGFBR2, THBS1, TP53, TSC1, VEGFA, VEGFB, VHL, STC2, ROCK2, NPEPPS, ATP6V1G1, DNM1L, NAMPT, DDAH1, HIPK2, UBQLN1, HP1BP3, CYB5R4, DDIT4, CPEB4, APOLD1, EGLN3, VASN, CPEB2
BP	GO:0033619	membrane protein proteolysis	17/2564	1.26E-02	ADAM10, DAG1, MYH9, NFKB1, PTPN3, RET, ROCK1, ADAM17, TIMP3, ADAM19, ADAM9, APH1A, MBTPS2, ERAP1, SPPL2A, SPPL3, SH3D19
BP	GO:0045843	negative regulation of striated muscle tissue development	17/2564	1.26E-02	EPHB1, G6PD, GJA1, JARID2, SMAD4, MEIS1, PPARA, PTEN, TGFBR2, YY1, FRS2, LEF1, SIX4, SOX6, LUC7L, SAV1, AKIRIN1
BP	GO:0072413	signal transduction	17/2564	1.26E-02	ATM, E2F1, EP300, MDM4, CNOT2, CNOT4, PRKDC, SOX4, TFDP1, TFDP2, TP53, BTG2, CNOT1, CNOT7, TRIAP1, CNOT6, CNOT6L

		involved in mitotic cell cycle checkpoint			
BP	GO:1902402	signal transduction involved in mitotic DNA damage checkpoint	17/2564	1.26E-02	ATM, E2F1, EP300, MDM4, CNOT2, CNOT4, PRKDC, SOX4, TFDP1, TFDP2, TP53, BTG2, CNOT1, CNOT7, TRIAP1, CNOT6, CNOT6L
BP	GO:1902403	signal transduction involved in mitotic DNA integrity checkpoint	17/2564	1.26E-02	ATM, E2F1, EP300, MDM4, CNOT2, CNOT4, PRKDC, SOX4, TFDP1, TFDP2, TP53, BTG2, CNOT1, CNOT7, TRIAP1, CNOT6, CNOT6L
BP	GO:0042698	ovulation cycle	19/2564	1.26E-02	AXL, BMPR1B, EGR1, EREG, ESR1, ETS1, FOXO3, HAS2, INHBA, PDGFRA, PTX3, TGFB2, NRIP1, FZD4, NCOA1, SGPL1, SLIT2, ADNP, PLEKHA1
BP	GO:0050771	negative regulation of axonogenesis	19/2564	1.26E-02	RHOA, EPHB2, FGF13, GDI1, MAP2, PTEN, WNT5A, SEMA7A, NRP1, CDK5R1, SEMA5A, SLIT2, ULK2, SEMA4D, SEMA3C, SEMA4C, RTN4, SEMA6A, TRAK2
BP	GO:0071300	cellular response to retinoic acid	19/2564	1.26E-02	ABL2, ATM, COL1A1, CREB1, PTK2B, FGFR2, TNC, PTK7, RARA, RET, RORB, SOX9, WNT5A, YES1, ZNF35, FZD4, YAP1, SETX, OSR1
BP	GO:0030032	lamellipodium assembly	18/2564	1.27E-02	ATP7A, CDC42, FER, MTOR, KIT, RAC1, VCL, WNT1, SLIT2, WASF2, VAV3, NCKAP1, SRGAP2, AUTS2, CCDC88A, GOLPH3, AKIRIN1, WHAMM
BP	GO:0060135	maternal process involved in female pregnancy	18/2564	1.27E-02	AR, PRDM1, BMPR2, DSG2, ESR1, MTOR, GJA1, ITGA3, LIF, MED1, MAPK1, PTGS2, NR2F2, UBE2A, STC2, KPNA6, DAZAP1, ASH1L
BP	GO:0010165	response to X-ray	11/2564	1.28E-02	ANXA1, ATM, CCND1, ERCC1, GATA3, MSH2, SFRP2, TP53, TP53BP1, HMGA2, NIPBL
BP	GO:1903393	positive regulation of adherens junction organization	11/2564	1.28E-02	ARF6, LIMS1, PTPRJ, RAC1, ROCK1, TSC1, VEGFA, NRP1, MAP4K4, IQSEC1, FMN1
BP	GO:0061462	protein localization to lysosome	13/2564	1.28E-02	SCARB2, LAMP2, NEDD4, SORL1, NCOA4, ROCK2, ZFYVE16, GGA3, SZT2, SH3BP4, AP3M1, RTN4, C12orf66
BP	GO:0072583	clathrin-dependent endocytosis	13/2564	1.28E-02	CANX, CLTC, HIP1, PIK3CB, PICALM, WASL, AAK1, SYT11, UBQLN2, FNBP1L, SCYL2, GPR107, FCHO2
BP	GO:0000280	nuclear division	77/2564	1.30E-02	APC, RHOA, ATM, ATRX, CDC27, CENPF, RCC1, CHEK1, EDN1, EPS8, EREG, FANCA, GOLGA2, HNRNPU, HSPA2, IGF1, INSR, KIF11, KPNB1, LIF, PDE3A, PRKAR1A, RAN, RB1, SPAST, TPR, WNT5A, SMC1A, CUL3, CDC14A, CDK13, RAB11A, CCNE2, BUB3, KIF3B, KIF23, ACTR3, RAD50, NME6, STAG1, SMC2, STAG2, NEK6, TPX2, PDS5B, PLCB1, PDS5A, SUN1, MAU2, KIF4A, NIPBL, CHMP2B, CHMP5, NDE1, PHIP, CEP192, SMPD3, NDC1, PPP2R2D, BCCIP, SPIRE1, CHMP1B, HECW2, FANCM, CENPK, NCAPG, CEP97, MAP9, RMI1, NAA50, NDEL1, SEH1L, CCSAP, UBXN2B, AGO4, GEN1, MZT1
BP	GO:0036293	response to decreased oxygen levels	71/2564	1.31E-02	AK4, APAF1, RHOA, ATM, ATP1B1, ATP7A, BCL2, ZFP36L1, CBL, CCNA2, CREB1, CREBBP, E2F1, EDN1, EGR1, EP300, ETS1, PTK2B, FOXO3, MTOR, GATA6, GNB1, RBPJ, ITPR1, SMAD4, MDM4, MECP2, MMP2, NF1, NFE2L2, NKX3-1, SLC11A2, NR4A2, OPA1, PKM, PPARA, PRKAA1, PRKCE, PSMD1, PTEN, PTGS2, REST, RORA, RPS27A, SLC9A1, SRF, ADAM17, TMBIM6, TGFB2, TGFBR2, THBS1, TP53, TSC1, VEGFA, VEGFB, VHL, STC2, ROCK2, NPEPPS, DNM1L, NAMPT, DDAH1, HIPK2, UBQLN1, HP1BP3, DDIT4, CPEB4, APOLD1, EGLN3, VASN, CPEB2
BP	GO:0010717	regulation of epithelial to	23/2564	1.32E-02	JAG1, COL1A1, DAG1, EZH2, MTOR, GCNT2, FOXA1, SMAD2, SMAD4, SMAD7, PTEN, SFRP2, TGFB2, TGFBR1, TGFBR2, TIAM1, BAMBI, WWTR1, GREM1, LEF1, ZNF703, PHLDB2, VASN

		mesenchymal transition			
BP	GO:0070304	positive regulation of stress-activated protein kinase signaling cascade	38/2564	1.33E-02	APP, EDN1, EPHA4, F2RL1, PTK2B, HMGB1, HMGCR, MAP3K4, MAP3K5, MID1, MAP3K9, MAP2K4, SLAMF1, STK3, TGFB2, TIAM1, TLR4, VEGFA, WNT5A, FZD5, FZD4, FZD8, TNFSF11, SPAG9, RB1CC1, ZEB2, PJA2, RASGRP1, MAP3K2, PLCB1, SASH1, HIPK2, MINK1, SEMA4C, TAOK1, SH3RF1, SAMD5, RELL1
BP	GO:0010508	positive regulation of autophagy	28/2564	1.34E-02	FOXO3, GNAI3, GSK3B, HMGB1, PIK3CB, PIP4K2A, PRKAA1, ROCK1, TSC1, EPM2A, TMEM59, MFN2, BCL2L11, OPTN, CAMKK2, RAB3GAP1, LARP1, SH3BP4, SESN1, WAC, VPS13C, SCOC, FYCO1, SESN2, MTDH, TP53INP1, LRRK2, SESN3
BP	GO:0045765	regulation of angiogenesis	73/2564	1.36E-02	ANXA1, FASLG, RHOA, BRCA1, BTG1, RUNX1, KRIT1, ATF2, CYP1B1, ERBB2, ETS1, PTK2B, FGF2, FLT1, GAB1, GATA6, GLUL, GTF2I, HGF, HOXA5, ID1, ITGB8, SMAD1, MECP2, NF1, NFE2L2, SERPINE1, PIK3C2A, PKM, PLCG1, PRKCA, PRKCB, PTGS2, PTPRM, ROCK1, SFRP2, SP1, SP100, SPARC, STAT1, STAT3, TGFB2, TGFBR2, THBS1, TNFAIP3, VEGFA, VEGFB, WNT5A, XBP1, ADAM12, HMGA2, RECK, FGF18, NRP1, SEMA5A, ROCK2, AKT3, PDCD6, SPRY2, GPNMB, SASH1, DDAH1, AGO1, AGO2, HIPK2, ERAP1, AGGF1, SEMA6A, VASH2, MMRN2, MTDH, AMOT, SPRED1
BP	GO:0016574	histone ubiquitination	14/2564	1.38E-02	BMI1, SKP1, UBE2A, PCGF2, CUL4B, TRIP12, RNF40, RYBP, SUZ12, WAC, UBR5, CDC73, PCGF5, RNF168
BP	GO:0036475	neuron death in response to oxidative stress	10/2564	1.40E-02	MCL1, REST, TLR4, TSC1, WNT1, FZD1, LANCL1, SLC7A11, OXR1, NCOA7
BP	GO:0045475	locomotor rhythm	7/2564	1.40E-02	ZFHX3, EGR1, MTOR, ID2, PTEN, NCOR1, NCOA2
BP	GO:0048569	post-embryonic animal organ development	7/2564	1.40E-02	ERCC1, FBN1, MYO1E, VEGFA, FZD5, BCL2L11, BCL11B
BP	GO:0051299	centrosome separation	7/2564	1.40E-02	CHEK1, KIF11, KIF3B, NDE1, MAP9, NDEL1, UBXN2B
BP	GO:0051770	positive regulation of nitric-oxide synthase biosynthetic process	7/2564	1.40E-02	JAK2, MAP2K4, STAT1, TLR4, AKAP12, NAMPT, LRRK2
BP	GO:0072075	metanephric mesenchyme development	7/2564	1.40E-02	SMAD4, PKD2, SIX1, STAT1, BASP1, SIX4, OSR1
BP	GO:0072148	epithelial cell fate commitment	7/2564	1.40E-02	RBPJ, JAG2, NEUROD1, RARA, NR2F2, NRP1, ESRP1
BP	GO:0072160	nephron tubule epithelial cell differentiation	7/2564	1.40E-02	GATA3, LIF, MEF2C, STAT1, YAP1, WWTR1, OSR1
BP	GO:0032273	positive regulation of protein polymerization	31/2564	1.40E-02	ARF1, ARF6, RHOA, PTK2B, FER, MTOR, HSP90AA1, MAP1B, MECP2, MET, PRKCE, RAC1, CDK5R1, WASL, ARPC5, ACTR3, ABI2, ARPC1A, CDC42EP3, NCKAP1, MAPRE1, NIN, TPPP3, AP1AR, SPIRE1, SLAIN2, NAV3, WHAMM, JMY, RICTOR, FMN1
BP	GO:0048593	camera-type eye morphogenesis	27/2564	1.41E-02	JAG1, SHROOM2, EPHB1, EPHB2, FOXF2, MEIS1, NF1, PITX2, PTPRM, RORB, SKI, SOX9, SP3, ZEB1, THRB, VEGFA, WNT5A, WNT2B, YY1, FZD5, ARID1A, MFN2, ABI2, FRS2, HIPK2, AHI1, TBC1D20
BP	GO:1903828	negative regulation of cellular protein localization	27/2564	1.41E-02	ARF6, CLTC, GDI1, GPM6B, GSK3B, INSIG1, NF1, PPP2R5A, SP100, PICALM, NUMB, DCLK1, ROCK2, TMEM59, ASTN2, RHOQ, LEPROTL1, ABHD17B, LZTFL1, YOD1, OTUD7B, GOPC, LZTS2, ANKRD13A, LRRK2, UBXN2B, TTBK2

BP	GO:0071478	cellular response to radiation	41/2564	1.41E-02	ATM, CALM1, CDC25A, CHEK1, CREBBP, ECT2, EGR1, EIF2S1, EP300, ERCC1, FMR1, GATA3, GNB1, HUS1, MME, NEDD4, NPM1, PIK3R1, POLH, PTGS2, PTPRK, SFRP2, SNAI2, TP53, TP53BP1, YY1, HMGA2, CUL4B, NMT2, CLOCK, N4BP1, NAMPT, NET1, YAP1, RAD51AP1, POLD3, ZBTB1, NIPBL, TRIAP1, USP47, TP53INP1
BP	GO:0002062	chondrocyte differentiation	29/2564	1.41E-02	BMPR1A, BMPR1B, BMPR2, RUNX2, RUNX3, COL12A1, FGFR3, GLG1, MEF2C, MEF2D, NFIB, SFRP2, SNAI2, SOX5, SOX9, TGFBI, TGFBR1, TGFBR2, TRPS1, WNT2B, HMGA2, FGF18, EIF2AK3, GREM1, SCARA3, SMPD3, SOX6, IFT80, OSR1
BP	GO:0050730	regulation of peptidyl-tyrosine phosphorylation	52/2564	1.43E-02	APP, AREG, BDNF, CBL, CBLB, CD44, EPHA4, ERBB3, ERBB4, EREG, PTK2B, FGFR3, MTOR, FYN, HGF, NRG1, IGF1, IL6R, IL6ST, IL12A, JAK2, KIT, LIF, NTF3, NTRK2, PAK2, PRKCE, RELN, PTPRJ, RAP2B, SFRP2, STAT3, ADAM17, TP53, VEGFA, YES1, NRP1, SOCS5, SEMA4D, IL24, ADNP, CLCF1, IBTK, GREM1, CNOT7, ERRFI1, NCAPG2, RAP2C, GGNBP2, PDGFD, SOCS4, RICTOR
BP	GO:0010718	positive regulation of epithelial to mesenchymal transition	15/2564	1.43E-02	JAG1, COL1A1, EZH2, MTOR, GCNT2, SMAD2, SMAD4, TGFB2, TGFBR1, TGFBR2, TIAM1, BAMBI, WWTR1, LEF1, ZNF703
BP	GO:0031113	regulation of microtubule polymerization	15/2564	1.43E-02	DYRK1A, STMN1, MAP1B, MAP2, MECP2, MET, RAC1, CDK5R1, MAPRE1, CAMSAP2, EML2, NIN, SLAIN2, NAV3, CAMSAP1
BP	GO:0072698	protein localization to microtubule cytoskeleton	15/2564	1.43E-02	APC, BICD1, DIAPH1, GSK3B, HNRNPU, MID1, MAPRE1, NUDCD3, ABHD17B, CEP192, CEP72, MCPH1, HOOK3, UBXN2B, TTBK2
BP	GO:0021536	diencephalon development	20/2564	1.43E-02	ADCYAP1, BMPR1A, CREB1, ETS1, RBPJ, KCNC2, NR4A2, PITX1, PITX2, POU3F2, SOX2, WNT1, WNT5A, NCOA1, NRP1, SEMA5A, ZEB2, OLIG2, RAB3GAP1, CNTNAP2
BP	GO:0046488	phosphatidylinositol metabolic process	38/2564	1.45E-02	ARF1, ARF3, ATM, CDS1, FGF2, INPP4A, INPPL1, MTM1, OCRL, PIK3C2A, PIK3C3, PIK3CB, PIK3CG, PIK3R1, PIP4K2A, PTEN, PIP5K1A, PIK3R3, SOCS2, MTMR3, MTMR6, SOCS6, SOCS5, SACM1L, SMG1, EFR3A, PLCB1, SOCS7, RAB14, MTMR12, PIGX, PI4K2B, PLEKHA1, MTMR9, PGAP1, PLEKHA8, PIKFYVE, FAM126B
BP	GO:2001252	positive regulation of chromosome organization	38/2564	1.45E-02	ATM, ATRX, BCL6, BRCA1, ERCC1, FMR1, GATA3, HNRNPA2B1, HNRNPU, JARID2, LIF, SMAD4, MECP2, MAP3K4, KMT2A, NAP1L2, MAPK1, RB1, SNAI2, TP53, TPR, VEGFA, CUL3, RPS6KA5, RNF40, RAD50, MTF2, NIPBL, AUTS2, PHF19, RIF1, ATF7IP, KMT2E, TET1, TNKS2, LRRK2, JDP2, NEK7
BP	GO:0097242	amyloid-beta clearance	12/2564	1.45E-02	CLTC, CYP51A1, HMGCR, IGF1R, INSR, LDLR, LRP1, MME, ROCK1, SRF, PICALM, RAB11A
BP	GO:0046330	positive regulation of JNK cascade	32/2564	1.45E-02	APP, EDN1, EPHA4, F2RL1, PTK2B, HMGB1, MAP3K4, MAP3K5, MAP3K9, MAP2K4, SLAMF1, STK3, TIAM1, TLR4, WNT5A, FZD5, FZD4, FZD8, TNFSF11, SPAG9, RB1CC1, ZEB2, PJA2, RASGRP1, MAP3K2, PLCB1, SASH1, HIPK2, MINK1, TAOK1, SH3RF1, SAMD5
BP	GO:0001756	somitogenesis	19/2564	1.45E-02	ATM, BMPR1A, EP300, RBPJ, SMAD4, NKX3-1, PCDH8, PRKDC, SFRP2, TP53, KDM6A, WNT5A, ZEB2, MED12, SEMA3C, LEF1, NLE1, POGLUT1, MIB1
BP	GO:0010517	regulation of phospholipase activity	19/2564	1.45E-02	ABL2, ANXA1, ARF4, ARL1, BDNF, BICD1, ESR1, FGF2, FGFR3, FGFR2, FLT1, GNAQ, KIT, LRP1, NTF3, NTRK2, PDGFRA, PLCG1, GNA13
BP	GO:0072170	metanephric tubule development	9/2564	1.45E-02	LIF, PKD2, POU3F3, SOX9, STAT1, YAP1, WWTR1, LGR4, OSR1
BP	GO:0072243	metanephric nephron epithelium development	9/2564	1.45E-02	LIF, PKD2, POU3F3, SOX9, STAT1, YAP1, WWTR1, LGR4, OSR1
BP	GO:0097150	neuronal stem cell population maintenance	9/2564	1.45E-02	JAG1, CDH2, FANCC, FOXO3, REST, SOX2, SS18, MCPH1, HOOK3
BP	GO:2000637	positive regulation of	9/2564	1.45E-02	DDX5, FMR1, STAT3, TP53, FXR1, PUM1, PUM2, AGO2, TRIM71

		gene silencing by miRNA			
BP	GO:0044380	protein localization to cytoskeleton	16/2564	1.45E-02	APC, BICD1, DIAPH1, GSK3B, HNRNPU, MID1, KLHL21, MAPRE1, NUDCD3, ABHD17B, CEP192, CEP72, MCPH1, HOOK3, UBXN2B, TTBK2
BP	GO:0048524	positive regulation of viral process	26/2564	1.46E-02	ADARB1, CCNT1, CHD1, DDX3X, EP300, STOM, FMR1, IFIT1, IGF2R, PKN2, RAD23A, SP1, STAU1, TAF11, VAPB, VAPA, LARP1, KPNA6, CHMP2B, PABPC1, CNOT7, LEF1, RSF1, YTHDC2, TBC1D20, PDE12
BP	GO:0048663	neuron fate commitment	18/2564	1.46E-02	DLX2, NRG1, FOXA1, HOXD10, ID2, RBPJ, JAG2, SMAD4, POU3F2, SIX1, TGFBR1, WNT1, OLIG2, MYT1L, SATB2, ZNF521, ESRP1, BCL11B
BP	GO:0060675	ureteric bud morphogenesis	18/2564	1.46E-02	BCL2, FGF2, GATA3, SMAD4, PBX1, PKD2, PTCH1, SIX1, SOX9, VEGFA, WNT1, WNT2B, MAGED1, SIX4, LGR4, LZTS2, NPNT, FMN1
BP	GO:0072665	protein localization to vacuole	18/2564	1.46E-02	SCARB2, LAMP2, NEDD4, SORL1, TNFAIP3, NCOA4, ROCK2, ZFYVE16, VTI1B, GGA3, SZT2, SH3BP4, AP3M1, VPS36, VPS13C, RTN4, VTI1A, C12orf66
BP	GO:0048635	negative regulation of muscle organ development	17/2564	1.46E-02	EPHB1, G6PD, GJA1, JARID2, SMAD4, MEIS1, PPARA, PTEN, TGFBR2, YY1, FRS2, LEF1, SIX4, SOX6, LUC7L, SAV1, AKIRIN1
BP	GO:0090342	regulation of cell aging	17/2564	1.46E-02	ARG2, BCL6, BMPR1A, CDK6, PAWR, PRKDC, PTEN, RBL1, NEK4, TP53, WNT1, HMGA2, AKT3, NAMPT, NEK6, ZNF277, SLC30A10
BP	GO:0034063	stress granule assembly	8/2564	1.46E-02	BICD1, DDX3X, DDX6, EIF2S1, PRKAA1, G3BP2, PUM2, OGFOD1
BP	GO:0035338	long-chain fatty-acyl-CoA biosynthetic process	8/2564	1.46E-02	ACSL1, ACSL3, ACSL4, ELOVL4, ACSL6, ELOVL5, ELOVL6, ELOVL7
BP	GO:0048025	negative regulation of mRNA splicing, via spliceosome	8/2564	1.46E-02	DYRK1A, HNRNPA2B1, HNRNPK, PTBP1, SRSF6, SRSF7, SRSF10, SRSF12
BP	GO:0032388	positive regulation of intracellular transport	45/2564	1.46E-02	ANK3, ARF1, ECT2, STOM, ERBB2, FYN, GSK3B, KIF5B, IPO5, MAP2, MSN, NEDD4, PIK3R1, PPM1A, PRKAA1, MAPK1, PTGS2, RAN, SORL1, STXBP1, TP53, TPR, UBE2D3, UBE2L3, EZR, FZD5, SNX4, CDK5R1, NPEPPS, GAB2, SEC16A, DNM1L, KHDRBS1, EHD1, RAB21, UBR5, CTDSPL2, RBM27, RBM22, TMEM30A, SAR1A, RBM26, XPO4, HPS4, TBC1D20
BP	GO:0006401	RNA catabolic process	75/2564	1.46E-02	ATM, ZFP36L1, ZFP36L2, DDX5, DDX6, E2F1, ETF1, FMR1, MTOR, GSPT1, HNRNPC, HNRNPU, TNPO1, RPSA, CNOT2, CNOT4, NPM1, PPP2R2A, PRKCA, PSMD1, RNASEL, ROCK1, RPL22, RPL28, RPL37, RPS16, RPS27A, VIM, XPO1, YWHAB, BTG2, FXR1, PABPC4, ROCK2, PUM1, SMG7, PAN2, RBM8A, TOB1, HNRNPR, IGF2BP3, HBS1L, CPEB3, DIS3, CNOT1, SAMD4A, SMG1, TNRC6B, LARP1, PUM2, GIGYF2, SERBP1, AGO1, PABPC1, AGO2, TNRC6A, CNOT7, MYEF2, LSM7, DCP1A, ZC3HAV1, CNOT6, TNRC6C, TRIM71, NUDT16, RC3H1, DCP2, AGO3, AGO4, PDE12, RBM24, CNOT6L, YTHDF3, PAN3, LIN28B
BP	GO:0014909	smooth muscle cell migration	23/2564	1.47E-02	ATP7A, BCL2, BMPR1A, CRK, HAS2, IGF1, IGFBP5, LRP1, MEF2C, NFE2L2, SERPINE1, PRKG1, SORL1, NRP1, SLIT2, DOCK4, ARPC5, TRIB1, SSH1, PARVA, DOCK5, PDGFD, DOCK7
BP	GO:0045639	positive regulation of myeloid cell differentiation	23/2564	1.47E-02	JAG1, ZFP36L1, CA2, RUNX1, CREB1, ETS1, FOXO3, GNAS, HMGB2, HOXA5, ID2, INHBA, LIF, MED1, PRKCA, RB1, STAT1, STAT3, KLF10, TNFSF11, TRIB1, LEF1, TMEM64
BP	GO:0033044	regulation of chromosome organization	66/2564	1.52E-02	APC, ATM, ATRX, BCL6, BRCA1, CAMK2D, CDC27, CENPF, CHEK1, ERCC1, FMR1, GATA3, HNRNPA2B1, HNRNPC, HNRNPU, JARID2, LIF, SMAD4, MECP2, MAP3K4, KMT2A, MLLT6, NAP1L2, MAPK1, RB1, KDM5A, RNF4, SKI, SNAI2, TP53, TPR, VEGFA, USP7, CUL3, BUB3, RPS6KA5, TRIP12, RNF40, SMG7, RAD50, CTCF, NEK6, MTF2, SMG1, PHF8, NIPBL, ZNF451, AUTS2, SENP6, PHF19, ATAD2, UBR5, RIF1, SETD5, ATF7IP, KMT2E, HECW2, MCPH1, TET1, TNKS2, LRRK2, JDP2, NEK7, SPTY2D1, DCP2, GEN1

BP	GO:0051100	negative regulation of binding	37/2564	1.53E-02	ACTB, E2F1, EIF2S1, GOLGA2, GSK3B, HFE, ID1, ID2, ID4, IFIT2, IFIT1, JAK2, STMN1, MAP2, MET, NFKBIA, NKX3-1, P2RY1, PPARA, PPP3CA, ROCK1, SUMO3, SORL1, SP100, TDG, TMBIM6, TMSB4X, HMGA2, ADNP, GTPBP4, LEF1, RSF1, MEPCE, ZNF462, LRRK2, TTBK2, ZFP90
BP	GO:0060538	skeletal muscle organ development	37/2564	1.53E-02	RHOA, BCL2, BCL9, KLF5, CCNT2, DDX5, EGR1, EP300, EPHB1, FLNB, HLF, HMGCR, HOXD10, FOXN2, MEF2C, MEF2D, MTM1, NF1, PITX1, PPP3CA, PRKAA1, RB1, SIX1, SKI, NR2F2, BTG2, COPS2, NR1D2, BASP1, ZBTB18, SIX4, NLN, HIVEP3, AKIRIN1, FOXP2, SMYD1, RBM24
BP	GO:0030148	sphingolipid biosynthetic process	25/2564	1.53E-02	CLN8, KDSR, PRKAA1, ELOVL4, UGT8, SGPL1, VAPB, VAPA, B4GALT6, B4GALT5, ST8SIA3, SPTLC3, SMPD3, AGK, ELOVL5, ELOVL6, FA2H, ELOVL7, ORMDL1, SAMD8, PPM1L, SPTSSB, SGMS2, CERS6, ACER2
BP	GO:0008625	extrinsic apoptotic signaling pathway via death domain receptors	22/2564	1.53E-02	FASLG, BCL2, BID, BMPR1B, BRCA1, DDX3X, HGF, HMGB2, NF1, SERPINE1, PIK3R1, PTEN, SFRP2, SKIL, SP100, STK3, STK4, THBS1, TIMP3, TNFAIP3, FAF1, ITPRIP
BP	GO:0042058	regulation of epidermal growth factor receptor signaling pathway	22/2564	1.53E-02	APP, FASLG, AREG, CBL, CBLB, CDC42, DOK1, EREG, FER, HIP1, PTPN3, PTPN12, PTPRJ, ADAM17, SOCS5, SPRY1, SPRY2, STAM2, SH3KBP1, ERRFI1, MVB12B, SOCS4
BP	GO:0051101	regulation of DNA binding	29/2564	1.55E-02	CALM3, CEBPG, E2F1, EP300, GATA3, HMGB1, HMGB2, ID1, ID2, ID4, IGF1, JAK2, LIF, NEUROD1, NFKBIA, RB1, SKI, SUMO3, SP100, TMSB4X, HMGA2, MAU2, NIPBL, HIPK2, LEF1, ZBTB7A, RSF1, ZNF462, ZFP90
BP	GO:0034764	positive regulation of transmembrane transport	43/2564	1.55E-02	ANK3, ARF1, ATP1B1, CA2, CACNA2D1, CALM1, CALM2, CALM3, CTSS, DMD, EPHB2, F2R, FGF14, G6PD, GLRX, HSPA2, IGF1, INSR, KCNC2, KCNJ2, KIF5B, MEF2A, NFE2L2, PIK3R1, PKD2, PLCG1, RELN, RNASEL, SLC1A2, SLC9A1, TMSB4X, SORBS1, ARPP19, RHOQ, APPL1, STK39, AZIN1, WNK1, WNK3, ADIPOR2, ALG10B, ANO6, LRRC55
BP	GO:0061028	establishment of endothelial barrier	13/2564	1.55E-02	F2RL1, FASN, MSN, PDE4D, RAP1B, ROCK1, TJP1, VEGFA, EZR, CLDN1, ROCK2, RAPGEF2, RAP2C
BP	GO:0120032	regulation of plasma membrane bounded cell projection assembly	38/2564	1.56E-02	APC, ARF6, ATP7A, KLF5, CDC42, EPS8, F2RL1, FER, FMR1, MTOR, GPM6A, KIT, MAP4, MYO10, ATP8B1, PLD1, RAC1, RALA, SRF, TGFBR1, WNT1, NRP1, WASL, SLIT2, CCP110, WASF2, CDC42EP3, NCKAP1, RHOQ, CORO1C, AUTS2, DCDC2, FNBP1L, CCDC88A, CEP97, AKIRIN1, NDEL1, DOCK11
BP	GO:0016126	sterol biosynthetic process	21/2564	1.58E-02	ACACB, CYP51A1, FASN, G6PD, HMGCR, INSIG1, KPNB1, LBR, NFYB, PRKAA1, RAN, SC5D, SCD, SP1, CNBP, ERLIN1, ERLIN2, NPC1L1, MBTPS2, GPAM, ELOVL6
BP	GO:0001738	morphogenesis of a polarized epithelium	32/2564	1.59E-02	RHOA, CDC42, CLTC, GPC4, FOXF2, MLLT3, MSN, MYO9A, OPHN1, PAFAH1B1, PSMD1, PTK7, RAC1, SFRP2, TIAM1, WNT1, WNT5A, FZD5, FZD3, FZD1, FZD4, TP63, MAGI2, MED12, EXOC5, RAB10, DAAM1, ASTN2, AHI1, SMURF2, VANGL1, PRICKLE2
BP	GO:0044706	multi-multicellular organism process	46/2564	1.59E-02	ADCYAP1, AR, BCL2, PRDM1, BMPR2, DSG2, EDN1, ESR1, ETS1, ACSL4, MTOR, B4GALT1, GJA1, HFE, HPGD, IGFBP5, ITGA3, LIF, LNPEP, MMP2, SERPINE2, MED1, MAPK1, PRLR, PTGS2, RARA, SP3, NR2F2, TGFBR2, UBE2A, FOSL1, ARID1A, RECK, STC2, NAMPT, KPNA6, DAZAP1, AGO2, SLC38A2, ASH1L, SMURF2, ADIPOR2, VMP1, POLR1B, ACVR1C, SH3PXD2B
BP	GO:0003176	aortic valve development	11/2564	1.60E-02	JAG1, BMPR2, GATA3, RBPJ, RB1, ROBO1, ROCK1, SNAI2, SOX9, SLIT2, ROCK2
BP	GO:0046949	fatty-acyl-CoA biosynthetic process	11/2564	1.60E-02	ACSL1, ACSL3, ACSL4, FASN, SCD, ELOVL4, ACSL6, ELOVL5, ELOVL6, ELOVL7, CBR4
BP	GO:0060317	cardiac epithelial to mesenchymal transition	11/2564	1.60E-02	JAG1, HAS2, RBPJ, SMAD4, SNAI2, TGFB2, TGFBR1, TGFBR2, SPRY1, PDCD4, RTN4

BP	GO:0071453	cellular response to oxygen levels	48/2564	1.61E-02	AK4, ATP6V1A, ATP7A, BCL2, ZFP36L1, CBL, CCNA2, CREBBP, E2F1, EDN1, EGR1, EP300, FOXO3, MTOR, GATA6, GNB1, RBPJ, MDM4, NFE2L2, NKX3-1, OPA1, PRKAA1, PRKCE, PSMD1, PTEN, PTGS2, RORA, RPS27A, SLC9A1, TMBIM6, TP53, TSC1, VEGFA, VHL, STC2, ROCK2, NPEPPS, ATP6V1G1, DNM1L, NAMPT, DDAH1, HIPK2, UBQLN1, HP1BP3, CPEB4, EGLN3, VASN, CPEB2
BP	GO:0007088	regulation of mitotic nuclear division	36/2564	1.63E-02	APC, ATM, ATRX, CDC27, CENPF, RCC1, CHEK1, EDN1, EREG, HNRNPU, IGF1, INSR, KIF11, RB1, TPR, SMC1A, CUL3, CDC14A, CDK13, BUB3, NME6, STAG1, STAG2, NEK6, NIPBL, CHMP2B, CHMP5, PHIP, SMPD3, CHMP1B, HECW2, CEP97, MAP9, CCSAP, UBXN2B, GEN1
BP	GO:0048285	organelle fission	83/2564	1.63E-02	APC, RHOA, ATM, ATRX, CDC27, CENPF, RCC1, CHEK1, EDN1, EPS8, EREG, FANCA, GOLGA2, HNRNPU, HSPA2, IGF1, INSR, KIF11, KPNB1, LIF, OPA1, PDE3A, PRKAR1A, RAN, RB1, SPAST, TPR, WNT5A, SMC1A, CUL3, CDC14A, CDK13, RAB11A, CCNE2, BUB3, KIF3B, KIF23, DNM1L, ACTR3, RAD50, NME6, STAG1, SMC2, STAG2, NEK6, TPX2, PDS5B, PLCB1, PDS5A, DDHD2, SUN1, MAU2, KIF4A, NIPBL, CHMP2B, CHMP5, NDE1, PHIP, CEP192, SMPD3, NDC1, PPP2R2D, BCCIP, SPIRE1, CHMP1B, HECW2, FANCM, CENPK, NCAPG, TMEM135, CEP97, MAP9, RMI1, NAA50, NDEL1, SEH1L, SLC25A46, LRRK2, CCSAP, UBXN2B, AGO4, GEN1, MZT1
BP	GO:0045599	negative regulation of fat cell differentiation	15/2564	1.69E-02	JAG1, ZFP36L2, E2F1, GATA3, ID4, INSIG1, RORA, TRIO, WNT1, WNT5A, ANKRD26, WWTR1, TRIB2, JDP2, ZADH2
BP	GO:0045807	positive regulation of endocytosis	34/2564	1.70E-02	ABR, ARF1, AXL, BICD1, CBL, CD151, F2RL1, FMR1, HFE, HIP1, HNRNPK, ITGAV, LRP1, NTF3, SERPINE1, PPP3CA, PTPRJ, PTX3, SH3GL1, VEGFA, WNT5A, WASL, MAGI2, DNM1L, RAB21, APPL1, GREM1, AHI1, SCYL2, MIB1, CBLL1, ATAD1, LRRK2, ANO6
BP	GO:0021872	forebrain generation of neurons	18/2564	1.70E-02	RHOA, ATP7A, DLX2, ERBB4, FGFR2, INHBA, ROBO1, WNT5A, NUMB, NRP1, NUMBL, SLIT2, RAPGEF2, SATB2, LEF1, ZSWIM6, BCL11B, AKNA
BP	GO:0006977	DNA damage response, signal transduction by p53 class mediator resulting in cell cycle arrest	16/2564	1.72E-02	ATM, E2F1, EP300, MDM4, CNOT2, CNOT4, SOX4, TFDP1, TFDP2, TP53, BTG2, CNOT1, CNOT7, TRIAP1, CNOT6, CNOT6L
BP	GO:2000514	regulation of CD4-positive, alpha-beta T cell activation	17/2564	1.72E-02	ANXA1, ARG2, BCL6, RUNX1, RUNX3, CBFB, GATA3, HMGB1, SMAD7, RARA, TGFBR2, TNFSF4, SOCS5, MALT1, CD274, SH3RF1, RC3H1
BP	GO:0097193	intrinsic apoptotic signaling pathway	57/2564	1.72E-02	APAF1, ATM, BCL2, BCL2L2, BID, BRCA1, CD44, CYP1B1, DDX3X, DDX5, E2F1, EP300, UBE2K, HNRNPK, ITPR1, JAK2, MCL1, MAP3K5, MSH2, NFE2L2, NKX3-1, OPA1, PIK3R1, PLAGL2, PRKDC, PTGS2, SFRP2, SKIL, SNAI2, SOD2, TMBIM6, TP53, TP53BP2, TPT1, XBP1, CUL5, CUL3, PRKRA, TP63, EIF2AK3, BCL2L11, DNM1L, SERINC3, ERP29, HIPK2, UBQLN1, RRM2B, TRIAP1, DDIT4, RRN3, USP47, FNIP2, PERP, SYVN1, LRRK2, JMY, NACC2
BP	GO:0031929	TOR signaling	29/2564	1.72E-02	ATM, EIF4EBP2, MTOR, GATA3, GNA12, MTM1, PRKAA1, RELN, RPS6KB1, TSC1, EPM2A, AKT3, PDCD6, SIK2, SZT2, LARP1, SH3BP4, SESN1, DDIT4, CCDC88A, FNIP2, RRAGD, GOLPH3, SEH1L, SESN2, SESN3, C12orf66, SIK1, RICTOR
BP	GO:0042752	regulation of circadian rhythm	27/2564	1.73E-02	ZFHX3, CREB1, EZH2, MTOR, GNAQ, GSK3B, ID2, PPARA, PPP1CC, PRKAA1, PRKDC, RORA, RORB, KLF10, TP53, UBE3A, USP7, USP9X, ROCK2, MAGED1, CLOCK, NR1D2, KDM2A, FBXW11, FBXL3, ARNTL2, SIK1
BP	GO:0045446	endothelial cell differentiation	27/2564	1.73E-02	ACVR2B, JAG1, BMPR2, BTG1, F2RL1, FASN, NRG1, ID1, RBPJ, SMAD4, MET, MSN, PDE4D, RAP1B, ROCK1, ZEB1, NR2F2, TJP1, VEGFA, EZR, VEZF1, NRP1, CLDN1, ROCK2, RAPGEF2, RAP2C, APOLD1
BP	GO:0008045	motor neuron axon guidance	10/2564	1.76E-02	ALCAM, CHN1, EPHA4, ERBB2, KIF5C, RAC1, NRP1, SLIT2, MYCBP2, RNF165
BP	GO:0021846	cell proliferation in forebrain	10/2564	1.76E-02	FGFR2, POU3F2, POU3F3, NUMB, NUMBL, ZEB2, AKNA, HOOK3, DOCK7, DIXDC1
BP	GO:0050686	negative regulation of mRNA processing	10/2564	1.76E-02	CCNT1, DYRK1A, HNRNPA2B1, HNRNPK, PTBP1, SRSF6, SRSF7, RNF40, SRSF10, SRSF12

BP	GO:0090344	negative regulation of cell aging	10/2564	1.76E-02	BCL6, CDK6, PRKDC, PTEN, RBL1, WNT1, HMGA2, AKT3, NAMPT, SLC30A10
BP	GO:1902745	positive regulation of lamellipodium organization	10/2564	1.76E-02	ATP7A, CDC42, MTOR, RAC1, WNT1, WASF2, NCKAP1, CORO1C, AUTS2, AKIRIN1
BP	GO:0007431	salivary gland development	12/2564	1.76E-02	DAG1, FGFR2, HGF, NFIB, NKX3-1, SNAI2, TGFB2, XBP1, NRP1, SEMA3C, BTBD7, NTN4
BP	GO:0014037	Schwann cell differentiation	12/2564	1.76E-02	DAG1, ERBB3, NRG1, NF1, NTRK2, POU3F2, SKI, MED12, DICER1, ADAM22, MPP5, FA2H
BP	GO:0048846	axon extension involved in axon guidance	12/2564	1.76E-02	ALCAM, BMPR2, VEGFA, WNT5A, SEMA7A, NRP1, SEMA5A, SLIT2, SEMA4D, SEMA3C, SEMA4C, SEMA6A
BP	GO:1902284	neuron projection extension involved in neuron projection guidance	12/2564	1.76E-02	ALCAM, BMPR2, VEGFA, WNT5A, SEMA7A, NRP1, SEMA5A, SLIT2, SEMA4D, SEMA3C, SEMA4C, SEMA6A
BP	GO:2000142	regulation of DNA-templated transcription, initiation	12/2564	1.76E-02	CREB1, ESR1, HMGB1, MITF, SRF, TP53, FOSL1, SETX, ZNF451, RRN3, ATF7IP, CAND1
BP	GO:0007077	mitotic nuclear envelope disassembly	6/2564	1.76E-02	PRKCA, PRKCB, NEK6, CTDNEP1, NEK9, CNEP1R1
BP	GO:0010649	regulation of cell communication by electrical coupling	6/2564	1.76E-02	ANK3, CALM1, CALM2, CALM3, CAMK2D, PDE4D
BP	GO:0048934	peripheral nervous system neuron differentiation	6/2564	1.76E-02	RUNX1, RUNX3, ETV1, HOXD10, NTRK2, ONECUT2
BP	GO:0048935	peripheral nervous system neuron development	6/2564	1.76E-02	RUNX1, RUNX3, ETV1, HOXD10, NTRK2, ONECUT2
BP	GO:0051549	positive regulation of keratinocyte migration	6/2564	1.76E-02	ARF6, MTOR, HAS2, ADAM9, MAP4K4, IQSEC1
BP	GO:0071481	cellular response to X-ray	6/2564	1.76E-02	ATM, GATA3, SFRP2, TP53BP1, HMGA2, NIPBL
BP	GO:0090148	membrane fission	6/2564	1.76E-02	OPA1, SPAST, DNM1L, TMCC1, CORO1C, SLC25A46
BP	GO:0090161	Golgi ribbon formation	6/2564	1.76E-02	GOLGA2, VAMP4, OPTN, TMED5, GOLPH3, VTI1A

BP	GO:0097284	hepatocyte apoptotic process	6/2564	1.76E-02	ARF6, BID, PIK3CG, RB1, STK3, STK4
BP	GO:1900376	regulation of secondary metabolite biosynthetic process	6/2564	1.76E-02	SP1, WNT5A, RAPGEF2, ZEB2, SLC7A11, APPL1
BP	GO:1900402	regulation of carbohydrate metabolic process by regulation of transcription from RNA polymerase II promoter	6/2564	1.76E-02	FOXK2, PPARA, TP53, KAT2B, NCOR1, MLXIP
BP	GO:1905244	regulation of modification of synaptic structure	6/2564	1.76E-02	RHOA, EPHA4, FMR1, TIAM1, CHMP2B, CTTNBP2
BP	GO:1905666	regulation of protein localization to endosome	6/2564	1.76E-02	MSN, SORL1, EZR, ROCK2, ABHD17B, ANKRD13A
BP	GO:0019722	calcium-mediated signaling	45/2564	1.83E-02	ATP1A2, ATP1B1, ATP2B4, CACNA1C, CALM1, CALM2, CALM3, CAMK2D, CLIC2, CCR6, DMD, EDN1, ERBB3, PTK2B, FKBP1A, MTOR, GSK3B, NRG1, IGF1, ITPR1, MYO5A, NFATC3, PDE4D, PKD2, PLCG1, PPP3CA, PPP3R1, PRKAA1, PTBP1, PTPRJ, CCL20, SGCD, SLC9A1, TNFSF11, EIF2AK3, CAMKK2, NFAT5, CAMTA1, LMCD1, TMEM38B, JPH1, JPH3, LRRK2, SPPL3, KSR2
BP	GO:0048469	cell maturation	38/2564	1.84E-02	APP, AXL, BCL2, RUNX2, CBFB, CCR6, EREG, PTK2B, FOXO3, MTOR, G6PD, GATA3, GJA1, FOXA1, HOXA5, ID2, MECP2, NRCAM, NR4A2, OPA1, PDE3A, RB1, RET, VEGFA, XBP1, FZD5, B4GALT6, B4GALT5, PTBP3, ABHD2, CNTNAP2, FLVCR1, ZBTB7A, BCL11A, NTN4, PABPC1L, LRRK2, GLDN
BP	GO:0036473	cell death in response to oxidative stress	23/2564	1.88E-02	BCL2, CYP1B1, FOXO3, FYN, HGF, JAK2, MCL1, MAP3K5, MET, NFE2L2, PAWR, REST, SOD2, TLR4, TSC1, WNT1, FZD1, LANCL1, SLC7A11, UBQLN1, OXR1, LRRK2, NCOA7
BP	GO:0006509	membrane protein ectodomain proteolysis	13/2564	1.88E-02	ADAM10, DAG1, MYH9, PTPN3, ROCK1, ADAM17, TIMP3, ADAM19, ADAM9, APH1A, ERAP1, SPPL2A, SH3D19
BP	GO:0010613	positive regulation of cardiac muscle hypertrophy	13/2564	1.88E-02	CAMK2D, EDN1, MTOR, IGF1, IL6ST, MEF2A, PPP3CA, PRKCA, ROCK1, SLC9A1, PDE5A, ROCK2, MTPN
BP	GO:0021915	neural tube development	35/2564	1.89E-02	APAF1, ZFP36L1, EN1, FOXA1, ITPK1, NF1, PKD2, PRKACB, PTCH1, PTK7, RALA, RARA, SALL2, SFRP2, SKI, SOX4, STK3, STK4, TGFB2, TSC1, KDM6A, WNT1, WNT5A, LUZP1, FZD3, ARID1A, FZD1, ZEB2, MED12, SEMA3C, GPR161, SEMA4C, MIB1, TRIM71, ARL13B
BP	GO:0010881	regulation of cardiac muscle contraction by regulation of the release of sequestered calcium ion	9/2564	1.90E-02	ATP1A2, CACNA1C, CALM1, CALM2, CALM3, CAMK2D, CLIC2, DMD, TMEM38B

BP	GO:0036010	protein localization to endosome	9/2564	1.90E-02	ARF6, MSN, SORL1, EZR, NRP1, ROCK2, ABHD17B, TMEM30A, ANKRD13A
BP	GO:0051220	cytoplasmic sequestering of protein	9/2564	1.90E-02	DBN1, MXI1, NFKBIA, PKD2, TMSB4X, YWHAB, G3BP2, FAF1, GOPC
BP	GO:0086064	cell communication by electrical coupling involved in cardiac conduction	9/2564	1.90E-02	ATP1A2, ATP1B1, CACNA1C, CALM1, CALM2, CALM3, CAMK2D, GJA1, PDE4D
BP	GO:1902914	regulation of protein polyubiquitinatio n	9/2564	1.90E-02	XIAP, FOXF2, SKP2, UBE2D1, TRIP12, RNF40, SASH1, UBR5, TRIM44
BP	GO:0038034	signal transduction in absence of ligand	19/2564	1.90E-02	BCL2, BCL2L2, ERBB3, EYA4, FOXO3, FYN, MKNK2, GSK3B, INHBA, ITGAV, MCL1, NF1, PPP2R1B, RET, SNAI2, BCL2L11, SGK3, APPL1, C8orf44-SGK3
BP	GO:0050805	negative regulation of synaptic transmission	19/2564	1.90E-02	ARF1, PTK2B, FMR1, GNAI2, GRIK3, NF1, PTEN, PTGS2, RAP1B, SLC6A1, SRF, STXBP1, SHANK2, SYT11, ADNP, SLC24A2, PCDH17, ATAD1, LRRK2
BP	GO:0097192	extrinsic apoptotic signaling pathway in absence of ligand	19/2564	1.90E-02	BCL2, BCL2L2, ERBB3, EYA4, FOXO3, FYN, MKNK2, GSK3B, INHBA, ITGAV, MCL1, NF1, PPP2R1B, RET, SNAI2, BCL2L11, SGK3, APPL1, C8orf44-SGK3
BP	GO:0010927	cellular component assembly involved in morphogenesis	27/2564	1.90E-02	CSRP2, DAG1, EDN1, AGFG1, SMAD4, MEF2A, MEF2C, MYH10, PAFAH1B1, PDGFRA, PMP22, PRKAR1A, RFX2, SRF, TMF1, UGT8, NEBL, AKAP13, DICER1, TMOD3, TMOD2, SIX4, MPP5, PHLDB2, MYLK3, TBC1D20, PIKFYVE
BP	GO:0003012	muscle system process	85/2564	1.92E-02	ALDOA, ARG2, RHOA, ASPH, ATP1A2, ATP1B1, ATP2B1, ATP2B4, CACNA1C, CACNA2D1, CALD1, CALM1, CALM2, CALM3, CAMK2D, CLIC2, DMD, DSC2, DSG2, EDN1, EZH2, F2R, FGF12, FOXO3, MTOR, G6PD, GATA6, GJA1, IGF1, IGFBP5, IL6ST, JARID2, KCNJ2, KCNJ3, KIT, SMAD4, SMAD5, SMAD7, MEF2A, MEF2C, MYLK, PPP1R12B, P2RY1, PDE4D, PIK3C2A, PIK3CG, PPARA, PPP3CA, PRKCA, PRKG1, MAP2K3, PTGS2, ROCK1, MAP2K4, SGCD, SMTN, SLC6A8, SLC9A1, SRF, SSTR2, TIAM1, TPM3, UTRN, VCL, VEGFB, VIM, YY1, SLMAP, SORBS2, PDE5A, ROCK2, DOCK4, SORBS1, PDLIM5, AKAP13, CAMTA2, GPD1L, TMOD3, TMOD2, LMCD1, ERRFI1, TMEM38B, DOCK5, MTPN, NPNT
BP	GO:0051348	negative regulation of transferase activity	56/2564	1.93E-02	ADARB1, APC, CBL, CBLB, DUSP4, DUSP5, DUSP8, EPHB2, GNAQ, GSK3B, HMGCR, HNRNPU, IGF1R, IPO5, SMAD7, NF1, NPM1, PAK2, PPP2R5A, PRKAR1A, PRKAR2A, DNAJC3, PTEN, PTPRJ, RB1, SFRP2, SORL1, NR2F2, TNFAIP3, TP53, KAT2B, SOCS5, HIPK3, TRIB1, SPRY1, SPRY2, IPO7, HEXIM1, DUSP14, PTPRT, IRAK3, CORO1C, WWTR1, IBTK, PDCD4, TRIB2, ERRFI1, CAMK2N1, WNK1, GGNBP2, ITPRIP, SOCS4, DUSP18, PAQR3, SPRED1, SPRED2
BP	GO:0030336	negative regulation of cell migration	64/2564	1.93E-02	ABR, ADARB1, JAG1, RHOA, BCL2, BMPR1A, KRIT1, CYP1B1, DAG1, ERBB4, FGF2, FOXO3, NRG1, HMGB1, IGFBP5, LRP1, SMAD7, MECP2, MEF2C, MITF, NF1, NFE2L2, SERPINE1, PRKG1, PTEN, PTPRG, PTPRJ, PTPRK, PTPRM, PTPRR, RAP2A, RAP2B, ROBO1, SFRP2, SP100, SRF, STAT3, NR2F2, THBS1, VCL, RECK, WASL, SLIT2, MAGI2, TRIB1, IL24, ABHD2, PTPRT, LRCH1, PLCB1, SRGAP2, GTPBP4, CORO1C, CLIC4, GREM1, RAP2C, MMRN2, NAV3, PHLDB2, TP53INP1, ACVR1C, SPRED1, ARID2, MIA3
BP	GO:0010799	regulation of peptidyl-threonine phosphorylation	14/2564	1.93E-02	APP, CALM1, CALM2, CALM3, UBE2K, SMAD7, MAPK1, WNT5A, SPRY2, CAB39, DDIT4, WNK3, SPRED1, SPRED2

