

Supplemental Table 6

| | Molecule Type | p-value of overlap | Target Molecules in Dataset | Mechanistic Network |
|--------------------------------|-------------------------------------|--------------------|--|--|
| Upstream Regulator | transcription regulator | 5.57E-05 | BDNF, DIO2, PAX6, RAX, ROBO2, SIX6 | © 2000-2020 QJAGEN. All rights reserved. |
| LHX2 | other | 7.74E-05 | PROX1, SERPINE1, TGFBR3 | |
| GIPC1 | transcription regulator | 3.72E-04 | HOXD10, HOXD9, PROX1 | |
| HOXD8 | transcription regulator | 6.24E-04 | AXIN2, BCL2L11, BMP1, BMP4, C15orf48, CD82, CDH2, CNR1, GATA4, GBX2 | |
| EZH2 | chemical drug | 7.32E-04 | PTK2, SERPINE1 | |
| ibilone | chemical - endogenous non-mammalian | 8.42E-04 | ACTA2, BDNF, DUSP6, EGR2, mir-329, NPTX2, PFKFB3 | |
| bicuculline | enzyme | 9.99E-04 | AXIN2, BMP4, GATA4 | |
| RG519 | other | 9.99E-04 | KIR2DL1, KIR2DL3, KLRC1, KLRD1 | |
| MLANA | transcription regulator | 1.07E-03 | BDNF, GATA4, GBX2, IL1R1, LHX8, MUC2, MUC5B, PAX6, PCDHB11, PCDHB12 | |
| CTCF | transcription regulator | 1.15E-03 | GATA4, HAND1, HOXA5, HOXA7, HOXC5, NKX2-2, SERPINA1 | 7 (2) |
| RNF2 | transcription regulator | 1.20E-03 | GBX2, HAND1, PLAGL1, POU3F3 | |
| DLX6 | transcription regulator | 1.31E-03 | ABHD12B, ACTA2, AXIN2, BCL2L11, BDNF, BMP1, BMP4, CD47, CDH2, CNR1 | 42 (2) |
| CTNNB1 | transcription regulator | 1.47E-03 | GBX2, POU3F3, SERPINE1 | |
| DLX1 | enzyme | 1.84E-03 | CDH2, EBF2, HOXA9, NKX2-2, OLIG1, PRDM16, SERPINE1 | |
| PRMT1 | transcription regulator | 1.96E-03 | AFF3, AXIN2, BCL2L11, CD86, EGR2, ERG, FGR, KLRC1, LCE3D, MMP25 | |
| PRDM1 | transcription regulator | 2.06E-03 | GATA4, HOXA7, NKX2-2 | |
| RYBP | chemical reagent | 2.16E-03 | AXIN2, CD47 | |
| ICRT14 | chemical drug | 2.16E-03 | ACTA2, SERPINE1 | |
| TT1-101 | other | 2.21E-03 | DLX1, EN1, GSK1, SP9 | |
| PPP4R3A | transcription regulator | 2.28E-03 | ACTA2, AXIN2, CDH2, FLRT2, OLIG1, PTK2, SELPLG, SERPINE1, ST3GAL5, TNFSF11 | |
| RUNX2 | microRNA | 2.29E-03 | ACTA2, CD47, CDH2, CLDN3, ERFF1, GATA4, HOXA5, PCDH10, PIP5K1A, PTK2 | |
| mir-8 | transcription regulator | 2.64E-03 | CHD9, HOXA5, HOXA7, HOXA9 | |
| PBX3 | transcription regulator | 2.80E-03 | BMP4, DEDD2, DHX34, HDACS, HSPB1, MAPT, PRAME, RAD51B, RPL22, TMPRSS3 | |
| HSF1 | group | 3.50E-03 | BMP4, CTNNA2, DIO2, IL1R1, SERPINA1, SERPINA3, SERPINA5, SERPINE1 | 42 (2) |
| TCF | chemical drug | 3.62E-03 | ACTA2, SERPINE1, SOD1 | |
| tetrathiomolybdate | enzyme | 3.96E-03 | CNR1, FBXO32, GATA4, HAND1, HOXC12, HOXD10, LAMC2, PAX6, PCDH10, UHMK1 | 26 (2) |
