

| ID       | Description                                     | pvalue   | geneID  | Count |
|----------|---|----------|---|-------|
| hsa04820 | Cytoskeleton in muscle cells                    | 3.07E-13 | THBS4/ITGA7/SYNPO2/TPM1/ACTN2/FLNC/ACTG2/ATP1B2/FHL1/MYOM1/LMOD1/MYH11/DES/ITGA8/ATP1A2/ANK2/ELN/DTNA/ACTA1/TMOD1/CSRP1/ANKRD1/DMD/PDLIM3/SGCA/TPM2/DCN/LDB3/COL4A6/MYL9/PLN/CACNG4/SLC8A2/ITGA7/IGF1/ADCY1/TPM1/DES/ITGA8/DTNA/AGT/DMD/SGCA/TPM2/CACNB2/LAMA2/ACTC1/SGCD/PRKAA2/CADRA1D/HTR2B/PTH1R/NPY/STR5/GRPR/GHR/PTGER3/GRIK5/HTR2A/GLP2R/TAC1/CHRNA3/CTSG/LEPR/UCN3/CNR1/TACR1/GIP/GLRB/TAC3/VIP/AGT/GRP/CCKAR/PTGFR/NPSR1/SCT/TACR2/F2/CHRM2/GCG/ADRA1D/ADCY1/PLA2G3/IRAG1/ACTG2/CALD1/PRKG1/ACTA2/MYH11/PPP1R14A/PLA2G5/PPP1R12B/AGT/KCNMB1/GUCY1A1/ADCY5/KCNMA1/MYL9/AGADRA1D/PLN/CACNG4/SLC8A2/ADCY1/POPDC2/TPM1/BVES/SCN7A/ATP1B2/ATP1A2/PPP1R1A/AGT/KCNK2/TPM2/ADCY5/CACNB2/SCN4B/AGTR1/ACTC | 35    |
| hsa05414 | Dilated cardiomyopathy                          | 1.69E-11 | CACNG4/SLC8A2/ITGA7/IGF1/ADCY1/TPM1/DES/ITGA8/DTNA/AGT/DMD/SGCA/TPM2/CACNB2/LAMA2/ACTC1/SGCD/PRKAA2/CADRA1D/HTR2B/PTH1R/NPY/STR5/GRPR/GHR/PTGER3/GRIK5/HTR2A/GLP2R/TAC1/CHRNA3/CTSG/LEPR/UCN3/CNR1/TACR1/GIP/GLRB/TAC3/VIP/AGT/GRP/CCKAR/PTGFR/NPSR1/SCT/TACR2/F2/CHRM2/GCG/ADRA1D/ADCY1/PLA2G3/IRAG1/ACTG2/CALD1/PRKG1/ACTA2/MYH11/PPP1R14A/PLA2G5/PPP1R12B/AGT/KCNMB1/GUCY1A1/ADCY5/KCNMA1/MYL9/AGADRA1D/PLN/CACNG4/SLC8A2/ADCY1/POPDC2/TPM1/BVES/SCN7A/ATP1B2/ATP1A2/PPP1R1A/AGT/KCNK2/TPM2/ADCY5/CACNB2/SCN4B/AGTR1/ACTC  | 22    |
| hsa05410 | Hypertrophic cardiomyopathy                     | 2.90E-10 | CACNG4/SLC8A2/ITGA7/IGF1/ADCY1/TPM1/DES/ITGA8/DTNA/AGT/DMD/SGCA/TPM2/CACNB2/LAMA2/ACTC1/SGCD/PRKAA2/CADRA1D/HTR2B/PTH1R/NPY/STR5/GRPR/GHR/PTGER3/GRIK5/HTR2A/GLP2R/TAC1/CHRNA3/CTSG/LEPR/UCN3/CNR1/TACR1/GIP/GLRB/TAC3/VIP/AGT/GRP/CCKAR/PTGFR/NPSR1/SCT/TACR2/F2/CHRM2/GCG/ADRA1D/ADCY1/PLA2G3/IRAG1/ACTG2/CALD1/PRKG1/ACTA2/MYH11/PPP1R14A/PLA2G5/PPP1R12B/AGT/KCNMB1/GUCY1A1/ADCY5/KCNMA1/MYL9/AGADRA1D/PLN/CACNG4/SLC8A2/ADCY1/POPDC2/TPM1/BVES/SCN7A/ATP1B2/ATP1A2/PPP1R1A/AGT/KCNK2/TPM2/ADCY5/CACNB2/SCN4B/AGTR1/ACTC  | 20    |