BP	GO:0031952	regulation of protein autophosphorylation	14/2564	1.93E-02	CALM1, CALM2, CALM3, PPP2R5A, PPP2R5E, RAP2A, RAP2B, VEGFA, RAD50, GPNMB, GREM1, ERRFI1, RAP2C, PDGFD
BP	GO:0043370	regulation of CD4-positive, alpha-beta T cell differentiation	14/2564	1.93E-02	ANXA1, BCL6, RUNX1, RUNX3, CBFB, GATA3, HMGB1, SMAD7, RARA, TNFSF4, SOCS5, MALT1, SH3RF1, RC3H1
BP	GO:0050435	amyloid-beta metabolic process	14/2564	1.93E-02	ADAM10, APP, DYRK1A, EPHA4, IGF1, MME, ROCK1, SORL1, PICALM, ROCK2, TMED10, UNC13A, GGA3, APH1A
BP	GO:0061383	trabecula morphogenesis	14/2564	1.93E-02	RHOA, BMPR1A, COL1A1, FBN2, FKBP1A, NRG1, RBPJ, MMP2, MED1, SRF, TGFB2, TGFBR1, SEMA4D, GREM1
BP	GO:0022404	molting cycle process	22/2564	1.94E-02	ATP7A, BCL2, FGFR2, HOXC13, IGFBP5, RBPJ, INHBA, SMAD4, MYO5A, NF1, SOX9, TGFB2, WNT5A, FZD3, TP63, LRIG1, LGR4, SAV1, ALX4, FOXQ1, MYSM1, ZDHHC21
BP	GO:0022405	hair cycle process	22/2564	1.94E-02	ATP7A, BCL2, FGFR2, HOXC13, IGFBP5, RBPJ, INHBA, SMAD4, MYO5A, NF1, SOX9, TGFB2, WNT5A, FZD3, TP63, LRIG1, LGR4, SAV1, ALX4, FOXQ1, MYSM1, ZDHHC21
BP	GO:0043506	regulation of JUN kinase activity	22/2564	1.94E-02	EDN1, EPHA4, PTK2B, MAP3K4, MAP3K5, MAP3K9, MAP2K4, SFRP2, TIAM1, WNT5A, FZD5, FZD4, FZD8, TNFSF11, SPAG9, ZEB2, HIPK3, MAP3K2, SASH1, PDCD4, TAOK1, SAMD5
BP	GO:0003158	endothelium development	30/2564	1.94E-02	ACVR2B, JAG1, RHOA, BMPR2, BTG1, F2RL1, FASN, GJA1, NRG1, ID1, RBPJ, SMAD4, MET, MSN, PDE4D, RAP1B, ROCK1, ZEB1, NR2F2, TJP1, VEGFA, EZR, VEZF1, NRP1, CLDN1, ROCK2, RAPGEF2, FOXP1, RAP2C, APOLD1
BP	GO:0042476	odontogenesis	30/2564	1.94E-02	ACVR2B, RHOA, BMPR1A, CA2, RUNX2, COL1A1, ATF2, DLX2, EDN1, FGFR2, TNC, INHBA, ITGA6, JAG2, MYO5A, NFIC, SERPINE1, PDGFRA, PITX2, PPARA, TGFB2, TNFSF11, TP63, BCL2L11, ADAMTS5, LEF1, SMPD3, PERP, BCL11B, OSR1
BP	GO:1901988	negative regulation of cell cycle phase transition	53/2564	1.95E-02	APC, ATM, CCND1, BCL2, BRCA1, ZFP36L1, ZFP36L2, CDK6, CENPF, CHEK1, FOXN3, E2F1, EP300, EZH2, HUS1, MDM4, CNOT2, CNOT4, PKD2, PRKDC, PSMD1, PTEN, RB1, RBL1, SKP1, SOX4, TFDP1, TFDP2, TP53, TPR, WEE1, BTG2, HMGA2, BUB3, CTDSPL, GPNMB, CNOT1, SYF2, GIGYF2, CNOT7, DONSON, TRIAP1, DTL, USP47, CNOT6, TAOK1, ZNF655, CDC73, TICRR, DCUN1D3, NACC2, CNOT6L, GEN1
BP	GO:0030033	microvillus assembly	7/2564	1.95E-02	KLF5, ATP8B1, PLD1, RAP2A, EZR, RAPGEF2, RAPGEF6
BP	GO:0060628	regulation of ER to Golgi vesicle-mediated transport	7/2564	1.95E-02	ARF1, INSIG1, SORL1, RNF139, SAR1A, LRRK2, TBC1D20
BP	GO:0072189	ureter development	7/2564	1.95E-02	GATA3, NFIA, RET, SIX1, SOX9, LZTS2, OSR1
BP	GO:1900242	regulation of synaptic vesicle endocytosis	7/2564	1.95E-02	CALM3, ROCK1, SH3GL1, VAMP4, DNM1L, SYT11, LRRK2
BP	GO:1903830	magnesium ion transmembrane transport	7/2564	1.95E-02	ZDHHC13, MRS2, MAGT1, MMGT1, NIPA1, NIPAL1, SLC41A1
BP	GO:0110053	regulation of actin filament organization	52/2564	1.95E-02	ADD3, ARF1, ARF6, RHOA, CAPZA1, CAPZA2, CDC42, DBN1, EPS8, F2RL1, PTK2B, FER, MTOR, ID1, STMN1, MET, PIK3R1, PRKCE, RAC1, RASA1, ROCK1, SLC9A1, SPTAN1, SPTBN1, TGFBR1, TMSB4X, TSC1, NRP1, WASL, SEMA5A, SLIT2, ROCK2, ARPC5, ACTR3, ABI2, WASF2, ARPC1A, ARFGEF1, CDC42EP3, NCKAP1, SWAP70, TMOD3, TMOD2, AP1AR, SPIRE1, PHLDB2, WHAMM, JMY, MTPN, RICTOR, SH3PXD2B, FMN1
BP	GO:0055025	positive regulation of cardiac muscle tissue development	17/2564	1.95E-02	BMPR1A, CREB1, EDN1, EFNB2, ERBB3, ERBB4, FGF2, FGFR2, MTOR, GATA6, NRG1, IGF1, RBPJ, MEF2C, MAPK1, YAP1, GREM1

BP	GO:2000772	regulation of cellular senescence	15/2564	1.95E-02	ARG2, BCL6, BMPR1A, CDK6, PAWR, PRKDC, RBL1, NEK4, TP53, HMGA2, AKT3, NAMPT, NEK6, ZNF277, SLC30A10
BP	GO:0010042	response to manganese ion	8/2564	1.95E-02	APP, ATP7A, EIF2S1, PTGS2, ADAM9, EIF2AK3, SLC30A10, LRRK2
BP	GO:0051767	nitric-oxide synthase biosynthetic process	8/2564	1.95E-02	EDN1, JAK2, MAP2K4, STAT1, TLR4, AKAP12, NAMPT, LRRK2
BP	GO:0051769	regulation of nitric-oxide synthase biosynthetic process	8/2564	1.95E-02	EDN1, JAK2, MAP2K4, STAT1, TLR4, AKAP12, NAMPT, LRRK2
BP	GO:0061162	establishment of monopolar cell polarity	8/2564	1.95E-02	RHOA, CDC42, MAP1B, MSN, MYO9A, OPHN1, PTK7, WNT5A
BP	GO:0010591	regulation of lamellipodium assembly	11/2564	1.95E-02	ATP7A, CDC42, FER, MTOR, RAC1, WNT1, SLIT2, WASF2, NCKAP1, AUTS2, AKIRIN1
BP	GO:0051204	protein insertion into mitochondrial membrane	11/2564	1.95E-02	BCL2, BID, E2F1, PPP3R1, TFDP1, TFDP2, TP53, TP53BP2, YWHAB, TP63, BCL2L11
BP	GO:0070536	protein K63-linked deubiquitination	11/2564	1.95E-02	TNFAIP3, VCP, USP13, SPATA2, USP25, DESI2, OTUD4, ZRANB1, YOD1, OTUD7B, OTUB2
BP	GO:0060043	regulation of cardiac muscle cell proliferation	16/2564	1.95E-02	BMPR1A, ERBB4, FGF2, FGFR2, GATA6, GJA1, RBPJ, JARID2, MEF2C, MEIS1, MAPK1, PTEN, TGFBR1, TGFBR2, YAP1, SAV1
BP	GO:1903707	negative regulation of hemopoiesis	34/2564	1.97E-02	ANXA1, BCL6, ZFP36L1, RUNX1, RUNX3, CBFB, CDK6, ERBB2, PTK2B, FBN1, GABPA, HMGB1, HOXA5, HOXA9, ID2, INHBA, SMAD7, MEIS1, MEIS2, NF1, NFE2L2, NFKBIA, PIK3R1, RARA, TLR4, TNFSF4, SOCS5, MAFB, TRIB1, TOB2, KLF13, NCAPG2, CDC73, RC3H1
BP	GO:0061008	hepaticobiliary system development	31/2564	1.99E-02	AK4, ANXA1, ARF6, ATP7A, CCND1, CEBPG, EZH2, GATA6, HFE, HGF, IGF2R, JARID2, MET, NF1, PKD2, PKM, MED1, PTCH1, PTPN3, RARA, SOX9, SP3, TNFAIP3, WNT1, XBP1, CUL3, CLDN1, ONECUT2, RB1CC1, SEC63, NIPBL
BP	GO:0006970	response to osmotic stress	21/2564	1.99E-02	ZFP36L1, ATF2, DDX3X, PTK2B, HSP90AB1, MYLK, PKD2, PTGS2, SLC12A2, TP53, MAP7, CLDN1, NOLC1, TSC22D2, OXSR1, SLC12A6, NFAT5, STK39, CAB39, ERRFI1, LRRC8D
BP	GO:0045727	positive regulation of translation	29/2564	2.05E-02	RHOA, DDX3X, ERBB2, PTK2B, FMR1, MTOR, NPM1, MAPK1, DNAJC3, RBM3, RPS6KB1, SOX4, THBS1, VIM, CNBP, FXR1, CDC123, KHDRBS1, CPEB3, SAMD4A, LARP4B, LARP1, PABPC1, SERP1, RBMS3, YTHDF1, LARP6, LARP4, YTHDF3
BP	GO:0090398	cellular senescence	20/2564	2.08E-02	ARG2, BCL6, BMPR1A, CDK6, ID2, OPA1, PAWR, PRKDC, RBL1, SRF, NEK4, TBX3, TP53, KAT6A, HMGA2, AKT3, NAMPT, NEK6, ZNF277, SLC30A10
BP	GO:0051495	positive regulation of cytoskeleton organization	46/2564	2.09E-02	ARF1, ARF6, RHOA, CDC42, EDN1, F2RL1, PTK2B, FER, MTOR, ID1, MAP1B, MECP2, MET, NTF3, PRKCE, RAC1, SPAST, TGFBR1, TSC1, NRP1, CDK5R1, WASL, SEMA5A, ROCK2, ARPC5, ACTR3, ABI2, ARPC1A, CDC42EP3, PLK4, NCKAP1, MAPRE1, SWAP70, GPSM2, NIN, AP1AR, SPIRE1, SLAIN2, NAV3, MYLK3, WHAMM, JMY, UBXN2B, RICTOR, SH3PXD2B, FMN1
BP	GO:0045185	maintenance of protein location	25/2564	2.10E-02	ANK3, DAG1, DBN1, FBN1, FBN2, FLNB, HNRNPU, INSIG1, MXI1, NFKBIA, PKD2, SKP1, SORL1, SP100, TMSB4X, EZR, YWHAB, G3BP2, FAF1, SYNE1, SUN1, VPS13C, GOPC, GOLPH3, ANKRD13C
BP	GO:0032386	regulation of intracellular transport	78/2564	2.12E-02	ANK3, ARF1, CALM3, ECT2, STOM, ERBB2, FER, FMR1, FYN, GDI1, GSK3B, INSIG1, KIF5B, IPO5, LAMP1, MAP1B, MAP2, MSN, PPP1R12A, NEDD4, NF1, P2RY1, PIK3R1, PPM1A, PPP1CC, PRKAA1, PRKCB, MAPK1, PTGS2, PTPN14, RAN, RAP1B, SORL1, SP100, STXBP1, VAMP1, TP53, TPR, UBE2D3, UBE2L3, EZR, XPO1, FZD5, SNX4, CDK5R1, NOLC1, NPEPPS, RIMS3,

					GAB2, SEC16A, DNM1L, KHDRBS1, EHD1, RNF139, RAB3GAP1, RIMS1, RAB21, WWC1, DNAJC13, SNAPIN, GIT1, UBR5, CTDSPL2, RBM27, RHOT1, YOD1, RBM22, TMEM30A, SAR1A, C12orf4, XPO5, RBM26, XPO4, TTC21B, NDEL1, HPS4, LRRK2, TBC1D20
BP	GO:0046326	positive regulation of glucose import	12/2564	2.12E-02	IGF1, INSR, MEF2A, NFE2L2, PIK3R1, RNASEL, SLC1A2, SORBS1, ARPP19, RHOQ, APPL1, ADIPOR2
BP	GO:1905898	positive regulation of response to endoplasmic reticulum stress	12/2564	2.12E-02	NFE2L2, PIK3R1, XBP1, USP13, BCL2L11, SERINC3, ATF6, UBQLN2, UBQLN1, RNFT1, TMEM33, TMEM259
BP	GO:0006479	protein methylation	38/2564	2.13E-02	ATRX, BRCA1, BTG1, ETF1, MECOM, EZH2, GATA3, GSPT1, JARID2, SMAD4, MECP2, KMT2A, MLLT6, RAB3B, RAB6A, ARID4A, SATB1, KDM6A, BTG2, PRMT3, CTCF, MTF2, SUZ12, AUTS2, PHF19, ARID4B, RIF1, SETD5, ASH1L, KMT2E, KMT2C, SETD6, FBXO11, TET1, WDR82, PCMTD1, SMYD1, TET3
BP	GO:0008213	protein alkylation	38/2564	2.13E-02	ATRX, BRCA1, BTG1, ETF1, MECOM, EZH2, GATA3, GSPT1, JARID2, SMAD4, MECP2, KMT2A, MLLT6, RAB3B, RAB6A, ARID4A, SATB1, KDM6A, BTG2, PRMT3, CTCF, MTF2, SUZ12, AUTS2, PHF19, ARID4B, RIF1, SETD5, ASH1L, KMT2E, KMT2C, SETD6, FBXO11, TET1, WDR82, PCMTD1, SMYD1, TET3
BP	GO:2001235	positive regulation of apoptotic signaling pathway	38/2564	2.13E-02	APAF1, BCL2, BID, BMPR1B, E2F1, GSK3B, INHBA, JAK2, MCL1, NF1, NKX3-1, PAK2, PLAGL2, PPP2R1B, PPP3R1, PTEN, RET, SKIL, STK3, STK4, TFDP1, TFDP2, TGFBR1, THBS1, TIMP3, TP53, TP53BP2, YWHAB, PRKRA, TP63, HRK, MAGED1, BCL2L11, DNM1L, SERINC3, FAF1, ITM2C, NACC2
BP	GO:0007596	blood coagulation	64/2564	2.16E-02	ACTB, AXL, CAPZA1, CAPZA2, ENTPD1, CDC42, COL1A1, DOCK1, EDN1, F2R, F2RL1, FYN, GATA3, GATA6, GNA12, GNAQ, GNAS, GNB1, ITPK1, ITPR1, JAK2, MAFG, MYH9, NFE2L2, P2RY1, SERPINE1, PDGFRA, SERPINE2, PIK3CB, PIK3CG, PIK3R1, PLSCR1, PRKACB, PRKAR1A, PRKAR2A, PRKCA, PRKCB, PRKCE, PRKG1, MAPK1, RAC1, RAP2B, SRF, STXBP1, THBS1, TLR4, VCL, TFPI2, DGKE, PABPC4, MFN2, VAV3, GNA13, EHD1, AKAP10, ENPP4, RCOR1, DOCK9, CBX5, SLC7A11, C1GALT1C1, HPS4, DOCK11, ANO6
BP	GO:0051235	maintenance of location	63/2564	2.18E-02	ACACB, ANK3, FASLG, ATP1A2, CACNA1C, CALM1, CALM2, CALM3, CAMK2D, CLIC2, DAG1, DBN1, DIAPH1, DMD, F2R, PTK2B, FBN1, FBN2, FGF2, FKBP1A, FLNB, HNRNPU, INSIG1, ITGAV, ITPR1, MXI1, MYO5A, NFKB1, NFKBIA, PAFAH1B1, PDE4D, PKD2, PLCG1, PPARA, PRKCE, SKP1, SOAT1, SORL1, SP100, TMSB4X, EZR, YWHAB, NRIP1, G3BP2, EHD1, FAF1, PLCB1, SYNE1, SUN1, IBTK, GPSM2, VPS13C, TMEM38B, JPH1, GOPC, JPH3, GOLPH3, POLR2M, ANKRD13C, OSBPL11, ACVR1C, STARD4, SLC30A7
BP	GO:0006644	phospholipid metabolic process	79/2564	2.19E-02	ARF1, ARF3, ATM, CDS1, CHKA, CSNK2A1, CLN8, ACSL3, PTK2B, FGF2, FGFR3, FLT1, GATA6, HADHB, INPP4A, INPPL1, KIT, LDLR, FADS1, MECP2, MTM1, OCRL, PAFAH1B1, PDGFRA, PIK3C2A, PIK3C3, PIK3CB, PIK3CG, PIK3R1, PIP4K2A, PLCG1, PLD1, PLSCR1, PTEN, PIP5K1A, PIK3R3, DGKE, CDS2, SOCS2, MTMR3, MTMR6, SOCS6, SOCS5, LPGAT1, VAV3, SERINC3, SACM1L, SMG1, EFR3A, GPD1L, PLCB1, DDHD2, SLC44A1, SOCS7, RAB14, GDE1, MTMR12, PIGX, TMEM38B, PI4K2B, AGPAT5, ETNK1, SMPD3, AGK, AGPAT3, GPAM, PLEKHA1, MTMR9, SRD5A3, LPCAT1, PGAP1, PLEKHA8, OSBPL10, SAMD8, SGMS2, PIKFYVE, SLC44A5, NAPEPLD, FAM126B
BP	GO:0010390	histone monoubiquitination	10/2564	2.20E-02	BMI1, SKP1, PCGF2, CUL4B, RNF40, RYBP, WAC, CDC73, PCGF5, RNF168
BP	GO:0031365	N-terminal protein amino acid modification	10/2564	2.20E-02	CREBBP, EP300, PPM1A, SOX4, KAT2B, NMT2, NAA25, NAA15, NAA50, NAA30
BP	GO:0051642	centrosome localization	10/2564	2.20E-02	DYNC1LI2, KIF5B, PAFAH1B1, EZR, BICD2, SUN1, GPSM2, NIN, NDE1, NDEL1
BP	GO:0002292	T cell differentiation involved in immune response	18/2564	2.21E-02	ANXA1, ATP7A, BCL6, MTOR, GATA3, HMGB1, SMAD7, CD46, RARA, RORA, STAT3, TSC1, TNFSF4, SOCS5, MALT1, FOXP1, LEF1, RC3H1

BP	GO:0033627	cell adhesion mediated by integrin	18/2564	2.21E-02	CRK, CYP1B1, FBN1, ITGAV, ITGB8, SERPINE1, PIK3CG, RET, SFRP2, SNAI2, ADAM17, TGFB2, ADAM9, ITGA11, SWAP70, WNK1, NPNT, ACER2
BP	GO:0070085	glycosylation	53/2564	2.21E-02	EXTL3, FKTN, GALNT1, GALNT2, GALNT3, GCNT2, GFPT1, B4GALT1, GOLGA2, MFNG, MGAT5, ST6GAL1, ST3GAL1, VCP, VEGFB, GALNT4, B4GALT4, B4GALT6, B4GALT5, TMEM59, GFPT2, ARFGEF1, B3GNT2, FUT9, MAN1A2, MGAT4A, ST6GALNAC4, SERP1, C1GALT1C1, ST8SIA3, GCNT4, GALNT7, GALNT10, POGLUT1, TRAK2, SRD5A3, EDEM3, TET1, TMTC1, B3GNT5, MAGT1, SYVN1, TMTC4, MCFD2, B3GAT2, ALG10B, B3GALNT2, TMTC3, TET3, GXYLT1, EOGT, DPY19L4, ACER2
BP	GO:0001953	negative regulation of cell-matrix adhesion	13/2564	2.21E-02	JAG1, BCL6, LRP1, NF1, SERPINE1, PIK3R1, PTEN, RASA1, THBS1, MAP4K4, CORO1C, PHLDB2, ACER2
BP	GO:0014742	positive regulation of muscle hypertrophy	13/2564	2.21E-02	CAMK2D, EDN1, MTOR, IGF1, IL6ST, MEF2A, PPP3CA, PRKCA, ROCK1, SLC9A1, PDE5A, ROCK2, MTPN
BP	GO:0021762	substantia nigra development	13/2564	2.21E-02	ACTB, RHOA, CALM1, CALM2, CALM3, CDC42, G6PD, GLUD1, ZNF148, SEC16A, BASP1, GNB4, ZNF430
BP	GO:0034198	cellular response to amino acid starvation	13/2564	2.21E-02	EIF2S1, MTOR, MAP3K5, MAPK1, EIF2AK3, SZT2, SESN1, SLC38A2, RRAGD, SEH1L, SESN2, SESN3, C12orf66
BP	GO:0051293	establishment of spindle localization	13/2564	2.21E-02	KPNB1, MAP4, MYH9, PAFAH1B1, SPRY1, SPRY2, GPSM2, NDE1, BCCIP, SPIRE1, MCPH1, NDEL1, UBXN2B
BP	GO:1904646	cellular response to amyloid-beta	13/2564	2.21E-02	APP, BCL2L2, CACNA2D1, EPHA4, FOXO3, FYN, GSK3B, IGF1, IGF1R, LRP1, TLR4, BCL2L11, NAMPT
BP	GO:0050806	positive regulation of synaptic transmission	36/2564	2.24E-02	ADCYAP1, APP, CA2, CREB1, EPHA4, EPHB2, PTK2B, FMR1, GLUL, GSK3B, KIF5B, MECP2, MME, NF1, NTRK2, SERPINE2, PRKCE, MAPK1, RELN, PTEN, PTGS2, RAB3B, SNAP25, STAU1, STXBP1, NRXN1, RIMS3, DNM1L, RAB3GAP1, SHANK2, RIMS1, UNC13A, SLC24A2, SSH1, YTHDF1, TSHZ3
BP	GO:0046637	regulation of alpha-beta T cell differentiation	17/2564	2.25E-02	ANXA1, RHOA, BCL6, PRDM1, RUNX1, RUNX3, CBFB, GATA3, HMGB1, SMAD7, RARA, TGFBR2, TNFSF4, SOCS5, MALT1, SH3RF1, RC3H1
BP	GO:0090181	regulation of cholesterol metabolic process	17/2564	2.25E-02	ACACB, CYP51A1, FASN, HMGCR, KPNB1, LDLR, NFYB, PRKAA1, RAN, SC5D, SCD, SP1, ERLIN1, ERLIN2, MBTPS2, GPAM, ELOVL6
BP	GO:0002576	platelet degranulation	29/2564	2.25E-02	ACTN1, ALDOA, APLP2, APP, CALM1, FN1, HGF, IGF1, LAMP2, SERPINE1, PCDH7, RAB27B, SPARC, STXBP1, TGFB2, THBS1, TIMP3, TMSB4X, VCL, VEGFA, VEGFB, PHACTR2, FAM3C, VTI1B, BRPF3, OLA1, TMX3, SYTL4, NHLRC2
BP	GO:0034763	negative regulation of transmembrane transport	29/2564	2.25E-02	ANK3, ATP1A2, ATP7A, CALM1, CALM2, CALM3, CAMK2D, CLIC2, EPHB2, FGF12, FMR1, MTOR, GEM, NEDD4, PKD2, PRKCB, PRKCE, PTEN, THBS1, OXSR1, STK39, UBQLN1, CAB39, CTTNBP2NL, GOPC, HECW2, SESTD1, OSR1, KCNRG
BP	GO:0014910	regulation of smooth muscle cell migration	21/2564	2.26E-02	ATP7A, BCL2, BMPR1A, CRK, HAS2, IGF1, IGFBP5, LRP1, MEF2C, NFE2L2, SERPINE1, PRKG1, SORL1, NRP1, SLIT2, DOCK4, TRIB1, SSH1, DOCK5, PDGFD, DOCK7
BP	GO:0035272	exocrine system development	14/2564	2.27E-02	DAG1, FGFR2, HGF, INSR, NFIB, NKX3-1, SNAI2, SOX9, TGFB2, XBP1, NRP1, SEMA3C, BTBD7, NTN4
BP	GO:0042059	negative regulation of epidermal growth factor receptor	14/2564	2.27E-02	AREG, CBL, CBLB, CDC42, EREG, PTPN3, PTPRJ, SOCS5, SPRY1, SPRY2, STAM2, SH3KBP1, ERRFI1, SOCS4

		signaling pathway			
BP	GO:0042093	T-helper cell differentiation	16/2564	2.27E-02	ANXA1, ATP7A, BCL6, MTOR, GATA3, HMGB1, SMAD7, RARA, RORA, STAT3, TNFSF4, SOCS5, MALT1, FOXP1, LEF1, RC3H1
BP	GO:0046605	regulation of centrosome cycle	16/2564	2.27E-02	BRCA1, CHEK1, KIF11, NPM1, XPO1, KAT2B, ROCK2, PLK4, CHMP2B, CHMP5, CHMP1B, MCPH1, MAP9, RAB6C, UBXN2B, GEN1
BP	GO:0051058	negative regulation of small GTPase mediated signal transduction	16/2564	2.27E-02	ABL2, BCL6, EPHB2, ITGA3, STMN1, MET, NF1, RASA1, TGFB2, CUL3, SLIT2, MFN2, RASA4, SPRY1, SPRY2, CD2AP
BP	GO:1903749	positive regulation of establishment of protein localization to mitochondrion	16/2564	2.27E-02	BCL2, BID, E2F1, PPP3R1, PRKAA1, TFDP1, TFDP2, TP53, TP53BP2, UBE2D3, UBE2L3, YWHAB, FZD5, TP63, NPEPPS, HPS4
BP	GO:0031122	cytoplasmic microtubule organization	15/2564	2.28E-02	DST, KPNB1, PAFAH1B1, SPAST, EZR, RAB11A, SLK, CAMSAP2, HOOK1, FIGN, CCDC88A, SLAIN2, KATNAL1, HOOK3, CAMSAP1
BP	GO:0002761	regulation of myeloid leukocyte differentiation	27/2564	2.30E-02	ZFP36L1, CA2, RUNX1, CDK6, CREB1, FBN1, MTOR, GNAS, ID2, INHBA, LIF, MITF, NF1, NOTCH2, PIK3R1, PRKCA, RARA, RB1, KLF10, TLR4, TNFSF11, MAFB, TRIB1, TOB2, FOXP1, LEF1, TMEM64
BP	GO:0050810	regulation of steroid biosynthetic process	23/2564	2.31E-02	ACACB, CYP51A1, EGR1, FASN, HMGCR, INSIG1, KPNB1, NFKB1, NFYB, PRKAA1, RAN, REST, SC5D, SCD, SNAI2, SP1, ERLIN1, ERLIN2, DDX20, MBTPS2, GPAM, ELOVL6, STARD4
BP	GO:1901989	positive regulation of cell cycle phase transition	25/2564	2.32E-02	ANXA1, APP, CCND1, CCND2, CDC25A, DDX3X, EZH2, HSPA2, MECP2, NPM1, PBX1, RB1, ADAM17, UBE2E2, CUL4B, CUL3, RAB11A, PLCB1, ANKRD17, TMOD3, DTL, KMT2E, MEPCE, CDC73, STXBP4
BP	GO:0032355	response to estradiol	30/2564	2.32E-02	ANXA1, AREG, CCND1, BCL2L2, CCNA2, COL1A1, ESR1, ETS1, EZH2, GJA1, FOXA1, HPGD, MAP1B, PTCH1, PTEN, PTGS2, RARA, SLC6A1, SSTR2, STAT3, STXBP1, NR2F2, NCOA3, NRIP1, NCOA1, SOCS2, DDX18, BCL2L11, STRN3, ZNF703
BP	GO:0007032	endosome organization	20/2564	2.35E-02	FASLG, SCARB2, CLCN3, PIK3C3, RAB11A, IST1, STAM2, TMCC1, DNAJC13, CORO1C, CHMP2B, VPS36, HOOK1, CHMP5, VTA1, PI4K2B, CHMP1B, RAB22A, ALS2, HOOK3
BP	GO:0000075	cell cycle checkpoint	44/2564	2.39E-02	APC, ATM, CCND1, BRCA1, CDC5L, CENPF, CHEK1, FOXN3, ATF2, E2F1, EP300, HUS1, MDM4, MSH2, CNOT2, CNOT4, PRKDC, RB1, SOX4, TFDP1, TFDP2, TP53, TP53BP1, TPR, WEE1, BTG2, HMGA2, BUB3, CLOCK, CNOT1, SYF2, GIGYF2, CNOT7, DONSON, WAC, TRIAP1, DTL, TIPIN, CNOT6, TAOK1, NABP1, TICRR, CNOT6L, GEN1
BP	GO:0002053	positive regulation of mesenchymal cell proliferation	9/2564	2.41E-02	BMPR1A, FGFR2, SIX1, SOX9, STAT1, TGFBR2, VEGFA, WNT5A, FOXP2
BP	GO:0051894	positive regulation of focal adhesion assembly	9/2564	2.41E-02	LIMS1, PTPRJ, RAC1, ROCK1, TSC1, VEGFA, NRP1, MAP4K4, FMN1
BP	GO:0061217	regulation of mesonephros development	9/2564	2.41E-02	GATA3, SIX1, SOX9, VEGFA, WNT2B, MAGED1, BASP1, SIX4, LGR4

BP	GO:0007435	salivary gland morphogenesis	11/2564	2.41E-02	DAG1, FGFR2, HGF, NFIB, NKX3-1, SNAI2, TGFB2, NRP1, SEMA3C, BTBD7, NTN4
BP	GO:0016601	Rac protein signal transduction	11/2564	2.41E-02	ARF6, CRK, EPS8, NF1, RAC1, TIAM1, ABI2, WASF2, NCKAP1, AUTS2, ALS2
BP	GO:0031128	developmental induction	11/2564	2.41E-02	AR, HOXC11, ROBO1, SIX1, SOX9, WNT1, WNT2B, FZD5, SPRY1, FRS2, HIPK2
BP	GO:0045862	positive regulation of proteolysis	68/2564	2.41E-02	APAF1, APP, FASLG, RHOA, ASPH, BID, DDX3X, EPHA4, F2R, PTK2B, FMR1, FN1, FYN, GSK3B, HIP1, HMGB1, JAK2, SMAD7, MAP3K5, MYH9, NFE2L2, NKX3-1, PTEN, RAD23A, REST, ROBO1, SFRP2, STAT3, VCP, PICALM, ADAM9, USP13, EIF2AK3, ROCK2, RNF14, SOCS5, RNF144A, IST1, RNF40, PDCD6, BCL2L11, TRIB1, TNIP1, TIMM17A, MALT1, RNF139, CARD8, FBXW11, ARIH1, TRIB2, SENP1, UBQLN2, UBQLN1, RNFT1, CLN6, PERP, ANTXR1, TMEM259, EGLN3, LRRK2, SOCS4, RNF19B, ACVR1C, SH3D19, RNF217, TMTC3, RNF144B, ACER2
BP	GO:0030901	midbrain development	22/2564	2.43E-02	ACTB, RHOA, CALM1, CALM2, CALM3, CDC42, EN1, FGFR2, G6PD, GLUD1, SMAD1, NR4A2, SFRP2, WNT1, WNT5A, ZNF148, FZD3, FZD1, SEC16A, BASP1, GNB4, ZNF430
BP	GO:0043507	positive regulation of JUN kinase activity	19/2564	2.43E-02	EDN1, EPHA4, PTK2B, MAP3K4, MAP3K5, MAP3K9, MAP2K4, TIAM1, WNT5A, FZD5, FZD4, FZD8, TNFSF11, SPAG9, ZEB2, MAP3K2, SASH1, TAOK1, SAMD5
BP	GO:0070373	negative regulation of ERK1 and ERK2 cascade	19/2564	2.43E-02	DUSP4, EPHB2, LIF, SMAD4, PTEN, PTPRR, TIMP3, TLR4, EZR, EIF3A, RANBP9, SPRY1, SPRY2, TNIP1, ERRFI1, CAMK2N1, LMO3, SEMA6A, SPRED1
BP	GO:0002065	columnar/cuboidal epithelial cell differentiation	26/2564	2.43E-02	JAG1, PRDM1, KLF5, CDH2, CDK6, FGFR2, GATA6, GSK3B, FOXA1, HOXA5, RBPJ, JAG2, NEUROD1, PAFAH1B1, SERPINE1, RARA, SOX4, WNT5A, TP63, SLC4A7, CLOCK, LEF1, ESRP1, BCCIP, SAV1, YIPF6
BP	GO:0042303	molting cycle	26/2564	2.43E-02	ATP7A, BCL2, FGFR2, HOXC13, IGFBP5, RBPJ, INHBA, SMAD4, MYO5A, NF1, PTGS2, SOX9, TGFB2, WNT5A, FZD3, TP63, CLOCK, NIPBL, LRIG1, LGR4, SAV1, ALX4, FA2H, FOXQ1, MYSM1, ZDHHC21
BP	GO:0042633	hair cycle	26/2564	2.43E-02	ATP7A, BCL2, FGFR2, HOXC13, IGFBP5, RBPJ, INHBA, SMAD4, MYO5A, NF1, PTGS2, SOX9, TGFB2, WNT5A, FZD3, TP63, CLOCK, NIPBL, LRIG1, LGR4, SAV1, ALX4, FA2H, FOXQ1, MYSM1, ZDHHC21
BP	GO:0001890	placenta development	33/2564	2.51E-02	PRDM1, BMPR2, ZFP36L1, BPTF, FGFR2, GJA1, HSP90AB1, RBPJ, ITGB8, LIF, MAP3K4, MME, PKD2, MED1, MAPK1, PTGS2, SP3, STK3, STK4, NR2F2, FZD5, FOSL1, ARID1A, STC2, NCOA1, ADAM19, PLK4, DAZAP1, LEF1, ASH1L, BIRC6, VASH2, GGNBP2
BP	GO:0051028	mRNA transport	33/2564	2.51E-02	ZFP36L1, FMR1, GLE1, HNRNPA2B1, AGFG1, KIF5C, SRSF1, SRSF2, SRSF6, SRSF7, TPR, XPO1, SLBP, QKI, ZC3H11A, SMG7, G3BP2, RBM8A, NXF1, IGF2BP3, XPO7, SMG1, BICD2, CPSF2, NDC1, NXT2, PARP11, THOC2, SEH1L, FYTTD1, YTHDC1, HNRNPA3, NUP43
BP	GO:0046486	glycerolipid metabolic process	76/2564	2.52E-02	ARF1, ARF3, ATM, DAGLA, CDS1, CHKA, CSNK2A1, ACSL1, ACSL3, ACSL4, FGF2, HADHB, INPP4A, INPPL1, INSIG1, LDLR, MECP2, MTM1, OCRL, PAFAH1B1, PIK3C2A, PIK3C3, PIK3CB, PIK3CG, PIK3R1, PIP4K2A, PLD1, PLSCR1, PTEN, SORL1, PIP5K1A, PIK3R3, DGKE, CDS2, SOCS2, MTMR3, MTMR6, SOCS6, SOCS5, LPGAT1, SERINC3, ABHD2, MGLL, SACM1L, SMG1, EFR3A, GPD1L, PLCB1, DDHD2, CTDNEP1, SLC44A1, SOCS7, RAB14, GDE1, MTMR12, PIGX, PI4K2B, AGPAT5, ETNK1, AGK, AGPAT3, GPAM, PLEKHA1, MTMR9, TBL1XR1, LPCAT1, PGAP1, PLEKHA8, OSBPL10, SIK1, PIKFYVE, SLC44A5, NAPEPLD, CNEP1R1, GK5, FAM126B
BP	GO:0045682	regulation of epidermis development	21/2564	2.55E-02	ZFP36L1, RUNX1, CBFB, EZH2, KRT10, SMAD4, MAFG, MED1, PTCH1, ROCK1, SRSF6, TGFB2, WNT5A, NCOA3, KLF7, TP63, ROCK2, GRHL1, ERRFI1, ESRP1, MYSM1
BP	GO:0001889	liver development	30/2564	2.55E-02	AK4, ANXA1, ARF6, ATP7A, CCND1, CEBPG, EZH2, GATA6, HFE, HGF, IGF2R, JARID2, MET, NF1, PKD2, PKM, MED1, PTCH1, PTPN3, RARA, SOX9, SP3, TNFAIP3, WNT1, XBP1, CUL3, CLDN1, ONECUT2, RB1CC1, SEC63
BP	GO:0006405	RNA export from nucleus	30/2564	2.55E-02	GLE1, HNRNPA2B1, AGFG1, NPM1, RAN, SRSF1, SRSF2, SRSF6, SRSF7, TPR, TSC1, XPO1, SLBP, ZC3H11A, SMG7, RBM8A, NXF1, KHDRBS1, SMG1, CPSF2, RBM27, NDC1, THOC2, XPO5, RBM26, SEH1L, FYTTD1, LTV1, YTHDC1, NUP43
BP	GO:0010661	positive regulation of muscle cell	12/2564	2.56E-02	CAMK2D, E2F3, HMGCR, IL12A, MAP3K5, PTEN, MAP2K4, SOD2, STK4, TP53, MFN2, PDCD4

		apoptotic process			
BP	GO:0043502	regulation of muscle adaptation	25/2564	2.57E-02	ATP2B4, CAMK2D, DAG1, EDN1, FOXO3, MTOR, G6PD, IGF1, IGFBP5, IL6ST, JARID2, SMAD4, MEF2A, PPARA, PPP3CA, PRKCA, ROCK1, SLC9A1, UTRN, YY1, PDE5A, ROCK2, LMCD1, ERRFI1, MTPN
BP	GO:0045600	positive regulation of fat cell differentiation	17/2564	2.57E-02	ZFP36L1, KLF5, CREB1, HNRNPU, ID2, PTGS2, SFRP2, SNAI2, STK3, STK4, XBP1, ASXL2, LMO3, SAV1, TMEM64, NAPEPLD, SH3PXD2B
BP	GO:1990823	response to leukemia inhibitory factor	23/2564	2.57E-02	KLF5, CREB1, EPS8, HNRNPU, JARID2, SMAD7, NFYB, RFX2, SRSF7, SHMT1, TFRC, XBP1, FZD4, SMARCA5, TNFSF11, GFPT2, SPRY2, B3GNT2, KDM5B, MTF2, KAT6B, CACYBP, RIF1
BP	GO:1990830	cellular response to leukemia inhibitory factor	23/2564	2.57E-02	KLF5, CREB1, EPS8, HNRNPU, JARID2, SMAD7, NFYB, RFX2, SRSF7, SHMT1, TFRC, XBP1, FZD4, SMARCA5, TNFSF11, GFPT2, SPRY2, B3GNT2, KDM5B, MTF2, KAT6B, CACYBP, RIF1
BP	GO:0010801	negative regulation of peptidyl-threonine phosphorylation	8/2564	2.57E-02	CALM1, CALM2, CALM3, SMAD7, SPRY2, DDIT4, SPRED1, SPRED2
BP	GO:0061339	establishment or maintenance of monopolar cell polarity	8/2564	2.57E-02	RHOA, CDC42, MAP1B, MSN, MYO9A, OPHN1, PTK7, WNT5A
BP	GO:2000114	regulation of establishment of cell polarity	8/2564	2.57E-02	KRIT1, PTK2B, GATA3, RAP1B, ROCK1, ROCK2, ARFGEF1, RICTOR
BP	GO:2000737	negative regulation of stem cell differentiation	8/2564	2.57E-02	JAG1, ZFP36L2, HNRNPU, NFE2L2, REST, STAT3, CDK13, YAP1
BP	GO:0007183	SMAD protein complex assembly	6/2564	2.57E-02	FKBP1A, SMAD1, SMAD2, SMAD4, PPM1A, PMEPA1
BP	GO:0014842	regulation of skeletal muscle satellite cell proliferation	6/2564	2.57E-02	EPHB1, FGF2, JAK2, SIX1, STAT3, AKIRIN1
BP	GO:0043201	response to leucine	6/2564	2.57E-02	MTOR, PIK3C3, SESN1, RRAGD, SESN2, SESN3
BP	GO:0051451	myoblast migration	6/2564	2.57E-02	ANXA1, ROCK1, SIX1, NET1, SIX4, AKIRIN1
BP	GO:0072182	regulation of nephron tubule epithelial cell differentiation	6/2564	2.57E-02	GATA3, LIF, STAT1, YAP1, WWTR1, OSR1
BP	GO:1902894	negative regulation of pri-miRNA transcription by RNA polymerase II	6/2564	2.57E-02	NFATC3, NFIB, PPARA, SOX9, SRF, YY1

BP	GO:1902947	regulation of tau-protein kinase activity	6/2564	2.57E-02	EGR1, HGF, HSP90AA1, HSP90AB1, RB1, SORL1
BP	GO:2000009	negative regulation of protein localization to cell surface	6/2564	2.57E-02	ARF6, GPM6B, PICALM, ASTN2, LEPROTL1, GOPC
BP	GO:0062012	regulation of small molecule metabolic process	83/2564	2.58E-02	ACACB, AK4, ANXA1, APP, RHOA, ATP2B4, ATP7A, BRCA1, CLTC, CYP51A1, EGR1, EP300, PTK2B, FASN, MTOR, GSK3B, HAS2, HMGCR, IGF1, FOXK2, INSIG1, INSR, KIT, KPNB1, LDLR, ME1, ME2, NFKB1, NFYB, P2RY1, PPARA, PRKAA1, PRKCE, PSMD1, PTGS2, RAN, REST, RORA, SC5D, SCD, SNAI2, SP1, STAT3, TMSB4X, TP53, TPR, VCP, KAT2B, NCOR1, EPM2AIP1, LPGAT1, DNM1L, FAM3C, NCOA2, SORBS1, ERLIN1, ARPP19, ERLIN2, SLC7A11, ZBTB20, DNAJC15, ZBTB7A, MBTPS2, AZIN1, DDIT4, SMPD3, NDC1, NLN, PDP2, GPAM, MID1IP1, ELOVL5, ELOVL6, ADIPOR2, PPP1R3B, SEH1L, SESN2, LONP2, SLC45A3, STARD4, SIK1, PDE12, NUP43
BP	GO:0001885	endothelial cell development	16/2564	2.61E-02	F2RL1, FASN, ID1, MET, MSN, PDE4D, RAP1B, ROCK1, TJP1, VEGFA, EZR, VEZF1, CLDN1, ROCK2, RAPGEF2, RAP2C
BP	GO:0010518	positive regulation of phospholipase activity	16/2564	2.61E-02	ABL2, ARF4, ARL1, BDNF, ESR1, FGF2, FGFR3, FGFR2, FLT1, GNAQ, KIT, NTF3, NTRK2, PDGFRA, PLCG1, GNA13
BP	GO:0046847	filopodium assembly	16/2564	2.61E-02	ARF6, CDC42, FMR1, GPM6A, ITGA6, MYO10, RALA, SRF, TGFBR1, EZR, NRP1, WASL, SRGAP2, RHOQ, FNBP1L, DOCK11
BP	GO:0007019	microtubule depolymerization	13/2564	2.61E-02	APC, FGF13, STMN1, MAP1B, MID1, SPAST, CAMSAP2, TAOK1, MID1IP1, NAV3, CCSAP, TTBK2, CAMSAP1
BP	GO:0010463	mesenchymal cell proliferation	13/2564	2.61E-02	BMPR1A, FGFR2, NFIB, SIX1, SOX9, STAT1, ZEB1, TGFBR2, VEGFA, WNT5A, PHF14, FOXP2, OSR1
BP	GO:0051489	regulation of filopodium assembly	13/2564	2.61E-02	ARF6, CDC42, FMR1, GPM6A, MYO10, RALA, SRF, TGFBR1, NRP1, WASL, RHOQ, FNBP1L, DOCK11
BP	GO:0060999	positive regulation of dendritic spine development	13/2564	2.61E-02	ARF1, DBN1, FMR1, MTOR, CAPRIN1, OPA1, PAFAH1B1, MAPK6, RELN, TIAM1, DNM1L, CPEB3, SHANK2
BP	GO:0002088	lens development in camera-type eye	20/2564	2.63E-02	SHROOM2, GATA3, GJA1, MEIS1, MED1, SKI, SKIL, TGFBR1, TGFBR2, VIM, WNT5A, WNT2B, ZEB2, ABI2, KDM5B, FRS2, PDS5B, SLC7A11, HIPK2, TBC1D20
BP	GO:0030199	collagen fibril organization	15/2564	2.64E-02	ATP7A, COL1A1, COL5A2, COL12A1, CYP1B1, LOX, LUM, NF1, DDR2, P4HA1, RB1, SFRP2, TGFB2, TGFBR1, GREM1
BP	GO:0030857	negative regulation of epithelial cell differentiation	14/2564	2.64E-02	JAG1, CCND1, EZH2, GSK3B, ID1, SRSF6, SOX9, STAT1, TBX3, ZEB1, VEGFA, TP63, YAP1, OSR1
BP	GO:0043124	negative regulation of I-kappaB kinase/NF-kappaB signaling	14/2564	2.64E-02	RHOA, ESR1, PPM1A, RORA, STAT1, TNFAIP3, USP10, OPTN, TNIP1, ZMYND11, CARD8, ASH1L, OTUD7B, TRIM59
BP	GO:0033599	regulation of mammary gland epithelial cell proliferation	7/2564	2.65E-02	CCND1, GATA3, HOXA5, ROBO1, KDM5B, RTN4, ZNF703

BP	GO:0035518	histone H2A monoubiquitination	7/2564	2.65E-02	BMI1, SKP1, PCGF2, CUL4B, RYBP, PCGF5, RNF168
BP	GO:0035855	megakaryocyte development	7/2564	2.65E-02	EP300, KIT, MEIS1, PIP4K2A, MED1, SRF, WASF2
BP	GO:0061298	retina vasculature development in camera-type eye	7/2564	2.65E-02	ACVR2B, BMPR2, COL4A1, CYP1B1, PDGFRA, FZD4, NRP1
BP	GO:0001666	response to hypoxia	67/2564	2.69E-02	AK4, APAF1, RHOA, ATM, ATP1B1, ATP7A, BCL2, ZFP36L1, CCNA2, CREB1, CREBBP, E2F1, EDN1, EGR1, EP300, ETS1, PTK2B, FOXO3, MTOR, GATA6, GNB1, RBPJ, ITPR1, SMAD4, MDM4, MECP2, MMP2, NF1, NFE2L2, NKX3-1, SLC11A2, NR4A2, OPA1, PKM, PPARA, PRKAA1, PRKCE, PSMD1, PTEN, PTGS2, REST, RORA, RPS27A, SLC9A1, SRF, ADAM17, TMBIM6, TGFB2, TGFBR2, THBS1, TP53, VEGFA, VEGFB, VHL, STC2, ROCK2, NPEPPS, DNM1L, DDAH1, HIPK2, UBQLN1, HP1BP3, DDIT4, APOLD1, EGLN3, VASN, CPEB2
BP	GO:0030168	platelet activation	33/2564	2.69E-02	ACTB, AXL, COL1A1, F2R, FYN, GNA12, GNAQ, GNAS, GNB1, ITPR1, MYH9, P2RY1, PDGFRA, SERPINE2, PIK3CB, PIK3CG, PIK3R1, PLSCR1, PRKCA, PRKCB, PRKCE, PRKG1, MAPK1, RAP2B, SRF, STXBP1, TLR4, VCL, DGKE, VAV3, GNA13, SLC7A11, C1GALT1C1
BP	GO:1903201	regulation of oxidative stress-induced cell death	19/2564	2.74E-02	FOXO3, FYN, HGF, MCL1, MET, NFE2L2, PAWR, REST, SOD2, TLR4, TSC1, WNT1, FZD1, LANCL1, SLC7A11, UBQLN1, OXR1, LRRK2, NCOA7
BP	GO:0007599	hemostasis	64/2564	2.81E-02	ACTB, AXL, CAPZA1, CAPZA2, ENTPD1, CDC42, COL1A1, DOCK1, EDN1, F2R, F2RL1, FYN, GATA3, GATA6, GNA12, GNAQ, GNAS, GNB1, ITPK1, ITPR1, JAK2, MAFG, MYH9, NFE2L2, P2RY1, SERPINE1, PDGFRA, SERPINE2, PIK3CB, PIK3CG, PIK3R1, PLSCR1, PRKACB, PRKAR1A, PRKAR2A, PRKCA, PRKCB, PRKCE, PRKG1, MAPK1, RAC1, RAP2B, SRF, STXBP1, THBS1, TLR4, VCL, TFPI2, DGKE, PABPC4, MFN2, VAV3, GNA13, EHD1, AKAP10, ENPP4, RCOR1, DOCK9, CBX5, SLC7A11, C1GALT1C1, HPS4, DOCK11, ANO6
BP	GO:0001942	hair follicle development	21/2564	2.85E-02	ATP7A, BCL2, FGFR2, HOXC13, IGFBP5, RBPJ, INHBA, SMAD4, MYO5A, NF1, SOX9, TGFB2, WNT5A, FZD3, TP63, LGR4, SAV1, ALX4, FOXQ1, MYSM1, ZDHHC21
BP	GO:0071156	regulation of cell cycle arrest	25/2564	2.85E-02	ATM, CCND1, BRCA1, E2F1, EP300, GATA6, HSP90AB1, ID2, MDM4, NEUROD1, CNOT2, CNOT4, PKD2, SOX4, TFDP1, TFDP2, TP53, BTG2, HMGA2, CDK5R1, CNOT1, CNOT7, TRIAP1, CNOT6, CNOT6L
BP	GO:0090630	activation of GTPase activity	23/2564	2.87E-02	ABR, CRK, ECT2, PTK2B, NTF3, TIAM1, TSC1, WNT5A, EVI5, PIP5K1A, USP6NL, TBC1D4, RABGAP1L, RASGRP1, CORO1C, RABGAP1, TBC1D10B, TBC1D22B, RALGAPB, NDEL1, DOCK7, SGSM1, RUNDC1
BP	GO:1902882	regulation of response to oxidative stress	23/2564	2.87E-02	FOXO3, FYN, HGF, MCL1, MET, NFE2L2, PAWR, REST, SOD2, TLR4, TSC1, WNT1, FZD1, LANCL1, SZT2, SLC7A11, SESN1, UBQLN1, OXR1, SESN2, LRRK2, NCOA7, SESN3
BP	GO:0043122	regulation of I-kappaB kinase/NF-kappaB signaling	47/2564	2.92E-02	BIRC3, FASLG, RHOA, ECT2, ESR1, F2R, F2RL1, FKBP1A, FYN, GJA1, PPM1A, PRKCB, PRKCE, REL, RORA, STAT1, TLR4, TSPAN6, TNFAIP3, UBE2I, WNT5A, TNFSF11, USP10, VAPA, LITAF, OPTN, TNIP1, TFG, ZMYND11, NEK6, MALT1, AKAP13, CARD8, TAB2, ANKRD17, IRAK4, CXXC5, ZFAND6, ZDHHC13, ASH1L, OTUD7B, PELI1, MTDH, TMED4, TAB3, LURAP1L, TRIM59
BP	GO:0032103	positive regulation of response to external stimulus	61/2564	2.92E-02	ADAM10, BMPR2, CCR6, EDN1, ETS1, F2RL1, PTK2B, FGF2, HMGB1, IL6R, IL6ST, IL12A, JAK2, LDLR, LRP1, MET, NFKBIA, NTF3, SERPINE1, PIK3CG, PRKCA, PTGS2, RAC1, ADAM17, THBS1, TIAM1, TLR4, TMSB4X, TNFSF4, VEGFA, VEGFB, WNT5A, SCG2, TNFSF11, SNX4, FGF18, NRP1, SEMA5A, SLIT2, CLOCK, PUM1, OXSR1, OPTN, TNIP1, SWAP70, CDK19, SASH1, PUM2, KPNA6, ANKRD17, APPL1, PDCD4, STK39, WNK1, AKIRIN1, PDGFD, NDEL1, ZCCHC3, LRRK2, ANO6, NAPEPLD
BP	GO:0000956	nuclear-transcribed mRNA catabolic process	42/2564	2.92E-02	ATM, ZFP36L1, ZFP36L2, DDX5, DDX6, ETF1, GSPT1, RPSA, CNOT2, CNOT4, PPP2R2A, RPL22, RPL28, RPL37, RPS16, RPS27A, BTG2, SMG7, PAN2, RBM8A, TOB1, HBS1L, CPEB3, DIS3, CNOT1, SAMD4A, SMG1, TNRC6B, AGO1, PABPC1, AGO2, TNRC6A, CNOT7, LSM7, DCP1A, CNOT6, TNRC6C, RC3H1, DCP2, PDE12, CNOT6L, PAN3
BP	GO:0099003	vesicle-mediated transport in synapse	42/2564	2.92E-02	ACTB, ARF1, ARF6, CALM3, CANX, EFNB2, FMR1, GSK3B, KIF5C, MAP2, RAB8A, OPHN1, P2RY1, PRKCB, RAB27B, RAP1B, ROCK1, SH3GL1, SNAP25, STXBP1, VAMP1, PICALM, EEA1, NUMB, VAMP4, RAB11A, RIMS3, SV2A, DNM1L, AP3M2, RAB3GAP1, RIMS1, UNC13A, SYT11, GRIP1, SNAPIN, AP3M1, PCLO, GIT1, KIAA1109, FCHO2, LRRK2