| SUZ12 | other | 4.23E-03 | BMP4, TNFSF11 | |
| LRP4 | other | 4.23E-03 | BDNF, CD86 | |
| MZB1 | chemical reagent | 4.23E-03 | BMP1, BMP4 | |
| PMX 205 | chemical drug | 4.23E-03 | BDNF, HDACS | |
| lamotrigine | transcription regulator | 4.61E-03 | DLX1, GSK1, PAX6 | |
| GSX2 | other | 4.61E-03 | ACTA2, BMP4, PAX6 | |
| FRS2 | group | 4.73E-03 | ABG, FEM1C, GYS1, LZTF1, NUDT13, PAM, PGAM1, RIPPLY3, SERPINE1, ULBP1 | |
| EGLIN | chemical drug | 4.76E-03 | B3GALT5, BCL2L11, BDNF, BMP4, BRCA2, CD226, CD86, CDH2, CRMP1, EIF4E | |
| decitabine | chemical reagent | 4.79E-03 | APBA2, BDNF, MAPT, SERPINE1, SOD1 | |
| M344 | chemical reagent | 4.86E-03 | ACTA2, COL8A2, DUSP6, FZD7, GREM1, LBH, MLPH, PCDH10, STK38L, TP5311 | |
| molybdenum disulfide | transcription regulator | 5.32E-03 | HOXA5, HOXA7, HOXA9, RPL22, SERPINE1 | |
| ASXL1 | transcription regulator | 5.54E-03 | BCL2L11, BFAI, BMP4, CASP10, CDH2, DLX1, EN1, GATA4, GBX2, HAND1 | |
| POU5F1 | transcription regulator | 5.69E-03 | GBX2, HAND1, PLAGL1, POU3F3 | |
| DLX5 | enzyme | 5.75E-03 | KIR2DL1, KIR2DL3, KLRC1, KLRD1 | |
| TYR | chemical drug | 5.89E-03 | BDNF, CLDN3, PHB, SLC6A5, YWHAQ | |
| ouabain | chemical - other | 5.92E-03 | ANLN, B3GALT5, BDNF, CDC126, DCLK2, DUSP6, EGR2, HDACS, LBH, NRN1 | |
| 2-amino-5-phosphonvaleric acid | other | 6.80E-03 | BRCA2, HIF3A, LIN28B, MAP2K6, SERPINE1, TJP2, TMPRSS3 | |
| MACROH2A1 | other | 6.93E-03 | AXIN2, TNFSF11 | |
| FAF1 | transcription regulator | 6.93E-03 | MAPT, NRN1 | |
| ELAVL4 | chemical drug | 6.93E-03 | BDNF, GRIN2B | |
| flenprodil | other | 7.05E-03 | NKX2-2, NNAT, PAX6 | |
| Nkx2-2os | microRNA | 7.05E-03 | ERG, HOXA7, HOXA9 | |
| mir-196 | transmembrane receptor | 7.05E-03 | ACTA2, CD86, PTK2 | |
| NRP1 | group | 7.05E-03 | ACTA2, CDH2, SERPINE1 | |
| Smad2/3/4 | complex | 7.85E-03 | GATA4, HAND1, HOXD10, OLIG1, PCDH10 | |
| PRC2 | transcription regulator | 8.22E-03 | BMP4, EN1, GBX2, NKX2-2, PAX6, THBS4 | |
| OTX2 | transcription regulator | 8.50E-03 | NKX2-2, PAX6, YAP1 | |
| NEUROG2 | enzyme | 8.60E-03 | HOXA5, HOXA7, HOXA9, HOXC5, HOXD10 | |
| KAT6A | growth factor | 8.66E-03 | ACTA2, BMP1, BMP4, CAV2, CDH2, FZD7, GREM1, NUDT13, PAX6, PRDM16 | |
| BMP7 | kinase | 9.32E-03 | BCL2L11, BMP4, CD86, EGR2, NPTX2, SOD1, TNFSF11 | |
| MAPK3 | transcription regulator | 1.01E-02 | CASP10, HSPB1, SERPINE1 | |
| DAXX | other | 1.02E-02 | CDH2, SERPINE1 | |
| LINC00842 | other | 1.02E-02 | BCL2L11, TNFSF11 | |