BP	GO:0010259	multicellular organism aging	11/2564	2.92E-02	ATM, EDN1, ERCC1, MSH2, SLC1A2, TP53, TP63, SEC63, SERP1, LRRK2, RNF165
BP	GO:0033144	negative regulation of intracellular steroid hormone receptor signaling pathway	11/2564	2.92E-02	RHOA, BRCA1, CNOT2, TP63, PIAS2, CLOCK, NCOR1, CNOT1, FOXP1, STRN3, ZBTB7A
BP	GO:1901030	positive regulation of mitochondrial outer membrane permeabilization involved in apoptotic signaling pathway	11/2564	2.92E-02	BCL2, BID, E2F1, GSK3B, PPP3R1, TFDP1, TFDP2, TP53, TP53BP2, YWHAB, TP63
BP	GO:1902991	regulation of amyloid precursor protein catabolic process	11/2564	2.92E-02	APP, EPHA4, FKBP1A, IGF1, ROCK1, SORL1, PICALM, ROCK2, TMED10, UNC13A, GGA3
BP	GO:0060828	regulation of canonical Wnt signaling pathway	55/2564	2.93E-02	APC, XIAP, CDH2, COL1A1, CTNND1, DDX3X, EGR1, FGFR2, FOXO3, GNAQ, GSK3B, RBPJ, MLLT3, NFKB1, PPM1A, PSMD1, PTK7, SFRP2, SNAI2, SOX2, SOX4, SOX9, STK3, STK4, VCP, WNT5A, FZD1, RECK, CUL3, SEMA5A, USP34, YAP1, CTDNEP1, BAMBI, WWTR1, GREM1, DKK2, RBMS3, UBR5, NLE1, GID8, USP47, RNF220, LGR4, SCYL2, PRDM15, SMURF2, WNK1, TBL1XR1, BICC1, ZNF703, TNKS2, LZTS2, LRRK2, TMEM64
BP	GO:0034968	histone lysine methylation	26/2564	2.96E-02	ATRX, BRCA1, MECOM, EZH2, GATA3, JARID2, SMAD4, MECP2, KMT2A, MLLT6, ARID4A, KDM6A, MTF2, SUZ12, AUTS2, PHF19, ARID4B, RIF1, SETD5, ASH1L, KMT2E, KMT2C, SETD6, WDR82, SMYD1, TET3
BP	GO:0060349	bone morphogenesis	26/2564	2.96E-02	BMPR1B, BMPR2, RUNX2, FOXN3, COL1A1, COL12A1, COL13A1, FGFR3, FGFR2, GLG1, GNAS, HAS2, INPPL1, INSIG1, MEF2C, MEF2D, MMP16, RARA, SFRP2, SKI, SOX9, TGFBR2, FGF18, SCARA3, SMPD3, IFT80
BP	GO:0050817	coagulation	64/2564	2.97E-02	ACTB, AXL, CAPZA1, CAPZA2, ENTPD1, CDC42, COL1A1, DOCK1, EDN1, F2R, F2RL1, FYN, GATA3, GATA6, GNA12, GNAQ, GNAS, GNB1, ITPK1, ITPR1, JAK2, MAFG, MYH9, NFE2L2, P2RY1, SERPINE1, PDGFRA, SERPINE2, PIK3CB, PIK3CG, PIK3R1, PLSCR1, PRKACB, PRKAR1A, PRKAR2A, PRKCA, PRKCB, PRKCE, PRKG1, MAPK1, RAC1, RAP2B, SRF, STXBP1, THBS1, TLR4, VCL, TFPI2, DGKE, PABPC4, MFN2, VAV3, GNA13, EHD1, AKAP10, ENPP4, RCOR1, DOCK9, CBX5, SLC7A11, C1GALT1C1, HPS4, DOCK11, ANO6
BP	GO:0048708	astrocyte differentiation	20/2564	2.97E-02	APP, CDK6, EPHA4, ID2, ID4, IL6ST, LDLR, LIF, LRP1, NF1, SERPINE2, POU3F2, MAPK1, SOX9, STAT3, TLR4, VIM, TSPAN2, CLCF1, SOX6
BP	GO:1902930	regulation of alcohol biosynthetic process	20/2564	2.97E-02	ACACB, CYP51A1, PTK2B, FASN, HMGCR, KPNB1, NFKB1, NFYB, P2RY1, PRKAA1, RAN, REST, SC5D, SCD, SP1, ERLIN1, ERLIN2, MBTPS2, GPAM, ELOVL6
BP	GO:0002294	CD4-positive, alpha-beta T cell differentiation involved in immune response	16/2564	3.03E-02	ANXA1, ATP7A, BCL6, MTOR, GATA3, HMGB1, SMAD7, RARA, RORA, STAT3, TNFSF4, SOCS5, MALT1, FOXP1, LEF1, RC3H1
BP	GO:0021591	ventricular system development	9/2564	3.04E-02	CDK6, CENPF, MECP2, MYH10, NUMB, NUMBL, RAPGEF2, SLC7A11, TTC21B
BP	GO:0060037	pharyngeal system development	9/2564	3.04E-02	BMPR1A, BMPR2, GATA3, NKX3-1, PTCH1, SIX1, TGFB2, TGFBR1, SIX4

BP	GO:1900120	regulation of receptor binding	9/2564	3.04E-02	BDNF, HFE, LOX, NKX3-1, PLCL1, NRP1, PLCL2, LEF1, GREM2
BP	GO:1903052	positive regulation of proteolysis involved in cellular protein catabolic process	27/2564	3.07E-02	PTK2B, FMR1, GSK3B, SMAD7, NFE2L2, PTEN, RAD23A, VCP, USP13, RNF14, SOCS5, RNF144A, RNF40, TRIB1, RNF139, ARIH1, TRIB2, UBQLN2, UBQLN1, RNFT1, TMEM259, LRRK2, SOCS4, RNF19B, RNF217, TMTC3, RNF144B
BP	GO:0002090	regulation of receptor internalization	15/2564	3.09E-02	ARF1, EFNB2, FMR1, MKLN1, NTF3, OPHN1, VEGFA, NUMB, MAGI2, GREM1, UBQLN2, AHI1, SCYL2, ATAD1, ANKRD13A
BP	GO:1902743	regulation of lamellipodium organization	13/2564	3.11E-02	ATP7A, CD44, CDC42, FER, MTOR, RAC1, WNT1, SLIT2, WASF2, NCKAP1, CORO1C, AUTS2, AKIRIN1
BP	GO:2000725	regulation of cardiac muscle cell differentiation	14/2564	3.12E-02	EDN1, EFNB2, MTOR, G6PD, NRG1, IGF1, RBPJ, SMAD4, MEF2C, PPARA, YY1, FRS2, GREM1, SOX6
BP	GO:0030198	extracellular matrix organization	68/2564	3.13E-02	ADAM10, APBB2, APP, ATP7A, CD44, COL1A1, COL4A1, COL4A5, COL5A2, COL12A1, COL13A1, CTSS, CYP1B1, DAG1, ETS1, FBN1, FBN2, FGF2, FOXF2, FN1, B4GALT1, GPM6B, HAS2, TNC, ITGA6, ITGA3, ITGAV, ITGB8, LAMC1, LOX, LRP1, LUM, MMP2, MMP16, MYO1E, NF1, DDR2, P4HA1, SERPINE1, PDGFRA, PTX3, RB1, SFRP2, SOX9, SPARC, TGFB2, TGFBI, TGFBR1, THBS1, ADAM12, RECK, ADAM19, SH3PXD2A, ADAMTS5, NID2, ITGA11, FLRT2, ABI3BP, GREM1, TMEM38B, SMPD3, NTN4, ANTXR1, PHLDB2, CCDC80, SCUBE3, NPNT, SH3PXD2B
BP	GO:0030100	regulation of endocytosis	54/2564	3.15E-02	ABL2, ABR, ARF1, ARF6, AXL, BICD1, CALM3, CBL, CD151, EFNB2, F2RL1, FMR1, HFE, HIP1, HMGB1, HNRNPK, ITGAV, LRP1, MKLN1, NTF3, OPHN1, SERPINE1, PIK3CB, PPP3CA, PTEN, PTPRJ, PTX3, RAC1, ROCK1, SH3GL1, VEGFA, WNT5A, PICALM, NUMB, VAMP4, WASL, ZFYVE16, MAGI2, DNM1L, AAK1, RAB21, SYT11, CD2AP, APPL1, GREM1, UBQLN2, AHI1, SCYL2, MIB1, CBLL1, ATAD1, ANKRD13A, LRRK2, ANO6
BP	GO:0002690	positive regulation of leukocyte chemotaxis	21/2564	3.20E-02	ADAM10, CCR6, EDN1, F2RL1, PTK2B, HMGB1, IL6R, IL12A, SERPINE1, RAC1, ADAM17, THBS1, VEGFA, VEGFB, WNT5A, OXSR1, SWAP70, STK39, WNK1, AKIRIN1, ANO6
BP	GO:0031124	mRNA 3'-end processing	23/2564	3.20E-02	APP, ZFP36L1, CCNT1, SRSF1, SRSF2, SRSF6, SRSF7, SLBP, RNF40, ZC3H11A, RBM8A, AHCYL1, PAPOLA, CPEB3, CSTF2T, PABPC1, CPSF2, RPRD1A, THOC2, RPRD1B, PAPOLG, CDC73, PABPC1L
BP	GO:0007249	I-kappaB kinase/NF-kappaB signaling	52/2564	3.21E-02	BIRC3, FASLG, RHOA, ECT2, ESR1, F2R, F2RL1, FKBP1A, FYN, GJA1, NFKBIA, PPM1A, PRKCB, PRKCE, REL, ROCK1, RORA, RPS27A, STAT1, TLR4, TSPAN6, TNFAIP3, UBE2I, WNT5A, TNFSF11, USP10, VAPA, ROCK2, LITAF, OPTN, TNIP1, TFG, ZMYND11, NEK6, MALT1, AKAP13, CARD8, TAB2, ANKRD17, IRAK4, CXXC5, ZFAND6, ZDHHC13, ASH1L, OTUD7B, PELI1, SNIP1, MTDH, TMED4, TAB3, LURAP1L, TRIM59
BP	GO:0042177	negative regulation of protein catabolic process	29/2564	3.26E-02	CSNK2A1, CYP51A1, EPHA4, FYN, HFE, NRG1, HMGCR, HSP90AB1, MDM4, MTM1, NELL1, OPHN1, SERPINE2, PTPN3, ROCK1, TIMP3, WNT1, USP7, N4BP1, IRAK3, MYCBP2, RYBP, HIPK2, USP25, SENP1, UBXN1, WAC, AZIN1, YOD1
BP	GO:0043647	inositol phosphate metabolic process	18/2564	3.26E-02	CALM1, PTK2B, FGF2, INPP4A, INPPL1, ITPK1, OCRL, P2RY1, PLCB4, PLCL1, PLCG1, PTEN, MINPP1, NUDT3, PLCL2, PLCB1, IPPK, NUDT10
BP	GO:0006023	aminoglycan biosynthetic process	26/2564	3.28E-02	CLTC, EXTL3, GPC4, GCNT2, B4GALT1, HAS2, LUM, NFKB1, SDC2, ST3GAL1, B4GALT4, B4GALT6, B4GALT5, CHST3, HS3ST3B1, HS3ST1, UST, B3GNT2, SLC35D1, GLCE, DSE, CHST12, SMPD3, B3GNT5, HS6ST2, DSEL
BP	GO:0046660	female sex differentiation	26/2564	3.28E-02	ADCYAP1, ATM, AXL, BCL2, BMPR1B, EREG, ESR1, FANCA, FOXO3, INHBA, INSR, KIT, SMAD4, PDGFRA, PTX3, TBX3, UBE3A, VEGFA, WNT5A, NRIP1, FZD4, TP63, SGPL1, SLIT2, TIPARP, PLEKHA1

BP	GO:0006611	protein export from nucleus	37/2564	3.34E-02	GLE1, GSK3B, HNRNPA2B1, AGFG1, NPM1, PPM1A, PTPN14, RAN, SRSF1, SRSF2, SRSF6, SRSF7, SP100, TP53, TPR, TSC1, XPO1, SLBP, ZC3H11A, SMG7, RBM8A, NXF1, AHCYL1, XPO7, SMG1, CTDSPL2, CPSF2, RBM22, NDC1, THOC2, XPO5, XPO4, SEH1L, FYTTD1, LTV1, YTHDC1, NUP43
BP	GO:0008064	regulation of actin polymerization or depolymerization	37/2564	3.34E-02	ADD3, ARF1, ARF6, RHOA, CAPZA1, CAPZA2, DBN1, EPS8, F2RL1, PTK2B, FER, MTOR, PRKCE, RASA1, SPTAN1, SPTBN1, TMSB4X, WASL, SEMA5A, SLIT2, ARPC5, ACTR3, ABI2, ARPC1A, ARFGEF1, CDC42EP3, NCKAP1, SWAP70, TMOD3, TMOD2, AP1AR, SPIRE1, WHAMM, JMY, MTPN, RICTOR, FMN1
BP	GO:1901800	positive regulation of proteasomal protein catabolic process	24/2564	3.34E-02	FMR1, GSK3B, SMAD7, NFE2L2, RAD23A, VCP, USP13, RNF14, SOCS5, RNF144A, RNF40, TRIB1, ARIH1, TRIB2, UBQLN2, UBQLN1, RNFT1, TMEM259, LRRK2, SOCS4, RNF19B, RNF217, TMTC3, RNF144B
BP	GO:0019932	second-messenger-mediated signaling	79/2564	3.34E-02	ADCY2, ADCY9, ADCYAP1, ADRB1, AHR, ATP1A2, ATP1B1, ATP2B4, CACNA1C, CALM1, CALM2, CALM3, CAMK2D, CLIC2, CCR6, DMD, EDN1, EIF4EBP2, EPHA5, ERBB3, PTK2B, FKBP1A, MTOR, GNAI2, GNAQ, GNAS, GNB1, GSK3B, GUCY1A2, NRG1, IGF1, ITPR1, KCNC2, MYO5A, NEUROD1, NFATC3, PDE3A, PDE4D, PKD2, PLCG1, PPP3CA, PPP3R1, PRKAA1, PRKAR1A, PRKAR2A, PRKCA, PRKG1, PTBP1, PTPRJ, CCL20, SGCD, SLC9A1, SOX9, THBS1, VEGFA, TNFSF11, PDE5A, EIF2AK3, RAPGEF2, CAMKK2, GNA13, NFAT5, RAPGEF4, AKAP13, CAMTA1, ADNP, GPR161, DDAH1, PCLO, LMCD1, PEX5L, TMEM38B, LGR4, JPH1, JPH3, ARRDC3, LRRK2, SPPL3, KSR2
BP	GO:0007369	gastrulation	38/2564	3.34E-02	ACVR2B, BMPR1A, BMPR2, COL5A2, COL12A1, DAG1, ETS2, FGFR2, FN1, GATA6, INHBA, ITGA3, ITGAV, SMAD1, SMAD2, SMAD4, MMP2, PRKAR1A, SFRP2, SOX2, SRF, TGFBR2, TP53, KDM6A, WNT5A, HMGA2, ARID1A, CUL3, FRS2, SYF2, LEF1, POGLUT1, TGIF2, WNK1, CDC73, PHLDB2, OSR1, AMOT
BP	GO:0051279	regulation of release of sequestered calcium ion into cytosol	20/2564	3.34E-02	ATP1A2, CACNA1C, CALM1, CALM2, CALM3, CAMK2D, CLIC2, DIAPH1, DMD, F2R, PTK2B, FKBP1A, MYO5A, PDE4D, PKD2, PLCG1, PRKCE, TMEM38B, JPH1, JPH3
BP	GO:0021988	olfactory lobe development	10/2564	3.34E-02	DLX2, ERBB4, ID2, ROBO1, SKI, SRF, WNT5A, SEMA7A, SLIT2, LRRK2
BP	GO:2000773	negative regulation of cellular senescence	8/2564	3.34E-02	BCL6, CDK6, PRKDC, RBL1, HMGA2, AKT3, NAMPT, SLC30A10
BP	GO:0043281	regulation of cysteine-type endopeptidase activity involved in apoptotic process	43/2564	3.34E-02	APAF1, BIRC3, XIAP, FASLG, RHOA, BID, CD44, CSNK2A1, DDX3X, F2R, HGF, HIP1, HMGB1, JAK2, MAP3K5, NKX3-1, PAK2, SERPINB9, PTGS2, REST, ROBO1, RPS6KA3, SFRP2, SOX2, THBS1, VCP, VEGFA, TP63, EIF2AK3, PDCD6, BCL2L11, MALT1, CARD8, TNFAIP8, SENP1, LEF1, TRIAP1, NLE1, USP47, SH3RF1, EGLN3, ACVR1C, ACER2
BP	GO:0007266	Rho protein signal transduction	41/2564	3.34E-02	ABL2, ABR, RHOA, RND3, ARHGAP5, BCL6, CDC42, ECT2, EPS8, F2R, F2RL1, GNA12, LPAR4, ITGA3, STMN1, MET, OPHN1, RAC1, ROBO1, ROCK1, SOS2, TIAM1, TRIO, CUL3, NRP1, ARHGAP29, ROCK2, NET1, VAV3, CDC42EP3, GNA13, AKAP13, ARHGEF12, RHOQ, ITSN2, ARHGEF3, RHOT1, CDC42SE1, CDC42SE2, PLEKHG1, ALS2
BP	GO:0040014	regulation of multicellular organism growth	17/2564	3.34E-02	ADRB1, APP, BCL2, CREB1, FXN, IGF1, POU3F2, PTCH1, STAT3, EZR, STC2, SOCS2, SGPL1, NIPBL, MBD5, TNKS2, SH3PXD2B
BP	GO:1905207	regulation of cardiocyte differentiation	17/2564	3.34E-02	EDN1, EFNB2, MTOR, G6PD, GATA6, NRG1, IGF1, RBPJ, SMAD4, MEF2C, PPARA, TGFB2, YY1, SEMA3C, FRS2, GREM1, SOX6
BP	GO:0030534	adult behavior	31/2564	3.34E-02	APP, ATP1A2, EN1, EPHA4, CLN8, EPS8, FGF12, FXN, GLRB, HOXD10, ID2, KCNJ10, MAFG, MECP2, NR4A2, PAFAH1B1, PPARA, PTEN, SLC1A2, TSC1, NRXN1, PUM1, CHL1, SHANK2, SLC7A11, CNTNAP2, GIGYF2, PCDH17, HIPK2, ADAM22, OXR1
BP	GO:0060041	retina development in camera-type eye	31/2564	3.34E-02	ACVR2B, ATP2B1, ATP2B4, BMPR1B, BMPR2, COL4A1, CYP1B1, DLX2, CLN8, GNB1, GPM6A, MYH10, NEUROD1, NTRK2, OPA1, PDGFRA, MED1, PTPRM, RET, RORB, SKI, SOX9, TGFB2, THRB, FZD4, NRP1, HIPK2, AHI1, TGIF2, LPCAT1, RAB11FIP4

BP	GO:0046634	regulation of alpha-beta T cell activation	22/2564	3.34E-02	ANXA1, ARG2, RHOA, BCL6, PRDM1, RUNX1, RUNX3, CBFB, GATA3, HFE, HMGB1, IL6R, IL12A, SMAD7, RARA, TGFBR2, TNFSF4, SOCS5, MALT1, CD274, SH3RF1, RC3H1
BP	GO:0002934	desmosome organization	5/2564	3.34E-02	DSG2, PRKCA, SNAI2, GRHL1, PERP
BP	GO:0003149	membranous septum morphogenesis	5/2564	3.34E-02	FGFR2, ID2, TGFB2, TGFBR2, FZD1
BP	GO:0006971	hypotonic response	5/2564	3.34E-02	MYLK, OXSR1, SLC12A6, STK39, CAB39
BP	GO:0007028	cytoplasm organization	5/2564	3.34E-02	ETV6, KIF5B, FOSL1, RRN3, ZMIZ1
BP	GO:0010749	regulation of nitric oxide mediated signal transduction	5/2564	3.34E-02	ATP2B4, GUCY1A2, THBS1, VEGFA, PDE5A
BP	GO:0018242	protein O-linked glycosylation via serine	5/2564	3.34E-02	GALNT1, GALNT2, GALNT3, GALNT4, POGLUT1
BP	GO:0035520	monoubiquitinated protein deubiquitination	5/2564	3.34E-02	USP1, USP7, USP15, USP47, MYSM1
BP	GO:0048021	regulation of melanin biosynthetic process	5/2564	3.34E-02	WNT5A, RAPGEF2, ZEB2, SLC7A11, APPL1
BP	GO:0048755	branching morphogenesis of a nerve	5/2564	3.34E-02	DLX2, FGFR2, BCL11A, RTN4, LRRK2
BP	GO:0071233	cellular response to leucine	5/2564	3.34E-02	MTOR, SESN1, RRAGD, SESN2, SESN3
BP	GO:0071501	cellular response to sterol depletion	5/2564	3.34E-02	INSIG1, ERLIN1, ERLIN2, NPC1L1, EIF2A
BP	GO:0090557	establishment of endothelial intestinal barrier	5/2564	3.34E-02	FASN, TJP1, CLDN1, RAPGEF2, RAP2C
BP	GO:1900122	positive regulation of receptor binding	5/2564	3.34E-02	BDNF, HFE, PLCL1, NRP1, PLCL2
BP	GO:1904779	regulation of protein localization to centrosome	5/2564	3.34E-02	APC, BICD1, GSK3B, CEP72, UBXN2B
BP	GO:1904896	ESCRT complex disassembly	5/2564	3.34E-02	IST1, CHMP2B, CHMP5, VTA1, CHMP1B
BP	GO:1904903	ESCRT III complex disassembly	5/2564	3.34E-02	IST1, CHMP2B, CHMP5, VTA1, CHMP1B

BP	GO:1990253	cellular response to leucine starvation	5/2564	3.34E-02	MTOR, SESN1, RRAGD, SESN2, SESN3
BP	GO:0031330	negative regulation of cellular catabolic process	51/2564	3.39E-02	ACACB, ATP2B4, BCL2, CSNK2A1, E2F1, EIF4G2, EPHA4, FMR1, MTOR, GOLGA2, HFE, HGF, HNRNPC, HNRNPU, HSP90AB1, FOXK2, MCL1, MET, MTM1, NELL1, OPHN1, PIK3CG, PPARA, PTPN3, ROCK1, SORL1, STAT3, TIMP3, TP53, TSC1, WNT1, USP7, N4BP1, NAMPT, TOB1, TAB2, LARP1, RYBP, PABPC1, HIPK2, USP25, SENP1, UBXN1, WAC, DDIT4, YOD1, NMNAT1, MTMR9, LRRK2, RBM24, TAB3
BP	GO:0006024	glycosaminoglycan biosynthetic process	25/2564	3.44E-02	CLTC, EXTL3, GPC4, GCNT2, B4GALT1, HAS2, LUM, NFKB1, SDC2, ST3GAL1, B4GALT4, B4GALT6, B4GALT5, CHST3, HS3ST3B1, HS3ST1, UST, B3GNT2, SLC35D1, GLCE, DSE, CHST12, SMPD3, HS6ST2, DSEL
BP	GO:0002287	alpha-beta T cell activation involved in immune response	16/2564	3.44E-02	ANXA1, ATP7A, BCL6, MTOR, GATA3, HMGB1, SMAD7, RARA, RORA, STAT3, TNFSF4, SOCS5, MALT1, FOXP1, LEF1, RC3H1
BP	GO:0002293	alpha-beta T cell differentiation involved in immune response	16/2564	3.44E-02	ANXA1, ATP7A, BCL6, MTOR, GATA3, HMGB1, SMAD7, RARA, RORA, STAT3, TNFSF4, SOCS5, MALT1, FOXP1, LEF1, RC3H1
BP	GO:0045604	regulation of epidermal cell differentiation	16/2564	3.44E-02	ZFP36L1, RUNX1, CBFB, EZH2, MAFG, MED1, PTCH1, ROCK1, SRSF6, NCOA3, KLF7, TP63, ROCK2, GRHL1, ERRFI1, ESRP1
BP	GO:0048645	animal organ formation	16/2564	3.44E-02	AR, BMPR1A, FGFR2, GATA6, HOXC11, RBPJ, MEF2C, MAPK1, ROBO1, SIX1, TGFBR2, WNT5A, WNT2B, TP63, SPRY1, FRS2
BP	GO:0030833	regulation of actin filament polymerization	34/2564	3.48E-02	ADD3, ARF1, ARF6, RHOA, CAPZA1, CAPZA2, DBN1, EPS8, PTK2B, FER, MTOR, PRKCE, RASA1, SPTAN1, SPTBN1, TMSB4X, WASL, SLIT2, ARPC5, ACTR3, ABI2, ARPC1A, ARFGEF1, CDC42EP3, NCKAP1, TMOD3, TMOD2, AP1AR, SPIRE1, WHAMM, JMY, MTPN, RICTOR, FMN1
BP	GO:0048871	multicellular organismal homeostasis	86/2564	3.50E-02	ACACB, ACTB, ACVR2B, ADCY2, ADCY9, ADCYAP1, ADRB1, ALDH1A1, APC, BCL2, CA2, CXADR, EGR1, CLN8, ESRRG, F2R, ACSL1, PTK2B, GCNT2, GJA1, GNAS, HAS2, HFE, ID1, IGF1R, RBPJ, JAK2, STMN1, LNPEP, MET, MYO5B, NEUROD1, NF1, NOVA1, NOVA2, NPR3, SLC11A2, PLCL1, PRKAA1, PRKACB, PRKAR1A, PRKAR2A, PRKCA, PRLR, PTGS2, RAC1, RB1, SCD, SCNN1A, SOX9, SRF, STAT3, ADAM17, TFRC, TLR4, TNFAIP3, VEGFA, TNFSF11, TP63, RAB11A, CLDN1, MFN2, NR1D2, AKT3, YAP1, ADAMTS5, RAB11FIP2, PLCL2, WWTR1, GIGYF2, STK39, GRHL1, LGR4, ACOT13, ARRDC3, ELOVL6, FA2H, ADIPOR2, LPCAT1, DOCK7, DRAM2, LCA5, TMEM64, NAPEPLD, POC1B, KSR2
BP	GO:0000578	embryonic axis specification	11/2564	3.50E-02	SMAD2, SMAD4, PCSK6, PTCH1, TBX3, KDM6A, WNT1, WNT5A, FZD5, BASP1, FRS2
BP	GO:0035137	hindlimb morphogenesis	11/2564	3.50E-02	BMPR1A, GNAS, HOXD10, PITX1, MED1, PTCH1, TBX3, TP63, ALX4, OSR1, FMN1
BP	GO:0070301	cellular response to hydrogen peroxide	23/2564	3.50E-02	ANXA1, AXL, CYP1B1, ECT2, ETS1, EZH2, FOXO3, FXN, HGF, MAP3K5, MET, NFE2L2, PAWR, PRKAA1, TNFAIP3, PCGF2, NET1, ZNF277, SETX, SMPD3, PLEKHA1, PDGFD, LRRK2
BP	GO:0061097	regulation of protein tyrosine kinase activity	21/2564	3.52E-02	APP, BDNF, CBL, CBLB, EPHA4, ERBB3, EREG, FYN, NRG1, NTRK2, PAK2, RELN, RAP2B, ADAM17, SOCS5, IBTK, ERRFI1, NCAPG2, RAP2C, GGNBP2, SOCS4
BP	GO:0098773	skin epidermis development	21/2564	3.52E-02	ATP7A, BCL2, FGFR2, HOXC13, IGFBP5, RBPJ, INHBA, SMAD4, MYO5A, NF1, SOX9, TGFB2, WNT5A, FZD3, TP63, LGR4, SAV1, ALX4, FOXQ1, MYSM1, ZDHHC21
BP	GO:0048488	synaptic vesicle endocytosis	15/2564	3.52E-02	ACTB, ARF6, CALM3, CANX, OPHN1, RAB27B, ROCK1, SH3GL1, PICALM, VAMP4, DNM1L, SYT11, KIAA1109, FCHO2, LRRK2
BP	GO:0140238	presynaptic endocytosis	15/2564	3.52E-02	ACTB, ARF6, CALM3, CANX, OPHN1, RAB27B, ROCK1, SH3GL1, PICALM, VAMP4, DNM1L, SYT11, KIAA1109, FCHO2, LRRK2

BP	GO:0030832	regulation of actin filament length	37/2564	3.53E-02	ADD3, ARF1, ARF6, RHOA, CAPZA1, CAPZA2, DBN1, EPS8, F2RL1, PTK2B, FER, MTOR, PRKCE, RASA1, SPTAN1, SPTBN1, TMSB4X, WASL, SEMA5A, SLIT2, ARPC5, ACTR3, ABI2, ARPC1A, ARFGEF1, CDC42EP3, NCKAP1, SWAP70, TMOD3, TMOD2, AP1AR, SPIRE1, WHAMM, JMY, MTPN, RICTOR, FMN1
BP	GO:0043534	blood vessel endothelial cell migration	37/2564	3.53E-02	ANXA1, RHOA, EFNB2, EPHB4, ETS1, PTK2B, FGF2, HMGB1, ID1, MECP2, MEF2C, MYH9, NF1, NFE2L2, PIK3C2A, PLCG1, PRKCA, MAP2K3, PTGS2, ROBO1, SP1, SRF, ADAM17, THBS1, TMSB4X, VEGFA, PIK3R3, FGF18, NRP1, SLIT2, AKT3, GREM1, MMRN2, AMOT, AMOTL1, SPRED1, MIA3
BP	GO:0021782	glial cell development	26/2564	3.53E-02	APP, MYRF, CDK6, DAG1, NRG1, ID2, ID4, KCNJ10, LDLR, LRP1, NF1, NTRK2, POU3F2, PTEN, SKI, SOX4, TLR4, VIM, B4GALT6, B4GALT5, MED12, TSPAN2, DICER1, ADAM22, MPP5, FA2H
BP	GO:0007221	positive regulation of transcription of Notch receptor target	7/2564	3.53E-02	CREBBP, EP300, RBPJ, PBX1, STAT1, KAT2B, WWC1
BP	GO:0009048	dosage compensation by inactivation of X chromosome	7/2564	3.53E-02	BRCA1, HNRNPU, EIF1, SMCHD1, RLIM, PCGF5, YTHDC1
BP	GO:0021756	striatum development	7/2564	3.53E-02	INHBA, SLC7A11, CNTNAP2, ZSWIM6, BCL11B, FOXP2, LRRK2
BP	GO:0035089	establishment of apical/basal cell polarity	7/2564	3.53E-02	RHOA, CDC42, MSN, MYO9A, OPHN1, PTK7, WNT5A
BP	GO:0043555	regulation of translation in response to stress	7/2564	3.53E-02	EIF2S1, NPM1, DNAJC3, RPS6KA3, EIF2AK3, SESN2, PPP1R15B
BP	GO:0090190	positive regulation of branching involved in ureteric bud morphogenesis	7/2564	3.53E-02	SIX1, SOX9, VEGFA, WNT2B, MAGED1, SIX4, LGR4
BP	GO:1904262	negative regulation of TORC1 signaling	7/2564	3.53E-02	ATM, SZT2, SESN1, FNIP2, SESN2, SESN3, C12orf66
BP	GO:1905276	regulation of epithelial tube formation	7/2564	3.53E-02	GATA3, PTK7, SFRP2, SIX1, WNT5A, FZD1, SIX4
BP	GO:0043112	receptor metabolic process	39/2564	3.53E-02	ARF1, CLTC, EDN1, EFNB2, FMR1, NRG1, HNRNPK, HOXA5, ITGAV, JAK2, LRP1, MKLN1, NEDD4, NSF, NTF3, OPHN1, PPARA, SNAP25, SNX1, SORL1, TFRC, VEGFA, EZR, VLDLR, PICALM, NUMB, VAMP3, MAGI2, OPTN, GREM1, UBQLN2, CHMP5, AHI1, AP1AR, SCYL2, ALS2, ANKRD13C, ATAD1, ANKRD13A
BP	GO:0016571	histone methylation	30/2564	3.53E-02	ATRX, BRCA1, MECOM, EZH2, GATA3, JARID2, SMAD4, MECP2, KMT2A, MLLT6, ARID4A, SATB1, KDM6A, PRMT3, CTCF, MTF2, SUZ12, AUTS2, PHF19, ARID4B, RIF1, SETD5, ASH1L, KMT2E, KMT2C, SETD6, TET1, WDR82, SMYD1, TET3
BP	GO:0031333	negative regulation of protein complex assembly	30/2564	3.53E-02	ADD3, CAPZA1, CAPZA2, CDC42, DDX3X, DYRK1A, EP300, EPS8, GSK3B, HMGB1, INSIG1, STMN1, MAP2, PPM1A, SORL1, SPTAN1, SPTBN1, STXBP1, TMSB4X, SLIT2, ARFGEF1, MAPRE1, EML2, ZNF451, DNAJC15, TMOD3, TMOD2, PMEPA1, ANKRD27, MTPN
BP	GO:0033135	regulation of peptidyl-serine phosphorylation	30/2564	3.53E-02	APP, ATP2B4, BCL2, CD44, DMD, HGF, HSP90AA1, HSP90AB1, LIF, SMAD7, NTF3, NTRK2, PDE4D, PLCL1, PRKAA1, PTGS2, RET, SFRP2, STK4, VEGFA, WNT5A, SPRY2, GPD1L, PLCL2, DDIT4, FNIP2, GGNBP2, DOCK7, PAQR3, RICTOR

BP	GO:0001954	positive regulation of cell-matrix adhesion	14/2564	3.56E-02	CDK6, DAG1, PTK2B, GSK3B, LIMS1, PTPRJ, RAC1, ROCK1, TSC1, UTRN, VEGFA, NRP1, MAP4K4, FMN1
BP	GO:0043403	skeletal muscle tissue regeneration	12/2564	3.56E-02	ANXA1, BCL9, KLF5, DAG1, EZH2, GJA1, IGF1, PKM, PPP3CA, TGFBR2, AKIRIN1, MTPN
BP	GO:0022602	ovulation cycle process	13/2564	3.58E-02	BMPR1B, EREG, ESR1, FOXO3, INHBA, PDGFRA, PTX3, TGFB2, NRIP1, FZD4, SGPL1, SLIT2, PLEKHA1
BP	GO:0031648	protein destabilization	13/2564	3.58E-02	CREBBP, EP300, ID1, PRKDC, RAD23A, XBP1, CUL3, RNF139, GGA3, FBXW11, FBXL3, DERL1, CDC73
BP	GO:0044003	modification by symbiont of host morphology or physiology	13/2564	3.58E-02	DAG1, INSR, ITGAV, KPNB1, KPNA3, KPNA4, SERPINB9, VAPB, VAPA, BCL2L11, TNIP1, KPNA6, HIPK2
BP	GO:0035019	somatic stem cell population maintenance	18/2564	3.58E-02	BCL9, ZFP36L2, FGF2, RBPJ, KIT, SMAD2, SMAD4, PBX1, REST, SKI, SOX2, SOX4, SOX9, STAT3, KLF10, TP63, YAP1, FOXP1
BP	GO:0014841	skeletal muscle satellite cell proliferation	6/2564	3.58E-02	EPHB1, FGF2, JAK2, SIX1, STAT3, AKIRIN1
BP	GO:0014857	regulation of skeletal muscle cell proliferation	6/2564	3.58E-02	EPHB1, FGF2, JAK2, SIX1, STAT3, AKIRIN1
BP	GO:0043455	regulation of secondary metabolic process	6/2564	3.58E-02	SP1, WNT5A, RAPGEF2, ZEB2, SLC7A11, APPL1
BP	GO:0045064	T-helper 2 cell differentiation	6/2564	3.58E-02	ANXA1, BCL6, GATA3, RARA, TNFSF4, SOCS5
BP	GO:0051775	response to redox state	6/2564	3.58E-02	ADH5, NPAS2, CLOCK, SLC7A11, SMPD3, VASN
BP	GO:0060049	regulation of protein glycosylation	6/2564	3.58E-02	FKTN, GOLGA2, TMEM59, ARFGEF1, ALG10B, ACER2
BP	GO:0001841	neural tube formation	24/2564	3.59E-02	APAF1, PRKACB, PTCH1, PTK7, RALA, RARA, SFRP2, SKI, SOX4, STK3, STK4, TGFB2, TSC1, KDM6A, WNT5A, LUZP1, FZD3, ARID1A, FZD1, ZEB2, MED12, SEMA4C, MIB1, TRIM71
BP	GO:0043500	muscle adaptation	27/2564	3.59E-02	ATP2B4, CAMK2D, EDN1, EZH2, FOXO3, MTOR, G6PD, GATA6, IGF1, IGFBP5, IL6ST, JARID2, SMAD4, MEF2A, MEF2C, PPARA, PPP3CA, PRKCA, ROCK1, SLC9A1, YY1, PDE5A, ROCK2, CAMTA2, LMCD1, ERRFI1, MTPN
BP	GO:1903169	regulation of calcium ion transmembrane transport	32/2564	3.62E-02	ATP1A2, ATP1B1, CACNA1C, CACNA2D1, CALM1, CALM2, CALM3, CAMK2D, CLIC2, DIAPH1, DMD, F2R, PTK2B, FGF14, FKBP1A, FMR1, FYN, G6PD, GEM, HSPA2, MYO5A, PDE4D, PIK3CG, PKD2, PLCG1, PRKCE, SLC9A1, UBQLN1, TMEM38B, JPH1, JPH3, SESTD1
BP	GO:0031214	biomineral tissue development	34/2564	3.71E-02	ACVR2B, ATP2B1, BMPR1A, BMPR1B, BMPR2, COL1A1, PTK2B, FBN2, FGFR3, FGFR2, GJA1, GPM6B, IGF1, LOX, MEF2C, NELL1, DDR2, PPARA, PTGS2, ROCK1, SOX9, KLF10, EIF2AK3, ROCK2, MINPP1, GPNMB, GREM1, TMEM38B, LGR4, SMPD3, TXLNG, ANKH, OSR1, ANO6
BP	GO:0034067	protein localization to Golgi apparatus	9/2564	3.72E-02	ARL1, RAB6A, SORL1, OPTN, BICD2, VPS13C, GOLPH3, PAQR3, ARL5B
BP	GO:0048668	collateral sprouting	9/2564	3.72E-02	APP, BDNF, FGF13, LRP1, ULK2, IST1, ZEB2, SEMA4D, NIN

BP	GO:0048799	animal organ maturation	9/2564	3.72E-02	RHOA, FGFR3, GATA3, IGF1, RET, SEMA4D, GREM1, MBTPS2, ANO6
BP	GO:0060384	innervation	9/2564	3.72E-02	ADARB1, GABRB2, SERPINE2, RET, NRP1, UNC13A, LRIG1, FBXO45, RNF165
BP	GO:0072207	metanephric epithelium development	9/2564	3.72E-02	LIF, PKD2, POU3F3, SOX9, STAT1, YAP1, WWTR1, LGR4, OSR1
BP	GO:0051705	multi-organism behavior	17/2564	3.74E-02	APP, EIF4EBP2, EN1, CLN8, MTOR, GAD1, GLS, MECP2, PEX13, PTEN, ATXN1, NRXN1, SHANK2, CIC, CNTNAP2, GCNT4, UBR3
BP	GO:0017157	regulation of exocytosis	43/2564	3.75E-02	ABR, AP1G1, ANXA1, ARF1, CALM3, F2RL1, FER, FMR1, GNAI2, GSK3B, LAMP1, RAB8A, NSF, P2RY1, PRKCB, RAB3B, RAB27B, RALA, RAP1B, REST, STXBP1, VAMP1, VSNL1, SNX4, RIMS3, GAB2, DNM1L, RAB10, RAPGEF4, RAB3GAP1, RIMS1, RAB21, EXPH5, SYT11, SNAPIN, PCLO, GIT1, SMPD3, C12orf4, SYT13, SYTL4, LRRK2, STXBP5
BP	GO:0031032	actomyosin structure organization	40/2564	3.78E-02	RHOA, CDC42, CSRP2, ECT2, EDN1, PTK2B, MTOR, STMN1, SMAD4, MEF2A, MEF2C, MET, MYH9, MYH10, PDGFRA, PIK3R1, PRKAR1A, RAC1, ROCK1, SLC9A1, SRF, TGFBR1, TSC1, CUL3, NRP1, ROCK2, KIF23, WASF2, NEBL, SORBS1, AKAP13, TMOD3, TMOD2, SIX4, TRPM7, EPB41L4A, PHLDB2, MYLK3, FRMD6, SH3PXD2B
BP	GO:0006413	translational initiation	39/2564	3.78E-02	DDX3X, EIF1AX, EIF2S1, EIF4A1, EIF4EBP2, EIF4G2, FMR1, MTOR, GLE1, RPSA, NPM1, DNAJC3, RPL22, RPL28, RPL37, RPS6KB1, RPS16, RPS27A, TPR, EIF4H, EIF3A, EIF3J, EIF4G3, CDC123, EIF2AK3, EIF1, EIF3M, KHDRBS1, LARP1, PABPC1, AGO2, PAIP2, YTHDF1, EIF2A, PPP1R15B, TICRR, YTHDF3, EIF4E3, PAIP2B
BP	GO:1901654	response to ketone	39/2564	3.78E-02	ADCY2, AHR, AR, ATP2B1, CCND1, KLF9, CALM3, CBL, CDC5L, DSG2, EDN1, FDX1, FOXO3, GNB1, NR3C1, TNC, MSN, NASP, NKX3-1, OPA1, PRKAA1, PRKCE, TGFB2, THBS1, TNFSF4, UBE3A, FOSL1, NCOA1, CLDN1, SLIT2, ROCK2, YAP1, NCOA2, ABHD2, KIF1B, LARP1, ERRFI1, DDIT4, FOXP2
BP	GO:0034446	substrate adhesion-dependent cell spreading	23/2564	3.83E-02	AXL, CDC42, CRK, DOCK1, MEGF9, FER, FN1, HAS2, ITGAV, LAMC1, LIMS1, RAB1A, RAC1, FZD4, NRP1, VAMP3, SRGAP2, CORO1C, AP1AR, PARVA, NTN4, DOCK5, ANTXR1
BP	GO:0007613	memory	26/2564	3.85E-02	BDNF, CREB1, EIF4EBP2, FGF13, MTOR, INSR, ITGA3, LDLR, MECP2, NTF3, RELN, PTEN, PTGS2, ATXN1, SGK1, SRF, VLDLR, PJA2, CPEB3, CIC, PLCB1, ADNP, SLC24A2, YTHDF1, JPH3, ATAD1
BP	GO:0010822	positive regulation of mitochondrion organization	26/2564	3.85E-02	BCL2, BID, E2F1, GSK3B, OPA1, PPP3R1, PRKAA1, TFDP1, TFDP2, TP53, TP53BP2, UBE2D3, UBE2L3, YWHAB, FZD5, TP63, HRK, NPEPPS, MFN2, BCL2L11, DNM1L, OPTN, CAMKK2, DDHD2, VPS13C, HPS4
BP	GO:0030433	ubiquitin-dependent ERAD pathway	19/2564	3.86E-02	NFE2L2, HSPA13, VCP, RNF103, UBE4A, ERLIN1, ERLIN2, UBXN4, FAF2, UBQLN2, UBQLN1, JKAMP, SGTB, YOD1, DERL1, DNAJB14, EDEM3, SYVN1, DNAJC18
BP	GO:0000377	RNA splicing, via transesterification reactions with bulged adenosine as nucleophile	69/2564	3.86E-02	CDC5L, DDX5, DYRK1A, FMR1, HNRNPA2B1, HNRNPC, HNRNPF, HNRNPH1, HNRNPH3, HNRNPK, HNRNPL, HNRNPU, MBNL1, NOVA1, NOVA2, PCBP1, PCBP2, PNN, PTBP1, RBM3, REST, SRSF1, SRSF2, SRSF6, SRSF7, TRA2B, USP4, CDK13, WTAP, AQR, RBM8A, MBNL2, HNRNPR, SF3B4, SMNDC1, PRPF8, KHDRBS1, CELF1, CELF2, SRSF10, PAPOLA, DDX20, SETX, CSTF2T, U2SURP, SYF2, AAR2, DAZAP1, PABPC1, RSRC1, ZBTB7A, LSM7, LUC7L3, CPSF2, SMU1, RBM41, PRPF40A, LUC7L, RBM22, CCAR1, SNIP1, FAM172A, PRPF38A, RBM17, YTHDC1, SRSF12, SREK1, HNRNPA3, RBM24
BP	GO:0000398	mRNA splicing, via spliceosome	69/2564	3.86E-02	CDC5L, DDX5, DYRK1A, FMR1, HNRNPA2B1, HNRNPC, HNRNPF, HNRNPH1, HNRNPH3, HNRNPK, HNRNPL, HNRNPU, MBNL1, NOVA1, NOVA2, PCBP1, PCBP2, PNN, PTBP1, RBM3, REST, SRSF1, SRSF2, SRSF6, SRSF7, TRA2B, USP4, CDK13, WTAP, AQR, RBM8A, MBNL2, HNRNPR, SF3B4, SMNDC1, PRPF8, KHDRBS1, CELF1, CELF2, SRSF10, PAPOLA, DDX20, SETX, CSTF2T, U2SURP, SYF2, AAR2, DAZAP1, PABPC1, RSRC1, ZBTB7A, LSM7, LUC7L3, CPSF2, SMU1, RBM41, PRPF40A, LUC7L, RBM22, CCAR1, SNIP1, FAM172A, PRPF38A, RBM17, YTHDC1, SRSF12, SREK1, HNRNPA3, RBM24
BP	GO:1901019	regulation of calcium ion transmembrane transporter activity	21/2564	3.88E-02	ATP1A2, ATP1B1, CACNA2D1, CALM1, CALM2, CALM3, CAMK2D, CLIC2, DMD, FGF14, FKBP1A, FMR1, GEM, HSPA2, MYO5A, PDE4D, PKD2, SLC9A1, UBQLN1, JPH1, JPH3
BP	GO:0007585	respiratory gaseous exchange	16/2564	3.88E-02	ADH5, ATP1A2, BPGM, COX15, EDN1, GLS, HOXA5, JAG2, MECP2, NR4A2, SLC5A3, KDM6A, MAFB, MAN1A2, NDUFA12, TSHZ3

BP	GO:0001569	branching involved in blood vessel morphogenesis	10/2564	4.01E-02	COL4A1, EDN1, SFRP2, SRF, STK4, TGFBR2, VEGFA, NRP1, GNA13, LEF1
BP	GO:0010880	regulation of release of sequestered calcium ion into cytosol by sarcoplasmic reticulum	10/2564	4.01E-02	ATP1A2, CACNA1C, CALM1, CALM2, CALM3, CAMK2D, CLIC2, DMD, PDE4D, TMEM38B
BP	GO:0048841	regulation of axon extension involved in axon guidance	10/2564	4.01E-02	BMPR2, VEGFA, WNT5A, SEMA7A, NRP1, SEMA5A, SEMA4D, SEMA3C, SEMA4C, SEMA6A
BP	GO:0051968	positive regulation of synaptic transmission, glutamatergic	10/2564	4.01E-02	ADCYAP1, PTK2B, GLUL, RELN, PTGS2, STXBP1, NRXN1, RAB3GAP1, SHANK2, TSHZ3
BP	GO:0060674	placenta blood vessel development	10/2564	4.01E-02	RBPJ, ITGB8, PKD2, MAPK1, NR2F2, FZD5, FOSL1, ARID1A, VASH2, GGNBP2
BP	GO:0006109	regulation of carbohydrate metabolic process	41/2564	4.05E-02	ACACB, APP, SCARB2, CLTC, EP300, PTK2B, MTOR, GSK3B, HAS2, IGF1, FOXK2, INSR, NFKB1, P2RY1, PPARA, PRKAA1, PRKCE, RORA, STAT3, TP53, TPR, KAT2B, NCOR1, EPM2AIP1, FAM3C, NCOA2, SORBS1, ARPP19, MLXIP, ZBTB20, ZBTB7A, DDIT4, SMPD3, NDC1, NLN, PPP1R3B, SEH1L, SESN2, SLC45A3, SIK1, NUP43
BP	GO:0010821	regulation of mitochondrion organization	37/2564	4.06E-02	BCL2, BID, E2F1, FXN, GSK3B, HGF, IGF1, OPA1, PPP3R1, PRKAA1, TFDP1, TFDP2, TP53, TP53BP2, UBE2D3, UBE2L3, YWHAB, FZD5, TP63, HRK, NPEPPS, MFN2, BCL2L11, DNM1L, OPTN, VAT1, CAMKK2, DDHD2, TMEM14A, TRIAP1, VPS13C, RHOT1, FNIP2, GOLPH3, TMEM135, HPS4, LRRK2
BP	GO:0030041	actin filament polymerization	37/2564	4.06E-02	ADD3, ARF1, ARF6, RHOA, CAPZA1, CAPZA2, DBN1, DIAPH1, EPS8, PTK2B, FER, MTOR, JAK2, PRKCE, RAC1, RASA1, SPTAN1, SPTBN1, TMSB4X, WASL, SLIT2, ARPC5, ACTR3, ABI2, ARPC1A, ARFGEF1, CDC42EP3, NCKAP1, TMOD3, TMOD2, AP1AR, SPIRE1, WHAMM, JMY, MTPN, RICTOR, FMN1
BP	GO:0060350	endochondral bone morphogenesis	18/2564	4.06E-02	BMPR1B, BMPR2, RUNX2, COL1A1, COL12A1, COL13A1, FGFR3, GNAS, INPPL1, MEF2C, MEF2D, MMP16, RARA, SOX9, TGFBR2, FGF18, SCARA3, SMPD3
BP	GO:0110020	regulation of actomyosin structure organization	22/2564	4.08E-02	RHOA, CDC42, ECT2, EDN1, MTOR, STMN1, SMAD4, MEF2C, MET, PIK3R1, RAC1, ROCK1, SLC9A1, TGFBR1, TSC1, NRP1, ROCK2, WASF2, AKAP13, PHLDB2, MYLK3, SH3PXD2B
BP	GO:0032411	positive regulation of transporter activity	25/2564	4.11E-02	ANK3, ATP1B1, CACNA2D1, CALM1, CALM2, CALM3, CTSS, DMD, EPHB2, FGF14, GLRX, HSPA2, KCNC2, KIF5B, KMT2A, PKD2, RELN, SGK1, SLC9A1, TMSB4X, STK39, WNK1, WNK3, ALG10B, LRRC55
BP	GO:0006301	postreplication repair	14/2564	4.11E-02	BRCA1, MSH2, POLH, REV3L, RFC1, RPS27A, UBE2A, UBE2V2, VCP, USP10, POLD3, ZBTB1, DTL, SPRTN
BP	GO:0046580	negative regulation of Ras protein signal transduction	14/2564	4.11E-02	ABL2, BCL6, EPHB2, ITGA3, STMN1, MET, NF1, RASA1, TGFB2, CUL3, MFN2, RASA4, SPRY1, SPRY2
BP	GO:0060421	positive regulation of heart growth	14/2564	4.11E-02	ACACB, BMPR1A, EDN1, ERBB4, FGF2, FGFR2, MTOR, GATA6, IGF1, RBPJ, MEF2C, MAPK1, BASP1, YAP1

BP	GO:0072132	mesenchyme morphogenesis	14/2564	4.11E-02	BMPR1A, RBPJ, SMAD2, SMAD4, MDM4, ROBO1, SNAI2, SOX9, TGFB2, TGFBR1, TGFBR2, WNT5A, LEF1, OSR1
BP	GO:0032885	regulation of polysaccharide biosynthetic process	11/2564	4.15E-02	CLTC, MTOR, GSK3B, HAS2, IGF1, INSR, NFKB1, EPM2AIP1, SORBS1, SMPD3, PPP1R3B
BP	GO:1903514	release of sequestered calcium ion into cytosol by endoplasmic reticulum	11/2564	4.15E-02	FASLG, ATP1A2, CACNA1C, CALM1, CALM2, CALM3, CAMK2D, CLIC2, DMD, PDE4D, TMEM38B
BP	GO:0014911	positive regulation of smooth muscle cell migration	13/2564	4.18E-02	ATP7A, BCL2, CRK, HAS2, IGF1, IGFBP5, LRP1, NRP1, DOCK4, SSH1, DOCK5, PDGFD, DOCK7
BP	GO:0048066	developmental pigmentation	13/2564	4.18E-02	AP1G1, BCL2, KIT, MEF2C, MITF, MYO5A, USP13, ZEB2, BCL2L11, LEF1, VPS33A, ANKRD27, HPS4
BP	GO:0007064	mitotic sister chromatid cohesion	8/2564	4.19E-02	ATRX, RB1, SMC1A, PDS5B, PDS5A, MAU2, NIPBL, NAA50
BP	GO:0036037	CD8-positive, alpha-beta T cell activation	8/2564	4.19E-02	BCL2, RUNX1, RUNX3, CBFB, HFE, SATB1, CD274, SH3RF1
BP	GO:0060445	branching involved in salivary gland morphogenesis	8/2564	4.19E-02	DAG1, FGFR2, HGF, SNAI2, NRP1, SEMA3C, BTBD7, NTN4
BP	GO:2001222	regulation of neuron migration	12/2564	4.19E-02	ERBB4, NRG1, RELN, STAT3, RAPGEF2, ZNF609, SRGAP2, FLRT2, NIPBL, NSMF, SEMA6A, UNC5D
BP	GO:0090263	positive regulation of canonical Wnt signaling pathway	31/2564	4.22E-02	XIAP, COL1A1, DDX3X, FGFR2, RBPJ, NFKB1, PPM1A, PSMD1, PTK7, SFRP2, SOX4, VCP, RECK, SEMA5A, USP34, YAP1, CTDNEP1, BAMBI, DKK2, UBR5, NLE1, GID8, USP47, RNF220, LGR4, PRDM15, SMURF2, WNK1, TBL1XR1, TNKS2, LRRK2
BP	GO:0050891	multicellular organismal water homeostasis	17/2564	4.24E-02	ADCY2, ADCY9, HAS2, STMN1, MET, MYO5B, PRKACB, PRKAR1A, PRKAR2A, SCNN1A, SRF, TP63, RAB11A, CLDN1, RAB11FIP2, GRHL1, FA2H
BP	GO:0043583	ear development	43/2564	4.28E-02	ABR, ADAM10, JAG1, SHROOM2, BCL2, CCNA2, EDN1, EPHA4, EPHB2, FGFR2, GABRB2, GATA3, HOXA1, RBPJ, INSIG1, JAG2, NEUROD1, OPA1, PAFAH1B1, ATP8B1, MAPK1, PTK7, SIX1, SOX2, SOX9, SPARC, ZEB1, TGFB2, WNT1, WNT5A, FZD3, PRKRA, SLC4A7, MAFB, BCL2L11, SPRY2, NIPBL, LRIG1, LRP10, SIX4, AHI1, ESRP1, OSR1
BP	GO:0001736	establishment of planar polarity	27/2564	4.31E-02	RHOA, CDC42, CLTC, GPC4, FOXF2, MLLT3, PAFAH1B1, PSMD1, PTK7, RAC1, SFRP2, TIAM1, WNT1, WNT5A, FZD5, FZD3, FZD1, FZD4, TP63, MAGI2, MED12, EXOC5, DAAM1, ASTN2, SMURF2, VANGL1, PRICKLE2
BP	GO:0007043	cell-cell junction assembly	27/2564	4.31E-02	APC, RHOA, RUNX1, CBFB, CDH2, CDH6, CDH11, CTNND1, ECT2, GJA1, PRKCA, PKN2, ROCK1, SNAI2, SRF, STRN, TJP1, UGT8, VCL, FZD5, PKP4, CLDN1, ROCK2, MPP5, PARD6B, MTDH, OCLN
BP	GO:0007098	centrosome cycle	27/2564	4.31E-02	BRCA1, CHEK1, GOLGA2, KIF11, PPP1R12A, NPM1, PKD2, XPO1, KAT2B, KIF3B, ROCK2, CCP110, PLK4, CHMP2B, NIN, CHMP5, NDE1, CEP192, CEP72, CHMP1B, MCPH1, MAP9, NDEL1, RAB6C, PARD6B, UBXN2B, GEN1
BP	GO:0007164	establishment of tissue polarity	27/2564	4.31E-02	RHOA, CDC42, CLTC, GPC4, FOXF2, MLLT3, PAFAH1B1, PSMD1, PTK7, RAC1, SFRP2, TIAM1, WNT1, WNT5A, FZD5, FZD3, FZD1, FZD4, TP63, MAGI2, MED12, EXOC5, DAAM1, ASTN2, SMURF2, VANGL1, PRICKLE2
BP	GO:0071456	cellular response to hypoxia	41/2564	4.31E-02	AK4, ATP7A, BCL2, ZFP36L1, CCNA2, CREBBP, E2F1, EDN1, EGR1, EP300, FOXO3, MTOR, GATA6, GNB1, RBPJ, MDM4, NFE2L2, NKX3-1, OPA1, PRKAA1, PRKCE, PSMD1, PTEN, PTGS2, RORA, RPS27A, SLC9A1, TMBIM6, TP53, VEGFA, VHL, STC2, ROCK2, NPEPPS, DDAH1, HIPK2, UBQLN1, HP1BP3, EGLN3, VASN, CPEB2