| MN1 | peptidase | 1.02E-02 | ACTA2, PTK2 | |
| OTUD7B | other | 1.02E-02 | DIO2, PRDM16 | |
| BGLAP | transcription regulator | 1.02E-02 | HOXD10, HOXD9 | |
| HOXD9 | transporter | 1.02E-02 | CLDN3, MUC5B | |
| AQP5 | other | 1.02E-02 | RPLP1, RPLP2 | |
| GNRH2 | other | 1.02E-02 | CDH2, SERPINE1 | |
| NET1 | cytokine | 1.03E-02 | ACTA2, AXIN2, BMP4, EIF4E, LBH, MRA5, NKX2-2, SERPINE1, TERC | |
| WNT1 | enzyme | 1.17E-02 | EGR2, GATA4, HOXA9, PAX6 | |
| TET1 | enzyme | 1.17E-02 | CNTN4, GRIN2B, MTMR7, ROBO2 | |
| SETDB1 | enzyme | 1.17E-02 | GATA4, HAND1, NKX2-8, PAX6 | |
| AHCY | G-protein coupled receptor | 1.19E-02 | ACTA2, BMP4, GATA4 | |
| FZD8 | enzyme | 1.21E-02 | ACTA2, BDNF, EGR2, OLIG1, SPI1 | |
| DGCR8 | other | 1.21E-02 | BMP4, EGR2, LAMC2, SERPINE1, TGFBR3 | |
| TIMP3 | other | 1.30E-02 | BCL2L11, MTERF1, PRDM16, SERPINE1 | |
| FLCN | transcription regulator | 1.30E-02 | CHD9, HOXA5, HOXA7, HOXA9 | |
| MES1 | growth factor | 1.31E-02 | ACTA2, AXIN2, LAMC2, SERPINE1, TGFBR3 | |
| CCN5 | transcription regulator | 1.37E-02 | AKT3, BDNF, CA10, CALM1, CDH2, CIART, CRMP1, CTNNA2, DIO2, EGR2 | |
| CREB1 | other | 1.39E-02 | HOXA5, HOXA9, HOXD10 | |
| EMD | peptidase | 1.39E-02 | ACTA2, CDH2, GRIN2B, MDM4, NR2E1, PAX6, SLC45A2 | |
| ADAM10 | group | 1.40E-02 | BDNF, GRIN2B | |
| dopamine D1 receptor | G-protein coupled receptor | 1.40E-02 | DIO2, PRDM16 | |
| GPRC6A | other | 1.40E-02 | CDH2, PFKFB3 | |
| BCAR4 | chemical drug | 1.40E-02 | BDNF, PTK2 | |
| penfluridol | kinase | 1.40E-02 | LHX8, SERPINE1 | |
| WNK1 | kinase | 1.40E-02 | ERFF1, PIP5K1A | |
| PIP5K1C | G-protein coupled receptor | 1.40E-02 | BDNF, EGR2 | |
| ADCYAP1R1 | complex | 1.40E-02 | HOXA-AS3, HOXA11-AS | |
| Cohesin | chemical drug | 1.42E-02 | CNTN4, EXOC6B, GPC6, NNAT, PDE4B, PTK2, RBFOX1, RC3TB2, ROBO2, TIAM1 | |
| topotecan | growth factor | 1.43E-02 | ACTA2, BMP4, CD86, EGR2, KCNQ1OT1, LIPG, SERPINE1, TGFBR3 | |
| TGFB2 | growth factor | 1.47E-02 | BMP4, DLX1, EN1, ERFF1, GBX2, LHX8, PAX6 | |
| FGF8 | chemical drug | 1.52E-02 | PDHA2, PFKFB3, PGAM1, SERPINE1, TJP2 | |
| salirasib | enzyme | 1.54E-02 | AFF3, BCL2L11, CBR1, FCN1, GATA4, IL1R1, PAX6, RAB44, RNF144A | |
| TET2 | transcription regulator | 1.58E-02 | ACTA2, HPSE, PTK2, WWTR1 | |
| ETV4 | chemical drug | 1.58E-02 | BCL2L11, BDNF, CD86, PDE4B | |
| rolipram | transcription regulator | 1.60E-02 | PDE4B, PDE4C, PDE7A | |
| NONO | enzyme | 1.68E-02 | AXIN2, BCL2L11, BDNF, CD226, CD86, EGR2, KCNQ1OT1, LIPG, RAD23A, RBFOX1 | |
| DICER1 | complex | 1.83E-02 | CSNK2A1, SERPINA3, VPS4A | |
| ACHR | microRNA | 1.83E-02 | ACTA2, BDNF, BRCA2, CDH2, DUSP6, GMNN, LIN28B, NR2E1, PLAGL1, SERPINE1 | |
| let-7 | other | 1.84E-02 | ARL2, HOXA9 | |
| UCA1 | transcription regulator | 1.84E-02 | BCL2L11, CASP10 | |
| ARID3B | growth factor | 1.84E-02 | BMP4, GREM1 | |
| LTBP4 | other | 1.84E-02 | PCDH11, PCDHB8 | |
| STAG1 | chemical drug | 1.84E-02 | BDNF, HDACS | |
| levetiracetam | complex | 1.84E-02 | CDYL, GBX2 | |
| OCT4-NANOG | peptidase | 1.84E-02 | MDM4, SERPINE1 | |
| USP2 | other | 1.84E-02 | ACTA2, TGFBR3 | |
| SDC2 | transcription regulator | 1.84E-02 | HOXA7, HOXA9 | |
| PSIP1 | other | 1.84E-02 | AXIN2, FZD7 | |
| CCDC80 | other | 1.84E-02 | ACTA2, PTK2 | |
| ACTA2 | other | 1.84E-02 | ACTA2, PTK2 | |

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| SERPINE1 | other | 1.84E-02 | CDH2,SERPINE1 |
| cinnamon powder | chemical reagent | 1.84E-02 | GYS1,MAPT |
| NROB2 | ligand-dependent nuclear receptor | 1.99E-02 | BAA1,CD86,CYP7B1,ESRRG,mir-329,mir-541,SERPINE1 |
| DOT1L | phosphatase | 2.07E-02 | HOXA9,SPI1,UBB |
| ITGA9 | other | 2.07E-02 | ACTA2,CDH2,TNFSF11 |
| CCN3 | growth factor | 2.07E-02 | BMP4,GREM1,SERPINE1 |
| TGFB | group | 2.32E-02 | ACTA2,TNFSF11 |
| cytidyl-3'-5'-guanosine | chemical reagent | 2.32E-02 | BCL2L1,CD86 |
| CPEB4 | other | 2.32E-02 | GPC6,RBFOX1 |
| AGRN | other | 2.32E-02 | BMP4,MAPT |
| WNT5B | other | 2.32E-02 | ACTA2,PROX1 |
| CDKN2B | transcription regulator | 2.32E-02 | CD86,SERPINE1 |
| PPP1CA | phosphatase | 2.32E-02 | CDH2,WWTR1 |
| SLC30A3 | transporter | 2.32E-02 | BDNF,GRIN2B |
| 2-oxoglutaric acid | chemical - endogenous mammalian | 2.32E-02 | ACTA2,DIO2 |
| TGFA | growth factor | 2.38E-02 | ERRF1,LAMC2,MUC2,PLAGL1,SERPINA1,SERPINE1 |
| NANOG | transcription regulator | 2.43E-02 | DLX1,EN1,GATA4,GBX2,NKX2-2,PAX6,PRDM14,RIPPLY3 |
| tetradecanoylphorbol acetate | chemical drug | 2.62E-02 | APRT,BDNF,CAV2,CD226,DIO2,DUSP6,EGR2,EIF4E,EN1,ERRF1 |
| STK4 | kinase | 2.62E-02 | BCL2L1,WWTR1,YAP1 |
| SIX5 | transcription regulator | 2.62E-02 | EBF2,PTN,TWIST2 |
| HE11 | transcription regulator | 2.62E-02 | ACTA2,GATA4,PROX1 |
| 1-methyl-4-phenylpyridinium | chemical toxicant | 2.62E-02 | BCL2L1,MAPT,SOD1 |
| SB 290157 | chemical reagent | 2.62E-02 | BMP1,BMP4,CD86 |
| PP2A/G1879 tyrosine kinase inhibitor | chemical - kinase inhibitor | 2.64E-02 | BCL2L1,CDH2,FGFR,HOXD10,MAPT,SERPINE1 |
| spironolactone | chemical drug | 2.64E-02 | BMP4,NR3C2,PRDM16,SLC22B1,ULBP1,ULBP2 |