BP	GO:2001242	regulation of intrinsic apoptotic signaling pathway	34/2564	4.31E-02	BCL2, BCL2L2, BID, CD44, DDX3X, HNRNPK, MCL1, NFE2L2, NKX3-1, OPA1, PLAGL2, PTGS2, SFRP2, SKIL, SNAI2, SOD2, TMBIM6, TP53, TPT1, XBP1, PRKRA, EIF2AK3, BCL2L11, DNM1L, SERINC3, ERP29, UBQLN1, RRM2B, TRIAP1, RRN3, USP47, SYVN1, LRRK2, NACC2
BP	GO:0001570	vasculogenesis	19/2564	4.31E-02	ZFP36L1, HAS2, ITGAV, ITGB8, MYO1E, NTRK2, RASA1, TGFBR2, VEGFA, FZD4, SGPL1, QKI, RAPGEF2, YAP1, TIPARP, AGGF1, ZMIZ1, AMOT, SPRED1
BP	GO:0043536	positive regulation of blood vessel endothelial cell migration	19/2564	4.31E-02	ANXA1, ETS1, FGF2, HMGB1, NFE2L2, PIK3C2A, PLCG1, PRKCA, MAP2K3, PTGS2, SP1, ADAM17, THBS1, TMSB4X, VEGFA, FGF18, NRP1, AKT3, AMOTL1
BP	GO:0045652	regulation of megakaryocyte differentiation	19/2564	4.31E-02	RUNX1, CBFB, EP300, GABPA, HMGB2, LOX, MEF2C, KMT2A, CNOT4, THBS1, KAT2B, TNRC6B, AGO1, TNRC6A, KMT2E, TNRC6C, KMT2C, AGO3, AGO4
BP	GO:1903312	negative regulation of mRNA metabolic process	19/2564	4.31E-02	CCNT1, DYRK1A, E2F1, FMR1, MTOR, HNRNPA2B1, HNRNPC, HNRNPK, HNRNPU, PTBP1, SRSF6, SRSF7, RNF40, TOB1, SRSF10, LARP1, PABPC1, SRSF12, RBM24
BP	GO:0046879	hormone secretion	58/2564	4.33E-02	ACVR2B, ADCYAP1, SLC25A4, ANXA1, CACNA1C, CREB1, EDN1, ENSA, EPHA5, GATA3, GJA1, GLUD1, GLUL, GNAS, HFE, HMGCR, INHBA, ITPR1, JAK2, KCNC2, KIF5B, LIF, LRP1, SMAD2, SMAD4, MYO5A, NEUROD1, NKX3-1, P2RY1, PPP3CA, PRKCA, PRKCE, RAB1A, RAC1, REST, SNAP25, SOX4, TBX3, TIAM1, TMF1, VSNL1, FZD4, TNFSF11, KLF7, SNX4, MAP4K4, CLOCK, KDM5B, RAPGEF4, RAB11FIP2, SERP1, PCLO, CYB5R4, SMPD3, RAB11FIP1, SYTL4, ACVR1C, STXBP4
BP	GO:2000401	regulation of lymphocyte migration	16/2564	4.42E-02	ADAM10, APP, RHOA, CCR6, CRK, PTK2B, MSN, CCL20, ADAM17, WNT5A, WASL, OXSR1, LRCH1, STK39, WNK1, MIA3
BP	GO:0000375	RNA splicing, via transesterification reactions	69/2564	4.47E-02	CDC5L, DDX5, DYRK1A, FMR1, HNRNPA2B1, HNRNPC, HNRNPF, HNRNPH1, HNRNPH3, HNRNPK, HNRNPL, HNRNPU, MBNL1, NOVA1, NOVA2, PCBP1, PCBP2, PNN, PTBP1, RBM3, REST, SRSF1, SRSF2, SRSF6, SRSF7, TRA2B, USP4, CDK13, WTAP, AQR, RBM8A, MBNL2, HNRNPR, SF3B4, SMNDC1, PRPF8, KHDRBS1, CELF1, CELF2, SRSF10, PAPOLA, DDX20, SETX, CSTF2T, U2SURP, SYF2, AAR2, DAZAP1, PABPC1, RSRC1, ZBTB7A, LSM7, LUC7L3, CPSF2, SMU1, RBM41, PRPF40A, LUC7L, RBM22, CCAR1, SNIP1, FAM172A, PRPF38A, RBM17, YTHDC1, SRSF12, SREK1, HNRNPA3, RBM24
BP	GO:0008585	female gonad development	22/2564	4.52E-02	ADCYAP1, ATM, BCL2, BMPR1B, EREG, ESR1, FANCA, FOXO3, INHBA, INSR, KIT, SMAD4, PDGFRA, PTX3, UBE3A, VEGFA, NRIP1, FZD4, SGPL1, SLIT2, TIPARP, PLEKHA1
BP	GO:0032418	lysosome localization	18/2564	4.58E-02	CBL, FER, KIT, MYH9, PIK3CG, STXBP1, SNX4, SPAG9, GAB2, RASGRP1, KIF1B, SNAPIN, TMEM106B, ARL8B, C12orf4, VPS33A, NDEL1, SYTL4
BP	GO:0051145	smooth muscle cell differentiation	18/2564	4.58E-02	EREG, FGFR2, GATA6, KIT, MECP2, MEF2C, NFATC3, SGCB, SIX1, SOD2, SOX9, SRF, ZEB1, VEGFA, ANKRD17, PDCD4, EPC1, NPNT
BP	GO:0003180	aortic valve morphogenesis	9/2564	4.62E-02	JAG1, GATA3, RB1, ROBO1, ROCK1, SNAI2, SOX9, SLIT2, ROCK2
BP	GO:1902003	regulation of amyloid-beta formation	9/2564	4.62E-02	APP, EPHA4, IGF1, ROCK1, SORL1, PICALM, ROCK2, TMED10, GGA3
BP	GO:1902668	negative regulation of axon guidance	9/2564	4.62E-02	WNT5A, SEMA7A, NRP1, SEMA5A, SLIT2, SEMA4D, SEMA3C, SEMA4C, SEMA6A
BP	GO:0007350	blastoderm segmentation	7/2564	4.62E-02	PCSK6, TBX3, WNT5A, FZD5, NRP1, BASP1, FRS2
BP	GO:0010523	negative regulation of calcium ion	7/2564	4.62E-02	BCL2, CALM1, CALM2, CALM3, CLIC2, PKD2, TMBIM6

		transport into cytosol			
BP	GO:0035728	response to hepatocyte growth factor	7/2564	4.62E-02	CREB1, CRK, GAB1, HGF, MED1, NRP1, APPL1
BP	GO:0051546	keratinocyte migration	7/2564	4.62E-02	ARF6, MTOR, HAS2, PTEN, ADAM9, MAP4K4, IQSEC1
BP	GO:0060438	trachea development	7/2564	4.62E-02	HOXA5, MAPK1, RARA, SOX9, SRF, TGFBR2, LEF1
BP	GO:0072074	kidney mesenchyme development	7/2564	4.62E-02	SMAD4, PKD2, SIX1, STAT1, BASP1, SIX4, OSR1
BP	GO:0030203	glycosaminoglycan metabolic process	33/2564	4.64E-02	ARSB, CD44, CLTC, EXTL3, GPC4, FGF2, GCNT2, B4GALT1, HAS2, HGF, LUM, NFKB1, SDC2, ST3GAL1, SLC9A1, B4GALT4, B4GALT6, B4GALT5, CHST3, HS3ST3B1, HS3ST1, UST, B3GNT2, SLC35D1, GLCE, DSE, SPOCK3, CLN6, CHST12, SMPD3, HS6ST2, DSEL, B3GAT2
BP	GO:0010522	regulation of calcium ion transport into cytosol	23/2564	4.67E-02	ATP1A2, BCL2, CACNA1C, CALM1, CALM2, CALM3, CAMK2D, CLIC2, DIAPH1, DMD, F2R, PTK2B, FKBP1A, FYN, MYO5A, PDE4D, PKD2, PLCG1, PRKCE, TMBIM6, TMEM38B, JPH1, JPH3
BP	GO:2001257	regulation of cation channel activity	36/2564	4.67E-02	ANK3, APP, CACNA2D1, CALM1, CALM2, CALM3, CAMK2D, CLIC2, CTSS, DMD, STOM, EPHB2, PTK2B, FGF12, FGF14, FKBP1A, FMR1, GEM, GRIA2, KCNC2, KIF5B, MEF2C, MYO5A, PDE4D, PKD2, RELN, SLMAP, SHANK2, UBQLN1, MINK1, KLHL24, JPH1, JPH3, ALG10B, LRRC55, KCNRG
BP	GO:2000116	regulation of cysteine-type endopeptidase activity	46/2564	4.75E-02	APAF1, BIRC3, XIAP, FASLG, RHOA, ASPH, BID, CD44, CSNK2A1, DDX3X, F2R, FYN, HGF, HIP1, HMGB1, JAK2, MAP3K5, NKX3-1, PAK2, SERPINB9, PTGS2, REST, ROBO1, RPS6KA3, SFRP2, SOX2, THBS1, VCP, VEGFA, TP63, EIF2AK3, PDCD6, BCL2L11, MALT1, CARD8, TNFAIP8, SENP1, LEF1, TRIAP1, NLE1, USP47, SH3RF1, PERP, EGLN3, ACVR1C, ACER2
BP	GO:0000186	activation of MAPKK activity	14/2564	4.75E-02	CRK, F2R, JAK2, MAP3K1, MAP3K4, MAP3K5, MAP3K9, MAPK1, TGFBR1, ADAM9, MAP3K2, FRS2, TAOK1, LRRK2
BP	GO:0007632	visual behavior	14/2564	4.75E-02	APP, ATP1A2, CREB1, MTOR, HMGCR, HOXA1, KIT, MECP2, MEIS2, NF1, SLC1A2, DDHD2, SLC7A11, TANC1
BP	GO:0045638	negative regulation of myeloid cell differentiation	21/2564	4.80E-02	ZFP36L1, CDK6, PTK2B, FBN1, GABPA, HOXA5, HOXA9, INHBA, MEIS1, MEIS2, NF1, NFKBIA, PIK3R1, RARA, TLR4, MAFB, TRIB1, TOB2, KLF13, NCAPG2, CDC73
BP	GO:1901992	positive regulation of mitotic cell cycle phase transition	21/2564	4.80E-02	ANXA1, APP, CCND1, CCND2, CDC25A, DDX3X, HSPA2, MECP2, PBX1, RB1, ADAM17, UBE2E2, CUL4B, CUL3, RAB11A, PLCB1, ANKRD17, TMOD3, DTL, KMT2E, MEPCE
BP	GO:0030166	proteoglycan biosynthetic process	17/2564	4.80E-02	BMPR1B, BMPR2, EXTL3, IGF1, CHST3, FAM20B, HS3ST3B1, HS3ST1, UST, SLC35D1, GLCE, DSE, CHST12, HS6ST2, DSEL, B3GAT2, HS6ST3
BP	GO:0032526	response to retinoic acid	24/2564	4.82E-02	ABL2, ATM, COL1A1, CREB1, PTK2B, FGFR2, GJA1, TNC, IGF2R, PTCH1, PTK7, RARA, RET, RORB, SOX9, WNT5A, YES1, ZNF35, FZD4, NCOA1, YAP1, SETX, OSR1, ACER2
BP	GO:0010092	specification of animal organ identity	10/2564	4.82E-02	AR, FGFR2, HOXC11, RBPJ, MEF2C, ROBO1, SIX1, WNT2B, SPRY1, FRS2
BP	GO:0031112	positive regulation of microtubule polymerization or depolymerization	10/2564	4.82E-02	MAP1B, MECP2, MET, RAC1, SPAST, CDK5R1, MAPRE1, NIN, SLAIN2, NAV3

BP	GO:0035115	embryonic forelimb morphogenesis	10/2564	4.82E-02	CACNA1C, RUNX2, EN1, HOXA9, TBX3, RECK, TP63, NIPBL, ALX4, OSR1
BP	GO:0040001	establishment of mitotic spindle localization	10/2564	4.82E-02	KPNB1, PAFAH1B1, SPRY1, SPRY2, GPSM2, NDE1, BCCIP, MCPH1, NDEL1, UBXN2B
BP	GO:0048854	brain morphogenesis	10/2564	4.82E-02	CDH2, FANCC, FOXO3, NF1, PAFAH1B1, PTEN, WNT5A, FZD3, AKT3, SHANK2
BP	GO:0071985	multivesicular body sorting pathway	10/2564	4.82E-02	RAB27B, VCP, EXPH5, LEPROTL1, CHMP2B, VPS36, CHMP5, VTA1, CHMP1B, SYTL4
BP	GO:1901890	positive regulation of cell junction assembly	10/2564	4.82E-02	LIMS1, PTPRJ, RAC1, ROCK1, TSC1, VEGFA, NRP1, CLDN1, MAP4K4, FMN1
BP	GO:2000758	positive regulation of peptidyl-lysine acetylation	10/2564	4.82E-02	BRCA1, GATA3, LIF, SMAD4, NAP1L2, PRKAA1, SNAI2, SOX4, RPS6KA5, AUTS2
BP	GO:0032060	bleb assembly	5/2564	4.83E-02	EMP1, MYLK, PMP22, ROCK1, ANO6
BP	GO:0033148	positive regulation of intracellular estrogen receptor signaling pathway	5/2564	4.83E-02	AR, FOXA1, MED1, SKP2, YAP1
BP	GO:0035457	cellular response to interferon-alpha	5/2564	4.83E-02	AXL, GATA3, IFIT2, TPR, PDE12
BP	GO:0040015	negative regulation of multicellular organism growth	5/2564	4.83E-02	ADRB1, FXN, PTCH1, STC2, SOCS2
BP	GO:0045628	regulation of T-helper 2 cell differentiation	5/2564	4.83E-02	ANXA1, BCL6, RARA, TNFSF4, SOCS5
BP	GO:0048096	chromatin-mediated maintenance of transcription	5/2564	4.83E-02	CHEK1, SMARCD1, ARID1A, ZMIZ1, PABPC1L
BP	GO:0060315	negative regulation of ryanodine-sensitive calcium-release channel activity	5/2564	4.83E-02	CALM1, CALM2, CALM3, CLIC2, PKD2
BP	GO:0060379	cardiac muscle cell myoblast differentiation	5/2564	4.83E-02	NRG1, RBPJ, REST, SRF, GREM1
BP	GO:0060525	prostate glandular acinus development	5/2564	4.83E-02	ESR1, FGFR2, FOXA1, TP63, FRS2

BP	GO:0070106	interleukin-27-mediated signaling pathway	5/2564	4.83E-02	CANX, IL6ST, JAK2, STAT1, STAT3
BP	GO:1902065	response to L-glutamate	5/2564	4.83E-02	CREB1, FYN, OPA1, TMBIM6, BCL11A
BP	GO:1902946	protein localization to early endosome	5/2564	4.83E-02	MSN, SORL1, EZR, NRP1, ROCK2
BP	GO:1905668	positive regulation of protein localization to endosome	5/2564	4.83E-02	MSN, SORL1, EZR, ROCK2, ABHD17B
BP	GO:0008154	actin polymerization or depolymerization	41/2564	4.83E-02	ADD3, ARF1, ARF6, RHOA, CAPZA1, CAPZA2, DBN1, DIAPH1, EPS8, F2RL1, PTK2B, FER, MTOR, JAK2, PRKCE, RAC1, RASA1, SPTAN1, SPTBN1, TMSB4X, WASL, SEMA5A, SLIT2, ARPC5, ACTR3, ABI2, ARPC1A, ARFGEF1, CDC42EP3, NCKAP1, SWAP70, TMOD3, TMOD2, AP1AR, ENAH, SPIRE1, WHAMM, JMY, MTPN, RICTOR, FMN1
BP	GO:0032924	activin receptor signaling pathway	12/2564	4.83E-02	ACVR2B, BMPR2, FKBP1A, IGSF1, INHBA, SMAD2, SMAD7, SKI, TGFBR1, MAGI2, TGIF2, ACVR1C
BP	GO:0045429	positive regulation of nitric oxide biosynthetic process	12/2564	4.83E-02	EDN1, PTK2B, MTOR, HSP90AA1, HSP90AB1, INSR, JAK2, PKD2, PTGS2, PTX3, TLR4, DDAH1
BP	GO:0050850	positive regulation of calcium-mediated signaling	12/2564	4.83E-02	CALM1, CALM2, CALM3, ERBB3, NRG1, IGF1, PKD2, PTBP1, SLC9A1, CAMTA1, LMCD1, SPPL3
BP	GO:0055026	negative regulation of cardiac muscle tissue development	12/2564	4.83E-02	G6PD, GJA1, JARID2, SMAD4, MEIS1, PPARA, PTEN, TGFBR2, YY1, FRS2, SOX6, SAV1
BP	GO:0016572	histone phosphorylation	11/2564	4.83E-02	ATM, CCNA2, CHEK1, FMR1, JAK2, PRKAA1, PRKCA, PRKCB, HMGA2, BAZ1B, RPS6KA5
BP	GO:0046825	regulation of protein export from nucleus	11/2564	4.83E-02	GSK3B, PPM1A, PTPN14, SP100, TP53, TPR, XPO1, CTDSPL2, RBM22, XPO5, XPO4
BP	GO:0002467	germinal center formation	6/2564	4.83E-02	BCL6, MEF2C, ADAM17, TNFAIP3, KLHL6, RC3H1
BP	GO:0007351	tripartite regional subdivision	6/2564	4.83E-02	PCSK6, TBX3, WNT5A, FZD5, BASP1, FRS2
BP	GO:0008595	anterior/posterior axis specification, embryo	6/2564	4.83E-02	PCSK6, TBX3, WNT5A, FZD5, BASP1, FRS2
BP	GO:0014856	skeletal muscle cell proliferation	6/2564	4.83E-02	EPHB1, FGF2, JAK2, SIX1, STAT3, AKIRIN1

BP	GO:0032486	Rap protein signal transduction	6/2564	4.83E-02	CBL, RAP1B, RAP2A, RAP2B, RAPGEF2, RAP2C
BP	GO:0033151	V(D)J recombination	6/2564	4.83E-02	ATM, HMGB1, HMGB2, PRKDC, LEF1, BCL11B
BP	GO:0045898	regulation of RNA polymerase II transcriptional preinitiation complex assembly	6/2564	4.83E-02	CREB1, ESR1, HMGB1, TP53, ATF7IP, CAND1
BP	GO:1903729	regulation of plasma membrane organization	6/2564	4.83E-02	AR, MYH9, TGFB2, WASL, ASAP1, SYTL4
BP	GO:2001028	positive regulation of endothelial cell chemotaxis	6/2564	4.83E-02	FGF2, MET, TMSB4X, VEGFA, FGF18, SEMA5A
BP	GO:2001185	regulation of CD8-positive, alpha-beta T cell activation	6/2564	4.83E-02	RUNX1, RUNX3, CBFB, HFE, CD274, SH3RF1
BP	GO:0030316	osteoclast differentiation	22/2564	4.88E-02	CA2, CREB1, FBN1, MTOR, GNAS, IREB2, MITF, NF1, NOTCH2, PAFAH1B1, PIK3R1, TFRC, KLF10, TLR4, TNFSF11, SH3PXD2A, GAB2, MAFB, TOB2, FOXP1, OSTM1, TMEM64
BP	GO:0043255	regulation of carbohydrate biosynthetic process	22/2564	4.88E-02	CLTC, EP300, PTK2B, MTOR, GSK3B, HAS2, IGF1, FOXK2, INSR, NFKB1, P2RY1, PPARA, KAT2B, EPM2AIP1, FAM3C, SORBS1, ARPP19, SMPD3, NLN, PPP1R3B, SESN2, SIK1
BP	GO:0048709	oligodendrocyte differentiation	22/2564	4.88E-02	MYRF, DAG1, DLX2, ERBB2, MTOR, NRG1, ID2, ID4, KCNJ10, NF1, NTRK2, PTEN, PTPRZ1, SOX9, B4GALT6, B4GALT5, MED12, TSPAN2, OLIG2, SOX6, FA2H, SLC45A3
BP	GO:0055002	striated muscle cell development	35/2564	4.92E-02	BCL2, CSRP2, CXADR, DMD, EDN1, MTOR, G6PD, HNRNPU, IGF1, LOX, SMAD4, MEF2A, MEF2C, MYH10, PDGFRA, PPARA, PPP3CA, PRKAR1A, MAP2K4, SGCB, SGCD, SIX1, SKI, SRF, TBX3, VEGFA, YY1, SORBS2, NEBL, PDLIM5, AKAP13, TMOD3, TMOD2, SIX4, MYLK3
BP	GO:0035794	positive regulation of mitochondrial membrane permeability	16/2564	4.92E-02	BCL2, BID, ATF2, E2F1, GSK3B, PPP3R1, SLC9A1, TFDP1, TFDP2, TP53, TP53BP2, YWHAB, TP63, BCL2L11, TMEM14A, RHOT1
BP	GO:0043550	regulation of lipid kinase activity	16/2564	4.92E-02	PTK2B, FGF2, FGFR3, FLT1, KIT, PDGFRA, PIK3R1, PPP2R5A, RB1, RBL1, PIK3R3, SOCS2, SOCS6, SOCS5, VAV3, SOCS7
BP	GO:0060291	long-term synaptic potentiation	20/2564	5.00E-02	APP, CREB1, EPHA4, EPHB2, PTK2B, GSK3B, MECP2, MME, NF1, NTRK2, SERPINE2, MAPK1, RELN, PTEN, SNAP25, STAU1, SHANK2, SLC24A2, YTHDF1, TSHZ3
CC	GO:0000151	ubiquitin ligase complex	83/2640	4.22E-10	BMI1, BRCA1, CDC27, CKS1B, PHC2, LMO7, MKLN1, NEDD4, MED1, SKP1, SKP2, UBE2A, UBE2D1, UBE2D3, UBE2L3, VHL, PCGF2, CUL5, GAN, CUL4B, CUL3, ENC1, CBX4, DCAF5, UBE4A, MED21, RNF14, RNF144A, RNF40, KLHL21, MED12, PDCD6, RANBP9, DCAF7, ZER1, WWP1, FBXW11, ARIH1, FBXL2, ARMC8, FBXL3, FBXL5, KLHL3, FBXO8, RNF11, CACYBP, KLHL20, DTL, UBE2D4, YPEL5, DCUN1D1, KLHL24, GID8, USP47, CAND1, KLHL42, KLHL8, ZSWIM6, SMURF2, RMND5A, FBXL17, GID4, DERL1, DCAF10, ZYG11B, CBLL1, PHC3, SPSB1, FBXO11, WDR26, KLHL15, PCGF5, SYVN1, KBTBD8, KLHL13, DCUN1D3, RNF19B, UBR3, RNF217, RNF168, FBXO45, RNF144B, SPOPL
CC	GO:0005925	focal adhesion	107/2640	4.22E-10	ACTB, ACTN1, ADAM10, ALCAM, ANXA1, ARF1, ARF6, RHOA, RND3, DST, CBL, SCARB2, CD44, CD151, CDC42, CDH2, CLTC, CSRP2, DAG1, EFNB2, PTK2B, FGFR3, FLNB, FLT1, GJA1, GNA12, HNRNPK, TNC, IGF2R, ITGA6, ITGA3, ITGAV, ITGB8, JAK2, LASP1, LIMS1, LMO7, LPP, LRP1, MARCKS, MCAM, CD46, MME, MSN, MYH9, PPP1R12A, NPM1, DDR2,

					PCBP2, PPP1CC, PRKAR2A, MAPK1, PTK7, PTPN12, RAC1, RALA, RPL22, RPS16, SLC9A1, SNTB2, ADAM17, VCL, EZR, VIM, YES1, YWHAB, FZD1, PIP5K1A, SORBS2, NUMB, ADAM9, NRP1, MAP4K4, KIF23, AKAP12, ARPC5, ACTR3, SORBS1, GNA13, NCKAP1, RAB10, RRAS2, ITGA11, MTF2, MAPRE1, RAB21, PALLD, MPRIP, CORO1C, FLRT3, FLRT2, REXO2, PABPC1, GIT1, SENP1, SH3KBP1, DCTN4, ENAH, PARVA, TNS3, ARHGAP24, TNS4, DOCK7, DIXDC1, LMLN, PHLDB2, ARL14EP
CC	GO:0030055	cell-substrate junction	108/2640	4.22E-10	ACTB, ACTN1, ADAM10, ALCAM, ANXA1, ARF1, ARF6, RHOA, RND3, DST, CBL, SCARB2, CD44, CD151, CDC42, CDH2, CLTC, CSRP2, DAG1, DMD, EFNB2, PTK2B, FGFR3, FLNB, FLT1, GJA1, GNA12, HNRNPK, TNC, IGF2R, ITGA6, ITGA3, ITGAV, ITGB8, JAK2, LASP1, LIMS1, LMO7, LPP, LRP1, MARCKS, MCAM, CD46, MME, MSN, MYH9, PPP1R12A, NPM1, DDR2, PCBP2, PPP1CC, PRKAR2A, MAPK1, PTK7, PTPN12, RAC1, RALA, RPL22, RPS16, SLC9A1, SNTB2, ADAM17, VCL, EZR, VIM, YES1, YWHAB, FZD1, PIP5K1A, SORBS2, NUMB, ADAM9, NRP1, MAP4K4, KIF23, AKAP12, ARPC5, ACTR3, SORBS1, GNA13, NCKAP1, RAB10, RRAS2, ITGA11, MTF2, MAPRE1, RAB21, PALLD, MPRIP, CORO1C, FLRT3, FLRT2, REXO2, PABPC1, GIT1, SENP1, SH3KBP1, DCTN4, ENAH, PARVA, TNS3, ARHGAP24, TNS4, DOCK7, DIXDC1, LMLN, PHLDB2, ARL14EP
CC	GO:0005924	cell-substrate adherens junction	107/2640	4.22E-10	ACTB, ACTN1, ADAM10, ALCAM, ANXA1, ARF1, ARF6, RHOA, RND3, DST, CBL, SCARB2, CD44, CD151, CDC42, CDH2, CLTC, CSRP2, DAG1, EFNB2, PTK2B, FGFR3, FLNB, FLT1, GJA1, GNA12, HNRNPK, TNC, IGF2R, ITGA6, ITGA3, ITGAV, ITGB8, JAK2, LASP1, LIMS1, LMO7, LPP, LRP1, MARCKS, MCAM, CD46, MME, MSN, MYH9, PPP1R12A, NPM1, DDR2, PCBP2, PPP1CC, PRKAR2A, MAPK1, PTK7, PTPN12, RAC1, RALA, RPL22, RPS16, SLC9A1, SNTB2, ADAM17, VCL, EZR, VIM, YES1, YWHAB, FZD1, PIP5K1A, SORBS2, NUMB, ADAM9, NRP1, MAP4K4, KIF23, AKAP12, ARPC5, ACTR3, SORBS1, GNA13, NCKAP1, RAB10, RRAS2, ITGA11, MTF2, MAPRE1, RAB21, PALLD, MPRIP, CORO1C, FLRT3, FLRT2, REXO2, PABPC1, GIT1, SENP1, SH3KBP1, DCTN4, ENAH, PARVA, TNS3, ARHGAP24, TNS4, DOCK7, DIXDC1, LMLN, PHLDB2, ARL14EP
CC	GO:0030426	growth cone	58/2640	6.93E-10	APBB2, APP, CALM3, CBL, CTNND1, CXADR, DBN1, EPHA4, EPS8, PTK2B, FGF13, FMR1, GPM6A, HSP90AA1, HSP90AB1, ITGA3, KIF5B, KIF5C, LRP1, MAP1B, MAP2, MYH10, MYO5A, MYO9A, PAFAH1B1, PCDH9, PTCH1, SNAP25, TIAM1, TSC1, UTRN, USP9X, UNC5C, NRP1, CDK5R1, ARPC5, HNRNPR, BASP1, SHANK2, PALLD, KIF21B, SETX, DICER1, CBX6, NPTXR, FLRT3, AUTS2, TMOD2, NIN, SSH1, TSHZ3, ALS2, TRAK2, ORAI2, CPEB4, NDEL1, DOCK7, LRRK2
CC	GO:0033267	axon part	101/2640	6.93E-10	ACTB, ADCYAP1, ANK3, APBB2, APP, DST, DAGLA, CALM3, CBL, CTNND1, CXADR, DAG1, DBN1, EPHA4, EPS8, PTK2B, FGF13, FMR1, GAD1, GLUL, GPM6A, GRIK3, HSP90AA1, HSP90AB1, ITGA3, KCNC2, KCNQ3, KIF5B, KIF5C, LRP1, MAP1B, MAP2, MYH10, MYO5A, MYO9A, NRCAM, NTRK2, OPA1, OPHN1, PAFAH1B1, PCDH9, PRKCB, PTCH1, RAB27B, SCN8A, SLC1A2, SNAP25, SPAST, SPTBN1, TIAM1, TSC1, UTRN, USP9X, EEA1, UNC5C, NRP1, CDK5R1, KIF3B, RNF40, ARPC5, HNRNPR, BASP1, SLC9A6, AP3M2, AAK1, SHANK2, TPX2, RAB21, PALLD, UNC13A, KIF21B, SETX, KIF1B, SYT11, KIF13B, DICER1, CBX6, NPTXR, SNAPIN, FLRT3, KIF4A, CNTNAP2, AUTS2, AP3M1, GIT1, TMOD2, KCNIP3, NIN, SSH1, ARL8B, TSHZ3, ALS2, TRAK2, ORAI2, CPEB4, NDEL1, DOCK7, TANC1, NAV1, LRRK2, TPRG1L
CC	GO:0030427	site of polarized growth	58/2640	2.05E-09	APBB2, APP, CALM3, CBL, CTNND1, CXADR, DBN1, EPHA4, EPS8, PTK2B, FGF13, FMR1, GPM6A, HSP90AA1, HSP90AB1, ITGA3, KIF5B, KIF5C, LRP1, MAP1B, MAP2, MYH10, MYO5A, MYO9A, PAFAH1B1, PCDH9, PTCH1, SNAP25, TIAM1, TSC1, UTRN, USP9X, UNC5C, NRP1, CDK5R1, ARPC5, HNRNPR, BASP1, SHANK2, PALLD, KIF21B, SETX, DICER1, CBX6, NPTXR, FLRT3, AUTS2, TMOD2, NIN, SSH1, TSHZ3, ALS2, TRAK2, ORAI2, CPEB4, NDEL1, DOCK7, LRRK2
CC	GO:0005635	nuclear envelope	113/2640	7.98E-09	ANXA4, APP, BCL2, BNIP2, DST, CCND2, CENPF, RCC1, GATA6, GLE1, GNAQ, GNAZ, AGFG1, IGF2R, INSR, ITPR1, KPNB1, KPNA3, KPNA4, IPO5, LBR, LMNB1, LMO7, SMAD1, NELL1, PAFAH1B1, PDE4D, RAN, TRA2B, SORL1, SPAST, TMPO, TPR, UBE2I, XPO1, YEATS4, MTMR6, VAPA, NRXN1, WTAP, IST1, MRPL19, SCRN1, RB1CC1, PGRMC2, NXF1, IPO7, SPIN1, FAF1, CBX3, ZBTB1, ATF6, SEPHS1, XPO7, PHF8, UBXN4, ATP11B, PLCB1, BICD2, SYNE1, SUN1, PUM2, CTDNEP1, CBX5, GTPBP4, KPNA6, UNC50, NSMF, OSBPL3, ANKRD17, TOR1AIP1, CACYBP, SENP1, IPO11, PHF20, DTL, TMEM38B, TMEM33, RIF1, AGPAT5, LRRC59, NDC1, TXLNG, NXT2, AGPAT3, PARP11, RTN4, TOR3A, XPO4, TMEM43, AKIRIN1, DNAJB14, EPC1, TNKS2, POLR2M, NDEL1, SEH1L, DCTN5, PRPF38A, NAV3, MTDH, OSBPL6, TMEM170A, TBC1D20, TMEM18, TOR1AIP2, PRICKLE2, NAPEPLD, CERS6, CNEP1R1, DPY19L4, NUP43, RGPD8
CC	GO:0150034	distal axon	76/2640	1.27E-07	ACTB, ADCYAP1, APBB2, APP, CALM3, CBL, CTNND1, CXADR, DBN1, EPHA4, EPS8, PTK2B, FGF13, FMR1, GAD1, GLUL, GPM6A, GRIK3, HSP90AA1, HSP90AB1, ITGA3, KCNC2, KIF5B, KIF5C, LRP1, MAP1B, MAP2, MYH10, MYO5A, MYO9A, NTRK2, OPHN1, PAFAH1B1, PCDH9, PRKCB, PTCH1, SNAP25, TIAM1, TSC1, UTRN, USP9X, UNC5C, NRP1, CDK5R1, RNF40, ARPC5, HNRNPR, BASP1, SLC9A6, AAK1, SHANK2, PALLD, UNC13A, KIF21B, SETX, SYT11, DICER1, CBX6, NPTXR, FLRT3, AUTS2, GIT1, TMOD2, KCNIP3, NIN, SSH1, TSHZ3, ALS2, TRAK2, ORAI2, CPEB4, NDEL1, DOCK7, TANC1, LRRK2, TPRG1L
CC	GO:0005769	early endosome	88/2640	1.48E-07	ADRB1, ANXA1, APP, ARF6, CLCN3, CLCN5, EPHA4, EPHB1, F2R, F2RL1, GJA1, HFE, IGF2R, LDLR, LNPEP, LRP1, MME, MYO1B, MYO5A, SLC11A2, NTRK2, OCRL, MAPK1, RAB1A, RET, SH3GL1, SNX1, SORL1, TFRC, TLR4, PTP4A1, FZD5, PTP4A2, PICALM, EEA1, STX7, NUMB, SNX4, NRP1, USP10, RABEP1, TGFBRAP1, LITAF, VPS26A, ZFYVE16, RABGAP1L, ATP9A, WASF2, STAM2, GPNMB, SLC9A6, VTI1B, EHD1, RAB21, UHRF1BP1L, SNX13, GGA3, ATP11B, ASTN2, DNAJC13, SGK3, CNTNAP2, APPL1, RNF11, CD274, APH1A, RAB14, AP1AR, SLC30A10, PMEPA1, RAB22A, ARRDC3, WDFY1, ALS2, GPR107, VPS33A, TRAK2, DERL1, PLEKHF2, STEAP4, SNX27, ANKRD27, MVB12B, MMGT1, NIPA1, PIKFYVE, NAPEPLD, C8orf44-SGK3

CC	GO:0030175	filopodium	37/2640	4.84E-07	APP, ARF6, CDC42, CXADR, DAG1, DMD, EPHA4, EPHB1, FGF13, FMR1, B4GALT1, GPM6A, UBE2K, INPPL1, ITGA6, ITGA3, ITGAV, MAP2, MYO1B, MSN, MTM1, MYO5A, MYO10, UTRN, EZR, FZD3, UNC5C, CD302, ARL4C, ABI2, CBX6, NPTXR, NGDN, OSBPL3, ENAH, RAPH1, ANTXR1
CC	GO:0005667	transcription factor complex	89/2640	4.84E-07	AHR, ZFHX3, BCL9, KLF5, RUNX2, RUNX1, RUNX3, CBFB, CREB1, E2F1, E2F3, EP300, ERCC1, ETS1, FOXF2, GATA6, NR6A1, GTF2A1, GTF2H1, GTF3C2, HNRNPU, HOXA9, HSP90AB1, RBPJ, SMAD1, SMAD2, SMAD4, SMAD5, SMAD7, MEF2A, MEIS1, MXI1, NEUROD1, NFATC3, NFYB, NPAS2, NR4A2, PBX1, PITX1, PITX2, PKNOX1, POU2F1, POU3F2, PPARA, PRKDC, RARA, RB1, RBL1, REL, SIX1, SKI, SOX2, SOX4, SOX9, STAT3, TAF5, TAF11, TAF13, TCF4, ZEB1, TCF12, TEAD1, TFDP1, TFDP2, THRB, TP53, YY1, GTF3C4, MED17, MED26, CLOCK, MAFB, NR1D2, MED6, SRA1, YAP1, NFAT5, RCOR1, SATB2, WWTR1, TAF5L, HIPK2, LEF1, SIX4, ATF7IP, BDP1, ARNTL2, ALX4, NAA15
CC	GO:0098978	glutamatergic synapse	86/2640	4.84E-07	ABR, ACTB, ACTN1, ADAM10, ARF1, ARF4, ARF6, RHOA, ATP2B1, ATP2B2, ATP2B4, CANX, CDH11, CTNND1, DAG1, DBN1, EFNB2, EPHA4, EPHB1, EPHB2, EPS8, ERBB4, PTK2B, GPC4, MTOR, FYN, GPM6A, GRIK3, GRM3, GSK3B, NRG1, HIP1, DNAJB1, JAK2, RAB8A, MYH10, MYO5A, NRCAM, OPHN1, P2RY1, PAK2, PCDH8, PLCB4, PLCG1, PPP1CC, PPP2R2A, PPP3CA, PRKAR1A, PURA, RAC1, RPL22, SH3GL1, SLC1A2, SNAP25, SPARC, SPTBN1, STAT3, STAU1, STXBP1, VAMP1, TIAM1, VCP, WNT5A, YES1, FXR1, FZD4, DGKE, NUMB, RAB11A, NRP1, NRXN1, SV2A, UNC13A, PLCB1, GRIP1, NPTXR, FLRT3, CHMP2B, TANC2, PCDH17, ABHD17B, ADAM22, PLEKHA5, CTTNBP2, LRRK2, FBXO45
CC	GO:0000790	nuclear chromatin	90/2640	1.05E-06	ACTB, AR, ATRX, RUNX2, RUNX3, RCC1, CHD4, CREB1, CREBBP, CSNK2A1, E2F1, EN1, ESR1, EZH2, BPTF, FER, GABPA, GATA3, HMGB1, HMGB2, HNRNPC, HNRNPK, SMAD2, SMAD4, MEF2A, MEF2C, MEF2D, NASP, PAWR, RARA, RB1, RBBP4, SATB1, SNAI2, SMARCC2, SMARCD1, SMARCE1, SP1, SRF, SS18, STAT1, STAT3, TAF5, TCF4, TCF12, THRB, TP53, TRPS1, UBE2A, YY1, PCGF2, KAT6A, NCOA3, NRIP1, CHAF1B, ARID1A, SMARCA5, HAT1, CDK13, TP63, NCOA1, NCOR1, ZEB2, HMGXB4, RAD50, RAD51AP1, BRD8, CBX1, CBX3, PLCB1, CBX5, SUZ12, KAT6B, NIPBL, NSMF, SS18L1, ZBTB7A, RSF1, CHRAC1, TIPIN, RIF1, PBRM1, ASXL2, GATAD2B, SAP130, TTC21B, ASXL3, KAT8, ACTR8, NACC2
CC	GO:0005819	spindle	84/2640	1.39E-06	APP, ATM, CALM1, CALM2, CALM3, CDC27, CDC42, CENPF, CLTC, DIAPH1, ECT2, GEM, GOLGA2, NR3C1, HNRNPU, HSPA2, KIF11, MAP4, MID1, MYH9, MYH10, NPM1, PAFAH1B1, PKD2, MAPK1, RB1, SPAST, DYNLT3, TPR, TPT1, PTP4A1, EVI5, SMC1A, CUL3, PKP4, CDC14A, RAB11A, KIF3B, KIF23, NCOR1, CEP104, CEP350, CEP170, KLHL21, FRY, STAG1, STAG2, NEK6, SPIN1, CBX1, CBX3, MAPRE1, TPX2, KIF4A, EML2, GPSM2, DCTN4, NIN, DCDC2, YPEL5, NDE1, RIF1, ARL8B, YEATS2, MAP7D1, ACOT13, BCCIP, BIRC6, MTUS1, HECW2, KLHL42, TBL1XR1, MAP9, NDEL1, KATNAL1, RAB11FIP4, KBTBD8, EFHC1, CCSAP, UBXN2B, NEK7, POC1B, MZT1, FAM110C
CC	GO:0005911	cell-cell junction	104/2640	1.39E-06	ACTN1, ADD3, ANK3, ANXA1, APC, APP, SHROOM2, RHOA, ATP1A2, ATP1B1, CCND1, BMPR2, KRIT1, CDH2, CDH6, CDH11, COL13A1, CTNND1, CXADR, DAG1, DBN1, DDX6, DSC2, DSG2, ECT2, EIF4G2, FGF13, GAB1, B4GALT1, GJA1, ITGA6, KCNJ2, KIT, LIMS1, SMAD7, MYH9, MYO1E, CLDN11, PCDH9, PIK3R1, PKD2, PLCG1, PMP22, PNN, PPP3CA, PKN2, PTK7, PTPRJ, PTPRK, PTPRM, RAP1B, RAP2B, SLC9A1, STRN, ADAM17, TGFBR1, TIAM1, TJP1, VCL, VEGFA, FZD5, FZD4, PKP4, CLDN1, VAPA, RAPGEF2, MAGI2, SV2A, ACTR3, WASF2, SORBS1, PDLIM5, FRS2, RAB10, CD2AP, CADM1, FLRT3, FLRT2, CLIC4, CNTNAP2, TMOD3, UBN1, SH3KBP1, USP53, KLHL24, AHI1, ARHGAP17, FRMD4A, ASH1L, KIAA1210, RAP2C, PERP, MPP5, WNK3, TMEM47, PARD6B, MTDH, FRMD6, AMOT, AMOTL1, TMEM65, PIKFYVE, MAGI3, OCLN
CC	GO:0031252	cell leading edge	94/2640	1.40E-06	ACTN1, APBB2, APC, APP, ARF1, ARF4, ARF6, RHOA, ATP2B1, ATP7A, DST, CD44, CDH2, CDK6, CTNND1, DAG1, DBN1, DIAPH1, EEF1A1, EPS8, PTK2B, FER, INPPL1, INSR, ITGAV, KCNC2, MKLN1, MTM1, MYH9, MYH10, MYLK, MYO5A, MYO10, PAFAH1B1, PKD2, PLCG1, PKN2, PTPRJ, PTPRK, PTPRM, RAC1, RASA1, ROCK1, SLC1A2, SLC9A1, SNX1, SPTBN1, ADAM17, TIAM1, TSC1, EZR, VIM, PIP5K1A, SORBS2, UNC5C, WASL, MTMR6, SLK, SRA1, ARPC5, ACTR3, ABI2, WASF2, SPRY2, NCKAP1, AAK1, PALLD, SWAP70, WWC1, PSD3, SRGAP2, SLC39A14, CORO1C, CD2AP, GABARAPL1, CNTNAP2, APPL1, SSH1, TRPM7, CCDC88A, ENAH, PARVA, RAB22A, SH3RF1, ALS2, PLEKHA1, RAPH1, MTMR9, NDEL1, ANTXR1, PHLDB2, JMY, AMOT, AMOTL1
CC	GO:0010008	endosome membrane	107/2640	1.72E-06	ANXA1, ARF6, SCARB2, CLCN3, CLCN5, CLTC, EPHA4, EPHB1, ERBB2, GRB14, INSR, LAMP1, LAMP2, LDLR, RAB8A, MYO1B, SLC11A2, NTRK2, OCRL, PLD1, RAB27B, RAC1, RAP2A, RAP2B, RET, RPS27A, SH3GL1, SNX1, SORL1, TFRC, TLR4, UBE2D3, FZD5, EEA1, STX7, SNX4, CD164, RAB11A, RABEP1, VAMP3, TM9SF2, ITM2B, LITAF, SCAMP1, TMEM59, VPS26A, LAPTM4A, ARHGAP32, ZFYVE16, RNF144A, ATP9A, OPTN, STAM2, GPNMB, SLC9A6, VTI1B, RAB10, EHD1, RAB11FIP2, RAB21, TAB2, SNX13, GGA3, ATP11B, DNAJC13, ABCA5, MMD, CORO1C, CHMP2B, APPL1, GOLIM4, CD274, VPS36, ABHD17B, APH1A, IRAK4, CHMP5, VTA1, RAB14, WDR44, TMEM106B, PLEKHB2, ARL8B, VPS53, SCYL2, PMEPA1, CHMP1B, RAB22A, RAP2C, KIF13A, GPR135, VPS33A, PLEKHF2, STEAP4, SNX27, ANTXR1, RAB11FIP4, SPPL2A, LTV1, MVB12B, MMGT1, OSBPL11, VTI1A, PIKFYVE, NAPEPLD, ZNRF2, TAB3
CC	GO:0035770	ribonucleoprotein granule	60/2640	2.18E-06	ACTB, ZFP36L1, CDC42, DDX3X, DDX6, EIF2S1, FMR1, HNRNPK, HNRNPL, HNRNPU, HOXD10, KPNB1, CAPRIN1, MBNL1, CNOT2, PABPC3, PCBP1, RAC1, ROCK1, RPL28, STAU1, TIAL1, VCP, FXR1, PABPC4, ROCK2, CLOCK, PUM1, G3BP2, PAN2, CNOT1, SAMD4A, TNRC6B, LARP4B, SYNE1, LARP1, PUM2, GIGYF2, AGO1, PABPC1, TAF5L, AGO2, TNRC6A, CNOT7, BTBD1, OGFOD1, DCP1A, NUFIP2, TNRC6C, YTHDC2, PABPC1L, MEX3A, LARP4, TRIM71, RC3H1, DCP2, AGO3, AGO4, HNRNPA3, PAN3

CC	GO:0061695	transferase complex, transferring phosphorus-containing groups	66/2640	4.27E-06	ACVR2B, CCND1, CCNA2, CCND2, CCNG1, CCNT1, CCNT2, CDK6, CKS1B, ERCC1, GTF2A1, GTF2H1, IGF1R, INSR, MCM3, MAP3K5, PHKA1, PIK3C2A, PIK3C3, PIK3CB, PIK3CG, PIK3R1, PKM, PRKAA1, PRKAR1A, PRKAR2A, RB1, REV3L, TAF5, TAF11, TAF13, TGFBR1, TP53, PIK3R3, CDK13, SOCS2, CDK5R1, CCNE2, SOCS6, SOCS5, RB1CC1, SORBS1, POLR3F, POLD3, CCNI, SIK2, TAF5L, SOCS7, POLR1D, ZBTB7A, CAB39, CHRAC1, CCNJ, RPRD1A, SETD5, WDR41, POLR3B, BCCIP, ZNFX1, RPRD1B, CDC73, POLR2M, SESN2, POLR1B, ACVR1C, SIK1
CC	GO:0036464	cytoplasmic ribonucleoprotein granule	57/2640	4.27E-06	ACTB, ZFP36L1, CDC42, DDX3X, DDX6, EIF2S1, FMR1, HNRNPK, HNRNPU, HOXD10, KPNB1, CAPRIN1, MBNL1, CNOT2, PABPC3, PCBP1, RAC1, ROCK1, RPL28, STAU1, TIAL1, VCP, FXR1, PABPC4, ROCK2, CLOCK, PUM1, G3BP2, PAN2, CNOT1, SAMD4A, TNRC6B, LARP4B, SYNE1, LARP1, PUM2, GIGYF2, AGO1, PABPC1, TAF5L, AGO2, TNRC6A, CNOT7, BTBD1, OGFOD1, DCP1A, NUFIP2, TNRC6C, PABPC1L, MEX3A, LARP4, TRIM71, RC3H1, DCP2, AGO3, AGO4, PAN3
CC	GO:0010494	cytoplasmic stress granule	26/2640	4.27E-06	DDX3X, DDX6, EIF2S1, FMR1, HNRNPK, KPNB1, CAPRIN1, MBNL1, PABPC3, ROCK1, STAU1, TIAL1, VCP, PABPC4, PUM1, G3BP2, LARP4B, LARP1, PUM2, GIGYF2, PABPC1, OGFOD1, NUFIP2, PABPC1L, LARP4, RC3H1
CC	GO:0008287	protein serine/threonine phosphatase complex	20/2640	1.09E-05	ITPR1, PPP1R12A, PPP1CC, PPP2R1B, PPP2R2A, PPP2R2C, PPP2R5A, PPP2R5E, PPP3CA, PPP3R1, SHOC2, CTDNEP1, IER5, PPP2R2D, PPP4R4, PPP1R3B, WDR82, PPP1R15B, PPP4R2, CNEP1R1
CC	GO:1903293	phosphatase complex	20/2640	1.09E-05	ITPR1, PPP1R12A, PPP1CC, PPP2R1B, PPP2R2A, PPP2R2C, PPP2R5A, PPP2R5E, PPP3CA, PPP3R1, SHOC2, CTDNEP1, IER5, PPP2R2D, PPP4R4, PPP1R3B, WDR82, PPP1R15B, PPP4R2, CNEP1R1
CC	GO:0031519	PcG protein complex	20/2640	2.45E-05	BMI1, CSNK2A1, PHC2, EZH2, JARID2, RBBP4, SKP1, YY1, PCGF2, CBX4, SCML2, MTF2, RYBP, CBX6, SUZ12, PHF19, ASXL2, PHC3, ASXL3, PCGF5
CC	GO:0014069	postsynaptic density	75/2640	2.98E-05	ABR, ADAM10, ADD3, ARF1, ATP2B2, BMPR2, CACNA1C, CDH2, CTNND1, DBN1, EFNB2, EPHA4, EPS8, ERBB4, PTK2B, FMR1, FYN, GRIA2, GRM3, DNAJB1, ITPR1, MAP1B, MAP2, MAP4, RAB8A, NRCAM, NSF, NTRK2, P2RY1, PAK2, PCBP2, PLCB4, MAPK1, PTCH1, SH3GL1, SPTBN1, STAT3, STRN, TIAM1, TSC1, FXR1, PKP4, EIF3A, CDK5R1, DCLK1, ARHGAP32, MAGI2, PJA2, PDLIM5, CPEB3, SHANK2, SYT11, PSD3, SRGAP2, CHMP2B, NSMF, TANC2, PCLO, MINK1, ABHD17B, BCL11A, ADAM22, PLEKHA5, SEMA4C, CAMK2N1, ANKS1B, GOPC, RTN4, PRR12, MIB1, ALS2, CPEB4, TANC1, FBXO45, HNRNPA3
CC	GO:0072686	mitotic spindle	34/2640	3.04E-05	CDC42, CLTC, DIAPH1, ECT2, GEM, GOLGA2, HNRNPU, KIF11, MAP4, PKD2, MAPK1, DYNLT3, TPR, SMC1A, PKP4, CDC14A, KIF23, NCOR1, STAG1, STAG2, MAPRE1, TPX2, EML2, GPSM2, NIN, DCDC2, YPEL5, YEATS2, BCCIP, HECW2, TBL1XR1, MAP9, EFHC1, CCSAP
CC	GO:1902911	protein kinase complex	34/2640	3.04E-05	ACVR2B, CCND1, CCNA2, CCND2, CCNG1, CCNT1, CCNT2, CDK6, CKS1B, GTF2H1, IGF1R, INSR, MAP3K5, PHKA1, PRKAA1, PRKAR1A, PRKAR2A, RB1, TGFBR1, CDK13, CDK5R1, CCNE2, RB1CC1, SORBS1, CCNI, SIK2, ZBTB7A, CAB39, CCNJ, WDR41, BCCIP, SESN2, ACVR1C, SIK1
CC	GO:0032279	asymmetric synapse	75/2640	4.38E-05	ABR, ADAM10, ADD3, ARF1, ATP2B2, BMPR2, CACNA1C, CDH2, CTNND1, DBN1, EFNB2, EPHA4, EPS8, ERBB4, PTK2B, FMR1, FYN, GRIA2, GRM3, DNAJB1, ITPR1, MAP1B, MAP2, MAP4, RAB8A, NRCAM, NSF, NTRK2, P2RY1, PAK2, PCBP2, PLCB4, MAPK1, PTCH1, SH3GL1, SPTBN1, STAT3, STRN, TIAM1, TSC1, FXR1, PKP4, EIF3A, CDK5R1, DCLK1, ARHGAP32, MAGI2, PJA2, PDLIM5, CPEB3, SHANK2, SYT11, PSD3, SRGAP2, CHMP2B, NSMF, TANC2, PCLO, MINK1, ABHD17B, BCL11A, ADAM22, PLEKHA5, SEMA4C, CAMK2N1, ANKS1B, GOPC, RTN4, PRR12, MIB1, ALS2, CPEB4, TANC1, FBXO45, HNRNPA3
CC	GO:0005938	cell cortex	71/2640	5.82E-05	ACTB, ADD3, SHROOM2, ARF6, RHOA, RND3, ASPH, DST, CALD1, CAPZA1, CAPZA2, CDC42, CDH2, CTNND1, DBN1, EEF1A1, EPS8, PTK2B, FER, FGFR2, FLNB, GAD1, HFE, HIP1, LASP1, MARCKS, MKLN1, MYH9, MYH10, MYO5B, MYO10, NEDD4, PAFAH1B1, PKD2, SPTAN1, SPTBN1, TSC1, UTRN, EZR, WASL, AKAP12, ARHGAP32, RIMS3, CD302, ACTR3, FRY, EXOC5, RAB10, AKAP13, MAPRE1, RIMS1, UNC13A, FNBP1, ASTN2, RHOQ, CORO1C, NSMF, RAI14, PCLO, GPSM2, DCTN4, DCDC2, FNBP1L, LANCL2, SPIRE1, CTTNBP2, PARD6B, PHLDB2, WIPF2, FRYL, FAM110C
CC	GO:0055037	recycling endosome	46/2640	1.01E-04	AP1G1, APP, ARF6, HFE, KCNK1, RAB8A, MYO5A, MYO5B, SLC11A2, RAC1, RAN, RAP2A, RAP2B, SORL1, TFRC, EEA1, STX7, RAB11A, RABEP1, VAMP3, SCAMP1, ATP9A, OPTN, SLC9A6, VTI1B, RAB10, EHD1, RAB11FIP2, AVL9, GGA3, ATP11B, SYT11, GPR161, SGK3, RNF11, CD274, ABHD17B, RAB14, PLEKHB2, VPS53, SLC30A10, RAP2C, RAB11FIP1, RAB11FIP4, ATP11C, C8orf44-SGK3
CC	GO:0098858	actin-based cell projection	52/2640	1.01E-04	APP, ARF6, ATP6V1A, ATP7A, CA2, CD44, CDC42, CXADR, DAG1, DMD, EPHA4, EPHB1, EPS8, FGF13, FMR1, B4GALT1, GPM6A, UBE2K, FOXA1, INPPL1, ITGA6, ITGA3, ITGAV, MAP2, MYO1B, MSN, MTM1, MYO5A, MYO10, PAFAH1B1, PDGFRA, ATP8B1, UTRN, EZR, FZD3, CDC14A, UNC5C, SLC4A7, DOCK4, CD302, ARL4C, ABI2, KIF13B, CBX6, NPTXR, CLIC4, NGDN, OSBPL3, ENAH, RAPH1, ANTXR1, LRRK2
CC	GO:0099572	postsynaptic specialization	77/2640	1.01E-04	ABR, ADAM10, ADD3, ARF1, ATP2B2, BMPR2, CACNA1C, CDH2, CTNND1, DBN1, EFNB2, EPHA4, EPS8, ERBB4, PTK2B, FMR1, FYN, GABRB2, GRIA2, GRM3, DNAJB1, ITPR1, MAP1B, MAP2, MAP4, RAB8A, NRCAM, NSF, NTRK2, P2RY1, PAK2, PCBP2, PLCB4, MAPK1, PTCH1, SH3GL1, SPTBN1, STAT3, STRN, TIAM1, TSC1, YES1, FXR1, PKP4, EIF3A, CDK5R1, DCLK1, ARHGAP32, MAGI2, PJA2, PDLIM5, CPEB3, SHANK2, SYT11, PSD3, SRGAP2, CHMP2B, NSMF, TANC2, PCLO, MINK1,