| MSX2 | transcription regulator | 2.64E-02 | BMP4,CDH2,EGR2,PROX1 |
| NKX2-5 | transcription regulator | 2.64E-02 | ACTA2,DIO2,GATA4,HAND1 |
| FOXP3 | transcription regulator | 2.68E-02 | AKT3,ANLN,BCL2L1,CD101,CD226,DUSP6,mir-1206,NRN1,PLAGL1,TLR10 |
| 9-hydroxy-(5)-10,12-octadecadienoic acid | chemical - endogenous mammalian | 2.71E-02 | SERPINE1 |
| ergosterol | chemical - endogenous mammalian | 2.71E-02 | BCL2L1 |
| ORG 34517 | chemical drug | 2.71E-02 | NR3C2 |
| TRIM72 | enzyme | 2.71E-02 | ACTA2 |
| Becn2 | other | 2.71E-02 | CNR1 |
| Hdac-Rcor-Rest-Sin3a | complex | 2.71E-02 | BDNF |
| diacyl lipopeptide | chemical - other | 2.71E-02 | TNFSF11 |
| selective serotonin reuptake inhibitor | chemical drug | 2.71E-02 | BDNF |
| miocamycin | chemical drug | 2.71E-02 | MUC2 |
| loxoprofen | chemical drug | 2.71E-02 | MUC2 |
| Morrbid | other | 2.71E-02 | BCL2L1 |
| uridine triacetate | chemical drug | 2.71E-02 | BDNF |
| EMC2 | other | 2.71E-02 | TRPC6 |
| MSMB | other | 2.71E-02 | LIN28B |
| PRPF31 | other | 2.71E-02 | MDM4 |
| MCAT | enzyme | 2.71E-02 | LY96 |
| IDH3B | enzyme | 2.71E-02 | PFKFB3 |
| KREMEN1 | other | 2.71E-02 | AXIN2 |
| HOXD1 | transcription regulator | 2.71E-02 | HOXD10 |
| CAS4 | other | 2.71E-02 | PTK2 |
| TMPPSS2 | peptidase | 2.71E-02 | ERG |
| MARCHF6 | enzyme | 2.71E-02 | DIO2 |
| B3GNT6 | enzyme | 2.71E-02 | MUC2 |
| USP9Y | peptidase | 2.71E-02 | MUC2 |
| B3GALT1 | enzyme | 2.71E-02 | B3GALT5 |
| CARF | transcription regulator | 2.71E-02 | BDNF |
| Pantr2 | other | 2.71E-02 | POU3F3 |
| CDCA4 | other | 2.71E-02 | GMNN |
| NLRP6 | G-protein coupled receptor | 2.71E-02 | IL22RA2 |
| CCDC47 | other | 2.71E-02 | TRPC6 |
| HOXD13 | transcription regulator | 2.71E-02 | HOXD9 |
| CLSTN1 | other | 2.71E-02 | GRIN2B |
| EMC6 | other | 2.71E-02 | TRPC6 |
| Chr | group | 2.71E-02 | BDNF |
| black cohosh extract | chemical drug | 2.71E-02 | SERPINE1 |
| USP39 | peptidase | 2.71E-02 | MDM4 |
| ginsenoside Rh1 | chemical - endogenous non-mammalian | 2.71E-02 | BDNF |
| PRCC | other | 2.71E-02 | SERPINE1 |
| DYNLRB1 | other | 2.71E-02 | SERPINE1 |
| BSN | other | 2.71E-02 | BDNF |
| MYL6 | other | 2.71E-02 | ACTA2 |
| CXCR5 | G-protein coupled receptor | 2.71E-02 | TNFSF11 |
| PRL-3 inhibitor 1 | chemical reagent | 2.71E-02 | ULBP2 |
| KIF5A | transporter | 2.71E-02 | GABRB2 |
| TSTA3 | enzyme | 2.71E-02 | ACTA2 |
| UBE2K | transcription regulator | 2.71E-02 | UBD |
| miR-1258 (miRNAs w/seed GUUAGGA) | mature microRNA | 2.71E-02 | HPSE |
| mir-1258 | microRNA | 2.71E-02 | HPSE |
| miR-2861 (and other miRNAs w/seed GGGCCUG) | mature microRNA | 2.71E-02 | HDC5 |
| miR-571 (miRNAs w/seed GAGUUGC) | mature microRNA | 2.71E-02 | GMNN |
| miR-1275 (and other miRNAs w/seed UGGGGGA) | mature microRNA | 2.71E-02 | HAND2,AS1 |
| KREMEN2 | other | 2.71E-02 | AXIN2 |
| IFI6 | other | 2.71E-02 | BCL2L1 |
| HCN1 | ion channel | 2.71E-02 | BDNF |
| 3,4-diaminopyridine | chemical drug | 2.71E-02 | BDNF |
| GPRASP1 | transporter | 2.71E-02 | CNR1 |
| WDR61 | other | 2.71E-02 | HOXA9 |
| ITH5 | other | 2.71E-02 | ACTA2 |
| MYT1L | transcription regulator | 2.71E-02 | RBFOX1 |
| GRIN2A | ion channel | 2.71E-02 | BDNF |
| SEM1 | peptidase | 2.71E-02 | BRCA2 |
| KIF17 | transporter | 2.71E-02 | GRIN2B |
| WDR30S | other | 2.71E-02 | TRPC6 |
| RXF1 | G-protein coupled receptor | 2.71E-02 | ACTA2 |
| ADAM19 | peptidase | 2.71E-02 | EGR2 |
| GDF10 | growth factor | 2.71E-02 | SERPINE1 |
| alpelisib | chemical drug | 2.71E-02 | BCL2L1 |
| UBL5 | other | 2.71E-02 | MDM4 |
| NTSR1 | G-protein coupled receptor | 2.71E-02 | BDNF |
| EEF2 | translation regulator | 2.71E-02 | BDNF |
| UNC0224 | chemical reagent | 2.71E-02 | BDNF |
| diacetylbis(4-methylthiosemicarbazonato)copper(II) | chemical reagent | 2.71E-02 | SOD1 |
| NHP2 | other | 2.71E-02 | TERC |
| GDC-0623 | chemical drug | 2.71E-02 | BCL2L1 |
| annonacin | chemical reagent | 2.71E-02 | MAPT |
| ralaniten | chemical reagent | 2.71E-02 | UBE2C |
| methaneselenol | chemical - endogenous non-mammalian | 2.71E-02 | ULBP2 |
| AZ10606120 | chemical reagent | 2.71E-02 | CD86 |
| atomoxetine | chemical drug | 2.71E-02 | BDNF |
| zolpidem | chemical drug | 2.71E-02 | BDNF |
| rivastigmine | chemical drug | 2.71E-02 | BDNF |
| SU9597 | chemical - kinase inhibitor | 2.71E-02 | PAX6 |

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| SDM25N | chemical reagent | 2.71E-02 | CD86 |
| GSK2656157 | chemical - kinase inhibitor | 2.71E-02 | BDNF |
| N-acetylsertotonin | chemical - endogenous mammalian | 2.71E-02 | BDNF |
| myrcene | chemical - endogenous non-mammalian | 2.71E-02 | SOD1 |
| cineole | chemical drug | 2.71E-02 | SOD1 |
| SMAD3-EP300 | complex | 2.71E-02 | SERPINE1 |
| cyclololeucine | chemical toxicant | 2.71E-02 | PHB |
| fucose | chemical - endogenous mammalian | 2.71E-02 | ACTA2 |
| Cr3+ | chemical reagent | 2.71E-02 | TNFSF11 |
| 3,4,5,3',4'-pentachlorobiphenyl | chemical toxicant | 2.78E-02 | AKR1A1,BDNF,BMP4,PTGFR,SLCO2B1,SLCO3A1 |