					ABHD17B, BCL11A, ADAM22, PLEKHA5, SEMA4C, CAMK2N1, ANKS1B, GOPC, RTN4, PRR12, MIB1, ALS2, CPEB4, TANC1, FBXO45, HNRNPA3
CC	GO:0044309	neuron spine	45/2640	1.01E-04	ADAM10, APP, ARF4, RHOA, ATP1A2, ATP2B1, CANX, CDC42, CTNND1, EPHA4, PTK2B, FMR1, GPM6A, GRIA2, GRM3, DNAJB1, KCNJ2, MAP1B, RAB8A, MYH10, NEDD4, NTRK2, OPHN1, PPP1CC, PPP3CA, PTEN, RAC1, STRN, TIAM1, FXR1, EEA1, CDK5R1, ARHGAP32, ABI2, SLC9A6, SHANK2, SYT11, SRGAP2, ASAP1, ABHD17B, DOCK10, ANKS1B, ALS2, CPEB4, CTTNBP2
CC	GO:0005802	trans-Golgi network	57/2640	1.08E-04	ADAM10, AP1G1, APP, ARF1, ARL1, ATP7A, BICD1, CLTC, GOLGA4, IGF2R, RAB8A, MME, MYO1B, OCRL, RAB6A, RAC1, SNAP25, SORL1, TGFBI, VAMP4, RAB11A, AP1S2, VAMP3, CHST3, SCAMP1, USP6NL, ATP9A, OPTN, COG5, ARFGEF1, TGOLN2, RAB10, RAB21, NMNAT2, GGA3, ATP11B, NBEA, KLHL20, RAB30, RAB14, GOLPH3L, VPS53, CCDC91, PI4K2B, WDR11, BIRC6, SCOC, KIF13A, GOLPH3, SLC10A7, PLEKHA8, LRRK2, VTI1A, FAM91A1, ARL5B, ATP11C, YIPF6
CC	GO:0030027	lamellipodium	49/2640	1.10E-04	APBB2, APC, APP, RHOA, CD44, CDH2, CTNND1, DAG1, DBN1, PTK2B, FER, INPPL1, ITGAV, MYH10, MYLK, MYO10, PKD2, PLCG1, PKN2, PTPRM, RAC1, ROCK1, SLC9A1, SNX1, TSC1, PIP5K1A, SORBS2, UNC5C, WASL, ARPC5, ACTR3, ABI2, WASF2, NCKAP1, PALLD, SWAP70, SRGAP2, SLC39A14, CORO1C, SSH1, CCDC88A, ENAH, PARVA, SH3RF1, ALS2, RAPH1, ANTXR1, AMOT, AMOTL1
CC	GO:0120111	neuron projection cytoplasm	27/2640	1.51E-04	DST, CANX, FMR1, GRIK3, HNRNPU, KIF5B, KIF5C, MAP2, OPA1, PAFAH1B1, MAPK1, PURA, RAB27B, MAP2K4, SPAST, KIF3B, AP3M2, RAB21, KIF1B, SNAPIN, GABARAPL1, KIF4A, AP3M1, ARL8B, TRAK2, NDEL1, LRRK2
CC	GO:0016363	nuclear matrix	32/2640	1.90E-04	CENPF, HLCS, HNRNPA2B1, HNRNPU, JAK2, LMNB1, RNASEL, SATB1, ATXN1, ATXN7, SPARC, TP53, VIM, YY1, YEATS4, SMC1A, ENC1, HAT1, DCAF7, STAG1, ARFGEF1, SORBS1, STAG2, SATB2, KIF4A, CLIC4, NSMF, FIGN, PRPF40A, ZNF703, KAT8, ZNF326
CC	GO:0098984	neuron to neuron synapse	76/2640	2.06E-04	ABR, ADAM10, ADD3, ARF1, ATP2B2, BMPR2, CACNA1C, CDH2, CTNND1, DBN1, EFNB2, EPHA4, EPS8, ERBB4, PTK2B, FMR1, FYN, GRIA2, GRM3, DNAJB1, ITPR1, MAP1B, MAP2, MAP4, RAB8A, NRCAM, NSF, NTRK2, P2RY1, PAK2, PCBP2, PLCB4, MAPK1, PTCH1, SH3GL1, SPTBN1, STAT3, STRN, TIAM1, TSC1, FXR1, PKP4, EIF3A, CDK5R1, DCLK1, ARHGAP32, MAGI2, PJA2, PDLIM5, RAPGEF4, CPEB3, SHANK2, SYT11, PSD3, SRGAP2, CHMP2B, NSMF, TANC2, PCLO, MINK1, ABHD17B, BCL11A, ADAM22, PLEKHA5, SEMA4C, CAMK2N1, ANKS1B, GOPC, RTN4, PRR12, MIB1, ALS2, CPEB4, TANC1, FBXO45, HNRNPA3
CC	GO:0098793	presynapse	99/2640	2.93E-04	ACTB, ADAM10, ADCYAP1, APP, ARF6, ATP2B1, ATP2B2, ATP2B4, BDNF, CALM3, CANX, CDH2, CLCN3, CTNND1, EFNB2, EPHA4, EPHB2, CLN8, ERBB4, GPC4, FMR1, GAD1, GLUL, GPM6A, GRIK3, GRM3, HIP1, KCNC2, KCNJ3, KCNJ10, LAMP1, RAB8A, MME, NF1, NTF3, NTRK2, OPHN1, P2RY1, PCDH8, PPP1CC, PRKCB, RAB3B, RAB27B, RPL22, SH3GL1, SLC1A2, SLC6A1, SNAP25, STXBP1, VAMP1, SYPL1, FZD3, FOSL1, PICALM, STX7, VAMP4, CDK5R1, VAMP3, NRXN1, SCAMP1, RIMS3, RNF40, SV2A, DNM1L, HNRNPR, SLC9A6, VTI1B, RAB10, AAK1, RIMS1, UNC13A, SYT11, DMXL2, WDR7, SNAPIN, FLRT3, PNISR, SLC17A5, PCDH17, PCLO, GIT1, KCNIP3, APH1A, TRAPPC4, SEMA4C, KCTD16, NDEL1, CTTNBP2, KIAA1109, TANC1, KCTD12, FCHO2, LRRK2, TPRG1L, SYNPR, STXBP5, VTI1A, FBXO45, ZNRF2
CC	GO:0031965	nuclear membrane	66/2640	3.01E-04	ANXA4, BCL2, CCND2, RCC1, GATA6, GLE1, GNAQ, ITPR1, KPNB1, KPNA4, LBR, LMNB1, SMAD1, PAFAH1B1, PDE4D, TRA2B, SPAST, TPR, XPO1, YEATS4, VAPA, NRXN1, WTAP, MRPL19, SCRN1, RB1CC1, SPIN1, CBX3, ZBTB1, SEPHS1, PHF8, ATP11B, PLCB1, SYNE1, SUN1, PUM2, CTDNEP1, GTPBP4, UNC50, NSMF, OSBPL3, ANKRD17, TOR1AIP1, SENP1, PHF20, DTL, TMEM38B, RIF1, NDC1, TXLNG, TMEM43, AKIRIN1, DNAJB14, EPC1, DCTN5, PRPF38A, NAV3, MTDH, OSBPL6, TBC1D20, TMEM18, TOR1AIP2, PRICKLE2, CERS6, CNEP1R1, DPY19L4
CC	GO:0043197	dendritic spine	43/2640	3.27E-04	ADAM10, APP, ARF4, RHOA, ATP1A2, ATP2B1, CANX, CDC42, CTNND1, EPHA4, PTK2B, FMR1, GPM6A, GRIA2, GRM3, DNAJB1, KCNJ2, MAP1B, RAB8A, MYH10, NEDD4, NTRK2, OPHN1, PPP1CC, PPP3CA, PTEN, RAC1, STRN, TIAM1, FXR1, CDK5R1, ARHGAP32, ABI2, SHANK2, SYT11, SRGAP2, ASAP1, ABHD17B, DOCK10, ANKS1B, ALS2, CPEB4, CTTNBP2
CC	GO:0044295	axonal growth cone	13/2640	3.91E-04	EPHA4, GPM6A, HSP90AA1, HSP90AB1, KIF5B, KIF5C, LRP1, MYO9A, PTCH1, TIAM1, FLRT3, NIN, TRAK2
CC	GO:0017053	transcriptional repressor complex	26/2640	3.95E-04	CCND1, CHD4, CSNK2A1, HMGB1, RBPJ, ARID4A, RBBP4, REST, SKI, SP1, SP3, YWHAB, SMARCA5, NCOR1, BAZ2A, DDX20, SPEN, RCOR1, CBX5, RLIM, ZBTB7A, DEPDC1, GATAD2B, TBL1XR1, LIN52, JAZF1
CC	GO:0043025	neuronal cell body	99/2640	4.34E-04	ADAM10, ADCYAP1, ALCAM, APP, ATP2B1, ATP7A, BMPR1A, BMPR1B, BMPR2, CACNA1C, CANX, CDC42, EPHA4, EPHA5, EPHB2, ACSL4, PTK2B, FLNB, FMR1, MTOR, GDI1, GLUL, GPM6A, GRIK3, HCFC1, AGFG1, HSP90AA1, HSP90AB1, DNAJB1, IL6ST, INSR, KCNC2, KCNJ2, KCNK1, KCNN3, KIF5C, LAMP1, LRP1, MAP1B, MAP2, RAB8A, MME, MYH10, MYO5A, MYO10, PAFAH1B1, SERPINI1, PRKAA1, MAPK1, PTPRK, PURA, RET, MAP2K4, SLC2A3, STAU1, STRN, TGFB2, TIAM1, FZD5, FZD3, FXR1, PICALM, UNC5C, NRP1, CDK5R1, NRXN1, AKAP12, RAPGEF2, SV2A, RBM8A, VTI1B, PGRMC1, SHANK2, TPX2, ASTN2, ADNP, CBX6, NPTXR, BRD1, ATXN10, NSMF, CNTNAP2, GIGYF2, STRN3, UBXN1, SLC38A2, KLHL24, CAMK2N1, RTN4, ALS2, ELOVL5, TMPRSS3, TRAK2, POLR2M, NDEL1, TANC1, EFHC1, LRRK2, VTI1A

CC	GO:0031248	protein acetyltransferase complex	28/2640	4.94E-04	ACTB, CREBBP, EP300, HCFC1, TAF5, BRPF1, KAT6A, YEATS4, KAT2B, BRD8, KAT6B, BRD1, TAF5L, BRPF3, PHF20, RSF1, MSL2, MRGBP, KANSL3, YEATS2, MEAF6, NAA25, NAA15, NAA50, EPC1, KAT8, NAA30, KANSL1L
CC	GO:1902493	acetyltransferase complex	28/2640	4.94E-04	ACTB, CREBBP, EP300, HCFC1, TAF5, BRPF1, KAT6A, YEATS4, KAT2B, BRD8, KAT6B, BRD1, TAF5L, BRPF3, PHF20, RSF1, MSL2, MRGBP, KANSL3, YEATS2, MEAF6, NAA25, NAA15, NAA50, EPC1, KAT8, NAA30, KANSL1L
CC	GO:0098562	cytoplasmic side of membrane	44/2640	4.94E-04	ACP1, RHOA, ATP2B1, EEF1A1, PTK2B, FER, FKBP1A, FRK, FYN, G6PD, GEM, GNA12, GNAI2, GNAI3, GNAQ, GNAS, GNAZ, GNB1, HIP1, KIT, PKD2, PPP3CA, PTEN, PTPN3, PTPN4, SNAP25, TIAM1, EZR, YES1, PTP4A1, PKP4, LITAF, EPM2AIP1, GNA13, RAB21, CBX6, NPTXR, GNG13, ERRFI1, GNG12, ESYT2, SPPL2A, LRRK2, SPPL3
CC	GO:0030496	midbody	43/2640	5.14E-04	ARF6, RHOA, CDC42, CENPF, CTNND1, ECT2, GDI1, GEM, GNAI2, GNAI3, HNRNPU, RAB8A, MYH10, PIK3C3, PIK3CB, PPP1CC, PKN2, PTCH1, RALA, RAN, RAP2A, SPAST, TACC1, PKP4, KIF3B, KIF23, IST1, EXOC5, ZFYVE26, KIF4A, CLIC4, YPEL5, SSH1, TTC19, CEP55, ARL8B, MBD5, CHMP1B, BIRC6, KIF13A, RAB11FIP4, LZTS2, KLHL13
CC	GO:0034399	nuclear periphery	35/2640	5.35E-04	CENPF, DAG1, HLCS, HNRNPA2B1, HNRNPU, JAK2, LMNB1, MAP2, RNASEL, SATB1, ATXN1, ATXN7, SPARC, TP53, TPR, VIM, YY1, YEATS4, SMC1A, ENC1, HAT1, DCAF7, STAG1, ARFGEF1, SORBS1, STAG2, SATB2, KIF4A, CLIC4, NSMF, FIGN, PRPF40A, ZNF703, KAT8, ZNF326
CC	GO:0044798	nuclear transcription factor complex	48/2640	5.44E-04	BCL9, RUNX1, RUNX3, CBFB, CREB1, E2F1, E2F3, ERCC1, GTF2A1, GTF2H1, GTF3C2, HNRNPU, SMAD2, SMAD4, MXI1, NEUROD1, NFATC3, NFYB, PBX1, POU2F1, PPARA, RARA, RB1, SOX2, SOX4, SOX9, STAT3, TAF5, TAF11, TAF13, TCF4, TCF12, TEAD1, TFDP1, TFDP2, THRB, TP53, GTF3C4, MED17, MED26, NR1D2, MED6, YAP1, NFAT5, TAF5L, HIPK2, LEF1, BDP1
CC	GO:0031463	Cul3-RING ubiquitin ligase complex	15/2640	5.58E-04	GAN, CUL3, ENC1, KLHL21, PDCD6, ARIH1, KLHL3, KLHL20, KLHL24, KLHL42, KLHL8, KLHL15, KBTBD8, KLHL13, SPOPL
CC	GO:0016605	PML body	28/2640	1.00E-03	ATRX, MTOR, MKNK2, PTEN, RB1, RNF4, SATB1, SKI, SUMO3, SP3, SP100, TDG, TP53, UBE2I, ZMYM2, USP7, KAT6A, PIAS2, N4BP1, HIPK3, CBX5, ZNF451, KLHL20, HIPK2, UBN1, RNF111, RPAIN, TP53INP1
CC	GO:0090575	RNA polymerase II transcription factor complex	40/2640	1.17E-03	BCL9, RUNX1, RUNX3, CBFB, CREB1, E2F1, E2F3, ERCC1, GTF2A1, GTF2H1, HNRNPU, SMAD2, SMAD4, MXI1, NEUROD1, NFYB, PBX1, POU2F1, PPARA, RARA, RB1, STAT3, TAF5, TAF11, TAF13, TCF4, TCF12, TEAD1, TFDP1, TFDP2, THRB, TP53, MED17, MED26, NR1D2, MED6, YAP1, TAF5L, HIPK2, LEF1
CC	GO:0030135	coated vesicle	62/2640	1.31E-03	AP1G1, APP, AREG, ARF1, ATP7A, SCARB2, CLTC, EDN1, EREG, GAD1, GOLGA2, HIP1, IGF2R, IL7R, LDLR, LRP1, RAB8A, MYO1E, OCRL, PIK3C2A, RAB27B, TFRC, WNT5A, FZD5, PICALM, FZD4, USO1, NUMB, VAMP4, VAMP3, SCAMP1, SEC24C, SEC16A, PDCD6, CNIH1, VTI1B, TGOLN2, TMED10, SEC23IP, AAK1, SEC31A, ASTN2, DDHD2, TMED3, SH3BP4, NECAP1, TMED5, ERGIC2, RAB14, SCYL2, CCDC88A, SAR1A, GOPC, GPR107, VPS33A, MCFD2, FCHO2, VTI1A, DENND1B, VMA21, TMED4, YIPF6
CC	GO:0070603	SWI/SNF superfamily-type complex	23/2640	1.33E-03	CHD4, CSNK2A1, EN1, BPTF, RB1, RBBP4, SMARCC2, SMARCD1, SMARCE1, SS18, YY1, ARID1A, SMARCA5, HMGXB4, BRD8, SUZ12, SS18L1, ZBTB7A, RSF1, CHRAC1, PBRM1, GATAD2B, ACTR8
CC	GO:1904949	ATPase complex	28/2640	1.36E-03	ATP1A2, ATP1B1, CHD4, CSNK2A1, EN1, BPTF, RB1, RBBP4, RFC1, SLC9A1, SMARCC2, SMARCD1, SMARCE1, SS18, VCP, YY1, ARID1A, SMARCA5, HMGXB4, BRD8, SUZ12, SS18L1, ZBTB7A, RSF1, CHRAC1, PBRM1, GATAD2B, ACTR8
CC	GO:0043296	apical junction complex	36/2640	1.38E-03	ANK3, APC, SHROOM2, RHOA, CCND1, CTNND1, CXADR, ECT2, CLDN11, PMP22, PKN2, RAP2B, STRN, TGFBR1, TJP1, FZD5, CLDN1, VAPA, RAPGEF2, MAGI2, SORBS1, UBN1, USP53, ARHGAP17, FRMD4A, ASH1L, RAP2C, MPP5, WNK3, PARD6B, MTDH, FRMD6, AMOT, AMOTL1, MAGI3, OCLN
CC	GO:0000775	chromosome, centromeric region	45/2640	1.48E-03	APC, ATRX, CENPF, DYNC1LI2, FMR1, HNRNPU, PPP1R12A, ORC2, PAFAH1B1, PPP1CC, PPP2R5A, SUMO3, DYNLT3, TP53BP1, TPR, XPO1, SMC1A, KAT2B, BAZ1B, BUB3, STAG1, CTCF, STAG2, CBX1, CBX3, PDS5B, FBXO28, PDS5A, CBX5, NGDN, SS18L1, DCTN4, NDE1, ZNFX1, CENPK, NCAPG, MEAF6, CENPO, NDEL1, SEH1L, KAT8, PHF6, DCTN5, SPC24, NUP43
CC	GO:0016323	basolateral plasma membrane	49/2640	1.72E-03	ANK3, ANXA1, ATP1B1, ATP2B1, ATP2B4, ATP7A, BMPR2, DST, CA2, CD44, CDH2, CXADR, DAG1, ERBB2, ERBB3, ERBB4, B4GALT1, HPGD, HSP90AB1, IL6R, ITGA6, ITGA3, KCNC2, KCNJ10, LDLR, LRP1, MET, MSN, P2RY1, PKD2, SLC9A1, SLC14A1, TFRC, TJP1, EZR, NUMB, SLC4A4, ADAM9, MAP7, SLC7A6, CLDN1, SLC4A7, SLC23A2, SLC12A6, CADM1, DSTYK, STK39, SLC16A10, SLC41A1
CC	GO:0005798	Golgi-associated vesicle	42/2640	1.79E-03	ADAM10, AP1G1, APP, AREG, ARF1, ATP7A, CLTC, GJA1, GOLGA2, IGF2R, RAB8A, OCRL, RAB27B, USO1, ITM2B, SEC24C, SEC16A, PDCD6, CNIH1, VTI1B, TGOLN2, TMED10, SEC23IP, SEC31A, DDHD2, TMED3, RHOQ, TMED5, ERGIC2, RAB14, ZDHHC13, CCDC88A, SAR1A, GOPC, SPPL2A, MCFD2, LRRK2, SPPL3, VTI1A, VMA21, TMED4, YIPF6

CC	GO:1902554	serine/threonine protein kinase complex	25/2640	1.89E-03	ACVR2B, CCND1, CCNA2, CCND2, CCNG1, CCNT1, CCNT2, CDK6, CKS1B, GTF2H1, PHKA1, RB1, TGFBR1, CDK13, CDK5R1, CCNE2, RB1CC1, CCNI, ZBTB7A, CAB39, CCNJ, WDR41, BCCIP, SESN2, ACVR1C
CC	GO:0005765	lysosomal membrane	72/2640	1.93E-03	AP1G1, ATP6V1A, SCARB2, CLCN5, CLTC, EEF1A1, STOM, MTOR, B4GALT1, GNAI3, GNAQ, GNB1, HSP90AB1, IGF2R, LAMP1, LAMP2, LDLR, LNPEP, LRP1, SLC11A2, NSF, PLD1, RAB2A, RAP1B, VLDLR, STX7, CD164, NAPG, AP1S2, SPAG9, VAPA, LITAF, TMEM59, ATP6V1G1, LAPTM4A, VTI1B, GLIPR1, ATP11B, DNAJC13, SZT2, ABCA5, ZFYVE26, MMD, SNAPIN, SLC17A5, AP3M1, OSTM1, RAB14, ATP6V1H, TMEM106B, ARL8B, WDR41, DRAM1, WDR11, TMEM30A, GOPC, SLC7A14, GNB4, VPS33A, LPCAT1, CYBRD1, ITM2C, SEH1L, MAGT1, SPPL2A, ABCC10, VASN, DRAM2, C12orf66, ABCA13, ZNRF2, ATP11C
CC	GO:0098852	lytic vacuole membrane	72/2640	2.08E-03	AP1G1, ATP6V1A, SCARB2, CLCN5, CLTC, EEF1A1, STOM, MTOR, B4GALT1, GNAI3, GNAQ, GNB1, HSP90AB1, IGF2R, LAMP1, LAMP2, LDLR, LNPEP, LRP1, SLC11A2, NSF, PLD1, RAB2A, RAP1B, VLDLR, STX7, CD164, NAPG, AP1S2, SPAG9, VAPA, LITAF, TMEM59, ATP6V1G1, LAPTM4A, VTI1B, GLIPR1, ATP11B, DNAJC13, SZT2, ABCA5, ZFYVE26, MMD, SNAPIN, SLC17A5, AP3M1, OSTM1, RAB14, ATP6V1H, TMEM106B, ARL8B, WDR41, DRAM1, WDR11, TMEM30A, GOPC, SLC7A14, GNB4, VPS33A, LPCAT1, CYBRD1, ITM2C, SEH1L, MAGT1, SPPL2A, ABCC10, VASN, DRAM2, C12orf66, ABCA13, ZNRF2, ATP11C
CC	GO:0030133	transport vesicle	78/2640	2.14E-03	ADAM10, AP1G1, APP, AREG, ATP7A, BDNF, CALM3, CLCN3, CLTC, EDN1, FGFR3, IGF1, IGF2R, ITPR1, LAMP1, RAB8A, MME, NTF3, RAB1A, RAB3B, RAB6A, RAB27B, SNAP25, SNTB2, VAMP1, SYPL1, PICALM, STX7, USO1, VAMP4, RAB11A, VAMP3, SCAMP1, SEC24C, SV2A, SEC16A, PDCD6, DNM1L, CNIH1, VTI1B, TGOLN2, RAB10, ERP29, TMED10, SEC23IP, SEC31A, UNC13A, SYT11, DMXL2, WDR7, TMED3, SNAPIN, SLC17A5, GOLIM4, APH1A, TRAPPC4, RAB14, SEMA4C, AP1AR, CCDC88A, TMEM30A, SAR1A, GOPC, SYT13, TMEM168, PLEKHF2, NDEL1, CTTNBP2, ANKRD27, MCFD2, SYTL4, LRRK2, TPRG1L, SYNPR, STXBP5, VTI1A, SPRED2, VMA21
CC	GO:0000932	P-body	24/2640	2.16E-03	ZFP36L1, DDX6, CAPRIN1, CNOT2, PUM1, PAN2, CNOT1, SAMD4A, TNRC6B, SYNE1, AGO1, AGO2, TNRC6A, CNOT7, BTBD1, DCP1A, TNRC6C, MEX3A, TRIM71, RC3H1, DCP2, AGO3, AGO4, PAN3
CC	GO:0031461	cullin-RING ubiquitin ligase complex	38/2640	2.18E-03	CDC27, CKS1B, SKP1, SKP2, CUL5, GAN, CUL4B, CUL3, ENC1, DCAF5, KLHL21, PDCD6, DCAF7, ZER1, FBXW11, ARIH1, FBXL2, FBXL3, FBXL5, KLHL3, CACYBP, KLHL20, DTL, KLHL24, USP47, CAND1, KLHL42, KLHL8, ZSWIM6, FBXL17, DCAF10, ZYG11B, SPSB1, KLHL15, KBTBD8, KLHL13, FBXO45, SPOPL
CC	GO:0005770	late endosome	55/2640	2.45E-03	ARF1, ATP7A, SCARB2, CLCN3, CTSS, DYNC1LI2, F2R, GJA1, IGF2R, IL12A, LAMP1, LAMP2, LDLR, MTM1, MYO5A, SLC11A2, PIK3C3, PLD1, MAPK1, RAB27B, SORL1, TPT1, STX7, RAB11A, LITAF, TMEM59, RAPGEF2, LAPTM4A, MAGI2, SLC9A6, VTI1B, NMNAT2, ASTN2, ABCA5, MMD, CHMP2B, VPS36, RAB14, TMEM106B, ARL8B, AP1AR, CHMP1B, RAB22A, VPS33A, DERL1, FYCO1, ANKRD27, SPPL2A, LTV1, ANKRD13A, MVB12B, OSBPL11, LRRK2, VTI1A, PIKFYVE
CC	GO:0000123	histone acetyltransferase complex	24/2640	2.52E-03	ACTB, CREBBP, EP300, HCFC1, TAF5, BRPF1, KAT6A, YEATS4, KAT2B, BRD8, KAT6B, BRD1, TAF5L, BRPF3, PHF20, RSF1, MSL2, MRGBP, KANSL3, YEATS2, MEAF6, EPC1, KAT8, KANSL1L
CC	GO:0097060	synaptic membrane	84/2640	2.53E-03	ADAM10, ANK3, ANXA1, ARF1, ATP2B1, ATP2B2, ATP2B4, DAGLA, CACNA1C, CANX, CDH2, COL13A1, DAG1, DBN1, DMD, EFNB2, EPHA4, EPHB2, ERBB4, F2R, GPC4, FMR1, GABRB2, GLRB, GPM6A, GRIA2, GRIK3, GRM3, HIP1, ITGA3, KCNC2, KCNJ3, NRCAM, P2RY1, PCDH8, PTEN, SLC1A2, SLC6A1, SNAP25, STRN, STXBP1, TIAM1, UTRN, FOSL1, PICALM, NRP1, DNAJA3, NRXN1, GABBR2, ARHGAP32, RIMS3, PJA2, DNM1L, PDLIM5, CPEB3, SHANK2, RIMS1, UNC13A, SYT11, SYNE1, PSD3, SRGAP2, GRIP1, FLRT3, NSMF, PCDH17, MINK1, ABHD17B, APH1A, ADAM22, SEMA4C, CAMK2N1, ANKS1B, GOPC, PRR12, KCTD16, CPEB4, ATAD1, TANC1, KCTD12, FCHO2, STXBP5, FBXO45, ZNRF2
CC	GO:0009898	cytoplasmic side of plasma membrane	37/2640	2.53E-03	ACP1, RHOA, ATP2B1, PTK2B, FER, FRK, FYN, G6PD, GEM, GNA12, GNAI2, GNAI3, GNAQ, GNAS, GNAZ, GNB1, HIP1, KIT, PPP3CA, PTEN, PTPN3, PTPN4, SNAP25, TIAM1, EZR, YES1, PTP4A1, PKP4, LITAF, GNA13, RAB21, CBX6, NPTXR, GNG13, ERRFI1, GNG12, ESYT2
CC	GO:0031901	early endosome membrane	36/2640	2.68E-03	ANXA1, ARF6, CLCN3, EPHA4, EPHB1, NTRK2, OCRL, SH3GL1, SNX1, FZD5, EEA1, STX7, SNX4, RABEP1, LITAF, ZFYVE16, ATP9A, STAM2, GPNMB, SLC9A6, VTI1B, EHD1, RAB21, SNX13, GGA3, DNAJC13, APPL1, CD274, RAB14, PMEPA1, PLEKHF2, STEAP4, SNX27, MMGT1, PIKFYVE, NAPEPLD
CC	GO:0099059	integral component of presynaptic active zone membrane	8/2640	2.78E-03	ATP2B1, ATP2B4, CANX, CDH2, GPM6A, P2RY1, NRXN1, SYT11
CC	GO:0005913	cell-cell adherens junction	30/2640	2.78E-03	ACTN1, ANXA1, APC, SHROOM2, BMPR2, CDH2, CDH6, CDH11, CTNND1, CXADR, DAG1, DDX6, DSC2, EIF4G2, GJA1, ITGA6, SMAD7, MYH9, PTPRM, TJP1, VCL, VEGFA, PKP4, SORBS1, PDLIM5, FRS2, RAB10, TMOD3, KIAA1210, MPP5

CC	GO:0016607	nuclear speck	78/2640	2.79E-03	AR, BDNF, CDC5L, DDX3X, DOCK1, DYRK1A, MECOM, NR3C1, HNRNPU, INPPL1, MEF2C, NR4A2, PCBP1, PLAG1, PNN, PPP1CC, PRKAA1, RFXAP, SRSF1, SRSF2, SRSF6, SRSF7, SGK1, TCF12, ZNF217, KAT6A, NRIP1, PIP5K1A, CBX4, CDK13, PIAS2, TRIP12, WTAP, PUM1, TATDN2, RBM8A, NAMPT, SMNDC1, BASP1, NXF1, PRPF8, SRSF10, NEK6, ASCC3, BAZ2A, PLCB1, FNBP4, BRD1, SYF2, PNISR, HBP1, TAF5L, CNOT7, HP1BP3, RSRC1, WAC, LUC7L3, RBM27, NCAPG2, SMU1, PRPF40A, KMT2E, SLC2A4RG, ZMIZ1, THOC2, GATAD2B, ZNF106, SMURF2, SAP130, CBLL1, SPRTN, FYTTD1, YTHDC1, SRSF12, SREK1, DENND1B, RNF169, ZNF621
CC	GO:0001726	ruffle	40/2640	2.81E-03	ACTN1, APC, ARF4, ARF6, RHOA, CDK6, DIAPH1, EEF1A1, EPS8, ITGAV, MKLN1, MTM1, MYH9, MYO5A, MYO10, PLCG1, PTPRJ, RAC1, RASA1, ROCK1, ADAM17, TIAM1, EZR, PIP5K1A, MTMR6, WASF2, SPRY2, NCKAP1, PALLD, WWC1, PSD3, CORO1C, CD2AP, APPL1, TRPM7, RAB22A, ALS2, PLEKHA1, MTMR9, AMOT
CC	GO:0005874	microtubule	81/2640	2.81E-03	APC, SHROOM2, BICD1, DST, CALM1, CALM2, CALM3, CDC27, CLTC, DYNC1LI2, DPYSL2, FGF13, GOLGA2, HNRNPU, KIF5B, KIF5C, KIF11, STMN1, MAP1B, MAP2, MAP4, MID1, MYO5A, PAFAH1B1, SNTB2, SPAST, SS18, DYNLT3, TIAM1, TPT1, CUL3, EIF3A, RAB11A, MAP7, KIF3B, KIF23, CEP170, KLHL21, DNM1L, SPRY2, NEK6, WDR47, MAPRE1, TPX2, KIF21B, KIF1B, CAMSAP2, KIF13B, GABARAPL1, KIF4A, EML2, TPGS2, STAU2, SERP1, NIN, HOOK1, DCDC2, TPPP3, NDE1, FIGN, KIF21A, MTUS1, SLAIN2, MID1IP1, KIF13A, MAP9, REEP4, AKNA, NDEL1, KATNAL1, HOOK3, LZTS2, NAV3, NAV1, TTC30A, WHAMM, CCSAP, NEK7, CAMSAP1, REEP3, FAM110C
CC	GO:0042734	presynaptic membrane	38/2640	2.81E-03	ATP2B1, ATP2B4, CANX, CDH2, EFNB2, EPHA4, EPHB2, ERBB4, GPC4, FMR1, GPM6A, GRIK3, GRM3, HIP1, KCNC2, KCNJ3, P2RY1, PCDH8, SLC1A2, SLC6A1, SNAP25, STXBP1, FOSL1, PICALM, NRXN1, RIMS3, DNM1L, RIMS1, UNC13A, SYT11, PCDH17, APH1A, KCTD16, KCTD12, FCHO2, STXBP5, FBXO45, ZNRF2
CC	GO:0098687	chromosomal region	70/2640	2.83E-03	APC, ATM, ATRX, CENPF, CHEK1, DYNC1LI2, ERCC1, EZH2, FMR1, HNRNPA2B1, HNRNPU, MCM3, MSH2, PPP1R12A, ORC2, ORC4, ORC5, PAFAH1B1, PPP1CC, PPP2R5A, PRKDC, PURA, SUMO3, SP100, DYNLT3, TP53BP1, TPR, XPO1, SMC1A, HAT1, KAT2B, BAZ1B, BUB3, RAD50, STAG1, CTCF, STAG2, CBX1, CBX3, SCMH1, PDS5B, SETX, FBXO28, PDS5A, SMCHD1, CBX5, NGDN, SS18L1, DCTN4, NDE1, RIF1, MBD5, ZNFX1, THOC2, CENPK, NCAPG, MEAF6, NABP1, CENPO, CDC73, WDR82, TNKS2, NDEL1, SEH1L, KAT8, PHF6, DCTN5, MBD6, SPC24, NUP43
CC	GO:0005923	bicellular tight junction	31/2640	2.83E-03	ANK3, APC, SHROOM2, CCND1, CXADR, ECT2, CLDN11, PMP22, RAP2B, STRN, TGFBR1, TJP1, FZD5, CLDN1, VAPA, RAPGEF2, MAGI2, UBN1, USP53, ARHGAP17, FRMD4A, ASH1L, RAP2C, MPP5, WNK3, PARD6B, MTDH, AMOT, AMOTL1, MAGI3, OCLN
CC	GO:1904115	axon cytoplasm	18/2640	2.83E-03	DST, FMR1, KIF5B, KIF5C, OPA1, PAFAH1B1, RAB27B, SPAST, KIF3B, AP3M2, RAB21, KIF1B, SNAPIN, KIF4A, AP3M1, ARL8B, TRAK2, NDEL1
CC	GO:0005903	brush border	26/2640	4.18E-03	ACTN1, ADD3, ATP7A, CAPZA2, EPS8, FLNB, B4GALT1, GNA12, HSP90AB1, KCNK1, MME, MYO1B, MYH9, MYH10, MYO1E, SLC11A2, ATP8B1, EZR, DNM1L, ACTR3, GNA13, SHANK2, SLC7A11, NPC1L1, SLC38A2, CYBRD1
CC	GO:0019898	extrinsic component of membrane	60/2640	4.91E-03	ANXA1, APC, RHOA, CDH2, CDH6, CDH11, CTNND1, PTK2B, FER, FKBP1A, FMR1, FRK, FYN, GNA12, GNAI2, GNAI3, GNAQ, GNAS, GNAZ, GNB1, HIP1, SMAD7, OPA1, SERPINE2, PIK3C2A, PIK3C3, PIK3CB, PIK3CG, PIK3R1, SNAP25, TIAM1, TPR, EZR, YES1, PICALM, EEA1, PIK3R3, NUMB, SOCS2, MTMR3, DNAJA3, SOCS6, NMT2, SOCS5, RNF40, RB1CC1, BCL2L11, GNA13, MGLL, AAK1, STK39, SOCS7, GNG13, ERRFI1, VPS13C, GNG12, ESYT2, SYTL4, OSR1, STXBP5
CC	GO:0032154	cleavage furrow	17/2640	5.25E-03	ARF6, RHOA, ECT2, MYH9, MYH10, MYLK, PPP1CC, PKN2, RALA, RAB11A, PLK4, RAB21, SSH1, NDE1, CEP55, SPIRE1, RAB11FIP4
CC	GO:0005741	mitochondrial outer membrane	40/2640	5.26E-03	ACACB, BCL2, BCL2L2, BID, ATF2, DDX3X, EPHA4, ACSL1, ACSL3, ACSL4, FOXO3, MTOR, GJA1, HADHB, MCL1, SLC11A2, OPA1, PPP1CC, RPS6KB1, RPS27A, VAMP1, SNN, MFN2, BCL2L11, DNM1L, VAT1, MLXIP, ACSL6, SLC44A1, ARMCX1, VPS13C, RHOT1, AGPAT5, AGK, GPAM, FUNDC2, CYB5B, SLC25A46, LRRK2, TOMM5
CC	GO:0070160	tight junction	31/2640	5.54E-03	ANK3, APC, SHROOM2, CCND1, CXADR, ECT2, CLDN11, PMP22, RAP2B, STRN, TGFBR1, TJP1, FZD5, CLDN1, VAPA, RAPGEF2, MAGI2, UBN1, USP53, ARHGAP17, FRMD4A, ASH1L, RAP2C, MPP5, WNK3, PARD6B, MTDH, AMOT, AMOTL1, MAGI3, OCLN
CC	GO:0031010	ISWI-type complex	6/2640	6.33E-03	BPTF, RBBP4, SMARCA5, HMGXB4, RSF1, CHRAC1
CC	GO:0055038	recycling endosome membrane	22/2640	6.33E-03	ARF6, RAB8A, RAC1, RAP2A, RAP2B, RAB11A, VAMP3, SCAMP1, OPTN, SLC9A6, VTI1B, RAB10, EHD1, RAB11FIP2, GGA3, ATP11B, CD274, ABHD17B, RAB14, PLEKHB2, RAP2C, RAB11FIP4
CC	GO:0000307	cyclin-dependent protein kinase holoenzyme complex	14/2640	6.42E-03	CCND1, CCNA2, CCND2, CCNG1, CCNT1, CCNT2, CDK6, CKS1B, RB1, CDK13, CCNE2, CCNI, CCNJ, BCCIP

CC	GO:0030014	CCR4-NOT complex	8/2640	6.65E-03	CNOT2, CNOT4, TOB1, CPEB3, CNOT1, CNOT7, CNOT6, CNOT6L
CC	GO:0030136	clathrin-coated vesicle	41/2640	7.95E-03	AP1G1, AREG, ATP7A, SCARB2, CLTC, EDN1, EREG, GAD1, HIP1, IGF2R, IL7R, LDLR, LRP1, RAB8A, MYO1E, OCRL, PIK3C2A, RAB27B, TFRC, WNT5A, FZD5, PICALM, FZD4, NUMB, VAMP4, VAMP3, SCAMP1, TGOLN2, TMED10, AAK1, ASTN2, SH3BP4, NECAP1, RAB14, SCYL2, GOPC, GPR107, VPS33A, FCHO2, VTI1A, DENND1B
CC	GO:0090734	site of DNA damage	20/2640	9.19E-03	ATF2, HUS1, NKX3-1, POLH, TP53, TP53BP1, VCP, ARPC5, ACTR3, RAD50, ARPC1A, CBX1, CBX3, SMCHD1, CBX5, ZBTB7A, RNF138, RIF1, RNF168, RNF169
CC	GO:0045211	postsynaptic membrane	63/2640	9.94E-03	ADAM10, ANK3, ARF1, ATP2B2, DAGLA, CACNA1C, CANX, CDH2, COL13A1, DAG1, DBN1, DMD, EFNB2, EPHA4, EPHB2, ERBB4, F2R, FMR1, GABRB2, GLRB, GRIA2, GRIK3, GRM3, HIP1, KCNC2, NRCAM, P2RY1, PCDH8, PTEN, SLC6A1, STRN, TIAM1, UTRN, PICALM, NRP1, DNAJA3, GABBR2, ARHGAP32, PJA2, PDLIM5, CPEB3, SHANK2, SYNE1, PSD3, SRGAP2, GRIP1, FLRT3, NSMF, PCDH17, MINK1, ABHD17B, ADAM22, SEMA4C, CAMK2N1, ANKS1B, GOPC, PRR12, KCTD16, CPEB4, ATAD1, TANC1, KCTD12, FBXO45
CC	GO:0032433	filopodium tip	8/2640	1.01E-02	EPHB1, FMR1, UBE2K, MYO5A, MYO10, FZD3, ABI2, OSBPL3
CC	GO:0019867	outer membrane	43/2640	1.07E-02	ACACB, BCL2, BCL2L2, BID, ATF2, DDX3X, EPHA4, ACSL1, ACSL3, ACSL4, FOXO3, MTOR, GJA1, HADHB, MCL1, SLC11A2, OPA1, PPP1CC, RPS6KB1, RPS27A, VAMP1, SNN, MFN2, BCL2L11, DNM1L, VAT1, MLXIP, ACSL6, SYNE1, SLC44A1, ARMCX1, VPS13C, RHOT1, AGPAT5, AGK, ANKH, GPAM, FUNDC2, CYB5B, NAV3, SLC25A46, LRRK2, TOMM5
CC	GO:0005774	vacuolar membrane	77/2640	1.07E-02	AP1G1, ATP6V1A, SCARB2, CLCN5, CLTC, EEF1A1, STOM, MTOR, B4GALT1, GNAI3, GNAQ, GNB1, HSP90AB1, IGF2R, LAMP1, LAMP2, LDLR, LNPEP, LRP1, SLC11A2, NSF, PLD1, RAB2A, RAP1B, VLDLR, YWHAB, STX7, CD164, NAPG, AP1S2, SPAG9, VAPA, LITAF, TMEM59, ATP6V1G1, LAPTM4A, VTI1B, GLIPR1, ATP11B, DNAJC13, SZT2, ABCA5, ZFYVE26, MMD, SNAPIN, GABARAPL1, SLC17A5, AP3M1, OSTM1, RAB14, ATP6V1H, TMEM106B, ARL8B, WDR41, DRAM1, WDR11, TMEM30A, GOPC, SLC7A14, RRAGD, GNB4, VPS33A, LPCAT1, CYBRD1, ITM2C, VMP1, SEH1L, MAGT1, SPPL2A, LTV1, ABCC10, VASN, DRAM2, C12orf66, ABCA13, ZNRF2, ATP11C
CC	GO:0005876	spindle microtubule	17/2640	1.09E-02	CALM1, CALM2, CALM3, CDC27, CLTC, HNRNPU, KIF11, PAFAH1B1, DYNLT3, CUL3, RAB11A, KIF3B, KLHL21, MAPRE1, KIF4A, MAP9, CCSAP
CC	GO:0000776	kinetochore	31/2640	1.24E-02	APC, CENPF, DYNC1LI2, HNRNPU, PPP1R12A, ORC2, PAFAH1B1, PPP1CC, SUMO3, DYNLT3, TP53BP1, TPR, XPO1, SMC1A, KAT2B, BUB3, FBXO28, CBX5, SS18L1, DCTN4, NDE1, CENPK, MEAF6, CENPO, NDEL1, SEH1L, KAT8, PHF6, DCTN5, SPC24, NUP43
CC	GO:0031091	platelet alpha granule	23/2640	1.25E-02	ACTN1, ALDOA, APLP2, APP, FN1, HGF, IGF1, SERPINE1, PCDH7, SERPINE2, SPARC, STXBP1, TGFB2, THBS1, TMSB4X, VEGFA, VEGFB, PHACTR2, VTI1B, OLA1, TMX3, SYTL4, NHLRC2
CC	GO:0005942	phosphatidylinositol 3-kinase complex	10/2640	1.30E-02	PIK3C2A, PIK3C3, PIK3CB, PIK3CG, PIK3R1, PIK3R3, SOCS2, SOCS6, SOCS5, SOCS7
CC	GO:0035097	histone methyltransferase complex	22/2640	1.30E-02	EZH2, HCFC1, JARID2, KMT2A, KDM5A, RBBP4, REST, KDM6A, KDM5B, MTF2, KDM4B, MGA, CBX5, SUZ12, ZNF451, PHF19, PHF20, ZNF462, KMT2C, WDR82, KAT8, ZNF827
CC	GO:0019897	extrinsic component of plasma membrane	36/2640	1.38E-02	ANXA1, APC, RHOA, CDH2, CDH6, CDH11, CTNND1, PTK2B, FER, FMR1, FRK, FYN, GNA12, GNAI2, GNAI3, GNAQ, GNAS, GNAZ, GNB1, HIP1, SMAD7, SERPINE2, SNAP25, TIAM1, YES1, PICALM, EEA1, NUMB, DNAJA3, GNA13, AAK1, GNG13, ERRFI1, GNG12, ESYT2, STXBP5
CC	GO:0098945	intrinsic component of presynaptic active zone membrane	8/2640	1.41E-02	ATP2B1, ATP2B4, CANX, CDH2, GPM6A, P2RY1, NRXN1, SYT11
CC	GO:0048786	presynaptic active zone	19/2640	1.43E-02	APP, ATP2B1, ATP2B4, CANX, CDH2, CTNND1, GAD1, GPM6A, P2RY1, STXBP1, FZD3, NRXN1, RIMS3, SV2A, RIMS1, UNC13A, SYT11, PNISR, PCLO
CC	GO:0031968	organelle outer membrane	42/2640	1.43E-02	ACACB, BCL2, BCL2L2, BID, ATF2, DDX3X, EPHA4, ACSL1, ACSL3, ACSL4, FOXO3, MTOR, GJA1, HADHB, MCL1, SLC11A2, OPA1, PPP1CC, RPS6KB1, RPS27A, VAMP1, SNN, MFN2, BCL2L11, DNM1L, VAT1, MLXIP, ACSL6, SYNE1, SLC44A1, ARMCX1, VPS13C, RHOT1, AGPAT5, AGK, GPAM, FUNDC2, CYB5B, NAV3, SLC25A46, LRRK2, TOMM5
CC	GO:0070382	exocytic vesicle	43/2640	1.43E-02	ADAM10, APP, BDNF, CALM3, CLCN3, IGF1, LAMP1, RAB8A, MME, NTF3, RAB3B, RAB6A, RAB27B, SNAP25, VAMP1, SYPL1, PICALM, STX7, VAMP4, VAMP3, SCAMP1, SV2A, DNM1L, VTI1B, RAB10, UNC13A, SYT11, DMXL2, WDR7, SNAPIN, SLC17A5, APH1A, TRAPPC4, SEMA4C, SYT13, NDEL1, CTTNBP2, SYTL4, LRRK2, TPRG1L, SYNPR, STXBP5, VTI1A