| cercosporin | chemical - endogenous non-mammalian | 2.85E-02 | ACTA2,AXIN2 |
| SPRY4-IT1 | other | 2.85E-02 | CDH2,CLDN3 |
| MEOX1 | transcription regulator | 2.85E-02 | BMP4,GATA4 |
| RELN | peptidase | 2.85E-02 | BDNF,GRIN2B |
| GBX2 | transcription regulator | 2.85E-02 | EGR2,EN1 |
| HOXA1 | transcription regulator | 2.85E-02 | EGR2,GATA4 |
| midazolam | chemical drug | 2.85E-02 | BDNF,CD86 |
| CGP 42112 | chemical reagent | 2.85E-02 | MAPT,UBE2V2 |
| EED | transcription regulator | 2.85E-02 | BDNF,GATA4,HOXC12,OLIG1 |
| pituitary adenylate cyclase-activating polypeptide | biologic drug | 2.85E-02 | AXIN2,DUSP6,ERRF1,SEMA6D |
| EBF2 | transcription regulator | 2.92E-02 | DIO2,NTM,THBS4 |
| LRPAP1 | other | 2.92E-02 | ACTA2,SERPINA3,SERPINE1 |
| kainic acid | chemical toxicant | 3.04E-02 | BDNF,CIART,CNR1,CRMP1,EGR2,ERRF1,GABRB2,NPTX2,NR3C2 |
| MET | kinase | 3.07E-02 | BMP1,CDH2,FBXO32,HSPB1,MPP7,ONECLT2,SLCO3A1,SOD1 |
| SNAI2 | transcription regulator | 3.13E-02 | BCL2L11,BRCA2,CDH2,EGR2,TWIST2 |
| tretinoin | chemical - endogenous mammalian | 3.19E-02 | AKR1A1,APBA2,B3GALT5,BMP4,CBR1,CD101,CD47,CD82,CD86,CDH2 |
| tetrachlorodibenzodioxin | chemical toxicant | 3.20E-02 | AKR1A1,BDNF,BMP4,CBR1,CD86,ESRRG,FZD7,HDAC5,HOXD10,KCNA3 |
| TGFBR1 | kinase | 3.22E-02 | ACTA2,BMP4,CD86,EGR2,MUC2,SERPINE1 |
| PHF1 | transcription regulator | 3.23E-02 | HOXA9,HOXD10,HOXD9 |
| AZGP1 | transporter | 3.23E-02 | BMP4,FBXO32,GYS1 |
| K-252 | chemical drug | 3.23E-02 | BDNF,HPSE,NRN1 |
| EFNA5 | kinase | 3.31E-02 | BDNF,DUSP6,NTM,UBE2C |
| PCGF2 | transcription regulator | 3.31E-02 | CDH2,GATA4,HOXA7,NKX2-2 |
| INS | other | 3.37E-02 | ACTA2,EGR2,EIF4E,ERRF1,PRDM16,SDHC,SOD1,SSTR1,YAP1 |
| EPHB1 | kinase | 3.42E-02 | EGR2,SERPINE1 |
| RLIM | enzyme | 3.42E-02 | CDH2,SERPINE1 |
| HAS2 | enzyme | 3.42E-02 | ACTA2,PTK2 |
| TBX1 | transcription regulator | 3.42E-02 | BMP4,GBX2 |
| ATP7A | transporter | 3.42E-02 | PAM,PTK2 |
| ENTPD1 | enzyme | 3.42E-02 | CD86,SERPINE1 |
| carbamazepine | chemical drug | 3.42E-02 | BDNF,HDAC5 |
| rosmarinic acid | chemical - endogenous non-mammalian | 3.42E-02 | ACTA2,BDNF |
| scopolamine | chemical drug | 3.42E-02 | BDNF,MAPT |
| MYC | transcription regulator | 3.47E-02 | AEBP2,BCL2L11,BDNF,CASP10,CD47,CD86,CDH2,DNPH1,DUSP6,EGR2 |
| bucladesine | chemical toxicant | 3.48E-02 | AXIN2,BDNF,CD86,CDH2,DIO2,DUSP6,EGR2,ERRF1,PDE4B,PDE4C |
| MAPK9 | kinase | 3.49E-02 | BCL2L11,BMP1,BMP4,DIO2,EIF4E,MUC5B,NR3C2,SELPLG,SERPINA1 |
| POLR2A | enzyme | 3.50E-02 | EGR2,GATA4,HOXA9,UHMK1,YAP1 |