CC	GO:0032839	dendrite cytoplasm	11/2640	1.46E-02	CANX, GRIK3, HNRNPU, KIF5C, MAP2, MAPK1, PURA, MAP2K4, GABARAPL1, TRAK2, LRRK2
CC	GO:0045178	basal part of cell	15/2640	1.47E-02	ANK3, BMPR2, DST, EDN1, ERBB2, ERBB3, ERBB4, HFE, ITGA6, MET, SLC11A2, PKD2, SLC23A2, DOCK7, PHLDB2
CC	GO:0005795	Golgi stack	33/2640	1.51E-02	GALNT1, GALNT2, GALNT3, B4GALT1, GOLGA2, NSF, OCRL, RAB27B, ST6GAL1, ST3GAL1, SORL1, USO1, B4GALT4, ASAP2, B4GALT6, B4GALT5, TMEM59, FUT9, RAB21, TMED3, TMEM87A, RAB30, GOLIM4, APH1A, GOLGA7, TRAPPC4, RAB14, GOLPH3L, SMPD3, GOLPH3, VCPIP1, SLC10A7, YIPF6
CC	GO:0030658	transport vesicle membrane	43/2640	1.52E-02	AP1G1, AREG, CALM3, CLCN3, CLTC, ITPR1, LAMP1, RAB1A, RAB3B, RAB27B, SNTB2, VAMP1, SYPL1, USO1, VAMP4, VAMP3, SCAMP1, SEC24C, SV2A, SEC16A, PDCD6, DNM1L, CNIH1, VTI1B, TMED10, SEC23IP, SEC31A, UNC13A, SYT11, DMXL2, SNAPIN, SLC17A5, SEMA4C, TMEM30A, SAR1A, MCFD2, SYTL4, LRRK2, TPRG1L, SYNPR, VTI1A, SPRED2, VMA21
CC	GO:0030863	cortical cytoskeleton	27/2640	1.72E-02	ACTB, SHROOM2, CALD1, CAPZA1, CAPZA2, CDH2, DBN1, EEF1A1, HFE, HIP1, LASP1, MYH9, SPTAN1, SPTBN1, UTRN, EZR, WASL, RIMS3, ACTR3, AKAP13, MAPRE1, RIMS1, NSMF, PCLO, DCDC2, LANCL2, WIPF2
CC	GO:0005884	actin filament	26/2640	1.84E-02	ACTN1, ANXA1, DBN1, FYN, MYO1B, MYO5A, PAWR, PKD2, RAC1, SMTN, TPM3, TSC1, EZR, YES1, WASL, DNAJA3, PDLIM5, NCKAP1, AKAP13, PALLD, RHOQ, CD2AP, GNG12, WIPF2, AMOT, FMN1
CC	GO:0071782	endoplasmic reticulum tubular network	8/2640	1.89E-02	ASPH, KPNB1, RAB10, RAB3GAP1, RAB18, ATL3, RTN4, ATL2
CC	GO:0032153	cell division site	18/2640	1.92E-02	ARF6, RHOA, RND3, ECT2, MYH9, MYH10, MYLK, PPP1CC, PKN2, RALA, RAB11A, PLK4, RAB21, SSH1, NDE1, CEP55, SPIRE1, RAB11FIP4
CC	GO:0042470	melanosome	25/2640	1.92E-02	CALU, CANX, CLTC, STOM, FASN, HSP90AA1, HSP90AB1, LAMP1, MYO5A, NAP1L1, RAB1A, RAB2A, RAB27B, RAC1, RAN, SYPL1, TFRC, YWHAB, GPNMB, GNA13, ERP29, TMED10, TMEM33, ANKRD27, HPS4
CC	GO:0048770	pigment granule	25/2640	1.92E-02	CALU, CANX, CLTC, STOM, FASN, HSP90AA1, HSP90AB1, LAMP1, MYO5A, NAP1L1, RAB1A, RAB2A, RAB27B, RAC1, RAN, SYPL1, TFRC, YWHAB, GPNMB, GNA13, ERP29, TMED10, TMEM33, ANKRD27, HPS4
CC	GO:0032155	cell division site part	17/2640	1.96E-02	ARF6, RHOA, ECT2, MYH9, MYH10, MYLK, PPP1CC, PKN2, RALA, RAB11A, PLK4, RAB21, SSH1, NDE1, CEP55, SPIRE1, RAB11FIP4
CC	GO:1902562	H4 histone acetyltransferase complex	13/2640	1.98E-02	ACTB, HCFC1, YEATS4, KAT2B, BRD8, MSL2, MRGBP, KANSL3, YEATS2, MEAF6, EPC1, KAT8, KANSL1L
CC	GO:0035861	site of double-strand break	16/2640	1.98E-02	ATF2, HUS1, POLH, TP53, TP53BP1, VCP, ARPC5, ACTR3, RAD50, ARPC1A, SMCHD1, ZBTB7A, RNF138, RIF1, RNF168, RNF169
CC	GO:0045177	apical part of cell	70/2640	2.59E-02	JAG1, ANXA1, APP, SHROOM2, ATP1B1, ATP2B1, ATP6V1A, ATP7A, BMPR2, CA2, CD44, CDH2, CLCN5, DSG2, ERBB2, ERBB3, FN1, GJA1, GNAS, HFE, HSP90AB1, IL6R, ITPK1, KCNC2, KCNK1, LDLR, LMO7, LRP1, MYO1B, MSN, MYO5B, SLC11A2, DDR2, P2RY1, PDE4D, ATP8B1, PLD1, PRKAA1, PTEN, RAB27B, SCNN1A, SLC9A1, SLC12A2, ADAM17, TJP1, EZR, FZD3, SORBS2, NUMB, CLDN1, VAMP3, SLC4A7, RAPGEF2, SLC23A2, CHL1, AHCYL1, SHANK2, DSTYK, CLIC4, STK39, NPC1L1, NIN, RAPGEF6, TMEM30A, SLC30A5, PARD6B, MTDH, DRAM2, AMOTL1, OCLN
CC	GO:0005834	heterotrimeric G-protein complex	10/2640	2.60E-02	GNA12, GNAI2, GNAI3, GNAQ, GNAS, GNAZ, GNB1, GNA13, GNG13, GNG12
CC	GO:1905360	GTPase complex	10/2640	2.60E-02	GNA12, GNAI2, GNAI3, GNAQ, GNAS, GNAZ, GNB1, GNA13, GNG13, GNG12
CC	GO:0008021	synaptic vesicle	39/2640	2.62E-02	ADAM10, APP, BDNF, CALM3, CLCN3, LAMP1, RAB8A, MME, NTF3, RAB3B, RAB27B, SNAP25, VAMP1, SYPL1, PICALM, STX7, VAMP4, VAMP3, SCAMP1, SV2A, DNM1L, VTI1B, RAB10, UNC13A, SYT11, DMXL2, WDR7, SNAPIN, SLC17A5, APH1A, TRAPPC4, SEMA4C, NDEL1, CTTNBP2, LRRK2, TPRG1L, SYNPR, STXBP5, VTI1A
CC	GO:0005681	spliceosomal complex	38/2640	2.62E-02	CDC5L, DDX5, HNRNPA2B1, HNRNPC, HNRNPF, HNRNPH1, HNRNPH3, HNRNPK, HNRNPU, PNN, RBM3, SRSF1, SRSF2, TRA2B, AQR, RBM8A, HNRNPR, SF3B4, SMNDC1, PRPF8, SYF2, AAR2, PABPC1, MYEF2, WAC, LSM7, LUC7L3, PRPF38B, SMU1, RBM41, PRPF40A, LUC7L, RBM22, SNIP1, PRPF38A, RBM17, SREK1, HNRNPA3
CC	GO:0098589	membrane region	61/2640	2.72E-02	ADCY2, ADD3, BIRC3, APP, FASLG, ATP1A2, ATP1B1, ATP2B1, ATP2B4, ATP7A, BMPR1A, BMPR2, CBL, CBLB, CDH2, CRK, CXADR, DAG1, DMD, STOM, EPHB1, F2R, PTK2B, FYN, GJA1, GNAI2, GNAI3, GPM6B, HAS2, INSR, JAK2, LAMP2, CD46, MME, OLR1, PLSCR1, PPP2R1B, PRKAR1A, PRKAR2A, MAPK1, PTCH1, PTGS2, RAP2B, RET, SLC9A1, ADAM17, TGFBR1, TGFBR2, EZR, XPO1, SORBS1, ERLIN2, BICD2, GRIP1, RHOQ, CORO1C, PAG1, SMURF2, LRRK2, SPRED1, PIKFYVE
CC	GO:0033116	endoplasmic reticulum-Golgi intermediate	18/2640	2.87E-02	AREG, CLN8, GOLGA2, RAB2A, ROBO1, CNIH1, TMED10, TMED3, TMED5, ERGIC2, ERGIC1, PRRG4, VMP1, MCFD2, SPPL3, WHAMM, TBC1D20, VMA21

		compartment membrane			
CC	GO:0044291	cell-cell contact zone	18/2640	2.87E-02	ACTN1, ANK3, ATP1A2, ATP1B1, CDH2, DSC2, DSG2, FGF13, GJA1, KCNJ2, PCDH9, RAP2B, SLC9A1, TIAM1, VCL, PKP4, RAP2C, TMEM65
CC	GO:0030134	COPII-coated ER to Golgi transport vesicle	22/2640	2.89E-02	APP, AREG, GOLGA2, USO1, SEC24C, SEC16A, PDCD6, CNIH1, VTI1B, TMED10, SEC23IP, SEC31A, DDHD2, TMED3, TMED5, ERGIC2, SAR1A, MCFD2, VTI1A, VMA21, TMED4, YIPF6
CC	GO:0030140	trans-Golgi network transport vesicle	10/2640	3.20E-02	AP1G1, ATP7A, CLTC, IGF2R, RAB8A, RAB27B, TGOLN2, TMED10, RAB14, GOPC
CC	GO:0005844	polysome	18/2640	3.28E-02	BTF3, EIF2S1, FMR1, MYH10, VBP1, VIM, EIF4H, FXR1, LARP4B, LARP1, AGO1, AGO2, HSPA14, LARP6, NUFIP2, LARP4, NAA30, MSI2
CC	GO:0000922	spindle pole	34/2640	3.31E-02	CALM1, CALM2, CALM3, CENPF, GOLGA2, HNRNPU, KIF11, NPM1, TPT1, SMC1A, CUL3, PKP4, CDC14A, RAB11A, CEP104, KLHL21, FRY, STAG1, STAG2, NEK6, TPX2, GPSM2, DCTN4, NIN, YPEL5, NDE1, BCCIP, BIRC6, KATNAL1, EFHC1, UBXN2B, NEK7, POC1B, FAM110C
CC	GO:0031527	filopodium membrane	7/2640	3.56E-02	ARF6, DMD, ITGA3, ITGAV, MYO10, UTRN, ANTXR1
CC	GO:0010369	chromocenter	6/2640	3.62E-02	FMR1, CBX1, SCMH1, CBX5, MBD5, MBD6
CC	GO:0031588	nucleotide-activated protein kinase complex	6/2640	3.62E-02	PRKAA1, PRKAR1A, PRKAR2A, SIK2, SESN2, SIK1
CC	GO:0038201	TOR complex	6/2640	3.62E-02	MTOR, LARP1, SESN1, SESN2, SESN3, RICTOR
CC	GO:0099056	integral component of presynaptic membrane	18/2640	3.65E-02	ATP2B1, ATP2B4, CANX, CDH2, EFNB2, EPHA4, EPHB2, ERBB4, GPM6A, GRM3, KCNJ3, P2RY1, SLC1A2, SLC6A1, NRXN1, SYT11, PCDH17, APH1A
CC	GO:0016328	lateral plasma membrane	15/2640	3.68E-02	ANK3, ANXA1, APC, DMD, DSG2, ERBB3, FGF13, GJA1, GNA12, FZD3, CLDN1, CORO1C, GPSM2, VANGL1, OCLN
CC	GO:0045121	membrane raft	58/2640	3.72E-02	ADCY2, ADD3, BIRC3, APP, FASLG, ATP1A2, ATP1B1, ATP2B1, ATP2B4, ATP7A, BMPR1A, BMPR2, CBL, CBLB, CDH2, CRK, CXADR, DAG1, DMD, STOM, EPHB1, F2R, PTK2B, FYN, GJA1, GNAI2, GNAI3, GPM6B, HAS2, INSR, JAK2, LAMP2, MME, OLR1, PLSCR1, PPP2R1B, PRKAR1A, PRKAR2A, MAPK1, PTCH1, PTGS2, RAP2B, RET, SLC9A1, ADAM17, TGFBR1, TGFBR2, EZR, SORBS1, ERLIN2, GRIP1, RHOQ, CORO1C, PAG1, SMURF2, LRRK2, SPRED1, PIKFYVE
CC	GO:0030139	endocytic vesicle	56/2640	3.88E-02	ARF6, ATP7A, CAMK2D, SCARB2, CLCN3, CLTC, FLNB, GRIA2, HIP1, HSP90AA1, IGF2R, ITGAV, KIF5B, LAMP1, LAMP2, LDLR, LRP1, RAB8A, MYO1E, OCRL, PIK3C3, PLD1, PTCH1, RALA, RPS27A, SPARC, STXBP1, VIM, WNT1, WNT5A, FZD5, PICALM, FZD4, STX7, RAB11A, WASL, RABEP1, VAMP3, RAPGEF2, RAB10, SYT11, SRGAP2, GPR161, CD2AP, APPL1, GOLIM4, SH3KBP1, RAB14, RAPGEF6, RAB22A, RAB11FIP1, RAB11FIP4, FCHO2, AMOT, STXBP4, OCLN
CC	GO:0016592	mediator complex	11/2640	3.89E-02	MED1, MED21, MED17, MED26, MED12, MED13, MED6, CDK19, MED13L, MED29, MED12L
CC	GO:0098857	membrane microdomain	58/2640	3.89E-02	ADCY2, ADD3, BIRC3, APP, FASLG, ATP1A2, ATP1B1, ATP2B1, ATP2B4, ATP7A, BMPR1A, BMPR2, CBL, CBLB, CDH2, CRK, CXADR, DAG1, DMD, STOM, EPHB1, F2R, PTK2B, FYN, GJA1, GNAI2, GNAI3, GPM6B, HAS2, INSR, JAK2, LAMP2, MME, OLR1, PLSCR1, PPP2R1B, PRKAR1A, PRKAR2A, MAPK1, PTCH1, PTGS2, RAP2B, RET, SLC9A1, ADAM17, TGFBR1, TGFBR2, EZR, SORBS1, ERLIN2, GRIP1, RHOQ, CORO1C, PAG1, SMURF2, LRRK2, SPRED1, PIKFYVE
CC	GO:0031234	extrinsic component of cytoplasmic side of plasma membrane	21/2640	4.21E-02	RHOA, PTK2B, FER, FRK, FYN, GNA12, GNAI2, GNAI3, GNAQ, GNAS, GNAZ, GNB1, HIP1, SNAP25, TIAM1, YES1, GNA13, GNG13, ERRFI1, GNG12, ESYT2
CC	GO:0005905	clathrin-coated pit	17/2640	4.32E-02	APP, CLTC, HIP1, LDLR, LRP1, OCRL, TFRC, VLDLR, PICALM, AP1S2, DNM1L, AAK1, FNBP1, SH3BP4, NECAP1, LRP10, FCHO2
CC	GO:0005793	endoplasmic reticulum-Golgi	27/2640	4.32E-02	AREG, CLN8, FN1, GOLGA2, HMGB1, RAB2A, ROBO1, MTMR6, IST1, CNIH1, TMED10, SEC23IP, ERP44, DDHD2, DICER1, TMED3, TMED5, ERGIC2, ERGIC1, PRRG4, VMP1, MCFD2, SPPL3, WHAMM, TBC1D20, VMA21, TMED4

		intermediate compartment			
CC	GO:0001650	fibrillar center	28/2640	4.34E-02	CHD1, KLF6, FOXA1, SMAD7, NFIB, NFIC, UBTF, EZR, SMARCA5, USO1, NOLC1, ARHGAP32, SPATA2, MALT1, SAMD4A, WDR43, RAI14, HERC4, AFF4, SESN1, IPO11, FAM111A, AKNA, RPAIN, MTDH, IMP4, MBD6, JAZF1
CC	GO:0098862	cluster of actin-based cell projections	31/2640	4.36E-02	ACTN1, ADD3, ATP7A, CAPZA2, EPS8, FLNB, B4GALT1, GNA12, HSP90AB1, KCNK1, MME, MYO1B, MYH9, MYH10, MYO1E, SLC11A2, PAFAH1B1, ATP8B1, EZR, CDC14A, SLC4A7, DOCK4, DNM1L, ACTR3, GNA13, SHANK2, SLC7A11, NPC1L1, DCDC2, SLC38A2, CYBRD1
CC	GO:0000159	protein phosphatase type 2A complex	7/2640	4.44E-02	PPP2R1B, PPP2R2A, PPP2R2C, PPP2R5A, PPP2R5E, IER5, PPP2R2D
CC	GO:0044853	plasma membrane raft	24/2640	4.44E-02	ADD3, FASLG, ATP1A2, ATP1B1, ATP2B4, BMPR1A, BMPR2, CBL, CDH2, DAG1, F2R, HAS2, INSR, JAK2, PRKAR1A, PRKAR2A, MAPK1, PTCH1, PTGS2, TGFBR2, EZR, CORO1C, LRRK2, SPRED1
CC	GO:0019005	SCF ubiquitin ligase complex	16/2640	4.44E-02	CKS1B, SKP1, SKP2, CUL5, CUL4B, CUL3, FBXW11, ARIH1, FBXL2, FBXL3, FBXL5, CACYBP, USP47, FBXL17, SPSB1, FBXO45
CC	GO:0035102	PRC1 complex	6/2640	4.75E-02	BMI1, PHC2, PCGF2, CBX4, PHC3, PCGF5
CC	GO:0045120	pronucleus	6/2640	4.75E-02	CCNA2, CENPF, EZH2, CBX1, RIF1, TET3
CC	GO:0000235	astral microtubule	5/2640	4.75E-02	PAFAH1B1, DYNLT3, MAPRE1, MAP9, CCSAP
CC	GO:0005818	aster	5/2640	4.75E-02	PAFAH1B1, DYNLT3, MAPRE1, MAP9, CCSAP
CC	GO:0031932	TORC2 complex	5/2640	4.75E-02	MTOR, SESN1, SESN2, SESN3, RICTOR
CC	GO:0031985	Golgi cisterna	25/2640	4.85E-02	GALNT1, GALNT2, GALNT3, B4GALT1, GOLGA2, ST6GAL1, ST3GAL1, SORL1, B4GALT4, ASAP2, B4GALT6, B4GALT5, TMEM59, FUT9, RAB21, TMED3, TMEM87A, RAB30, GOLIM4, APH1A, GOLPH3L, SMPD3, GOLPH3, SLC10A7, YIPF6
CC	GO:0099522	region of cytosol	8/2640	4.90E-02	DAG1, DBN1, MTOR, PRKCB, PTEN, LRRK2, STXBP5, FBXO45
MF	GO:0001228	DNA-binding transcription activator activity, RNA polymerase II-specific	122/2563	2.09E-10	AR, KLF5, RUNX2, RUNX1, CDC5L, CEBPG, KLF6, CREB1, ATF2, DLX2, E2F3, EGR1, ELF1, ELK3, EP300, ERG, ESR1, ESRRG, ETS1, ETV1, ETV6, FOXF2, FOXO3, FOSL2, GABPA, GATA3, NR6A1, NR3C1, HCFC1, HLF, FOXA1, HNRNPK, HOXA1, HOXA5, HOXC11, HOXC13, HOXD10, RBPJ, FOXK2, SMAD1, SMAD2, SMAD4, MAFG, MEF2A, MEF2C, MEF2D, MEIS1, MEIS2, MITF, MTF1, NEUROD1, NFIA, NFATC3, NFE2L2, NFIB, NFIC, NFKB1, NR4A2, PBX1, PITX1, PKNOX1, PLAG1, PLAGL2, PLSCR1, POU3F2, PPARA, REL, REST, RORA, RORB, SALL2, SIX1, SOX2, SOX4, SOX9, SP1, SRF, STAT1, STAT3, TCF4, TBX3, TCF12, TFDP1, TFDP2, KLF10, TP53, NR2C2, ZNF24, VEZF1, FOSL1, HMGA2, KLF7, TP63, FUBP3, ONECUT2, LITAF, CLOCK, ZEB2, MAFB, DMTF1, STAG1, CTCF, NFAT5, MLXIP, FOXJ3, ATF6, ZNF292, MYT1L, MGA, SATB2, PATZ1, GRHL1, LEF1, KLF13, SIX4, ALX4, IRF2BPL, BCL11B, CSRNP3, AKNA, CREBRF, IRF2BP2
MF	GO:0004842	ubiquitin-protein transferase activity	108/2563	5.87E-10	BIRC3, XIAP, BRCA1, CBL, CBLB, CDC42, UBE2K, LMO7, NEDD4, CNOT4, MED1, RNF4, SKP1, SKP2, TNFAIP3, UBE2A, UBE2D1, UBE2D3, UBE2E2, UBE2H, UBE2L3, UBE2V2, UBE3A, VHL, RNF103, CUL5, CUL3, HERC3, TRIP12, UBE4A, MED21, RNF14, RNF144A, RNF40, PJA2, AREL1, KLHL21, MED12, MALT1, WWP1, RNF139, RNF24, MYCBP2, FBXW11, TRIM2, MKRN1, ARIH1, FBXL2, HECTD1, LTN1, HERC4, FBXW2, FBXL3, FBXL5, RNF11, KLHL20, RLIM, RNFT1, UBR5, RNF138, DTL, TRIM33, UBE2D4, RNF111, MSL2, RNF220, UBE2W, G2E3, KCMF1, PELI1, BIRC6, RNF150, HECW2, MIB1, KLHL42, SH3RF1, RNF213, UBE2O, IRF2BPL, SMURF2, RMND5A, FBXL17, GID4, HECTD3, RNF122, CBLL1, FBXO11, ZFP91, RNF170, SYVN1, KLHL13, UBE2Q2, RNF157, RNF19B, UBR3, TRIM71, HECTD2, RC3H1, RNF187, RNF38, RNF217, RNF168, RNF182, ZNRF2, RNF144B, RNF149, TRIM59, RNF165
MF	GO:0019787	ubiquitin-like protein transferase activity	113/2563	5.87E-10	BIRC3, XIAP, BRCA1, CBL, CBLB, CDC42, UBE2K, LMO7, NEDD4, CNOT4, MED1, RNF4, SKP1, SKP2, TNFAIP3, UBE2A, UBE2D1, UBE2D3, UBE2E2, UBE2H, UBE2I, UBE2L3, UBE2V2, UBE3A, VHL, RNF103, CUL5, CUL3, CBX4, HERC3, PIAS2, TRIP12, UBE4A, MED21, RNF14, RNF144A, RNF40, PJA2, AREL1, KLHL21, MED12, MALT1, WWP1, RNF139, RNF24, MYCBP2, FBXW11, TRIM2, MKRN1, ARIH1, FBXL2, HECTD1, ZNF451, LTN1, HERC4, FBXW2, FBXL3, FBXL5, RNF11, KLHL20, RLIM, RNFT1, UBR5, RNF138, DTL, TRIM33, UBE2D4, RNF111, MSL2, RNF220, UBE2W, G2E3, KCMF1, PELI1, ZMIZ1, BIRC6, RNF150, HECW2, MIB1, KLHL42, SH3RF1, RNF213, UBE2O, IRF2BPL, SMURF2, RMND5A, FBXL17, GID4, HECTD3, RNF122, CBLL1, FBXO11, ZFP91, RNF170, SYVN1, KLHL13, UBE2Q2, RNF157, RNF19B, UBR3, TRIM71, HECTD2, RC3H1, RNF187, RNF38, RNF217, RNF168, RNF182, ZNRF2, RNF144B, RNF149, TRIM59, RNF165
MF	GO:0046332	SMAD binding	37/2563	2.69E-09	ACVR2B, BMPR1A, BMPR1B, BMPR2, COL5A2, DDX5, FKBP1A, SMAD1, SMAD2, SMAD4, SMAD7, MEF2A, PPM1A, PURA, PURB, SKI, SKIL, TCF12, TGFBR1, TGFBR2, TGIF1, YY1, HMGA2, USP9X, TGFBRAP1, ZEB2, MAGI2, USP15, TOB1, IPO7, HIPK2, ZBTB7A, TRIM33, RNF111, PMEPA1, SMURF2, ACVR1C

MF	GO:0031267	small GTPase binding	110/2563	8.90E-07	ABR, ADRB1, AP1G1, ATP7A, BICD1, RCC1, CHM, CHML, DIAPH1, DOCK1, ECT2, EPS8, GDI1, KPNB1, TNPO1, IPO5, RAB8A, MYO5A, MYO5B, NSF, OCRL, PAK2, PKN2, RAC1, ROCK1, SORL1, SOS2, TIAM1, TRIO, XPO1, EVI5, PICALM, KIF3B, ROCK2, RAPGEF2, USP6NL, DOCK4, RAPGEF5, RIMS3, TBC1D4, RABGAP1L, RANBP9, DNM1L, RASGRP1, OPTN, ABI2, DENND4A, NET1, VAV3, IPO7, CDC42EP3, EXOC5, NCKAP1, RALBP1, EHD1, RAPGEF4, AKAP13, RAB11FIP2, PPP6R1, RAB3GAP1, RIMS1, DAAM1, XPO7, MYCBP2, EXPH5, GGA3, BICD2, DMXL2, ARHGEF12, SRGAP2, CORO1C, RABGAP1, SH3BP4, TBC1D10B, AP3M1, NPC1L1, STRN3, ITSN2, ARHGEF3, IPO11, TRAPPC4, PEX5L, RAPGEF6, ERRFI1, WDR44, ARHGAP17, WDR41, TBC1D22B, DENND4C, CDC42SE1, CDC42SE2, PLEKHG1, XPO5, ALS2, RAB11FIP1, ANKRD27, RAB11FIP4, PARD6B, DOCK7, HPS4, SYTL4, LRRK2, WHAMM, TBC1D20, SGSM1, STXBP5, DOCK11, RUNDC1, DENND1B, RGPD8
MF	GO:0045296	cadherin binding	88/2563	8.90E-07	ALDOA, ANK3, ANXA1, BMPR2, CALD1, CAPZA1, CBL, CDH2, CDH6, CDH11, CTNND1, DBN1, DDX3X, DDX6, EIF4G2, FASN, FLNB, GOLGA2, HCFC1, HNRNPK, HSP90AB1, DNAJB1, ITGA6, KIF5B, KTN1, LASP1, CD46, MYO1B, MYH9, PAK2, PCBP1, PKM, PKN2, PTPRJ, PTPRM, RAB1A, RAN, SH3GL1, SNX1, SPTAN1, SPTBN1, STAT1, TJP1, TMPO, VCL, EZR, EIF4H, YWHAB, PICALM, PKP4, USO1, NUMB, CDK5R1, LRRFIP1, VAPB, VAPA, SLK, IST1, WASF2, PDLIM5, RAB10, EHD1, PTPRT, MAPRE1, PDXDC1, SWAP70, MPRIP, DOCK9, LARP1, CD2AP, CHMP2B, GIGYF2, GAPVD1, SERBP1, TMOD3, OLA1, ASAP1, CHMP5, FNBP1L, LRRC59, PARVA, ZC3HAV1, RTN4, ESYT2, EIF2A, PHLDB2, VASN, MB21D2
MF	GO:0050839	cell adhesion molecule binding	120/2563	1.00E-06	ACTN1, ADAM10, ALDOA, ANK3, ANXA1, BMPR2, DST, CALD1, CAPZA1, CBL, CD151, CDH2, CDH6, CDH11, CTNND1, CXADR, DBN1, DDX3X, DDX6, DSG2, EIF4G2, FASN, FBN1, FGF2, FLNB, FN1, GOLGA2, HCFC1, NRG1, HMGB1, HNRNPK, HSP90AB1, DNAJB1, IGF1, ITGA6, ITGA3, ITGAV, ITGB8, KIF5B, KTN1, LASP1, LGALS8, CD46, MYO1B, MSN, MYH9, PAK2, PCBP1, PKM, PRKCA, PKN2, PTPRJ, PTPRM, PTPRZ1, RAB1A, RAN, SFRP2, SH3GL1, SNX1, SPTAN1, SPTBN1, STAT1, ADAM17, TGFBI, THBS1, TJP1, TMPO, UTRN, VCL, EZR, EIF4H, YWHAB, PICALM, SEMA7A, PKP4, USO1, NUMB, ADAM9, CDK5R1, LRRFIP1, VAPB, VAPA, NRXN1, SLK, IST1, EDIL3, WASF2, GPNMB, PDLIM5, RAB10, EHD1, ADAMTS5, PTPRT, MAPRE1, PDXDC1, SWAP70, MPRIP, DOCK9, LARP1, CD2AP, CHMP2B, GIGYF2, GAPVD1, SERBP1, TMOD3, OLA1, ASAP1, CHMP5, ADAM22, FNBP1L, LRRC59, PARVA, ZC3HAV1, RTN4, ESYT2, EIF2A, PHLDB2, VASN, MB21D2, NPNT
MF	GO:0003713	transcription coactivator activity	85/2563	1.09E-06	ACTN1, BCL9, BRCA1, CBFB, CREBBP, EP300, FGF2, GABPA, GATA3, GTF2A1, HCFC1, HMGB1, HMGB2, MEF2A, MNT, MTF1, NEUROD1, NPAT, NPM1, POU3F2, PPARA, MED1, PRKCB, RARA, RB1, KDM5A, RFXAP, RNF4, SMARCC2, SMARCD1, SMARCE1, SOX4, SP4, SS18, TAF11, ZEB1, TCF20, TFDP1, THRB, NR2C2, UBE2L3, UBE3A, YY1, ZFX, KAT6A, NCOA4, NCOA3, NRIP1, ARID1A, KLF7, NCOA1, KAT2B, PIAS2, MED21, MED17, MED26, MAGED1, NFE2L3, RNF14, SERTAD2, MED12, MED13, NR1D2, MED6, SRA1, YAP1, ZBTB18, NCOA2, ATF6, WWC1, GRIP1, WWTR1, SS18L1, MYCBP, TAF5L, HIPK2, CCAR1, ZMIZ1, RAP2C, KMT2C, MTDH, MYSM1, MED12L, JMY, NCOA7
MF	GO:0017016	Ras GTPase binding	106/2563	1.31E-06	ABR, ADRB1, AP1G1, ATP7A, BICD1, RCC1, CHM, CHML, DIAPH1, DOCK1, ECT2, EPS8, GDI1, KPNB1, TNPO1, IPO5, RAB8A, MYO5A, MYO5B, NSF, OCRL, PAK2, PKN2, RAC1, ROCK1, SOS2, TIAM1, TRIO, XPO1, EVI5, PICALM, KIF3B, ROCK2, RAPGEF2, USP6NL, DOCK4, RAPGEF5, RIMS3, TBC1D4, RABGAP1L, RANBP9, DNM1L, RASGRP1, OPTN, ABI2, DENND4A, NET1, VAV3, IPO7, CDC42EP3, EXOC5, NCKAP1, RALBP1, EHD1, RAPGEF4, AKAP13, RAB11FIP2, PPP6R1, RAB3GAP1, RIMS1, DAAM1, XPO7, MYCBP2, EXPH5, BICD2, DMXL2, ARHGEF12, SRGAP2, CORO1C, RABGAP1, SH3BP4, TBC1D10B, AP3M1, NPC1L1, STRN3, ITSN2, ARHGEF3, IPO11, TRAPPC4, RAPGEF6, WDR44, ARHGAP17, WDR41, TBC1D22B, DENND4C, CDC42SE1, CDC42SE2, PLEKHG1, XPO5, ALS2, RAB11FIP1, ANKRD27, RAB11FIP4, PARD6B, DOCK7, HPS4, SYTL4, LRRK2, WHAMM, TBC1D20, SGSM1, STXBP5, DOCK11, RUNDC1, DENND1B, RGPD8
MF	GO:0061659	ubiquitin-like protein ligase activity	65/2563	4.54E-06	BIRC3, XIAP, CBL, CBLB, CDC42, UBE2K, NEDD4, MED1, SKP1, SKP2, UBE3A, VHL, RNF103, PIAS2, UBE4A, MED21, RNF14, RNF144A, PJA2, AREL1, MED12, WWP1, RNF139, RNF24, MYCBP2, FBXW11, TRIM2, MKRN1, ARIH1, ZNF451, LTN1, FBXL3, RLIM, RNFT1, UBR5, RNF138, RNF111, MSL2, RNF220, KCMF1, PELI1, ZMIZ1, RNF150, HECW2, SH3RF1, UBE2O, IRF2BPL, SMURF2, FBXL17, GID4, RNF122, CBLL1, RNF170, SYVN1, RNF157, RNF19B, UBR3, TRIM71, RC3H1, RNF217, ZNRF2, RNF144B, RNF149, TRIM59, RNF165
MF	GO:0003725	double-stranded RNA binding	30/2563	5.54E-06	ACTN1, ADARB1, CLTC, DDX3X, EIF4A1, FMR1, HNRNPU, HSP90AB1, MBNL1, MSN, STAU1, TFRC, VIM, EIF4H, FXR1, PRKRA, LRRFIP1, DICER1, ZNF346, AGO1, STAU2, AGO2, ZFR, DGCR8, STRBP, MRPL44, MTDH, RC3H1, AGO3, AGO4
MF	GO:0061630	ubiquitin protein ligase activity	62/2563	1.03E-05	BIRC3, XIAP, CBL, CBLB, CDC42, UBE2K, NEDD4, MED1, SKP1, SKP2, UBE3A, VHL, RNF103, UBE4A, MED21, RNF14, RNF144A, PJA2, AREL1, MED12, WWP1, RNF139, RNF24, MYCBP2, FBXW11, TRIM2, MKRN1, ARIH1, LTN1, FBXL3, RLIM, RNFT1, UBR5, RNF138, RNF111, MSL2, RNF220, KCMF1, PELI1, RNF150, HECW2, SH3RF1, UBE2O, IRF2BPL, SMURF2, FBXL17, GID4, RNF122, CBLL1, RNF170, SYVN1, RNF157, RNF19B, UBR3, TRIM71, RC3H1, RNF217, ZNRF2, RNF144B, RNF149, TRIM59, RNF165
MF	GO:0004721	phosphoprotein phosphatase activity	53/2563	2.13E-05	ACP1, CDC25A, DUSP4, DUSP5, DUSP8, EYA4, MTM1, PPM1A, PPP1CC, PPP2R1B, PPP2R2A, PPP2R2C, PPP2R5A, PPP3CA, PPP3R1, PPP6C, PTEN, PTPN3, PTPN4, PTPN12, PTPN14, PTPRE, PTPRG, PTPRJ, PTPRK, PTPRM, PTPRR, PTPRZ1, PTP4A1, SHOC2, PTP4A2, PPM1D, CDC14A, RNGTT, MTMR3, MTMR6, MINPP1, CTDSPL, DUSP14, PTPN21, PTPRT, PHLPP2, CTDNEP1, PPA2, CTDSPL2, SSH1, PPP2R2D, PDP2, PPP1R3B, SSH2, UBLCP1, DUSP18, PPM1L
MF	GO:0042393	histone binding	56/2563	2.22E-05	ATRX, RCC1, CHD1, CHD2, CKS1B, FMR1, JAK2, KMT2A, MLLT3, MLLT6, NAP1L2, NASP, NPM1, PRKCB, KDM5A, RBBP4, SMARCC2, STAT1, TP53BP1, DEK, KAT6A, CHAF1B, SMARCA5, HAT1, CBX4, BAZ1B, USP15, IPO7, KDM5B, ZMYND11,

					SPIN1, BAZ2A, MTF2, PHF8, CBX5, SUZ12, KAT6B, BRD1, PYGO1, PHF19, ATAD2, LEF1, RSF1, NCAPG2, PHIP, YEATS2, KMT2E, KMT2C, TBL1XR1, KAT8, PHF6, MYSM1, PWWP2A, CDYL2, SPTY2D1, RNF168
MF	GO:0030371	translation repressor activity	15/2563	2.87E-05	EIF4EBP2, FMR1, IREB2, PURA, RARA, RBM3, SHMT1, CELF1, CPEB3, SAMD4A, PAIP2, CPEB4, TRIM71, CPEB2, PAIP2B
MF	GO:0097718	disordered domain specific binding	17/2563	4.01E-05	BCL2L2, CALM1, CALM2, CALM3, CLTC, FN1, FYN, GJA1, HSPA2, HSP90AA1, HSP90AB1, SMAD2, MYO5A, RB1, TP53, EZR, NCOA3
MF	GO:0003727	single-stranded RNA binding	33/2563	4.01E-05	ANXA1, DDX3X, DLX2, FMR1, HNRNPC, HNRNPF, HNRNPH1, HNRNPU, PABPC3, PTBP1, RBM3, ATXN1, EIF4H, CNBP, FXR1, CBX4, PABPC4, SRA1, KHDRBS1, CBX6, AGO1, DAZAP1, PABPC1, AGO2, RBMS3, A1CF, ZFR, STRBP, PABPC1L, LARP4, MSI2, AGO3, AGO4
MF	GO:0003730	mRNA 3'-UTR binding	32/2563	4.07E-05	ZFP36L1, ZFP36L2, DDX5, ELAVL3, ELAVL4, FMR1, HNRNPA2B1, HNRNPC, HNRNPU, PABPC3, RBM3, TIAL1, TP53, FXR1, PABPC4, PUM1, SECISBP2L, RNF40, HNRNPR, IGF2BP3, CPEB3, LARP1, PUM2, SERBP1, DAZAP1, PABPC1, RBMS3, CPEB4, PABPC1L, CPEB2, RC3H1, RBM24
MF	GO:0019199	transmembrane receptor protein kinase activity	29/2563	4.58E-05	ACVR2B, AXL, BMPR1A, BMPR1B, BMPR2, EPHA4, EPHA5, EPHB1, EPHB2, EPHB4, ERBB2, ERBB3, ERBB4, FGFR3, FGFR2, FLT1, IGF1R, IGF2R, INSR, KIT, MET, NTRK2, DDR2, PDGFRA, RET, TGFBR1, TGFBR2, NRP1, ACVR1C
MF	GO:0015631	tubulin binding	81/2563	8.97E-05	ALDOA, APC, DST, BRCA1, KRIT1, DAG1, DPYSL2, FGF13, FMR1, FYN, GJA1, GOLGA2, KIF5B, KIF5C, KIF11, STMN1, MAP1B, MAP2, MAP4, MID1, OPA1, PAFAH1B1, SPAST, TIAM1, TPR, VBP1, EZR, UNC5C, RAB11A, CDK5R1, VAPB, VAPA, KIF3B, MAP4K4, KIF23, CEP350, BCL2L11, DNM1L, ARL4C, MAPRE1, KIF21B, KIF1B, SYT11, CAMSAP2, KIF13B, ADNP, RABGAP1, GABARAPL1, KIF4A, EML2, APPL1, CACYBP, HOOK1, TPPP3, CCSER2, NDE1, ARL8B, STRBP, KIF21A, CCDC88A, BCCIP, MTUS1, TAOK1, KIF13A, MAP9, REEP4, NDEL1, KATNAL1, PHF6, HOOK3, DIXDC1, NAV3, EFHC1, FCHO2, LRRK2, WHAMM, CCSAP, TTBK2, CAMSAP1, FMN1, FAM110C
MF	GO:0060589	nucleoside-triphosphatase regulator activity	82/2563	1.19E-04	ABR, ALDH1A1, ARHGAP5, ATP1B1, BNIP2, KRIT1, CHM, CHML, CHN1, DOCK1, ECT2, GDI1, GNAQ, AGFG1, DNAJB1, IPO5, MYO9A, NF1, OCRL, OPHN1, RASA1, RP2, TSC1, EVI5, NRP1, ASAP2, WASL, DNAJA3, RABEP1, SLIT2, ARHGAP29, RASAL2, RAPGEF2, USP6NL, DOCK4, ARHGAP32, TBC1D4, RABGAP1L, DNM1L, FAM13A, RASA4, VAV3, IPO7, RALBP1, DNAJB4, RAB3GAP1, RIMS1, PLCB1, ARHGEF12, SRGAP2, RABGAP1, SH3BP4, TBC1D10B, TOR1AIP1, GAPVD1, RGS17, GIT1, DNAJC15, GPSM2, ASAP1, FAM13B, ERRFI1, ARHGAP17, TBC1D22B, DEPDC1, CDC42SE1, RALGAPB, FNIP2, DOCK5, ARHGAP24, SESN2, ANKRD27, ARAP2, LRRK2, TBC1D20, SGSM1, CPEB2, GRPEL2, STXBP5, RUNDC1, TOR1AIP2, RGPD8
MF	GO:0001227	DNA-binding transcription repressor activity, RNA polymerase II-specific	62/2563	1.66E-04	ZFHX3, BCL6, PRDM1, E2F1, ELK3, EN1, ERF, ETS2, ETV6, FOXO3, GATA3, HIVEP1, FOXK2, JARID2, MECP2, MITF, MNT, MXI1, NFATC3, NFKB1, PPARA, PURA, PURB, REST, SATB1, SKIL, SNAI2, SP3, TBX3, ZEB1, TGIF1, TRPS1, YY1, CNBP, ZNF148, ZNF202, ZNF217, BTG2, HMGA2, LRRFIP1, NFE2L3, ZEB2, ZBTB5, NR1D2, CTCF, KLF12, MYT1L, HIC2, RCOR1, ZBTB20, PURG, KCNIP3, ZBTB7A, BCL11A, CHCHD3, SOX6, ZBTB4, PHF6, FOXP2, FOXQ1, JDP2, ZFP90
MF	GO:0140030	modification-dependent protein binding	42/2563	1.95E-04	ATRX, CHD1, FMR1, KMT2A, MLLT3, RAD23A, KDM5A, TNFAIP3, TP53BP1, VCP, CBX4, USP15, OPTN, TNIP1, PRPF8, ZMYND11, SPIN1, BAZ2A, MTF2, ZBTB1, TAB2, PHF8, CBX5, SUZ12, PYGO1, PHF19, UBQLN2, UBQLN1, UBXN1, ZFAND6, ZRANB1, NCAPG2, PHIP, YEATS2, KMT2E, OTUD7B, SPRTN, KAT8, ANKRD13A, CDYL2, RNF168, RNF169
MF	GO:0045182	translation regulator activity	23/2563	2.10E-04	EIF4EBP2, FMR1, MTOR, IREB2, PURA, RARA, RBM3, RPL22, SHMT1, CNBP, FXR1, EIF2AK3, IGF2BP3, CELF1, CPEB3, SAMD4A, LARP1, PABPC1, PAIP2, CPEB4, TRIM71, CPEB2, PAIP2B
MF	GO:0030695	GTPase regulator activity	73/2563	2.66E-04	ABR, ALDH1A1, ARHGAP5, BNIP2, KRIT1, CHM, CHML, CHN1, DOCK1, ECT2, GDI1, GNAQ, AGFG1, IPO5, MYO9A, NF1, OCRL, OPHN1, RASA1, RP2, EVI5, NRP1, ASAP2, WASL, DNAJA3, RABEP1, SLIT2, ARHGAP29, RASAL2, RAPGEF2, USP6NL, DOCK4, ARHGAP32, TBC1D4, RABGAP1L, DNM1L, FAM13A, RASA4, VAV3, IPO7, RALBP1, RAB3GAP1, RIMS1, PLCB1, ARHGEF12, SRGAP2, RABGAP1, SH3BP4, TBC1D10B, GAPVD1, RGS17, GIT1, GPSM2, ASAP1, FAM13B, ERRFI1, ARHGAP17, TBC1D22B, DEPDC1, CDC42SE1, RALGAPB, DOCK5, ARHGAP24, SESN2, ANKRD27, ARAP2, LRRK2, TBC1D20, SGSM1, CPEB2, STXBP5, RUNDC1, RGPD8
MF	GO:0031625	ubiquitin protein ligase binding	70/2563	3.27E-04	APC, BCL2, BID, BRCA1, DBT, ERBB3, PTK2B, GSK3B, UBE2K, HSP90AA1, HSP90AB1, SMAD2, SMAD5, SMAD7, MID1, NFKBIA, PCBP2, PRKACB, PRKAR1A, PRKAR2A, PSMD1, RALA, RB1, RPS27A, SKI, TMBIM6, TP53, UBE2A, UBE2D1, UBE2D3, UBE2L3, VCL, VCP, FZD5, USP7, CUL5, FZD4, FZD8, CUL4B, CUL3, BLZF1, USP13, PIAS2, RNF40, MFN2, DNM1L, ABI2, TRIB1, ERLIN1, NEK6, FAF1, ERLIN2, ATF6, FAF2, SYT11, GABARAPL1, ARIH1, CACYBP, TRIB2, USP25, UBXN1, JKAMP, UBE2D4, NLK, UBE2W, YOD1, RTN4, DERL1, CACUL1, SPOPL
MF	GO:0004713	protein tyrosine kinase activity	39/2563	3.82E-04	ABL2, AXL, DYRK1A, EPHA4, EPHA5, EPHB1, EPHB2, EPHB4, ERBB2, ERBB3, ERBB4, PTK2B, FER, FGFR3, FGFR2, FLT1, FRK, FYN, IGF1R, IGF2R, INSR, JAK2, KIT, MET, NTRK2, DDR2, PDGFRA, MAP2K3, RET, MAP2K4, WEE1, YES1, NRP1, BAZ1B, HIPK3, TESK2, CAMKK2, DSTYK, HIPK2

MF	GO:0034212	peptide N-acetyltransferase activity	26/2563	3.83E-04	ATF2, CREBBP, EP300, HCFC1, TAF5, BRPF1, KAT6A, NCOA3, HAT1, NCOA1, KAT2B, GTF3C4, CLOCK, KAT6B, TAF5L, PHF20, RSF1, KANSL3, MEAF6, NAA25, NAA15, NAA50, EPC1, KAT8, NAA30, KANSL1L
MF	GO:0004402	histone acetyltransferase activity	23/2563	6.07E-04	ATF2, CREBBP, EP300, HCFC1, TAF5, BRPF1, KAT6A, NCOA3, HAT1, NCOA1, KAT2B, GTF3C4, CLOCK, KAT6B, TAF5L, PHF20, RSF1, KANSL3, MEAF6, NAA50, EPC1, KAT8, KANSL1L
MF	GO:0044389	ubiquitin-like protein ligase binding	72/2563	6.60E-04	APC, BCL2, BID, BRCA1, DBT, ERBB3, PTK2B, GSK3B, UBE2K, HSP90AA1, HSP90AB1, SMAD2, SMAD5, SMAD7, MID1, NFKBIA, PCBP2, PRKACB, PRKAR1A, PRKAR2A, PSMD1, RALA, RB1, RPS27A, SKI, SUMO3, STAT1, TMBIM6, TP53, UBE2A, UBE2D1, UBE2D3, UBE2L3, VCL, VCP, FZD5, USP7, CUL5, FZD4, FZD8, CUL4B, CUL3, BLZF1, USP13, PIAS2, RNF40, MFN2, DNM1L, ABI2, TRIB1, ERLIN1, NEK6, FAF1, ERLIN2, ATF6, FAF2, SYT11, GABARAPL1, ARIH1, CACYBP, TRIB2, USP25, UBXN1, JKAMP, UBE2D4, NLK, UBE2W, YOD1, RTN4, DERL1, CACUL1, SPOPL
MF	GO:0004725	protein tyrosine phosphatase activity	31/2563	6.60E-04	ACP1, CDC25A, DUSP4, DUSP5, DUSP8, EYA4, MTM1, PTEN, PTPN3, PTPN4, PTPN12, PTPN14, PTPRE, PTPRG, PTPRJ, PTPRK, PTPRM, PTPRR, PTPRZ1, PTP4A1, PTP4A2, CDC14A, RNGTT, MTMR3, MTMR6, DUSP14, PTPN21, PTPRT, SSH1, SSH2, DUSP18
MF	GO:0008187	poly-pyrimidine tract binding	15/2563	6.60E-04	FMR1, HNRNPC, HNRNPH1, HNRNPU, PABPC3, PTBP1, RBM3, ATXN1, PABPC4, KHDRBS1, DAZAP1, PABPC1, RBMS3, PABPC1L, MSI2
MF	GO:0048156	tau protein binding	18/2563	8.31E-04	ACTB, DYRK1A, EP300, FYN, GSK3B, HSPA2, HSP90AA1, HSP90AB1, SMAD2, MAP2, MARK3, PPP2R2A, PRKAA1, ROCK1, PICALM, ROCK2, TAOK1, TTBK2
MF	GO:0004674	protein serine/threonine kinase activity	95/2563	8.58E-04	ACVR2B, ATM, BMPR1A, BMPR1B, BMPR2, CAMK2D, CDK6, CHEK1, CSNK2A1, DYRK1A, PTK2B, MTOR, MKNK2, GSK3B, GTF2H1, MARK3, MAP3K1, MAP3K4, MAP3K5, MAP3K9, MYLK, PAK2, CDK17, PHKA1, PIK3CG, PRKAA1, PRKACB, PRKCA, PRKCB, PRKCE, PKN2, PRKDC, PRKG1, MAPK1, MAPK4, MAPK6, MAP2K3, ROCK1, RPS6KA3, RPS6KB1, MAP2K4, SGK1, NEK4, STK3, STK4, TGFBR1, TGFBR2, TRIO, PPM1D, CDK13, DCLK1, RPS6KA5, MAP4K4, EIF2AK3, ROCK2, ULK2, SLK, OXSR1, AKT3, HIPK3, TESK2, CAMKK2, PLK4, MAP3K2, NEK6, IRAK3, AKAP13, AAK1, STK38L, SMG1, CDK19, SIK2, SGK3, DSTYK, STK39, HIPK2, MINK1, IRAK4, NLK, CAB39, TRPM7, SNRK, TAOK1, WNK1, WNK3, NEK9, MYLK3, LRRK2, ACVR1C, NEK7, TTBK2, PDIK1L, SIK1, KSR2, C8orf44-SGK3
MF	GO:0061733	peptide-lysine-N-acetyltransferase activity	23/2563	8.58E-04	ATF2, CREBBP, EP300, HCFC1, TAF5, BRPF1, KAT6A, NCOA3, HAT1, NCOA1, KAT2B, GTF3C4, CLOCK, KAT6B, TAF5L, PHF20, RSF1, KANSL3, MEAF6, NAA50, EPC1, KAT8, KANSL1L
MF	GO:0017137	Rab GTPase binding	46/2563	8.58E-04	AP1G1, BICD1, CHM, CHML, GDI1, RAB8A, MYO5A, MYO5B, NSF, RAC1, EVI5, PICALM, USP6NL, RIMS3, TBC1D4, RABGAP1L, DNM1L, OPTN, DENND4A, EHD1, RAB11FIP2, RAB3GAP1, RIMS1, EXPH5, BICD2, DMXL2, RABGAP1, TBC1D10B, AP3M1, NPC1L1, TRAPPC4, WDR44, WDR41, TBC1D22B, DENND4C, ALS2, RAB11FIP1, ANKRD27, RAB11FIP4, HPS4, SYTL4, TBC1D20, SGSM1, STXBP5, RUNDC1, DENND1B
MF	GO:0001085	RNA polymerase II transcription factor binding	42/2563	8.58E-04	AHR, AR, CHD4, CREB1, ATF2, CREBBP, EP300, ERCC1, ESR1, GATA6, GSK3B, GTF2A1, HNRNPU, ID1, ID2, ID4, RBPJ, SMAD4, MEF2A, NEUROD1, NFE2L2, PITX1, PITX2, PPARA, RB1, RBL1, SP1, SRF, STAT3, TCF4, TBX3, TEAD1, TP53, TP53BP1, PIAS2, NCOR1, SPEN, MGA, HIPK2, ZMIZ1, MTDH, MIER3
MF	GO:0042578	phosphoric ester hydrolase activity	82/2563	8.58E-04	ACP1, MPPED2, CDC25A, DUSP4, DUSP5, DUSP8, EYA4, GNB1, INPP4A, MTM1, OCRL, PDE3A, PDE4D, PDE7A, PLCB4, PLCL1, PLCG1, PLD1, PPM1A, PPP1CC, PPP2R1B, PPP2R2A, PPP2R2C, PPP2R5A, PPP3CA, PPP3R1, PPP6C, PRKAR1A, PRKAR2A, PTEN, PTPN3, PTPN4, PTPN12, PTPN14, PTPRE, PTPRG, PTPRJ, PTPRK, PTPRM, PTPRR, PTPRZ1, PTP4A1, SHOC2, PTP4A2, PPM1D, CDC14A, PDE5A, RNGTT, MTMR3, MTMR6, MINPP1, CTDSPL, DUSP14, PTPN21, PTPRT, SACM1L, NT5C2, PHLPP2, PLCL2, PLCB1, CTDNEP1, PPA2, PDE7B, NT5C3A, CTDSPL2, NT5DC3, GDE1, SSH1, SMPD3, PPP2R2D, PDP2, PPP1R3B, PGAP1, SSH2, G6PC3, NUDT16, UBLCP1, DUSP18, PPM1L, PIKFYVE, NAPEPLD, PLCXD2
MF	GO:0004714	transmembrane receptor protein tyrosine kinase activity	22/2563	8.62E-04	AXL, EPHA4, EPHA5, EPHB1, EPHB2, EPHB4, ERBB2, ERBB3, ERBB4, FGFR3, FGFR2, FLT1, IGF1R, IGF2R, INSR, KIT, MET, NTRK2, DDR2, PDGFRA, RET, NRP1
MF	GO:0019207	kinase regulator activity	52/2563	9.69E-04	APC, CCND1, CALM1, CALM2, CALM3, CCNA2, CCND2, CCNG1, CCNT1, CCNT2, CKS1B, DDX3X, ERBB3, FGF13, NRG1, HSP90AB1, NPM1, PAK2, PIK3R1, PRKAR1A, PRKAR2A, DNAJC3, STK3, STK4, PIK3R3, SOCS2, KAT2B, CDK5R1, CCNE2, SOCS6, SOCS5, TRIB1, SPRY2, HEXIM1, MALT1, CCNI, FAF1, IBTK, GREM1, TRIB2, SOCS7, CAB39, CCNJ, CAMK2N1, BCCIP, TAOK1, ALS2, WNK1, ITPRIP, CCNYL1, SPRED1, SPRED2
MF	GO:0032549	ribonucleoside binding	84/2563	1.17E-03	AK4, ARF1, ARF3, ARF4, ARF6, RHOA, RND3, ARHGAP5, ARL1, MPPED2, CDC42, EEF1A1, GEM, GLUD1, GNA12, GNAI2, GNAI3, GNAQ, GNAS, GNAZ, GSPT1, GUCY1A2, HSP90AB1, INSR, RAB8A, NRAS, OPA1, RAB1A, RAB2A, RAB3B, RAB6A, RAB27B, RAC1, RALA, RAN, RAP1B, RAP2A, RAP2B, RP2, RNGTT, RAB11A, NOLC1, MFN2, DNM1L, ARL4C, GNA13, HBS1L, RAB10, EHD1, IFI44L, RRAS2, SEPHS1, RAB18, RAB21, RHOQ, GTPBP4, ATL3, RAB30, OLA1, NIN, RAB14, ARL15, ARL8B,