| ZFX3 | transcription regulator | 3.54E-02 | RPL37,RPLP2,SERPINA1,SIX6,SP9,VAX1 |
| HOTAIR | other | 3.55E-02 | ACTA2,CDH2,LAMC2,PCDH10 |
| UTP | chemical - endogenous mammalian | 3.57E-02 | CDH2,KCNA4,SERPINE1 |
| NKX2-2-AS1 | other | 3.57E-02 | EBF2,PHYH,PRDM16 |
| DTX1 | transcription regulator | 3.57E-02 | CD82,DUSP6,UHMK1 |
| IL15 | cytokine | 3.64E-02 | BCL2L11,CD226,CD86,EGR2,EIF4E,IL1R1,IL21R,KIR2DL1,KIR2DL3,KLRC1,KLRD1 |
| FOXA1 | transcription regulator | 3.72E-02 | ACTA2,EN1,HNF4G,MUC2,MUC5B,NPTX2,PAM,PAX6,SOD1 |
| SPHK1 | kinase | 3.80E-02 | ACTA2,BCL2L11,MAP2K6,SERPINE1 |
| SLC13A1 | transporter | 3.88E-02 | GPC6,HSPB1,NRN1,RAD51B,RPN1,TFG |
| collagen type I (family) | group | 3.92E-02 | CDH2,SERPINE1,TWIST2 |
| beraprost | chemical drug | 4.04E-02 | CD86,SOD1 |
| WWC1 | transcription regulator | 4.04E-02 | CDH2,YAP1 |
| LAMTOR5 | other | 4.04E-02 | EIF4E,LIN28B |
| STAR | transporter | 4.04E-02 | CD86,NR1H2 |
| CCR7 | G-protein coupled receptor | 4.04E-02 | BCL2L11,CD86 |
| SH3BP1 | other | 4.04E-02 | CD86,SERPINE1 |
| CDH5 | other | 4.04E-02 | CDH2,TIAM1 |
| ELN | other | 4.04E-02 | CD86,PTK2 |
| Col17a1 | other | 4.04E-02 | AXIN2,SERPINA1 |
| bisphenol A diglycidyl ether | chemical reagent | 4.04E-02 | ACTA2,SERPINE1 |
| PFS43 | chemical - kinase inhibitor | 4.05E-02 | ACTA2,DIO2,FGR,XIRP1 |
| DK1 | growth factor | 4.11E-02 | ACTA2,AXIN2,BDNF,BMP4,LBH |
| PPARGC1A | transcription regulator | 4.20E-02 | BMP4,DIO2,EBF2,FBXO32,GPC6,LAMB1,LDHB,MAP2K6,PGAM1,PHYH |
| HOXA7 | transcription regulator | 4.28E-02 | ERG,HOXA7,KCNA3 |
| NFATC3 | transcription regulator | 4.33E-02 | ACTA2,CASP10,EGR2,MUC2,TNFSF11 |
| GDNF | growth factor | 4.33E-02 | BDNF,EGR2,NNAT,NRN1,PAX6 |
| CG | complex | 4.65E-02 | ACTA2,BDNF,CDH2,DUSP6,EIF4E,GATA4,GREM1,HPSE,LIN28B,NR1H2 |
| KDM6B | enzyme | 4.67E-02 | BHLHE23,CDH2,HOXC12 |
| WP1066 | chemical drug | 4.69E-02 | ACTA2,CD86 |
| PPP3CB | phosphatase | 4.69E-02 | FBXO32,KLRD1 |
| EN1 | transcription regulator | 4.69E-02 | PAX6,TNFSF11 |
| methylene blue | chemical drug | 4.69E-02 | BDNF,MAPT |
| S-equal | chemical drug | 4.69E-02 | CD86,SERPINE1 |
| Calcineurin protein(s) | complex | 4.78E-02 | BCL2L11,BDNF,EGR2,SERPINE1,TRPC6 |
| CDX2 | transcription regulator | 4.85E-02 | AXIN2,B3GALT5,HOXA5,HOXA7,HOXA9,KCN115,LAMC2,MUC2 |
| PLK1 | kinase | 4.89E-02 | ACTA2,BCL2L11,CDH2,GMNN |
| BRD2 | kinase | 4.89E-02 | CD47,LIN28B,LV9,RPN1 |
| MYCN | transcription regulator | 4.98E-02 | AEBP2,GATA4,HDAC5,OLIG1,PHB,PTK2,RPL22,RPL37,RPLP1,RPLP2 |