					RHOT1, POLR3B, TSR1, HHAT, LANCL2, SAR1A, RAB22A, RAP2C, RRAGD, ATL2, RAB6C, POLR1B, GFM1, GTPBP10, LRRK2, NUDT16, RASEF, MMAA, ARL13B, ARL5B, RABL3
MF	GO:0001221	transcription cofactor binding	17/2563	1.31E-03	AHR, CCNT2, CDC5L, CREB1, ESR1, FOXO3, NFE2L2, CNOT2, PPARA, RORA, SIX1, TEAD1, TFAM, VGLL4, NEK6, ZBTB7A, CHD6
MF	GO:0070851	growth factor receptor binding	37/2563	1.42E-03	APP, AREG, ARF4, CBL, ERBB4, EREG, FER, FGF2, FYN, GATA3, HIP1, IL1R1, IL6R, IL6ST, IL12A, JAK2, PDGFRA, PLSCR1, PTEN, PTPRJ, SNX1, ADAM17, VEGFA, VEGFB, YES1, SNX4, FGF18, SOCS5, VAV3, FRS2, CD2AP, FLRT3, FLRT2, GREM1, IRAK4, ERAP1, PDGFD
MF	GO:0008013	beta-catenin binding	26/2563	1.43E-03	APC, SHROOM2, AR, BCL9, CDH2, CXADR, EP300, ESR1, FOXO3, GSK3B, SMAD7, NR4A2, PTPRJ, PTPRK, RORA, SKP1, SOX9, VCL, NUMB, MED12, PTPRT, GRIP1, CD2AP, LEF1, TBL1XR1, MED12L
MF	GO:0000900	translation repressor activity, mRNA regulatory element binding	9/2563	1.47E-03	PURA, RARA, SHMT1, CELF1, CPEB3, PAIP2, CPEB4, CPEB2, PAIP2B
MF	GO:0050681	androgen receptor binding	17/2563	1.68E-03	BRCA1, DDX5, EP300, PRKCB, RAN, RB1, RNF4, NCOA4, NCOA3, NRIP1, NCOA1, PIAS2, RNF14, GRIP1, FOXP1, ZBTB7A, FOXP2
MF	GO:0019003	GDP binding	24/2563	1.70E-03	ARF1, RHOA, GEM, GNAI3, RAB8A, NRAS, RAB2A, RAB3B, RAB27B, RALA, RAN, RAP1B, RAP2A, RAP2B, RAB10, RRAS2, RAB18, RAB21, RAB14, ARL8B, RAB22A, RAP2C, RRAGD, RASEF
MF	GO:0001882	nucleoside binding	84/2563	1.95E-03	AK4, ARF1, ARF3, ARF4, ARF6, RHOA, RND3, ARHGAP5, ARL1, MPPED2, CDC42, EEF1A1, GEM, GLUD1, GNA12, GNAI2, GNAI3, GNAQ, GNAS, GNAZ, GSPT1, GUCY1A2, HSP90AB1, INSR, RAB8A, NRAS, OPA1, RAB1A, RAB2A, RAB3B, RAB6A, RAB27B, RAC1, RALA, RAN, RAP1B, RAP2A, RAP2B, RP2, RNGTT, RAB11A, NOLC1, MFN2, DNM1L, ARL4C, GNA13, HBS1L, RAB10, EHD1, IFI44L, RRAS2, SEPHS1, RAB18, RAB21, RHOQ, GTPBP4, ATL3, RAB30, OLA1, NIN, RAB14, ARL15, ARL8B, RHOT1, POLR3B, TSR1, HHAT, LANCL2, SAR1A, RAB22A, RAP2C, RRAGD, ATL2, RAB6C, POLR1B, GFM1, GTPBP10, LRRK2, NUDT16, RASEF, MMAA, ARL13B, ARL5B, RABL3
MF	GO:0032550	purine ribonucleoside binding	82/2563	1.96E-03	AK4, ARF1, ARF3, ARF4, ARF6, RHOA, RND3, ARHGAP5, ARL1, MPPED2, CDC42, EEF1A1, GEM, GLUD1, GNA12, GNAI2, GNAI3, GNAQ, GNAS, GNAZ, GSPT1, GUCY1A2, HSP90AB1, INSR, RAB8A, NRAS, OPA1, RAB1A, RAB2A, RAB3B, RAB6A, RAB27B, RAC1, RALA, RAN, RAP1B, RAP2A, RAP2B, RP2, RNGTT, RAB11A, NOLC1, MFN2, DNM1L, ARL4C, GNA13, HBS1L, RAB10, EHD1, IFI44L, RRAS2, SEPHS1, RAB18, RAB21, RHOQ, GTPBP4, ATL3, RAB30, OLA1, NIN, RAB14, ARL15, ARL8B, RHOT1, TSR1, HHAT, LANCL2, SAR1A, RAB22A, RAP2C, RRAGD, ATL2, RAB6C, GFM1, GTPBP10, LRRK2, NUDT16, RASEF, MMAA, ARL13B, ARL5B, RABL3
MF	GO:0035257	nuclear hormone receptor binding	40/2563	2.01E-03	BRCA1, DDX5, EP300, ESR1, ETS2, NKX3-1, NR4A2, MED1, PRKCB, RAN, RB1, RNF4, SMARCE1, STAT1, STAT3, STRN, TACC1, TAF11, NCOA4, NCOA3, NRIP1, ARID1A, NCOA1, PIAS2, TRIP12, MED17, RNF14, NCOR1, MED12, MED13, NCOA2, TOB2, BAZ2A, CNOT1, GRIP1, FOXP1, LEF1, ZBTB7A, FOXP2, NCOA7
MF	GO:0005525	GTP binding	81/2563	2.20E-03	AK4, ARF1, ARF3, ARF4, ARF6, RHOA, RND3, ARHGAP5, ARL1, CDC42, EEF1A1, GEM, GLUD1, GNA12, GNAI2, GNAI3, GNAQ, GNAS, GNAZ, GSPT1, GUCY1A2, HSP90AB1, INSR, RAB8A, NRAS, OPA1, RAB1A, RAB2A, RAB3B, RAB6A, RAB27B, RAC1, RALA, RAN, RAP1B, RAP2A, RAP2B, RP2, RNGTT, RAB11A, NOLC1, MFN2, DNM1L, ARL4C, GNA13, HBS1L, RAB10, EHD1, IFI44L, RRAS2, SEPHS1, RAB18, RAB21, RHOQ, GTPBP4, ATL3, RAB30, OLA1, NIN, RAB14, ARL15, ARL8B, RHOT1, TSR1, HHAT, LANCL2, SAR1A, RAB22A, RAP2C, RRAGD, ATL2, RAB6C, GFM1, GTPBP10, LRRK2, NUDT16, RASEF, MMAA, ARL13B, ARL5B, RABL3
MF	GO:0035326	enhancer binding	36/2563	2.29E-03	ACTB, AHR, CHD4, CREB1, ATF2, GATA3, HIVEP1, HMGB2, HNRNPC, HOXA5, SMAD2, MEF2C, KMT2A, NFE2L2, NFKB1, NFYB, NPAS2, RBBP4, REL, SMARCC2, SMARCE1, SOX9, TCF12, TP53, XBP1, YY1, CLOCK, MED12, NR1D2, TIPARP, LEF1, CCAR1, ZNF395, GATAD2B, ZNF322, ZNF704
MF	GO:0001883	purine nucleoside binding	82/2563	2.40E-03	AK4, ARF1, ARF3, ARF4, ARF6, RHOA, RND3, ARHGAP5, ARL1, MPPED2, CDC42, EEF1A1, GEM, GLUD1, GNA12, GNAI2, GNAI3, GNAQ, GNAS, GNAZ, GSPT1, GUCY1A2, HSP90AB1, INSR, RAB8A, NRAS, OPA1, RAB1A, RAB2A, RAB3B, RAB6A, RAB27B, RAC1, RALA, RAN, RAP1B, RAP2A, RAP2B, RP2, RNGTT, RAB11A, NOLC1, MFN2, DNM1L, ARL4C, GNA13, HBS1L, RAB10, EHD1, IFI44L, RRAS2, SEPHS1, RAB18, RAB21, RHOQ, GTPBP4, ATL3, RAB30, OLA1, NIN, RAB14, ARL15, ARL8B, RHOT1, TSR1, HHAT, LANCL2, SAR1A, RAB22A, RAP2C, RRAGD, ATL2, RAB6C, GFM1, GTPBP10, LRRK2, NUDT16, RASEF, MMAA, ARL13B, ARL5B, RABL3
MF	GO:0016791	phosphatase activity	62/2563	2.40E-03	ACP1, CDC25A, DUSP4, DUSP5, DUSP8, EYA4, INPP4A, MTM1, OCRL, PPM1A, PPP1CC, PPP2R1B, PPP2R2A, PPP2R2C, PPP2R5A, PPP3CA, PPP3R1, PPP6C, PTEN, PTPN3, PTPN4, PTPN12, PTPN14, PTPRE, PTPRG, PTPRJ, PTPRK, PTPRM, PTPRR, PTPRZ1, PTP4A1, SHOC2, PTP4A2, PPM1D, CDC14A, RNGTT, MTMR3, MTMR6, MINPP1, CTDSPL, DUSP14, PTPN21, PTPRT, SACM1L, NT5C2, PHLPP2, CTDNEP1, PPA2, NT5C3A, CTDSPL2, NT5DC3, SSH1, PPP2R2D, PDP2, PPP1R3B, SSH2, G6PC3, NUDT16, UBLCP1, DUSP18, PPM1L, PIKFYVE

MF	GO:0008080	N-acetyltransferase activity	27/2563	2.41E-03	ATF2, CREBBP, EP300, HCFC1, SMARCE1, TAF5, BRPF1, KAT6A, NCOA3, HAT1, NCOA1, KAT2B, GTF3C4, CLOCK, KAT6B, TAF5L, PHF20, RSF1, KANSL3, MEAF6, NAA25, NAA15, NAA50, EPC1, KAT8, NAA30, KANSL1L
MF	GO:0004535	poly(A)-specific ribonuclease activity	8/2563	2.43E-03	CNOT2, PAN2, CNOT1, CNOT7, CNOT6, PDE12, CNOT6L, PAN3
MF	GO:0008266	poly(U) RNA binding	13/2563	2.44E-03	FMR1, HNRNPC, HNRNPH1, PABPC3, RBM3, ATXN1, PABPC4, KHDRBS1, DAZAP1, PABPC1, RBMS3, PABPC1L, MSI2
MF	GO:0019001	guanyl nucleotide binding	84/2563	2.50E-03	AK4, ARF1, ARF3, ARF4, ARF6, RHOA, RND3, ARHGAP5, ARL1, MPPED2, CDC42, EEF1A1, GEM, GLUD1, GNA12, GNAI2, GNAI3, GNAQ, GNAS, GNAZ, GSPT1, GUCY1A2, HSP90AB1, INSR, RAB8A, NRAS, OPA1, PRKG1, RAB1A, RAB2A, RAB3B, RAB6A, RAB27B, RAC1, RALA, RAN, RAP1B, RAP2A, RAP2B, RP2, PDE5A, RNGTT, RAB11A, NOLC1, MFN2, DNM1L, ARL4C, GNA13, HBS1L, RAB10, EHD1, IFI44L, RRAS2, SEPHS1, RAB18, RAB21, RHOQ, GTPBP4, ATL3, RAB30, OLA1, NIN, RAB14, ARL15, ARL8B, RHOT1, TSR1, HHAT, LANCL2, SAR1A, RAB22A, RAP2C, RRAGD, ATL2, RAB6C, GFM1, GTPBP10, LRRK2, NUDT16, RASEF, MMAA, ARL13B, ARL5B, RABL3
MF	GO:0032561	guanyl ribonucleotide binding	84/2563	2.50E-03	AK4, ARF1, ARF3, ARF4, ARF6, RHOA, RND3, ARHGAP5, ARL1, MPPED2, CDC42, EEF1A1, GEM, GLUD1, GNA12, GNAI2, GNAI3, GNAQ, GNAS, GNAZ, GSPT1, GUCY1A2, HSP90AB1, INSR, RAB8A, NRAS, OPA1, PRKG1, RAB1A, RAB2A, RAB3B, RAB6A, RAB27B, RAC1, RALA, RAN, RAP1B, RAP2A, RAP2B, RP2, PDE5A, RNGTT, RAB11A, NOLC1, MFN2, DNM1L, ARL4C, GNA13, HBS1L, RAB10, EHD1, IFI44L, RRAS2, SEPHS1, RAB18, RAB21, RHOQ, GTPBP4, ATL3, RAB30, OLA1, NIN, RAB14, ARL15, ARL8B, RHOT1, TSR1, HHAT, LANCL2, SAR1A, RAB22A, RAP2C, RRAGD, ATL2, RAB6C, GFM1, GTPBP10, LRRK2, NUDT16, RASEF, MMAA, ARL13B, ARL5B, RABL3
MF	GO:0016407	acetyltransferase activity	31/2563	2.62E-03	ATF2, CREBBP, DBT, DLAT, EP300, FASN, HCFC1, SMARCE1, TAF5, BRPF1, KAT6A, NCOA3, HAT1, NCOA1, KAT2B, GTF3C4, CLOCK, KAT6B, TAF5L, PHF20, RSF1, KANSL3, MEAF6, LPCAT1, NAA25, NAA15, NAA50, EPC1, KAT8, NAA30, KANSL1L
MF	GO:0035258	steroid hormone receptor binding	27/2563	3.19E-03	BRCA1, DDX5, EP300, ESR1, ETS2, NKX3-1, NR4A2, MED1, PRKCB, RAN, RB1, RNF4, STAT3, STRN, TACC1, NCOA4, NCOA3, NRIP1, NCOA1, PIAS2, RNF14, CNOT1, GRIP1, FOXP1, LEF1, ZBTB7A, FOXP2
MF	GO:0004879	nuclear receptor activity	17/2563	3.19E-03	AHR, AR, ESR1, ESRRG, NR6A1, NR3C1, NKX3-1, NR4A2, PPARA, RARA, RORA, RORB, STAT3, NR2F2, THRB, NR1D2, BRD8
MF	GO:0098531	transcription factor activity, direct ligand regulated sequence-specific DNA binding	17/2563	3.19E-03	AHR, AR, ESR1, ESRRG, NR6A1, NR3C1, NKX3-1, NR4A2, PPARA, RARA, RORA, RORB, STAT3, NR2F2, THRB, NR1D2, BRD8
MF	GO:0061980	regulatory RNA binding	15/2563	3.39E-03	FMR1, HNRNPA2B1, MECP2, SOX2, PUM1, PUM2, DICER1, ZNF346, AGO1, AGO2, FAM172A, TRIM71, RC3H1, AGO3, AGO4
MF	GO:0003707	steroid hormone receptor activity	19/2563	3.49E-03	AR, ESR1, ESRRG, NR6A1, NR3C1, NR3C2, NKX3-1, NR4A2, PPARA, RARA, RORA, RORB, NR2F2, THRB, NR2C2, NR1D2, PGRMC2, ABHD2, LEF1
MF	GO:0003714	transcription corepressor activity	55/2563	3.90E-03	CCND1, CREBBP, ERF, EZH2, HNRNPU, DNAJB1, ID4, MECP2, MEIS2, MNT, MXI1, NPAT, PAWR, MED1, RARA, SRSF2, SKI, ZEB1, NR2F2, TGIF1, THRB, YY1, NRIP1, CBX4, COPS2, NCOR1, TOB1, BASP1, YAP1, CTCF, KDM5B, TOB2, ZMYND11, ZHX1, KLF12, SPEN, ZHX3, RYBP, WWTR1, ZNF451, HIPK2, CNOT7, LMCD1, KCNIP3, RLIM, ZBTB7A, ATF7IP, CCAR1, TBL1XR1, JDP2, CDYL2, NACC2, SMYD1, MIER3, JAZF1
MF	GO:0051427	hormone receptor binding	45/2563	4.14E-03	ADCYAP1, BRCA1, DDX5, EP300, ESR1, ETS2, FYN, GNAS, JAK2, NKX3-1, NR4A2, MED1, PRKCB, RAN, RB1, RNF4, SMARCE1, STAT1, STAT3, STRN, TACC1, TAF11, NCOA4, NCOA3, NRIP1, ARID1A, NCOA1, SOCS2, PIAS2, TRIP12, MED17, RNF14, NCOR1, MED12, MED13, NCOA2, TOB2, BAZ2A, CNOT1, GRIP1, FOXP1, LEF1, ZBTB7A, FOXP2, NCOA7
MF	GO:0019887	protein kinase regulator activity	44/2563	4.23E-03	APC, CCND1, CALM1, CALM2, CALM3, CCNA2, CCND2, CCNG1, CCNT1, CCNT2, CKS1B, DDX3X, ERBB3, FGF13, NRG1, HSP90AB1, NPM1, PAK2, PRKAR1A, PRKAR2A, DNAJC3, STK3, STK4, KAT2B, CDK5R1, CCNE2, TRIB1, SPRY2, HEXIM1, CCNI, FAF1, IBTK, GREM1, TRIB2, CAB39, CCNJ, CAMK2N1, TAOK1, ALS2, WNK1, ITPRIP, CCNYL1, SPRED1, SPRED2
MF	GO:0005096	GTPase activator activity	61/2563	4.66E-03	ABR, ALDH1A1, ARHGAP5, BNIP2, CHM, CHML, CHN1, DOCK1, ECT2, GDI1, GNAQ, AGFG1, MYO9A, NF1, OCRL, OPHN1, RASA1, RP2, EVI5, NRP1, ASAP2, RABEP1, ARHGAP29, RASAL2, RAPGEF2, USP6NL, DOCK4, ARHGAP32, TBC1D4, RABGAP1L, DNM1L, FAM13A, RASA4, VAV3, RALBP1, RAB3GAP1, PLCB1, ARHGEF12, SRGAP2, RABGAP1, TBC1D10B, GAPVD1, RGS17, GIT1, ASAP1, FAM13B, ERRFI1, ARHGAP17, TBC1D22B, DEPDC1, RALGAPB, DOCK5, ARHGAP24, ANKRD27, ARAP2, LRRK2, TBC1D20, SGSM1, STXBP5, RUNDC1, RGPD8

MF	GO:0070530	K63-linked polyubiquitin modification-dependent protein binding	10/2563	4.75E-03	TNFAIP3, OPTN, PRPF8, ZBTB1, TAB2, ZRANB1, OTUD7B, SPRTN, RNF168, RNF169
MF	GO:0008017	microtubule binding	56/2563	4.80E-03	APC, DST, KRIT1, DPYSL2, FGF13, FMR1, GOLGA2, KIF5B, KIF5C, KIF11, MAP1B, MAP2, MAP4, MID1, OPA1, PAFAH1B1, SPAST, TIAM1, EZR, RAB11A, VAPB, VAPA, KIF3B, MAP4K4, KIF23, CEP350, BCL2L11, DNM1L, MAPRE1, KIF21B, KIF1B, CAMSAP2, KIF13B, KIF4A, EML2, HOOK1, CCSER2, NDE1, STRBP, KIF21A, CCDC88A, MTUS1, KIF13A, MAP9, REEP4, NDEL1, KATNAL1, HOOK3, NAV3, FCHO2, LRRK2, WHAMM, CCSAP, TTBK2, CAMSAP1, FMN1
MF	GO:0004722	protein serine/threonine phosphatase activity	23/2563	4.94E-03	DUSP4, PPM1A, PPP1CC, PPP2R1B, PPP2R2A, PPP2R2C, PPP3CA, PPP3R1, PPP6C, PTEN, SHOC2, PPM1D, CDC14A, MTMR3, MTMR6, CTDSPL, PHLPP2, CTDNEP1, PPA2, PPP2R2D, PDP2, UBLCP1, PPM1L
MF	GO:0060090	molecular adaptor activity	54/2563	5.75E-03	ANK3, ANXA1, BICD1, CHN1, COX15, CRK, EPS8, GAB1, GRB14, HCFC1, HIP1, LASP1, PIK3R1, SLC9A1, SMARCD1, ST13, TP53BP2, SORBS2, PEX3, SOCS2, SPAG9, GAB2, PDCD6, RAD50, OPTN, TOB1, ABI2, VAV3, SORBS1, KHDRBS1, FRS2, AKAP13, DDX20, CNOT1, WWC1, BICD2, SASH1, CBX5, FLRT3, FLRT2, ITSN2, OTUD4, CHCHD3, FRMD4A, PAG1, WWC3, CDC42SE2, SH3RF1, SAV1, IPPK, WWC2, SPSB1, PPP4R2, MAGI3
MF	GO:0032182	ubiquitin-like protein binding	27/2563	5.75E-03	CKS1B, NR3C1, NEDD4, RAD23A, RNF4, TDG, TNFAIP3, CBX4, USP13, BUB3, FAF1, GGA3, FAF2, SERBP1, USP25, VPS36, UBXN1, RNFT1, UBR5, DCUN1D1, RNF111, OTUB2, SPRTN, DCUN1D3, RNF19B, UBXN2B, RNF168
MF	GO:0005154	epidermal growth factor receptor binding	13/2563	5.81E-03	AREG, ARF4, CBL, ERBB4, EREG, FER, HIP1, PLSCR1, SNX1, YES1, SNX4, SOCS5, VAV3
MF	GO:0019902	phosphatase binding	44/2563	7.13E-03	ATP2B4, BCL2, CDC5L, CDC27, CDH2, ENSA, ERBB2, FER, HMGCR, SMAD2, MAP3K5, MET, PIK3R1, PPARA, PPP1CC, PPP2R2A, PPP3R1, MAPK1, SH3GL1, SLC9A1, STAT1, STAT3, STAU1, STRN, TP53, VCP, SHOC2, MTMR3, EIF2AK3, MAGI2, SMG7, ARPP19, PTPRT, AKAP11, PPP6R1, FBXL2, STRN3, CHCHD3, CEP192, PPP6R3, CTTNBP2NL, WNK1, MTMR9, SPRED1
MF	GO:0000287	magnesium ion binding	49/2563	7.80E-03	ABL2, ADCY2, ARF1, DUT, GEM, GLUL, IDH3A, FOXK2, ITPK1, MAP3K5, MSH2, OPA1, ATP8B1, PKM, PPM1A, PRKACB, RAN, RAP2A, RP2, RPS6KA3, STK3, STK4, TDG, WEE1, SUCLA2, RPS6KA5, OXSR1, PDCD6, ATP9A, NEK6, MTHFD2, PAPOLA, NUDT3, IRAK3, STK38L, ATP11B, SIK2, PPA2, IRAK4, NT5C3A, NLK, SNRK, ATP8B2, WNK1, LRRK2, NUDT16, SIK1, ATP11C, GEN1
MF	GO:0031593	polyubiquitin modification-dependent protein binding	17/2563	7.80E-03	RAD23A, TNFAIP3, VCP, OPTN, TNIP1, PRPF8, ZBTB1, TAB2, UBQLN2, UBQLN1, UBXN1, ZFAND6, ZRANB1, OTUD7B, SPRTN, RNF168, RNF169
MF	GO:0070717	poly-purine tract binding	12/2563	7.80E-03	DDX3X, FMR1, HNRNPU, PABPC3, ATXN1, PABPC4, KHDRBS1, DAZAP1, PABPC1, RBMS3, PABPC1L, LARP4
MF	GO:0001223	transcription coactivator binding	10/2563	1.01E-02	AHR, CCNT2, CREB1, ESR1, PPARA, RORA, SIX1, TEAD1, TFAM, VGLL4
MF	GO:0033613	activating transcription factor binding	24/2563	1.01E-02	CREB1, ATF2, CREBBP, EP300, GABPA, HCFC1, SMAD2, MEF2A, MEF2C, MEF2D, NEUROD1, NFE2L2, NPM1, PITX2, RB1, RBL1, TBX3, TP53BP1, NCOR1, YAP1, NEK6, MGA, HIPK2, ZBTB7A
MF	GO:0035198	miRNA binding	12/2563	1.05E-02	FMR1, HNRNPA2B1, SOX2, PUM1, PUM2, ZNF346, AGO1, AGO2, TRIM71, RC3H1, AGO3, AGO4
MF	GO:0140142	nucleocytoplasmic carrier activity	12/2563	1.05E-02	KPNB1, KPNA3, KPNA4, TNPO1, IPO5, RAN, XPO1, XPO7, KPNA6, IPO11, XPO5, XPO4
MF	GO:0030374	nuclear receptor transcription coactivator activity	20/2563	1.23E-02	ACTN1, FGF2, PPARA, MED1, PRKCB, RARA, RNF4, SS18, THRB, NCOA3, NCOA1, MED17, MED12, MED13, NR1D2, SRA1, NCOA2, CCAR1, ZMIZ1, NCOA7
MF	GO:0061650	ubiquitin-like protein	14/2563	1.26E-02	UBE2K, UBE2A, UBE2D1, UBE2D3, UBE2E2, UBE2H, UBE2I, UBE2L3, UBE2V2, UBE2D4, UBE2W, BIRC6, UBE2O, UBE2Q2

		conjugating enzyme activity			
MF	GO:0043021	ribonucleoprotein complex binding	33/2563	1.41E-02	DDX3X, DDX5, EIF2S1, ETF1, EZH2, FMR1, MTOR, HNRNPU, RPSA, NPM1, RBM3, RNASEL, EIF4H, NOLC1, SECISBP2L, PRMT3, EIF1, CPEB3, LARP1, CBX5, LTN1, OLA1, SEC61A1, MTRF1L, YTHDF1, XPO5, NAA15, CPEB4, EIF2A, PHF6, CPEB2, RICTOR, YTHDF3
MF	GO:0090079	translation regulator activity, nucleic acid binding	11/2563	1.42E-02	PURA, RARA, SHMT1, CELF1, CPEB3, LARP1, PABPC1, PAIP2, CPEB4, CPEB2, PAIP2B
MF	GO:0016303	1-phosphatidylinositol-3-kinase activity	6/2563	1.42E-02	ATM, PIK3C2A, PIK3C3, PIK3CB, PIK3CG, PIK3R3
MF	GO:0008022	protein C-terminus binding	43/2563	1.45E-02	ATP1B1, DST, CENPF, FOXN3, EP300, ERBB2, ERCC1, PTK2B, FN1, ID1, JAK2, KPNA3, MSH2, NPAT, PPP1CC, PRKAA1, ATXN1, SH3GL1, SP1, TAF13, TCF4, EZR, YWHAB, USP7, YEATS4, MED12, OPTN, YAP1, MAPRE1, HIC2, SASH1, GRIP1, CD2AP, EML2, NIPBL, PABPC1, AGO2, GPSM2, VPS36, VTA1, FIGN, MID1IP1, EFHC1
MF	GO:0016410	N-acyltransferase activity	29/2563	1.49E-02	ATF2, CREBBP, EP300, HCFC1, SMARCE1, TAF5, BRPF1, KAT6A, NCOA3, HAT1, NCOA1, KAT2B, GTF3C4, NMT2, CLOCK, KAT6B, TAF5L, PHF20, RSF1, KANSL3, MEAF6, NAA25, NAA15, NAA50, EPC1, KAT8, NAA30, KANSL1L, CERS6
MF	GO:0017048	Rho GTPase binding	41/2563	1.57E-02	ABR, ATP7A, DIAPH1, DOCK1, ECT2, EPS8, OCRL, PAK2, PKN2, ROCK1, SOS2, TIAM1, TRIO, KIF3B, ROCK2, DOCK4, ABI2, NET1, VAV3, CDC42EP3, NCKAP1, RALBP1, AKAP13, PPP6R1, DAAM1, ARHGEF12, SRGAP2, CORO1C, STRN3, ITSN2, ARHGEF3, ARHGAP17, CDC42SE1, CDC42SE2, PLEKHG1, ALS2, PARD6B, DOCK7, LRRK2, WHAMM, DOCK11
MF	GO:0051018	protein kinase A binding	16/2563	1.57E-02	GSK3B, PRKACB, PRKAR1A, PRKAR2A, RARA, SOX9, EZR, AKAP12, PJA2, WASF2, ARFGEF1, AKAP13, AKAP11, AKAP10, LRRK2, PRRC1
MF	GO:0031489	myosin V binding	8/2563	1.61E-02	RAB8A, RAB3B, RAB6A, RAB27B, RAB11A, RAB10, NPC1L1, RAB14
MF	GO:0001158	enhancer sequence-specific DNA binding	30/2563	1.61E-02	ACTB, CHD4, CREB1, ATF2, GATA3, HIVEP1, HMGB2, HNRNPC, HOXA5, MEF2C, KMT2A, NFE2L2, NFKB1, NFYB, NPAS2, RBBP4, REL, SMARCC2, SMARCE1, SOX9, TP53, XBP1, YY1, CLOCK, MED12, NR1D2, CCAR1, ZNF395, GATAD2B, ZNF704
MF	GO:0019903	protein phosphatase binding	34/2563	1.61E-02	ATP2B4, BCL2, CDC5L, CDC27, CDH2, ENSA, ERBB2, FER, HMGCR, MAP3K5, MET, PIK3R1, PPP1CC, PPP2R2A, SLC9A1, STAT1, STAT3, STAU1, STRN, TP53, VCP, SHOC2, MTMR3, EIF2AK3, SMG7, ARPP19, PTPRT, AKAP11, PPP6R1, FBXL2, STRN3, PPP6R3, CTTNBP2NL, MTMR9
MF	GO:0003924	GTPase activity	67/2563	1.61E-02	ARF1, ARF3, ARF4, ARF6, RHOA, RND3, ARHGAP5, ARL1, CDC42, DDX3X, EEF1A1, GEM, GNA12, GNAI2, GNAI3, GNAQ, GNAS, GNAZ, GNB1, GSPT1, RAB8A, NRAS, OPA1, RAB1A, RAB2A, RAB3B, RAB6A, RAB27B, RAC1, RALA, RAN, RAP1B, RAP2A, RAP2B, RASA1, RAB11A, MFN2, DNM1L, ARL4C, GNA13, HBS1L, RAB10, RRAS2, RAB18, RAB21, RHOQ, GTPBP4, ATL3, RGS17, RAB30, RAB14, GNG13, ARL8B, RHOT1, TSR1, GNG12, SAR1A, RAB22A, RAP2C, RRAGD, ATL2, RAB6C, GFM1, LRRK2, RASEF, MMAA, RABL3
MF	GO:0001047	core promoter binding	17/2563	1.64E-02	EZH2, NR3C1, NPM1, POU2F1, MED1, REST, STAT1, KLF10, TP53, UBTF, BAZ2A, ZNF451, AGO1, AGO2, RRN3, ZNF462, ZNF827
MF	GO:0017124	SH3 domain binding	32/2563	1.68E-02	ADAM10, CBL, CBLB, CRK, DOCK1, GJA1, INPPL1, PLSCR1, PTPN12, SH3GL1, ADAM17, TP53BP2, CCDC6, ADAM12, ADAM19, ADAM9, QKI, DOCK4, ABI2, WASF2, LANCL1, KHDRBS1, SHANK2, CD2AP, SH3KBP1, SOCS7, ERRFI1, ARHGAP17, ENAH, ZNF106, CTTNBP2, FMN1
MF	GO:0010485	H4 histone acetyltransferase activity	9/2563	1.72E-02	HCFC1, KAT6A, HAT1, KAT6B, PHF20, KANSL3, NAA50, KAT8, KANSL1L
MF	GO:0043539	protein serine/threonine kinase activator activity	11/2563	1.75E-02	CALM1, CALM2, CALM3, DDX3X, STK3, STK4, CDK5R1, SPRY2, CAB39, TAOK1, ALS2
MF	GO:0061631	ubiquitin conjugating enzyme activity	13/2563	2.02E-02	UBE2K, UBE2A, UBE2D1, UBE2D3, UBE2E2, UBE2H, UBE2L3, UBE2V2, UBE2D4, UBE2W, BIRC6, UBE2O, UBE2Q2

MF	GO:0042826	histone deacetylase binding	28/2563	2.09E-02	CCND1, PRDM1, CHD4, HSP90AA1, HSP90AB1, MEF2A, MEF2C, MEF2D, NKX3-1, PKN2, RAC1, RARA, RBBP4, SP1, SRF, TP53, YWHAB, NRIP1, KAT2B, NCOR1, DDX20, CAMTA2, CBX5, NIPBL, LEF1, PHF6, NACC2, MIER3
MF	GO:0035004	phosphatidylinositol 3-kinase activity	6/2563	2.33E-02	ATM, PIK3C2A, PIK3C3, PIK3CB, PIK3CG, PIK3R3
MF	GO:0016747	transferase activity, transferring acyl groups other than amino-acyl groups	50/2563	2.33E-02	ATF2, CREBBP, DBT, DLAT, EP300, FASN, GLUL, HADHB, HCFC1, SMARCE1, SOAT1, ELOVL4, TAF5, BRPF1, KAT6A, NCOA3, HAT1, NCOA1, KAT2B, GTF3C4, NMT2, CLOCK, LPGAT1, KAT6B, TAF5L, GOLGA7, PHF20, RSF1, ZDHHC13, SPTLC3, AGPAT5, KANSL3, HHAT, AGPAT3, GPAM, ELOVL5, MEAF6, ELOVL6, LPCAT1, ELOVL7, NAA25, NAA15, NAA50, EPC1, KAT8, NAA30, KANSL1L, SPTSSB, CERS6, ZDHHC21
MF	GO:0043022	ribosome binding	17/2563	2.33E-02	EIF2S1, ETF1, FMR1, MTOR, RPSA, PRMT3, CPEB3, OLA1, SEC61A1, MTRF1L, YTHDF1, NAA15, CPEB4, EIF2A, CPEB2, RICTOR, YTHDF3
MF	GO:0017075	syntaxin-1 binding	10/2563	2.35E-02	NSF, SNAP25, STXBP1, SYPL1, VAMP3, RNF40, UNC13A, LRRK2, SYNPR, STXBP5
MF	GO:0050321	tau-protein kinase activity	9/2563	2.35E-02	DYRK1A, FYN, GSK3B, MARK3, PRKAA1, ROCK1, ROCK2, TAOK1, TTBK2
MF	GO:0030145	manganese ion binding	18/2563	2.38E-02	ABL2, ADCY2, ARG2, MPPED2, GALNT1, GALNT2, GALNT3, B4GALT1, GLUL, ME1, MGAT5, PPM1A, SOD2, NEK4, GALNT4, PAPOLA, NUDT16, DCP2
MF	GO:0003779	actin binding	84/2563	2.42E-02	ABL2, ACTN1, ADD3, ALDOA, SHROOM2, DST, CALD1, CAPZA1, CAPZA2, DAG1, DBN1, DIAPH1, DMD, EPS8, FLNB, HIP1, HNRNPU, INPPL1, IPP, LASP1, MARCKS, MAP1B, MYO1B, MSN, MYH9, MYH10, MYLK, MYO1E, MYO5A, MYO5B, MYO9A, MYO10, OPHN1, PAWR, PRKCE, SMTN, SNTB2, SPTAN1, SPTBN1, TMSB4X, TPM3, UTRN, VCL, EZR, ENC1, CDK5R1, WASL, PHACTR2, ARPC5, ACTR3, WASF2, NEBL, ARPC1A, SORBS1, PDLIM5, DAAM1, STK38L, PALLD, MPRIP, SYNE1, CORO1C, KLHL3, KLHL20, TMOD3, TMOD2, KLHL5, HOOK1, SSH1, TRPM7, CCDC88A, ENAH, PARVA, SPIRE1, MARCKSL1, VASH2, ANTXR1, TNS4, DIXDC1, SSH2, LRRK2, WHAMM, JMY, WIPF2, FMN1
MF	GO:0005024	transforming growth factor beta-activated receptor activity	7/2563	2.91E-02	ACVR2B, BMPR1A, BMPR1B, BMPR2, TGFBR1, TGFBR2, ACVR1C
MF	GO:0051219	phosphoprotein binding	22/2563	2.91E-02	ABL2, CBL, CBLB, CRK, MTOR, IGF2R, MID1, NEDD4, PAFAH1B1, PIK3R1, PKD2, MAPK1, PTPN3, RASA1, RB1, YES1, YWHAB, PIK3R3, CBX4, TOX3, PHF6, LRP11
MF	GO:0031690	adrenergic receptor binding	8/2563	3.17E-02	ADRB1, GNAS, NEDD4, PDE4D, SH3GL1, RAPGEF2, MAGI2, ARRDC3
MF	GO:0045295	gamma-catenin binding	6/2563	3.74E-02	APC, CDH2, PTPRJ, PTPRK, PTPRT, LEF1
MF	GO:0031624	ubiquitin conjugating enzyme binding	11/2563	3.74E-02	PPARA, ZMYM2, RNF14, RNF144A, RNF40, ARIH1, DCUN1D1, DCUN1D3, RNF19B, RNF217, RNF144B
MF	GO:0051721	protein phosphatase 2A binding	11/2563	3.74E-02	BCL2, ENSA, HMGCR, PPP2R2A, STAT1, STRN, TP53, SMG7, ARPP19, STRN3, CTTNBP2NL
MF	GO:0008135	translation factor activity, RNA binding	22/2563	3.79E-02	EEF1A1, EIF1AX, EIF2S1, EIF4A1, EIF4G2, ETF1, GSPT1, EIF4H, EIF3A, EIF3J, EIF4G3, EIF1, EIF3M, HBS1L, CPEB3, AGO2, MTRF1L, CPEB4, EIF2A, GFM1, CPEB2, EIF4E3
MF	GO:0035591	signaling adaptor activity	21/2563	3.79E-02	CHN1, CRK, EPS8, GAB1, GRB14, LASP1, PIK3R1, TP53BP2, SOCS2, SPAG9, GAB2, TOB1, VAV3, SORBS1, KHDRBS1, FRS2, AKAP13, ITSN2, PAG1, CDC42SE2, SH3RF1
MF	GO:0035064	methylated histone binding	18/2563	3.79E-02	ATRX, CHD1, FMR1, KDM5A, TP53BP1, CBX4, ZMYND11, SPIN1, MTF2, PHF8, CBX5, SUZ12, PYGO1, PHF19, NCAPG2, KMT2E, KAT8, CDYL2

MF	GO:0140034	methylation-dependent protein binding	18/2563	3.79E-02	ATRX, CHD1, FMR1, KDM5A, TP53BP1, CBX4, ZMYND11, SPIN1, MTF2, PHF8, CBX5, SUZ12, PYGO1, PHF19, NCAPG2, KMT2E, KAT8, CDYL2
MF	GO:0019208	phosphatase regulator activity	24/2563	4.02E-02	CALM1, CALM2, CALM3, ENSA, MGAT5, PPP1R12A, PPP1R12B, PPP1R2, PPP2R1B, PPP2R2A, PPP2R2C, PPP2R5A, PPP2R5E, SHOC2, PHACTR2, ZEB2, ARPP19, FRS2, MTMR12, PPP2R2D, PPP4R4, PPP1R3B, PPP1R15B, PPP4R2
MF	GO:0005521	lamin binding	7/2563	4.02E-02	LBR, PPP1CC, TMPO, PLCB1, SYNE1, SUN1, TOR1AIP1
MF	GO:0015095	magnesium ion transmembrane transporter activity	7/2563	4.02E-02	ZDHHC13, MRS2, MAGT1, MMGT1, NIPA1, NIPAL1, SLC41A1
MF	GO:0052742	phosphatidylinositol kinase activity	7/2563	4.02E-02	ATM, PIK3C2A, PIK3C3, PIK3CB, PIK3CG, PIK3R3, PI4K2B
MF	GO:0071837	HMG box domain binding	7/2563	4.02E-02	GATA3, MEF2C, POU3F3, SP1, TCF12, OLIG2, ALX4
MF	GO:0008143	poly(A) binding	9/2563	4.03E-02	DDX3X, HNRNPU, PABPC3, PABPC4, KHDRBS1, PABPC1, RBMS3, PABPC1L, LARP4
MF	GO:0030165	PDZ domain binding	22/2563	4.08E-02	ADRB1, ATP2B1, ATP2B2, ATP2B4, CLCN3, CXADR, GJA1, NSF, PTEN, SDC2, SSTR2, ADAM17, FZD3, FZD1, FZD4, FZD8, ARHGAP29, RAPGEF2, DOCK4, CADM1, GNG12, PLEKHA1
MF	GO:0016922	nuclear receptor binding	8/2563	4.08E-02	MED1, SMARCE1, TACC1, NCOA3, ARID1A, NCOA1, NCOA2, BAZ2A
MF	GO:0070063	RNA polymerase binding	20/2563	4.17E-02	BRCA1, CCNT1, CCNT2, STOM, ERBB2, HNRNPU, NEDD4, PKN2, NCOA3, NOLC1, AGO1, AGO2, WAC, RRN3, RPRD1A, RPRD1B, YTHDC2, CDC73, SPTY2D1, ZNF326
MF	GO:0035035	histone acetyltransferase binding	10/2563	4.76E-02	CREB1, EGR1, ETS1, MEF2A, MTF1, SP1, STAT1, TP53, ZBTB7A, KANSL1L
MF	GO:0005085	guanyl-nucleotide exchange factor activity	45/2563	4.76E-02	ABR, ADRB1, ARF4, RCC1, DOCK1, ECT2, EPS8, SOS2, TIAM1, TRIO, RAPGEF2, DOCK4, RAPGEF5, IQSEC1, RASGRP1, DENND4A, NET1, VAV3, ARFGEF1, RAPGEF4, AKAP13, DIS3, RAB3GAP1, MYCBP2, DOCK9, PSD3, ARHGEF12, GAPVD1, FBXO8, ITSN2, ARHGEF3, TRAPPC4, RAPGEF6, RALGPS2, WDR41, DOCK10, DENND4C, PLEKHG1, ALS2, DOCK5, ANKRD27, DOCK7, HPS4, DOCK11, DENND1B
MF	GO:0050840	extracellular matrix binding	16/2563	4.76E-02	CTSS, DAG1, ITGA6, ITGA3, ITGAV, RPSA, SPARC, TGFBI, THBS1, VEGFA, ADAM9, SLIT2, ADAMTS5, SPOCK3, NTN4, SMOC1
MF	GO:0016248	channel inhibitor activity	12/2563	4.76E-02	BCL2, CALM1, CALM2, CAMK2D, ENSA, ITPR1, NEDD4, RASA1, STX7, VTI1B, WNK1, WNK3
MF	GO:0048487	beta-tubulin binding	12/2563	4.76E-02	FGF13, GJA1, SPAST, CDK5R1, VAPB, SYT11, ADNP, GABARAPL1, APPL1, ARL8B, TAOK1, NDEL1
KEGG	hsa05205	Proteoglycans in cancer	74/1203	7.18E-12	ACTB, ANK3, FASLG, RHOA, CCND1, CAMK2D, CBL, CD44, CDC42, COL1A1, DDX5, ERBB2, ERBB3, ERBB4, ESR1, FGF2, FLNB, FN1, MTOR, GAB1, HGF, HOXD10, IGF1, IGF1R, ITGAV, ITPR1, LUM, SMAD2, MET, MMP2, MSN, PPP1R12A, PPP1R12B, NRAS, PIK3CB, PIK3R1, PLCG1, PPP1CC, PRKACB, PRKCA, PRKCB, MAPK1, PTCH1, RAC1, ROCK1, RPS6KB1, SDC2, SLC9A1, SOS2, STAT3, TGFB2, THBS1, TIAM1, TIMP3, TLR4, TP53, VEGFA, EZR, WNT1, WNT5A, WNT2B, FZD5, FZD3, FZD1, FZD4, FZD8, PIK3R3, ROCK2, AKT3, VAV3, FRS2, RRAS2, ARHGEF12, PDCD4
KEGG	hsa01521	EGFR tyrosine kinase inhibitor resistance	36/1203	9.64E-09	AXL, BCL2, ERBB2, ERBB3, FGF2, FGFR3, FGFR2, FOXO3, MTOR, GAB1, GSK3B, HGF, NRG1, IGF1, IGF1R, IL6R, JAK2, MET, NF1, NRAS, PDGFRA, PIK3CB, PIK3R1, PLCG1, PRKCA, PRKCB, MAPK1, PTEN, RPS6KB1, SOS2, STAT3, VEGFA, PIK3R3, AKT3, BCL2L11, PDGFD
KEGG	hsa04550	Signaling pathways regulating pluripotency of stem cells	52/1203	1.38E-08	ACVR2B, APC, ZFHX3, BMI1, BMPR1A, BMPR1B, BMPR2, FGF2, FGFR3, FGFR2, GSK3B, HOXA1, ID1, ID2, ID4, IGF1, IGF1R, IL6ST, INHBA, JAK2, JARID2, LIF, LIFR, SMAD1, SMAD2, SMAD4, SMAD5, MEIS1, NRAS, PIK3CB, PIK3R1, MAPK1, REST, SKIL, SOX2, STAT3, TBX3, WNT1, WNT5A, WNT2B, PCGF2, FZD5, FZD3, KAT6A, FZD1, FZD4, FZD8, PIK3R3, AKT3, RIF1, PCGF5, ACVR1C
KEGG	hsa04520	Adherens junction	32/1203	7.95E-08	ACP1, ACTB, ACTN1, RHOA, CDC42, CREBBP, CSNK2A1, CTNND1, EP300, ERBB2, FER, FYN, IGF1R, INSR, LMO7, SMAD4, MET, MAPK1, PTPRJ, PTPRM, RAC1, SNAI2, TGFBR1, TGFBR2, TJP1, VCL, YES1, WASL, WASF2, SORBS1, LEF1, NLK

KEGG	hsa04350	TGF-beta signaling pathway	38/1203	8.05E-08	ACVR2B, RHOA, BMPR1A, BMPR1B, BMPR2, CREBBP, EP300, FBN1, ID1, ID2, ID4, INHBA, SMAD1, SMAD2, SMAD4, SMAD5, SMAD7, PITX2, PPP2R1B, MAPK1, RBL1, ROCK1, RPS6KB1, SKP1, SP1, TFDP1, TGFB2, TGFBR1, TGFBR2, TGIF1, THBS1, ZFYVE16, BAMBI, GREM1, TGIF2, GREM2, SMURF2, ACVR1C
KEGG	hsa04010	MAPK signaling pathway	83/1203	8.05E-08	FASLG, AREG, BDNF, CACNA1C, CACNA2D1, CDC42, ATF2, CRK, DUSP4, DUSP5, DUSP8, ERBB2, ERBB3, ERBB4, EREG, MECOM, FGF2, FGFR3, FGFR2, FLNB, FLT1, GNA12, MKNK2, HGF, HSPA2, IGF1, IGF1R, IL1R1, INSR, KIT, STMN1, MEF2C, MAP3K1, MAP3K4, MAP3K5, MET, NF1, NFATC3, NFKB1, NRAS, NTF3, NTRK2, PAK2, PDGFRA, PPM1A, PPP3CA, PPP3R1, PRKACB, PRKCA, PRKCB, MAPK1, MAP2K3, PTPRR, RAC1, RAP1B, RASA1, RPS6KA3, MAP2K4, SOS2, SRF, STK3, STK4, TGFB2, TGFBR1, TGFBR2, TP53, VEGFA, VEGFB, FGF18, RPS6KA5, MAP4K4, RAPGEF2, AKT3, RASGRP1, MAP3K2, RRAS2, TAB2, IRAK4, ECSIT, NLK, GNG12, TAOK1, PDGFD
KEGG	hsa04151	PI3K-Akt signaling pathway	95/1203	8.27E-08	FASLG, AREG, CCND1, BCL2, BDNF, BRCA1, CCND2, CDK6, COL1A1, COL4A1, COL4A5, CREB1, ATF2, ERBB2, ERBB3, ERBB4, EREG, F2R, FGF2, FGFR3, FGFR2, FOXO3, FLT1, FN1, MTOR, GNB1, LPAR4, GSK3B, GYS1, HGF, HSP90AA1, HSP90AB1, TNC, IGF1, IGF1R, IL6R, IL7R, INSR, ITGA6, ITGA3, ITGAV, ITGB8, JAK2, KIT, LAMC1, MCL1, MET, NFKB1, NRAS, NTF3, NTRK2, PDGFRA, PIK3CB, PIK3CG, PIK3R1, PPP2R1B, PPP2R2A, PPP2R2C, PPP2R5A, PPP2R5E, PRKAA1, PRKCA, PKN2, MAPK1, PRLR, RELN, PTEN, RAC1, RPS6KB1, SGK1, SOS2, THBS1, TLR4, TP53, TSC1, VEGFA, VEGFB, YWHAB, PIK3R3, FGF18, CCNE2, MAGI2, AKT3, BCL2L11, ITGA11, PHLPP2, SGK3, GNG13, DDIT4, PPP2R2D, GNG12, GNB4, PDGFD, G6PC3, C8orf44-SGK3
KEGG	hsa04218	Cellular senescence	52/1203	1.72E-07	SLC25A4, ATM, CCND1, ZFP36L1, ZFP36L2, CALM1, CALM2, CALM3, CCNA2, CCND2, CDC25A, CDK6, CHEK1, E2F1, E2F3, ETS1, FOXO3, MTOR, HUS1, ITPR1, SMAD2, NFATC3, NFKB1, NRAS, SERPINE1, PIK3CB, PIK3R1, PPP1CC, PPP3CA, PPP3R1, MAPK1, MAP2K3, PTEN, RB1, RBBP4, RBL1, TGFB2, TGFBR1, TGFBR2, TP53, TSC1, PIK3R3, CCNE2, AKT3, RAD50, HIPK3, RRAS2, FBXW11, HIPK2, TRPM7, LIN52, LIN54
KEGG	hsa04510	Focal adhesion	62/1203	1.72E-07	ACTB, ACTN1, BIRC3, XIAP, RHOA, ARHGAP5, CCND1, BCL2, CCND2, CDC42, COL1A1, COL4A1, COL4A5, CRK, DIAPH1, DOCK1, ERBB2, FLNB, FLT1, FN1, FYN, GSK3B, HGF, TNC, IGF1, IGF1R, ITGA6, ITGA3, ITGAV, ITGB8, LAMC1, MET, MYLK, PPP1R12A, PPP1R12B, PAK2, PDGFRA, PIK3CB, PIK3R1, PPP1CC, PRKCA, PRKCB, MAPK1, RELN, PTEN, RAC1, RAP1B, ROCK1, SOS2, THBS1, VCL, VEGFA, VEGFB, PIP5K1A, PIK3R3, ROCK2, AKT3, VAV3, ITGA11, PARVA, PDGFD, MYLK3
KEGG	hsa04810	Regulation of actin cytoskeleton	65/1203	2.97E-07	ACTB, ACTN1, APC, RHOA, CDC42, CRK, DIAPH1, DOCK1, F2R, FGF2, FGFR3, FGFR2, FN1, GNA12, LPAR4, ITGA6, ITGA3, ITGAV, ITGB8, MSN, MYH9, MYH10, MYLK, PPP1R12A, PPP1R12B, NRAS, PAK2, PDGFRA, PIK3CB, PIK3R1, PIP4K2A, PPP1CC, MAPK1, RAC1, ROCK1, SLC9A1, SOS2, TIAM1, TMSB4X, VCL, EZR, PIP5K1A, PIK3R3, FGF18, WASL, ROCK2, ARPC5, ACTR3, ABI2, WASF2, VAV3, ARPC1A, GNA13, NCKAP1, RRAS2, ITGA11, ARHGEF12, GIT1, SSH1, ENAH, GNG12, PDGFD, SSH2, MYLK3, PIKFYVE
KEGG	hsa04390	Hippo signaling pathway	50/1203	1.41E-06	ACTB, APC, BIRC3, AREG, CCND1, BMPR1A, BMPR1B, BMPR2, CCND2, GSK3B, ID1, ID2, SMAD1, SMAD2, SMAD4, SMAD7, SERPINE1, PPP1CC, PPP2R1B, PPP2R2A, PPP2R2C, SNAI2, SOX2, STK3, TEAD1, TGFB2, TGFBR1, TGFBR2, TP53BP2, WNT1, WNT5A, WNT2B, YWHAB, FZD5, FZD3, FZD1, FZD4, FZD8, YAP1, WWC1, FBXW11, WWTR1, LEF1, MOB1A, PPP2R2D, SAV1, MPP5, PARD6B, FRMD6, AMOT
KEGG	hsa04015	Rap1 signaling pathway	61/1203	2.05E-06	ACTB, ADCY2, ADCY9, RHOA, CALM1, CALM2, CALM3, KRIT1, CDC42, CRK, CTNND1, F2R, FGF2, FGFR3, FGFR2, FLT1, GNAI2, GNAI3, GNAQ, GNAS, LPAR4, HGF, ID1, IGF1, IGF1R, INSR, KIT, MET, NRAS, P2RY1, PDGFRA, PIK3CB, PIK3R1, PLCB4, PLCG1, PRKCA, PRKCB, MAPK1, MAP2K3, RAC1, RALA, RAP1B, THBS1, TIAM1, VEGFA, VEGFB, PIK3R3, FGF18, RAPGEF2, DOCK4, RAPGEF5, MAGI2, AKT3, VAV3, RAPGEF4, PLCB1, RAPGEF6, ENAH, PDGFD, PARD6B, MAGI3
KEGG	hsa04933	AGE-RAGE signaling pathway in diabetic complications	36/1203	3.03E-06	CCND1, BCL2, CDC42, COL1A1, COL4A1, COL4A5, DIAPH1, EDN1, EGR1, FN1, JAK2, SMAD2, SMAD4, MMP2, NFKB1, NRAS, SERPINE1, PIK3CB, PIK3R1, PLCB4, PLCG1, PRKCA, PRKCB, PRKCE, MAPK1, RAC1, STAT1, STAT3, TGFB2, TGFBR1, TGFBR2, VEGFA, VEGFB, PIK3R3, AKT3, PLCB1
KEGG	hsa04360	Axon guidance	54/1203	3.68E-06	RHOA, BMPR1B, BMPR2, CAMK2D, CDC42, DPYSL2, EFNB2, EPHA4, EPHA5, EPHB1, EPHB2, EPHB4, FYN, GNAI2, GNAI3, GSK3B, MET, NFATC3, NRAS, PAK2, PIK3CB, PIK3R1, PLCG1, PPP3CA, PPP3R1, PRKCA, MAPK1, PTCH1, RAC1, RASA1, ROBO1, ROCK1, WNT5A, FZD3, SEMA7A, PIK3R3, UNC5C, NRP1, SEMA5A, SLIT2, ROCK2, PLXNC1, SEMA4D, SEMA3C, ARHGEF12, SRGAP2, SSH1, SEMA4C, ENAH, SEMA6A, NTN4, PARD6B, SSH2, UNC5D
KEGG	hsa05215	Prostate cancer	35/1203	3.68E-06	AR, CCND1, BCL2, CREB1, CREBBP, E2F1, E2F3, EP300, ERBB2, ERG, FGFR2, MTOR, GSK3B, HSP90AA1, HSP90AB1, IGF1, IGF1R, NFKB1, NFKBIA, NKX3-1, NRAS, PDGFRA, PIK3CB, PIK3R1, MAPK1, PTEN, RB1, SOS2, ZEB1, TP53, PIK3R3, CCNE2, AKT3, LEF1, PDGFD
KEGG	hsa05163	Human cytomegalovirus infection	63/1203	4.01E-06	ADCY2, ADCY9, FASLG, RHOA, CCND1, BID, CALM1, CALM2, CALM3, CDK6, CREB1, ATF2, CRK, E2F1, E2F3, PTK2B, MTOR, GNA12, GNAI2, GNAI3, GNAQ, GNAS, GNB1, GSK3B, IL1R1, IL6R, ITGAV, ITPR1, NFATC3, NFKB1, NFKBIA, NRAS, PDGFRA, PIK3CB, PIK3R1, PLCB4, PPP3CA, PPP3R1, PRKACB, PRKCA, PRKCB, MAPK1, PTGS2, RAC1, RB1, ROCK1, RPS6KB1, SOS2, SP1, STAT3, TP53, TSC1, VEGFA, PIK3R3, ROCK2, AKT3, GNA13, AKAP13, PLCB1, ARHGEF12, GNG13, GNG12, GNB4

KEGG	hsa04071	Sphingolipid signaling pathway	40/1203	4.01E-06	RHOA, BCL2, BID, FYN, GNA12, GNAI2, GNAI3, GNAQ, MAP3K5, NFKB1, NRAS, PIK3CB, PIK3R1, PLCB4, PLD1, PPP2R1B, PPP2R2A, PPP2R2C, PPP2R5A, PPP2R5E, PRKCA, PRKCB, PRKCE, MAPK1, PTEN, RAC1, ROCK1, TP53, PIK3R3, SGPL1, ROCK2, GAB2, AKT3, GNA13, PLCB1, SPTLC3, PPP2R2D, SGMS2, CERS6, ACER2
KEGG	hsa04014	Ras signaling pathway	64/1203	5.30E-06	ABL2, FASLG, ARF6, RHOA, BDNF, CALM1, CALM2, CALM3, CDC42, ETS1, ETS2, FGF2, FGFR3, FGFR2, FLT1, GAB1, GNB1, HGF, IGF1, IGF1R, INSR, KIT, MET, NF1, NFKB1, NRAS, NTF3, NTRK2, PAK2, PDGFRA, PIK3CB, PIK3R1, PLCG1, PLD1, PRKACB, PRKCA, PRKCB, MAPK1, RAC1, RALA, RAP1B, RASA1, REL, SOS2, STK4, TIAM1, VEGFA, VEGFB, SHOC2, PIK3R3, FGF18, RASAL2, RAPGEF5, GAB2, AKT3, RASGRP1, RASA4, RALBP1, RRAS2, GNG13, GNG12, GNB4, PDGFD, KSR2
KEGG	hsa04919	Thyroid hormone signaling pathway	40/1203	5.94E-06	ACTB, ATP1A2, ATP1B1, CCND1, CREBBP, EP300, ESR1, MTOR, GSK3B, ITGAV, NOTCH2, NRAS, PIK3CB, PIK3R1, PLCB4, PLCG1, MED1, PRKACB, PRKCA, PRKCB, MAPK1, SLC9A1, STAT1, THRB, TP53, NCOA3, PIK3R3, NCOA1, KAT2B, MED17, NCOR1, TBC1D4, MED12, MED13, AKT3, NCOA2, PLCB1, MED13L, MED12L, SLC16A10
KEGG	hsa05206	MicroRNAs in cancer	79/1203	7.45E-06	APC, RHOA, ATM, CCND1, BCL2, BCL2L2, BMI1, BMPR2, BRCA1, CCND2, CCNG1, CD44, CDC25A, CDK6, CREBBP, CRK, CYP1B1, E2F1, E2F3, EP300, ERBB2, ERBB3, EZH2, FGFR3, MTOR, GLS, HNRNPK, HOXD10, TNC, STMN1, MARCKS, MCL1, MDM4, MET, MMP16, NFKB1, NOTCH2, NRAS, PDGFRA, PIK3CB, PIK3R1, PLCG1, PRKCA, PRKCB, PRKCE, MAPK1, PTEN, PTGS2, ROCK1, SLC7A1, SOS2, SOX4, STAT3, ZEB1, TGFB2, THBS1, TIMP3, TP53, UBE2I, VEGFA, EZR, VIM, FZD3, HMGA2, RECK, PIK3R3, TP63, CCNE2, RPS6KA5, KIF23, ZEB2, BCL2L11, SPRY2, DICER1, FOXP1, PDCD4, DDIT4, SLC45A3, TRIM71
KEGG	hsa04144	Endocytosis	66/1203	2.28E-05	ARF1, ARF3, ARF4, ARF6, RHOA, CAPZA1, CAPZA2, CBL, CBLB, CDC42, CLTC, FGFR3, FGFR2, HSPA2, IGF1R, IGF2R, KIF5B, KIF5C, LDLR, SMAD2, RAB8A, NEDD4, PDGFRA, PLD1, SH3GL1, SNX1, TFRC, TGFBR1, TGFBR2, PIP5K1A, EEA1, SNX4, RAB11A, ASAP2, WASL, RABEP1, VPS26A, ZFYVE16, IST1, IQSEC1, ARPC5, ACTR3, STAM2, ARPC1A, ARFGEF1, RAB10, EHD1, WWP1, RAB11FIP2, PSD3, CHMP2B, GIT1, SH3KBP1, ASAP1, VPS36, CHMP5, VTA1, CHMP1B, RAB22A, SMURF2, RAB11FIP1, RAB11FIP4, PARD6B, MVB12B, ARAP2, WIPF2
KEGG	hsa04371	Apelin signaling pathway	42/1203	2.51E-05	ADCY2, ADCY9, JAG1, CCND1, CALM1, CALM2, CALM3, EGR1, MTOR, GNAI2, GNAI3, GNAQ, GNB1, ITPR1, SMAD2, SMAD4, MEF2A, MEF2C, MEF2D, MYLK, NRAS, SERPINE1, PIK3C3, PIK3CG, PLCB4, PRKAA1, PRKACB, PRKCE, MAPK1, RPS6KB1, SLC9A1, TFAM, TGFBR1, AKT3, GNA13, RRAS2, PLCB1, GABARAPL1, GNG13, GNG12, GNB4, MYLK3
KEGG	hsa05212	Pancreatic cancer	28/1203	2.51E-05	CCND1, CDC42, CDK6, E2F1, E2F3, ERBB2, MTOR, SMAD2, SMAD4, NFKB1, PIK3CB, PIK3R1, PLD1, MAPK1, RAC1, RALA, RB1, RPS6KB1, STAT1, STAT3, TGFB2, TGFBR1, TGFBR2, TP53, VEGFA, PIK3R3, AKT3, RALBP1
KEGG	hsa04916	Melanogenesis	33/1203	6.40E-05	ADCY2, ADCY9, CALM1, CALM2, CALM3, CAMK2D, CREB1, CREBBP, EDN1, EP300, GNAI2, GNAI3, GNAQ, GNAS, GSK3B, KIT, MITF, NRAS, PLCB4, PRKACB, PRKCA, PRKCB, MAPK1, WNT1, WNT5A, WNT2B, FZD5, FZD3, FZD1, FZD4, FZD8, PLCB1, LEF1
KEGG	hsa04935	Growth hormone synthesis, secretion and action	37/1203	6.40E-05	ADCY2, ADCY9, CACNA1C, CREB1, ATF2, CREBBP, CRK, EP300, MTOR, GNAI2, GNAI3, GNAQ, GNAS, GSK3B, IGF1, ITPR1, JAK2, MAP3K1, NRAS, PIK3CB, PIK3R1, PLCB4, PLCG1, PRKACB, PRKCA, PRKCB, MAPK1, MAP2K3, MAP2K4, SOS2, SSTR2, STAT1, STAT3, PIK3R3, SOCS2, AKT3, PLCB1
KEGG	hsa04971	Gastric acid secretion	27/1203	7.35E-05	ACTB, ADCY2, ADCY9, ATP1A2, ATP1B1, CA2, CALM1, CALM2, CALM3, CAMK2D, GNAI2, GNAI3, GNAQ, GNAS, ITPR1, KCNJ2, KCNJ10, MYLK, PLCB4, PRKACB, PRKCA, PRKCB, SLC9A1, SSTR2, EZR, PLCB1, MYLK3
KEGG	hsa04022	cGMP-PKG signaling pathway	47/1203	7.35E-05	ADCY2, ADCY9, ADRB1, SLC25A4, RHOA, ATP1A2, ATP1B1, ATP2B1, ATP2B2, ATP2B4, CACNA1C, CALM1, CALM2, CALM3, CREB1, ATF2, GNA12, GNAI2, GNAI3, GNAQ, GTF2I, GUCY1A2, INSR, ITPR1, MEF2A, MEF2C, MEF2D, MYLK, PPP1R12A, NFATC3, PDE3A, PIK3CG, PLCB4, PPP1CC, PPP3CA, PPP3R1, PRKCE, PRKG1, MAPK1, ROCK1, SRF, PDE5A, ROCK2, AKT3, GNA13, PLCB1, MYLK3
KEGG	hsa05225	Hepatocellular carcinoma	47/1203	8.45E-05	ACTB, APC, CCND1, CDK6, E2F1, E2F3, MTOR, GAB1, GSK3B, HGF, IGF1R, SMAD2, SMAD4, MET, NFE2L2, NRAS, PIK3CB, PIK3R1, PLCG1, PRKCA, PRKCB, MAPK1, PTEN, RB1, RPS6KB1, SMARCC2, SMARCD1, SMARCE1, SOS2, TGFB2, TGFBR1, TGFBR2, TP53, WNT1, WNT5A, WNT2B, FZD5, FZD3, ARID1A, FZD1, FZD4, FZD8, PIK3R3, AKT3, LEF1, PBRM1, ARID2
KEGG	hsa04120	Ubiquitin mediated proteolysis	41/1203	9.20E-05	BIRC3, XIAP, BRCA1, CBL, CBLB, CDC27, UBE2K, MAP3K1, MID1, NEDD4, RPS27A, SKP1, SKP2, UBE2A, UBE2D1, UBE2D3, UBE2E2, UBE2H, UBE2I, UBE2L3, UBE3A, VHL, CUL5, CUL4B, CUL3, HERC3, PIAS2, TRIP12, UBE4A, WWP1, FBXW11, HERC4, UBR5, UBE2D4, UBE2W, BIRC6, UBE2O, SMURF2, SYVN1, KLHL13, UBE2Q2
KEGG	hsa05224	Breast cancer	42/1203	1.36E-04	JAG1, APC, CCND1, BRCA1, CDK6, E2F1, E2F3, ERBB2, ESR1, FGF2, MTOR, GSK3B, IGF1, IGF1R, JAG2, KIT, NOTCH2, NRAS, PIK3CB, PIK3R1, MAPK1, PTEN, RB1, RPS6KB1, SOS2, SP1, TP53, WNT1, WNT5A, WNT2B, FZD5, FZD3, NCOA3, FZD1, FZD4, FZD8, PIK3R3, TNFSF11, NCOA1, FGF18, AKT3, LEF1
KEGG	hsa04722	Neurotrophin signaling pathway	36/1203	1.37E-04	FASLG, RHOA, BCL2, BDNF, CALM1, CALM2, CALM3, CAMK2D, CDC42, CRK, FOXO3, GAB1, GSK3B, MAP3K1, MAP3K5, NFKB1, NFKBIA, NRAS, NTF3, NTRK2, PIK3CB, PIK3R1, PLCG1, MAPK1, RAC1, RAP1B, RPS6KA3, SOS2, TP53, PIK3R3, RPS6KA5, MAGED1, AKT3, FRS2, IRAK3, IRAK4

KEGG	hsa04928	Parathyroid hormone synthesis, secretion and action	33/1203	1.51E-04	ADCY2, ADCY9, RHOA, BCL2, RUNX2, CREB1, ATF2, EGR1, GATA3, GNA12, GNAI2, GNAI3, GNAQ, GNAS, ITPR1, MEF2A, MEF2C, MEF2D, MMP16, NR4A2, PDE4D, PLCB4, PLD1, PRKACB, PRKCA, PRKCB, MAPK1, SP1, TNFSF11, MAFB, GNA13, AKAP13, PLCB1
KEGG	hsa04070	Phosphatidylinositol signaling system	31/1203	1.51E-04	CALM1, CALM2, CALM3, CDS1, INPP4A, INPPL1, ITPK1, ITPR1, MTM1, OCRL, PIK3C2A, PIK3C3, PIK3CB, PIK3R1, PIP4K2A, PLCB4, PLCG1, PRKCA, PRKCB, PTEN, PIP5K1A, PIK3R3, DGKE, CDS2, MTMR3, MTMR6, SACM1L, PLCB1, PI4K2B, IPPK, PIKFYVE
KEGG	hsa01522	Endocrine resistance	31/1203	1.85E-04	ADCY2, ADCY9, JAG1, CCND1, BCL2, E2F1, E2F3, ERBB2, ESR1, MTOR, GNAS, IGF1, IGF1R, JAG2, MMP2, NOTCH2, NRAS, PIK3CB, PIK3R1, MED1, PRKACB, MAPK1, RB1, RPS6KB1, SOS2, SP1, TP53, NCOA3, PIK3R3, NCOR1, AKT3
KEGG	hsa05223	Non-small cell lung cancer	25/1203	1.93E-04	CCND1, CDK6, E2F1, E2F3, ERBB2, FOXO3, HGF, KIF5B, KIF5C, MET, NRAS, PIK3CB, PIK3R1, PLCG1, PRKCA, PRKCB, MAPK1, RB1, RET, SOS2, STAT3, STK4, TP53, PIK3R3, AKT3
KEGG	hsa04068	FoxO signaling pathway	38/1203	1.98E-04	FASLG, ATM, CCND1, BCL6, CCND2, CREBBP, EP300, FOXO3, IGF1, IGF1R, IL7R, INSR, SMAD4, NRAS, PIK3CB, PIK3R1, PRKAA1, MAPK1, PTEN, SGK1, SKP2, SOD2, SOS2, STAT3, STK4, TGFB2, TGFBR1, TGFBR2, USP7, PIK3R3, AKT3, BCL2L11, PLK4, SGK3, GABARAPL1, NLK, G6PC3, C8orf44-SGK3
KEGG	hsa04310	Wnt signaling pathway	44/1203	1.98E-04	APC, RHOA, CCND1, CAMK2D, CCND2, CREBBP, CSNK2A1, EP300, GPC4, GSK3B, SMAD4, NFATC3, PLCB4, PPP3CA, PPP3R1, PRKACB, PRKCA, PRKCB, RAC1, SFRP2, SKP1, TP53, WNT1, WNT5A, WNT2B, FZD5, FZD3, FOSL1, FZD1, FZD4, FZD8, ROCK2, DAAM1, PLCB1, FBXW11, BAMBI, CACYBP, DKK2, LEF1, NLK, LGR4, TBL1XR1, VANGL1, PRICKLE2
KEGG	hsa05210	Colorectal cancer	28/1203	2.28E-04	APC, AREG, RHOA, CCND1, BCL2, EREG, MTOR, GSK3B, SMAD2, SMAD4, MSH2, NRAS, PIK3CB, PIK3R1, MAPK1, RAC1, RALA, RPS6KB1, SOS2, TGFB2, TGFBR1, TGFBR2, TP53, PIK3R3, AKT3, BCL2L11, APPL1, LEF1
KEGG	hsa04110	Cell cycle	36/1203	2.86E-04	ATM, CCND1, CCNA2, CCND2, CDC25A, CDC27, CDK6, CHEK1, CREBBP, E2F1, E2F3, EP300, GSK3B, SMAD2, SMAD4, MCM3, ORC2, ORC4, ORC5, PRKDC, RB1, RBL1, SKP1, SKP2, TFDP1, TFDP2, TGFB2, TP53, WEE1, YWHAB, SMC1A, CDC14A, CCNE2, BUB3, STAG1, STAG2
KEGG	hsa04072	Phospholipase D signaling pathway	41/1203	2.86E-04	ADCY2, ADCY9, ARF1, ARF6, RHOA, F2R, PTK2B, MTOR, FYN, GAB1, GNA12, GNAS, LPAR4, GRM3, INSR, KIT, NRAS, PDGFRA, PIK3CB, PIK3CG, PIK3R1, PLCB4, PLCG1, PLD1, PRKCA, MAPK1, RALA, SOS2, TSC1, PIP5K1A, PIK3R3, DGKE, GAB2, AKT3, GNA13, RAPGEF4, RRAS2, PLCB1, AGPAT5, AGPAT3, PDGFD
KEGG	hsa05214	Glioma	25/1203	3.61E-04	CCND1, CALM1, CALM2, CALM3, CAMK2D, CDK6, E2F1, E2F3, MTOR, IGF1, IGF1R, NRAS, PDGFRA, PIK3CB, PIK3R1, PLCG1, PRKCA, PRKCB, MAPK1, PTEN, RB1, SOS2, TP53, PIK3R3, AKT3
KEGG	hsa04211	Longevity regulating pathway	28/1203	4.15E-04	ADCY2, ADCY9, CREB1, ATF2, FOXO3, MTOR, IGF1, IGF1R, INSR, NFKB1, NRAS, PIK3CB, PIK3R1, PRKAA1, PRKACB, RPS6KB1, SOD2, TP53, TSC1, PIK3R3, RB1CC1, AKT3, CAMKK2, APPL1, SESN1, ADIPOR2, SESN2, SESN3
KEGG	hsa04012	ErbB signaling pathway	27/1203	4.54E-04	ABL2, AREG, CAMK2D, CBL, CBLB, CRK, ERBB2, ERBB3, ERBB4, EREG, MTOR, GAB1, GSK3B, NRG1, NRAS, PAK2, PIK3CB, PIK3R1, PLCG1, PRKCA, PRKCB, MAPK1, RPS6KB1, MAP2K4, SOS2, PIK3R3, AKT3
KEGG	hsa05135	Yersinia infection	38/1203	4.82E-04	ACTB, ARF6, RHOA, CDC42, CRK, DOCK1, PTK2B, FN1, GNAQ, GSK3B, NFATC3, NFKB1, NFKBIA, PIK3CB, PIK3R1, PLCG1, PKN2, MAPK1, MAP2K3, RAC1, ROCK1, RPS6KA3, MAP2K4, TLR4, PIP5K1A, PIK3R3, WASL, ROCK2, AKT3, ARPC5, ACTR3, WASF2, VAV3, ARPC1A, TAB2, ARHGEF12, IRAK4, WIPF2
KEGG	hsa04115	p53 signaling pathway	24/1203	5.95E-04	APAF1, ATM, CCND1, BCL2, BID, CCND2, CCNG1, CDK6, CHEK1, IGF1, MDM4, SERPINE1, PTEN, RRM2, THBS1, TP53, PPM1D, CCNE2, SESN1, RRM2B, PERP, ZMAT3, SESN2, SESN3
KEGG	hsa04611	Platelet activation	35/1203	6.00E-04	ACTB, ADCY2, ADCY9, RHOA, COL1A1, F2R, FYN, GNAI2, GNAI3, GNAQ, GNAS, GUCY1A2, ITPR1, MYLK, PPP1R12A, P2RY1, PIK3CB, PIK3CG, PIK3R1, PLCB4, PPP1CC, PRKACB, PRKG1, MAPK1, PTGS1, RAP1B, ROCK1, PIK3R3, ROCK2, AKT3, RASGRP1, GNA13, PLCB1, ARHGEF12, MYLK3
KEGG	hsa04921	Oxytocin signaling pathway	41/1203	6.52E-04	ACTB, ADCY2, ADCY9, RHOA, CCND1, CACNA1C, CACNA2D1, CALM1, CALM2, CALM3, CAMK2D, GNAI2, GNAI3, GNAQ, GNAS, GUCY1A2, ITPR1, KCNJ2, KCNJ3, MEF2C, MYLK, PPP1R12A, PPP1R12B, NFATC3, NRAS, PIK3CG, PLCB4, PPP1CC, PPP3CA, PPP3R1, PRKAA1, PRKACB, PRKCA, PRKCB, MAPK1, PTGS2, ROCK1, ROCK2, CAMKK2, PLCB1, MYLK3
KEGG	hsa04152	AMPK signaling pathway	34/1203	6.65E-04	ACACB, CCND1, CCNA2, CREB1, FASN, FOXO3, MTOR, GYS1, HMGCR, IGF1, IGF1R, INSR, RAB8A, PIK3CB, PIK3R1, PPP2R1B, PPP2R2A, PPP2R2C, PPP2R5A, PPP2R5E, PRKAA1, RAB2A, RPS6KB1, SCD, TSC1, PIK3R3, AKT3, CAMKK2, RAB10, RAB14, CAB39, PPP2R2D, ADIPOR2, G6PC3
KEGG	hsa05222	Small cell lung cancer	28/1203	6.69E-04	APAF1, BIRC3, XIAP, CCND1, BCL2, CDK6, CKS1B, COL4A1, COL4A5, E2F1, E2F3, FN1, ITGA6, ITGA3, ITGAV, LAMC1, NFKB1, NFKBIA, PIK3CB, PIK3R1, PTEN, PTGS2, RB1, SKP2, TP53, PIK3R3, CCNE2, AKT3
KEGG	hsa04024	cAMP signaling pathway	53/1203	6.69E-04	ADCY2, ADCY9, ADCYAP1, ADRB1, RHOA, ATP1A2, ATP1B1, ATP2B1, ATP2B2, ATP2B4, BDNF, CACNA1C, CALM1, CALM2, CALM3, CAMK2D, CREB1, CREBBP, EDN1, EP300, F2R, GNAI2, GNAI3, GNAS, GRIA2, PPP1R12A, NFKB1, NFKBIA, PDE3A,

					PDE4D, PIK3CB, PIK3R1, PLD1, PPARA, PPP1CC, PRKACB, MAPK1, PTCH1, RAC1, RAP1B, ROCK1, SLC9A1, SOX9, SSTR2, TIAM1, PIK3R3, ROCK2, GABBR2, AKT3, VAV3, RAPGEF4, RRAS2, HHIP
KEGG	hsa04150	mTOR signaling pathway	41/1203	6.69E-04	RHOA, ATP6V1A, MTOR, GSK3B, IGF1, IGF1R, INSR, NRAS, PIK3CB, PIK3R1, PRKAA1, PRKCA, PRKCB, MAPK1, PTEN, RPS6KA3, RPS6KB1, SGK1, SKP2, SOS2, TSC1, WNT1, WNT5A, WNT2B, FZD5, FZD3, FZD1, FZD4, FZD8, PIK3R3, ATP6V1G1, ULK2, AKT3, ATP6V1H, CAB39, DDIT4, FNIP2, RRAGD, SEH1L, SESN2, RICTOR
KEGG	hsa03015	mRNA surveillance pathway	29/1203	6.69E-04	ETF1, GLE1, GSPT1, PABPC3, PNN, PPP1CC, PPP2R1B, PPP2R2A, PPP2R2C, PPP2R5A, PPP2R5E, RNGTT, PABPC4, SMG7, RBM8A, NXF1, HBS1L, PAPOLA, SMG1, CSTF2T, DAZAP1, PABPC1, CPSF2, PPP2R2D, NXT2, PAPOLG, WDR82, PABPC1L, MSI2
KEGG	hsa04666	Fc gamma R-mediated phagocytosis	29/1203	6.69E-04	ARF6, CDC42, CRK, DOCK1, INPPL1, MARCKS, MYO10, PIK3CB, PIK3R1, PLCG1, PLD1, PRKCA, PRKCB, PRKCE, MAPK1, RAC1, RPS6KB1, PIP5K1A, PIK3R3, ASAP2, GAB2, AKT3, ARPC5, ACTR3, WASF2, VAV3, ARPC1A, ASAP1, MARCKSL1
KEGG	hsa04713	Circadian entrainment	29/1203	6.69E-04	ADCY2, ADCY9, ADCYAP1, CACNA1C, CALM1, CALM2, CALM3, CAMK2D, CREB1, GNAI2, GNAI3, GNAQ, GNAS, GNB1, GRIA2, GUCY1A2, ITPR1, KCNJ3, PLCB4, PRKACB, PRKCA, PRKCB, PRKG1, MAPK1, RPS6KA5, PLCB1, GNG13, GNG12, GNB4
KEGG	hsa04917	Prolactin signaling pathway	23/1203	6.87E-04	CCND1, CCND2, ESR1, FOXO3, GSK3B, JAK2, NFKB1, NRAS, PIK3CB, PIK3R1, MAPK1, PRLR, SOS2, STAT1, STAT3, PIK3R3, TNFSF11, SOCS2, SOCS6, SOCS5, AKT3, SOCS7, SOCS4
KEGG	hsa04912	GnRH signaling pathway	28/1203	7.35E-04	ADCY2, ADCY9, CACNA1C, CALM1, CALM2, CALM3, CAMK2D, CDC42, EGR1, PTK2B, GNAQ, GNAS, ITPR1, MAP3K1, MAP3K4, MMP2, NRAS, PLCB4, PLD1, PRKACB, PRKCA, PRKCB, MAPK1, MAP2K3, MAP2K4, SOS2, MAP3K2, PLCB1
KEGG	hsa04728	Dopaminergic synapse	36/1203	8.32E-04	CACNA1C, CALM1, CALM2, CALM3, CAMK2D, CREB1, ATF2, GNAI2, GNAI3, GNAQ, GNAS, GNB1, GRIA2, GSK3B, ITPR1, KCNJ3, KIF5B, KIF5C, PLCB4, PPP1CC, PPP2R1B, PPP2R2A, PPP2R2C, PPP2R5A, PPP2R5E, PPP3CA, PRKACB, PRKCA, PRKCB, CLOCK, AKT3, PLCB1, GNG13, PPP2R2D, GNG12, GNB4
KEGG	hsa05161	Hepatitis B	42/1203	8.32E-04	APAF1, FASLG, BCL2, BID, CCNA2, CREB1, ATF2, CREBBP, DDX3X, E2F1, E2F3, EP300, PTK2B, JAK2, SMAD4, MAP3K1, NFATC3, NFKB1, NFKBIA, NRAS, PIK3CB, PIK3R1, PRKCA, PRKCB, MAPK1, MAP2K3, RB1, MAP2K4, SOS2, STAT1, STAT3, TGFB2, TGFBR1, TGFBR2, TLR4, TP53, YWHAB, PIK3R3, CCNE2, AKT3, TAB2, IRAK4
KEGG	hsa04720	Long-term potentiation	22/1203	8.91E-04	CACNA1C, CALM1, CALM2, CALM3, CAMK2D, CREBBP, EP300, GNAQ, GRIA2, ITPR1, NRAS, PLCB4, PPP1CC, PPP3CA, PPP3R1, PRKACB, PRKCA, PRKCB, MAPK1, RAP1B, RPS6KA3, PLCB1
KEGG	hsa05131	Shigellosis	58/1203	8.91E-04	ACTB, ACTN1, ARF1, ARF6, RHOA, ATM, BCL2, CD44, CDC42, CRK, DIAPH1, DOCK1, FOXO3, MTOR, GSK3B, IL1R1, ITPR1, NFKB1, NFKBIA, PIK3C3, PIK3CB, PIK3R1, PLCB4, PLCG1, PRKCE, MAPK1, RAC1, ROCK1, RPS6KB1, RPS27A, SKP1, TLR4, TP53, UBE2D1, UBE2D3, UBE2V2, VCL, PIK3R3, WASL, RPS6KA5, ROCK2, AKT3, ARPC5, ACTR3, WASF2, TNIP1, ARPC1A, MALT1, CBX3, FNBP1, TAB2, PLCB1, FBXW11, GABARAPL1, UBE2D4, FNBP1L, RRAGD, TAB3
KEGG	hsa05220	Chronic myeloid leukemia	24/1203	8.92E-04	CCND1, RUNX1, CBL, CDK6, CRK, E2F1, E2F3, MECOM, SMAD4, NFKB1, NFKBIA, NRAS, PIK3CB, PIK3R1, MAPK1, RB1, SOS2, TGFB2, TGFBR1, TGFBR2, TP53, PIK3R3, GAB2, AKT3
KEGG	hsa04915	Estrogen signaling pathway	37/1203	9.11E-04	ADCY2, ADCY9, BCL2, CALM1, CALM2, CALM3, CREB1, ATF2, ESR1, FKBP5, GNAI2, GNAI3, GNAQ, GNAS, HSPA2, HSP90AA1, HSP90AB1, ITPR1, KCNJ3, KRT10, MMP2, NRAS, PIK3CB, PIK3R1, PLCB4, PRKACB, MAPK1, RARA, SOS2, SP1, NCOA3, PIK3R3, NCOA1, GABBR2, AKT3, NCOA2, PLCB1
KEGG	hsa04066	HIF-1 signaling pathway	31/1203	9.36E-04	ALDOA, BCL2, CAMK2D, CREBBP, EDN1, EP300, ERBB2, FLT1, MTOR, MKNK2, IGF1, IGF1R, IL6R, INSR, NFKB1, SERPINE1, PIK3CB, PIK3R1, PLCG1, PRKCA, PRKCB, MAPK1, RPS6KB1, STAT3, TFRC, TLR4, VEGFA, VHL, PIK3R3, AKT3, EGLN3
KEGG	hsa04926	Relaxin signaling pathway	35/1203	1.02E-03	ADCY2, ADCY9, COL1A1, COL4A1, COL4A5, CREB1, ATF2, EDN1, GNAI2, GNAI3, GNAS, GNB1, SMAD2, MMP2, NFKB1, NFKBIA, NRAS, PIK3CB, PIK3R1, PLCB4, PRKACB, PRKCA, MAPK1, MAP2K4, SOS2, TGFBR1, TGFBR2, VEGFA, VEGFB, PIK3R3, AKT3, PLCB1, GNG13, GNG12, GNB4
KEGG	hsa05226	Gastric cancer	39/1203	1.02E-03	APC, CCND1, BCL2, E2F1, E2F3, ERBB2, FGF2, FGFR2, MTOR, GAB1, GSK3B, HGF, SMAD2, SMAD4, MET, NRAS, PIK3CB, PIK3R1, MAPK1, RB1, RPS6KB1, SOS2, TGFB2, TGFBR1, TGFBR2, TP53, WNT1, WNT5A, WNT2B, FZD5, FZD3, FZD1, FZD4, FZD8, PIK3R3, FGF18, CCNE2, AKT3, LEF1
KEGG	hsa04261	Adrenergic signaling in cardiomyocytes	39/1203	1.15E-03	ADCY2, ADCY9, ADRB1, ATP1A2, ATP1B1, ATP2B1, ATP2B2, ATP2B4, BCL2, CACNA1C, CACNA2D1, CALM1, CALM2, CALM3, CAMK2D, CREB1, ATF2, GNAI2, GNAI3, GNAQ, GNAS, PIK3CG, PLCB4, PPP1CC, PPP2R1B, PPP2R2A, PPP2R2C, PPP2R5A, PPP2R5E, PRKACB, PRKCA, MAPK1, SLC9A1, TPM3, RPS6KA5, AKT3, RAPGEF4, PLCB1, PPP2R2D
KEGG	hsa05165	Human papillomavirus infection	73/1203	1.15E-03	JAG1, APC, FASLG, ATM, ATP6V1A, CCND1, CCNA2, CCND2, CDC42, CDK6, CHD4, COL1A1, COL4A1, COL4A5, CREB1, CREBBP, E2F1, EP300, FN1, MTOR, GNAS, GSK3B, TNC, RBPJ, ITGA6, ITGA3, ITGAV, ITGB8, LAMC1, MFNG, NFKB1, NOTCH2, NRAS, PIK3CB, PIK3R1, PKM, PPP2R1B, PPP2R2A, PPP2R2C, PPP2R5A, PPP2R5E, PRKACB, MAPK1, RELN,

					PTEN, PTGS2, RB1, RBL1, RPS6KB1, SOS2, STAT1, THBS1, TP53, TSC1, UBE3A, VEGFA, WNT1, WNT5A, WNT2B, FZD5, FZD3, FZD1, FZD4, FZD8, PIK3R3, CCNE2, ATP6V1G1, AKT3, ITGA11, ATP6V1H, PPP2R2D, MPP5, PARD6B
KEGG	hsa04730	Long-term depression	20/1203	1.22E-03	GNA12, GNAI2, GNAI3, GNAQ, GNAS, GNAZ, GRIA2, GUCY1A2, IGF1, IGF1R, ITPR1, NRAS, PLCB4, PPP2R1B, PRKCA, PRKCB, PRKG1, MAPK1, GNA13, PLCB1
KEGG	hsa05130	Pathogenic Escherichia coli infection	48/1203	1.23E-03	ACTB, FASLG, ARF1, ARF6, RHOA, CASP7, CDC42, F2R, FYN, GNA12, LPAR4, IL1R1, MYO1B, MYH9, MYH10, MYO1E, MYO5A, MYO5B, MYO10, NFKB1, NFKBIA, CLDN11, PAK2, MAPK1, RAB1A, RAC1, ROCK1, TMBIM6, TJP1, TLR4, EZR, WASL, CLDN1, ROCK2, SEC24C, ARPC5, ACTR3, WASF2, ARPC1A, GNA13, NCKAP1, TMED10, TAB2, ARHGEF12, IRAK4, WIPF2, TAB3, OCLN
KEGG	hsa05211	Renal cell carcinoma	22/1203	1.23E-03	CDC42, CREBBP, CRK, EP300, ETS1, GAB1, HGF, MET, NRAS, PAK2, PIK3CB, PIK3R1, MAPK1, RAC1, RAP1B, SOS2, TGFB2, VEGFA, VHL, PIK3R3, AKT3, EGLN3
KEGG	hsa05166	Human T-cell leukemia virus 1 infection	52/1203	1.34E-03	ADCY2, ADCY9, SLC25A4, XIAP, ATM, CCND1, CANX, CCNA2, CCND2, CDC27, CHEK1, CREB1, ATF2, CREBBP, E2F1, E2F3, EGR1, EP300, ETS1, ETS2, IL1R1, SMAD2, SMAD4, MAP3K1, NFATC3, NFKB1, NFKBIA, NFYB, NRAS, PIK3CB, PIK3R1, PPP3CA, PPP3R1, PRKACB, MAPK1, PTEN, RAN, RB1, MAP2K4, SRF, TGFB2, TGFBR1, TGFBR2, TP53, XPO1, FOSL1, PIK3R3, NRP1, KAT2B, CCNE2, BUB3, AKT3
KEGG	hsa04910	Insulin signaling pathway	36/1203	1.46E-03	ACACB, CALM1, CALM2, CALM3, CBL, CBLB, CRK, FASN, MTOR, MKNK2, GSK3B, GYS1, INPPL1, INSR, NRAS, PHKA1, PIK3CB, PIK3R1, PPP1CC, PPP1R3A, PRKAA1, PRKACB, PRKAR1A, PRKAR2A, MAPK1, RPS6KB1, SOS2, TSC1, PIK3R3, SOCS2, AKT3, SORBS1, RHOQ, PPP1R3B, G6PC3, SOCS4
KEGG	hsa04725	Cholinergic synapse	31/1203	1.63E-03	ADCY2, ADCY9, BCL2, CACNA1C, CAMK2D, CREB1, FYN, GNAI2, GNAI3, GNAQ, GNB1, ITPR1, JAK2, KCNJ2, KCNJ3, KCNQ3, NRAS, PIK3CB, PIK3CG, PIK3R1, PLCB4, PRKACB, PRKCA, PRKCB, MAPK1, PIK3R3, AKT3, PLCB1, GNG13, GNG12, GNB4
KEGG	hsa04530	Tight junction	42/1203	1.74E-03	ACTB, ACTN1, RHOA, CCND1, RUNX1, CDC42, ERBB2, MAP3K1, MAP3K5, RAB8A, MSN, MYH9, MYH10, NEDD4, CLDN11, PPP2R1B, PPP2R2A, PPP2R2C, PRKAA1, PRKACB, PRKCE, RAC1, ROCK1, TIAM1, TJP1, EZR, CLDN1, ROCK2, RAPGEF2, ARPC5, ACTR3, ARPC1A, RAPGEF6, ARHGAP17, PPP2R2D, RAP2C, MPP5, PARD6B, WHAMM, AMOT, AMOTL1, OCLN
KEGG	hsa04724	Glutamatergic synapse	31/1203	1.88E-03	ADCY2, ADCY9, CACNA1C, GLS, GLUL, GNAI2, GNAI3, GNAQ, GNAS, GNB1, GRIA2, GRIK3, GRM3, ITPR1, KCNJ3, PLCB4, PLD1, PPP3CA, PPP3R1, PRKACB, PRKCA, PRKCB, MAPK1, SLC1A2, SHANK2, PLCB1, GNG13, SLC38A2, GNG12, GNB4, SLC38A1
KEGG	hsa05218	Melanoma	22/1203	2.20E-03	CCND1, CDK6, E2F1, E2F3, FGF2, HGF, IGF1, IGF1R, MET, MITF, NRAS, PDGFRA, PIK3CB, PIK3R1, MAPK1, PTEN, RB1, TP53, PIK3R3, FGF18, AKT3, PDGFD
KEGG	hsa05167	Kaposi sarcoma-associated herpesvirus infection	46/1203	2.47E-03	CCND1, BID, CALM1, CALM2, CALM3, CDK6, CREB1, CREBBP, E2F1, E2F3, EP300, FGF2, MTOR, GNB1, GSK3B, IL6ST, ITPR1, JAK2, NFATC3, NFKB1, NFKBIA, NRAS, PIK3C3, PIK3CB, PIK3CG, PIK3R1, PLCG1, PPP3CA, PPP3R1, MAPK1, PTGS2, RAC1, RB1, RPS27A, MAP2K4, STAT1, STAT3, TP53, VEGFA, PIK3R3, AKT3, GABARAPL1, LEF1, GNG13, GNG12, GNB4
KEGG	hsa00562	Inositol phosphate metabolism	22/1203	2.65E-03	INPP4A, INPPL1, ITPK1, MTM1, OCRL, PIK3C2A, PIK3C3, PIK3CB, PIK3CG, PIP4K2A, PLCB4, PLCG1, PTEN, PIP5K1A, MTMR3, MTMR6, MINPP1, SACM1L, PLCB1, PI4K2B, IPPK, PIKFYVE
KEGG	hsa04924	Renin secretion	21/1203	2.98E-03	ADCYAP1, ADRB1, CACNA1C, CALM1, CALM2, CALM3, CREB1, EDN1, GNAI2, GNAI3, GNAQ, GNAS, GUCY1A2, ITPR1, KCNJ2, PDE3A, PLCB4, PPP3CA, PPP3R1, PRKACB, PLCB1
KEGG	hsa03018	RNA degradation	23/1203	3.36E-03	BTG1, DDX6, CNOT2, CNOT4, PABPC3, BTG2, PABPC4, PAN2, TOB1, TOB2, BTG3, DIS3, CNOT1, PABPC1, CNOT7, LSM7, DCP1A, CNOT6, PABPC1L, NUDT16, DCP2, CNOT6L, PAN3
KEGG	hsa04934	Cushing syndrome	38/1203	3.85E-03	ADCY2, ADCY9, AHR, APC, CCND1, CACNA1C, CAMK2D, CDK6, CREB1, ATF2, E2F1, E2F3, GNAI2, GNAI3, GNAQ, GNAS, GSK3B, ITPR1, LDLR, KMT2A, PBX1, PLCB4, PRKACB, MAPK1, RAP1B, RB1, SP1, WNT1, WNT5A, WNT2B, FZD5, FZD3, FZD1, FZD4, FZD8, CCNE2, PLCB1, LEF1
KEGG	hsa05202	Transcriptional misregulation in cancer	45/1203	3.85E-03	BIRC3, ATM, BCL6, BMI1, RUNX2, RUNX1, CCNA2, CCND2, CCNT1, CCNT2, DDX5, ERG, ETV1, ETV6, FLT1, HOXA9, HPGD, ID2, IGF1, IGF1R, SMAD1, MEF2C, MEIS1, MET, MITF, KMT2A, AFF1, MLLT3, NFKB1, PBX1, RARA, REL, SIX1, SP1, SS18, ZEB1, TGFBR2, TP53, KDM6A, HMGA2, NCOR1, KLF3, SIX4, BCL11B, SLC45A3
KEGG	hsa05142	Chagas disease	27/1203	5.97E-03	FASLG, GNAI2, GNAI3, GNAQ, GNAS, IL12A, SMAD2, NFKB1, NFKBIA, SERPINE1, PIK3CB, PIK3R1, PLCB4, PPP2R1B, PPP2R2A, PPP2R2C, MAPK1, MAP2K4, TGFB2, TGFBR1, TGFBR2, TLR4, PIK3R3, AKT3, PLCB1, IRAK4, PPP2R2D
KEGG	hsa01524	Platinum drug resistance	21/1203	6.24E-03	APAF1, BIRC3, XIAP, FASLG, ATM, ATP7A, BCL2, BID, BRCA1, ERBB2, ERCC1, MAP3K5, MSH2, PIK3CB, PIK3R1, POLH, MAPK1, REV3L, TP53, PIK3R3, AKT3

KEGG	hsa04960	Aldosterone-regulated sodium reabsorption	13/1203	6.61E-03	ATP1A2, ATP1B1, IGF1, INSR, NR3C2, PIK3CB, PIK3R1, PRKCA, PRKCB, MAPK1, SCNN1A, SGK1, PIK3R3
KEGG	hsa04931	Insulin resistance	28/1203	6.65E-03	ACACB, CREB1, MTOR, GFPT1, GSK3B, GYS1, INSR, NFKB1, NFKBIA, PIK3CB, PIK3R1, PPARA, PPP1CC, PPP1R3A, PRKAA1, PRKCB, PRKCE, PTEN, RPS6KA3, RPS6KB1, STAT3, PIK3R3, TBC1D4, GFPT2, AKT3, MLXIP, PPP1R3B, G6PC3
KEGG	hsa04925	Aldosterone synthesis and secretion	26/1203	6.65E-03	ADCY2, ADCY9, ATP1A2, ATP1B1, ATP2B1, ATP2B2, ATP2B4, DAGLA, CACNA1C, CALM1, CALM2, CALM3, CAMK2D, CREB1, ATF2, GNAQ, GNAS, ITPR1, LDLR, NR4A2, PLCB4, PRKACB, PRKCA, PRKCB, PRKCE, PLCB1
KEGG	hsa04727	GABAergic synapse	24/1203	7.64E-03	ADCY2, ADCY9, CACNA1C, GABRB2, GAD1, GLS, GLUL, GNAI2, GNAI3, GNB1, NSF, PLCL1, PRKACB, PRKCA, PRKCB, SLC6A1, GABBR2, GABARAPL1, GNG13, SLC38A2, GNG12, GNB4, TRAK2, SLC38A1
KEGG	hsa04270	Vascular smooth muscle contraction	33/1203	7.74E-03	ADCY2, ADCY9, RHOA, CACNA1C, CALD1, CALM1, CALM2, CALM3, EDN1, GNA12, GNAQ, GNAS, GUCY1A2, ITPR1, MYH9, MYH10, MYLK, PPP1R12A, PPP1R12B, PLCB4, PPP1CC, PRKACB, PRKCA, PRKCB, PRKCE, PRKG1, MAPK1, ROCK1, ROCK2, GNA13, PLCB1, ARHGEF12, MYLK3
KEGG	hsa05170	Human immunodeficiency virus 1 infection	47/1203	9.30E-03	AP1G1, FASLG, ATM, BCL2, BID, CALM1, CALM2, CALM3, CHEK1, CRK, PTK2B, MTOR, GNAI2, GNAI3, GNAQ, GNB1, ITPR1, NFATC3, NFKB1, NFKBIA, NRAS, PAK2, PIK3CB, PIK3R1, PLCG1, PPP3CA, PPP3R1, PRKCA, PRKCB, MAPK1, MAP2K3, RAC1, RPS6KB1, SKP1, TLR4, WEE1, CUL5, CUL4B, PIK3R3, AP1S2, AKT3, TAB2, FBXW11, IRAK4, GNG13, GNG12, GNB4
KEGG	hsa04140	Autophagy - animal	33/1203	9.75E-03	BCL2, EIF2S1, MTOR, HMGB1, IGF1R, ITPR1, LAMP1, LAMP2, RAB8A, NRAS, PIK3C3, PIK3CB, PIK3R1, PRKAA1, PRKACB, MAPK1, PTEN, RAB1A, RPS6KB1, TSC1, PIK3R3, MTMR3, EIF2AK3, ULK2, RB1CC1, AKT3, CAMKK2, RRAS2, GABARAPL1, DDIT4, WDR41, RRAGD, VMP1
KEGG	hsa04213	Longevity regulating pathway - multiple species	18/1203	1.06E-02	ADCY2, ADCY9, EIF4EBP2, FOXO3, MTOR, HSPA2, IGF1, IGF1R, INSR, NRAS, PIK3CB, PIK3R1, PRKAA1, PRKACB, RPS6KB1, SOD2, PIK3R3, AKT3
KEGG	hsa04922	Glucagon signaling pathway	27/1203	1.12E-02	ACACB, ADCY2, CALM1, CALM2, CALM3, CAMK2D, CREB1, ATF2, CREBBP, EP300, GNAQ, GNAS, GYS1, ITPR1, PHKA1, PKM, PLCB4, PPARA, PPP3CA, PPP3R1, PRKAA1, PRKACB, AKT3, SIK2, PLCB1, G6PC3, SIK1
KEGG	hsa04961	Endocrine and other factor-regulated calcium reabsorption	16/1203	1.13E-02	ADCY9, ATP1A2, ATP1B1, ATP2B1, ATP2B2, ATP2B4, CLTC, ESR1, GNAQ, GNAS, PLCB4, PRKACB, PRKCA, PRKCB, RAB11A, PLCB1
KEGG	hsa05100	Bacterial invasion of epithelial cells	21/1203	1.13E-02	ACTB, RHOA, CBL, CDC42, CLTC, CRK, DOCK1, FN1, GAB1, MET, PIK3CB, PIK3R1, RAC1, VCL, PIK3R3, WASL, ARPC5, ACTR3, WASF2, ARPC1A, CD2AP
KEGG	hsa04141	Protein processing in endoplasmic reticulum	39/1203	1.15E-02	BCL2, CANX, EIF2S1, HSPA2, HSP90AA1, HSP90AB1, DNAJB1, MAP3K5, NFE2L2, DNAJC3, RAD23A, SKP1, SSR1, SSR3, UBE2D1, UBE2D3, VCP, XBP1, EIF2AK3, SEC24C, MAN1A2, ERP29, SEC63, HSPA4L, SEC31A, ATF6, UBXN4, TRAM1, SEC61A1, UBQLN2, UBQLN1, UBXN1, MBTPS2, UBE2D4, YOD1, SAR1A, DERL1, EDEM3, SYVN1
KEGG	hsa04540	Gap junction	23/1203	1.30E-02	ADCY2, ADCY9, ADRB1, GJA1, GNAI2, GNAI3, GNAQ, GNAS, GUCY1A2, ITPR1, NRAS, PDGFRA, PLCB4, PRKACB, PRKCA, PRKCB, PRKG1, MAPK1, SOS2, TJP1, MAP3K2, PLCB1, PDGFD
KEGG	hsa04670	Leukocyte transendothelial migration	28/1203	1.36E-02	ACTB, ACTN1, RHOA, ARHGAP5, CDC42, CTNND1, PTK2B, GNAI2, GNAI3, MMP2, MSN, CLDN11, PIK3CB, PIK3R1, PLCG1, PRKCA, PRKCB, RAC1, RAP1B, ROCK1, VCL, EZR, PIK3R3, CLDN1, ROCK2, VAV3, RAPGEF4, OCLN
KEGG	hsa05235	PD-L1 expression and PD-1 checkpoint pathway in cancer	23/1203	1.49E-02	CSNK2A1, MTOR, JAK2, NFATC3, NFKB1, NFKBIA, NRAS, PIK3CB, PIK3R1, PLCG1, PPP3CA, PPP3R1, MAPK1, MAP2K3, PTEN, RPS6KB1, STAT1, STAT3, TLR4, PIK3R3, AKT3, RASGRP1, CD274
KEGG	hsa00512	Mucin type O-glycan biosynthesis	11/1203	1.51E-02	GALNT1, GALNT2, GALNT3, ST3GAL1, GALNT4, B4GALT5, C1GALT1C1, GCNT4, GALNT7, GALNT10, POC1B-GALNT4

KEGG	hsa05219	Bladder cancer	13/1203	1.55E-02	CCND1, E2F1, E2F3, ERBB2, FGFR3, MMP2, NRAS, MAPK1, RB1, THBS1, TP53, VEGFA, RPS6KA5
KEGG	hsa05230	Central carbon metabolism in cancer	19/1203	1.69E-02	ERBB2, FGFR3, FGFR2, MTOR, G6PD, GLS, KIT, MET, NRAS, PDGFRA, PIK3CB, PIK3R1, PKM, MAPK1, PTEN, RET, TP53, PIK3R3, AKT3
KEGG	hsa05418	Fluid shear stress and atherosclerosis	32/1203	2.04E-02	ACTB, ACVR2B, RHOA, BCL2, BMPR1A, BMPR1B, BMPR2, CALM1, CALM2, CALM3, EDN1, HSP90AA1, HSP90AB1, IL1R1, ITGAV, MEF2A, MEF2C, MAP3K5, MMP2, NFE2L2, NFKB1, PIK3CB, PIK3R1, PRKAA1, RAC1, SDC2, MAP2K4, SUMO3, TP53, VEGFA, PIK3R3, AKT3
KEGG	hsa00514	Other types of O-glycan biosynthesis	14/1203	2.04E-02	GALNT1, GALNT2, GALNT3, B4GALT1, MFNG, ST6GAL1, GALNT4, C1GALT1C1, GALNT7, GALNT10, POGLUT1, GXYLT1, EOGT, POC1B-GALNT4
KEGG	hsa04923	Regulation of lipolysis in adipocytes	16/1203	2.20E-02	ADCY2, ADCY9, ADRB1, GNAI2, GNAI3, GNAS, INSR, PIK3CB, PIK3R1, PRKACB, PRKG1, PTGS1, PTGS2, PIK3R3, AKT3, MGLL
KEGG	hsa05160	Hepatitis C	35/1203	2.36E-02	APAF1, FASLG, CCND1, BID, CDK6, E2F1, E2F3, EIF2S1, GSK3B, IFIT1, LDLR, NFKB1, NFKBIA, NRAS, CLDN11, PIK3CB, PIK3R1, PPARA, PPP2R1B, PPP2R2A, PPP2R2C, MAPK1, RB1, RNASEL, SOS2, STAT1, STAT3, TP53, YWHAB, PIK3R3, CLDN1, EIF2AK3, AKT3, PPP2R2D, OCLN
KEGG	hsa05231	Choline metabolism in cancer	24/1203	2.36E-02	CHKA, MTOR, NRAS, PDGFRA, PIK3CB, PIK3R1, PLCG1, PLD1, PRKCA, PRKCB, MAPK1, RAC1, RPS6KB1, SOS2, SP1, TSC1, PIP5K1A, PIK3R3, DGKE, AKT3, WASF2, SLC44A1, PDGFD, SLC44A5
KEGG	hsa04970	Salivary secretion	23/1203	2.41E-02	ADCY2, ADCY9, ADRB1, ATP1A2, ATP1B1, ATP2B1, ATP2B2, ATP2B4, CALM1, CALM2, CALM3, GNAQ, GNAS, GUCY1A2, ITPR1, PLCB4, PRKACB, PRKCA, PRKCB, PRKG1, SLC9A1, SLC12A2, PLCB1
KEGG	hsa04062	Chemokine signaling pathway	41/1203	2.70E-02	ADCY2, ADCY9, RHOA, CDC42, CCR6, CRK, PTK2B, FOXO3, GNAI2, GNAI3, GNAQ, GNB1, GSK3B, JAK2, NFKB1, NFKBIA, NRAS, PIK3CB, PIK3CG, PIK3R1, PLCB4, PLCG1, PRKACB, PRKCB, MAPK1, RAC1, RAP1B, ROCK1, CCL20, SOS2, STAT1, STAT3, TIAM1, PIK3R3, ROCK2, AKT3, VAV3, PLCB1, GNG13, GNG12, GNB4
KEGG	hsa05203	Viral carcinogenesis	43/1203	2.85E-02	ACTN1, RHOA, CCND1, CCNA2, CCND2, CDC42, CDK6, CHD4, CHEK1, CREB1, ATF2, CREBBP, DDX3X, EP300, GTF2A1, GTF2H1, HNRNPK, RBPJ, IL6ST, NFKB1, NFKBIA, NRAS, PIK3CB, PIK3R1, PKM, PRKACB, MAPK1, RAC1, RB1, RBL1, REL, SKP2, SP100, SRF, STAT3, TP53, UBE3A, YWHAB, USP7, PIK3R3, KAT2B, DNAJA3, CCNE2
KEGG	hsa04750	Inflammatory mediator regulation of TRP channels	24/1203	2.95E-02	ADCY2, ADCY9, CALM1, CALM2, CALM3, CAMK2D, F2RL1, GNAQ, GNAS, IGF1, IL1R1, ITPR1, PIK3CB, PIK3R1, PLCB4, PLCG1, PPP1CC, PRKACB, PRKCA, PRKCB, PRKCE, MAP2K3, PIK3R3, PLCB1
KEGG	hsa00061	Fatty acid biosynthesis	7/1203	3.14E-02	ACACB, ACSL1, ACSL3, ACSL4, FASN, ACSL6, CBR4
KEGG	hsa05162	Measles	31/1203	3.33E-02	APAF1, FASLG, CCND1, BCL2, BID, CBLB, CCND2, CDK6, CSNK2A1, EIF2S1, GSK3B, HSPA2, IL12A, CD46, MSN, NFKB1, NFKBIA, PIK3CB, PIK3R1, SLAMF1, STAT1, STAT3, TLR4, TNFAIP3, TP53, PIK3R3, CCNE2, EIF2AK3, AKT3, TAB2, IRAK4
KEGG	hsa04659	Th17 cell differentiation	25/1203	3.52E-02	AHR, RUNX1, MTOR, GATA3, HSP90AA1, HSP90AB1, IL1R1, IL6R, IL6ST, JAK2, SMAD2, SMAD4, NFATC3, NFKB1, NFKBIA, PLCG1, PPP3CA, PPP3R1, MAPK1, RARA, RORA, STAT1, STAT3, TGFBR1, TGFBR2
KEGG	hsa04114	Oocyte meiosis	29/1203	3.57E-02	ADCY2, ADCY9, AR, CALM1, CALM2, CALM3, CAMK2D, CDC27, IGF1, IGF1R, ITPR1, PPP1CC, PPP2R1B, PPP2R5A, PPP2R5E, PPP3CA, PPP3R1, PRKACB, MAPK1, RPS6KA3, SKP1, YWHAB, SMC1A, CCNE2, SLK, CPEB3, FBXW11, CPEB4, CPEB2
KEGG	hsa04972	Pancreatic secretion	24/1203	3.57E-02	ADCY2, ADCY9, RHOA, ATP1A2, ATP1B1, ATP2B1, ATP2B2, ATP2B4, CA2, GNAQ, GNAS, ITPR1, RAB8A, PLCB4, PRKCA, PRKCB, RAB27B, RAC1, RAP1B, SLC9A1, SLC12A2, SLC4A4, RAB11A, PLCB1
KEGG	hsa05146	Amoebiasis	24/1203	3.57E-02	ACTN1, ARG2, COL1A1, COL4A1, COL4A5, FN1, GNAQ, GNAS, IL1R1, IL12A, LAMC1, NFKB1, SERPINB9, PIK3CB, PIK3R1, PLCB4, PRKACB, PRKCA, PRKCB, TGFB2, TLR4, VCL, PIK3R3, PLCB1
KEGG	hsa04216	Ferroptosis	12/1203	3.61E-02	ACSL1, ACSL3, ACSL4, SLC11A2, PCBP1, PCBP2, TFRC, TP53, NCOA4, ACSL6, SLC39A14, SLC7A11
KEGG	hsa05216	Thyroid cancer	11/1203	4.15E-02	CCND1, NRAS, MAPK1, RET, TP53, TPM3, TPR, CCDC6, NCOA4, TFG, LEF1
KEGG	hsa05221	Acute myeloid leukemia	17/1203	4.35E-02	CCND1, RUNX1, CCNA2, MTOR, KIT, NFKB1, NRAS, PIK3CB, PIK3R1, MAPK1, RARA, RPS6KB1, SOS2, STAT3, PIK3R3, AKT3, LEF1
KEGG	hsa05017	Spinocerebellar ataxia	31/1203	4.62E-02	SLC25A4, FGF14, MTOR, GNAQ, GRIA2, RBPJ, ITPR1, MAP3K5, OPA1, PIK3C3, PIK3CB, PIK3R1, PLCB4, PRKCA, PRKCB, RELN, PSMD1, RORA, ATXN1, SP1, VLDLR, XBP1, PIK3R3, PUM1, ULK2, RB1CC1, AKT3, CIC, PLCB1, PUM2, ATXN10

Note： GO,Gene Ontology; BC, Bladder Carcinoma; BP, biological process; CC, cellular component; MF, molecular function; KEGG, Kyoto Encyclopedia of Genes and Genomes; adj.P-value, adjusted p-value.