| hsa04080 | Neuroactive ligand-receptor interaction         | 1.29E-08 | CACNG4/SLC8A2/ITGA7/IGF1/ADCY1/TPM1/DES/ITGA8/DTNA/AGT/DMD/SGCA/TPM2/CACNB2/LAMA2/ACTC1/SGCD/PRKAA2/CADRA1D/HTR2B/PTH1R/NPY/STR5/GRPR/GHR/PTGER3/GRIK5/HTR2A/GLP2R/TAC1/CHRNA3/CTSG/LEPR/UCN3/CNR1/TACR1/GIP/GLRB/TAC3/VIP/AGT/GRP/CCKAR/PTGFR/NPSR1/SCT/TACR2/F2/CHRM2/GCG/ADRA1D/ADCY1/PLA2G3/IRAG1/ACTG2/CALD1/PRKG1/ACTA2/MYH11/PPP1R14A/PLA2G5/PPP1R12B/AGT/KCNMB1/GUCY1A1/ADCY5/KCNMA1/MYL9/AGADRA1D/PLN/CACNG4/SLC8A2/ADCY1/POPDC2/TPM1/BVES/SCN7A/ATP1B2/ATP1A2/PPP1R1A/AGT/KCNK2/TPM2/ADCY5/CACNB2/SCN4B/AGTR1/ACTC  | 37    |
| hsa04270 | Vascular smooth muscle contraction              | 1.31E-08 | CACNG4/SLC8A2/ITGA7/IGF1/ADCY1/TPM1/DES/ITGA8/DTNA/AGT/DMD/SGCA/TPM2/CACNB2/LAMA2/ACTC1/SGCD/PRKAA2/CADRA1D/HTR2B/PTH1R/NPY/STR5/GRPR/GHR/PTGER3/GRIK5/HTR2A/GLP2R/TAC1/CHRNA3/CTSG/LEPR/UCN3/CNR1/TACR1/GIP/GLRB/TAC3/VIP/AGT/GRP/CCKAR/PTGFR/NPSR1/SCT/TACR2/F2/CHRM2/GCG/ADRA1D/ADCY1/PLA2G3/IRAG1/ACTG2/CALD1/PRKG1/ACTA2/MYH11/PPP1R14A/PLA2G5/PPP1R12B/AGT/KCNMB1/GUCY1A1/ADCY5/KCNMA1/MYL9/AGADRA1D/PLN/CACNG4/SLC8A2/ADCY1/POPDC2/TPM1/BVES/SCN7A/ATP1B2/ATP1A2/PPP1R1A/AGT/KCNK2/TPM2/ADCY5/CACNB2/SCN4B/AGTR1/ACTC  | 21    |
| hsa04261 | Adrenergic signaling in cardiomyocytes          | 1.57E-07 | CACNG4/SLC8A2/ITGA7/IGF1/ADCY1/TPM1/DES/ITGA8/DTNA/AGT/DMD/SGCA/TPM2/CACNB2/LAMA2/ACTC1/SGCD/PRKAA2/CADRA1D/HTR2B/PTH1R/NPY/STR5/GRPR/GHR/PTGER3/GRIK5/HTR2A/GLP2R/TAC1/CHRNA3/CTSG/LEPR/UCN3/CNR1/TACR1/GIP/GLRB/TAC3/VIP/AGT/GRP/CCKAR/PTGFR/NPSR1/SCT/TACR2/F2/CHRM2/GCG/ADRA1D/ADCY1/PLA2G3/IRAG1/ACTG2/CALD1/PRKG1/ACTA2/MYH11/PPP1R14A/PLA2G5/PPP1R12B/AGT/KCNMB1/GUCY1A1/ADCY5/KCNMA1/MYL9/AGADRA1D/PLN/CACNG4/SLC8A2/ADCY1/POPDC2/TPM1/BVES/SCN7A/ATP1B2/ATP1A2/PPP1R1A/AGT/KCNK2/TPM2/ADCY5/CACNB2/SCN4B/AGTR1/ACTC  | 21    |
| hsa05412 | Arrhythmogenic right ventricular cardiomyopathy | 3.93E-07 | CACNG4/SLC8A2/ITGA7/IGF1/ADCY1/TPM1/DES/ITGA8/DTNA/AGT/DMD/SGCA/TPM2/CACNB2/LAMA2/ACTC1/SGCD/PRKAA2/CADRA1D/HTR2B/PTH1R/NPY/STR5/GRPR/GHR/PTGER3/GRIK5/HTR2A/GLP2R/TAC1/CHRNA3/CTSG/LEPR/UCN3/CNR1/TACR1/GIP/GLRB/TAC3/VIP/AGT/GRP/CCKAR/PTGFR/NPSR1/SCT/TACR2/F2/CHRM2/GCG/ADRA1D/ADCY1/PLA2G3/IRAG1/ACTG2/CALD1/PRKG1/ACTA2/MYH11/PPP1R14A/PLA2G5/PPP1R12B/AGT/KCNMB1/GUCY1A1/ADCY5/KCNMA1/MYL9/AGADRA1D/PLN/CACNG4/SLC8A2/ADCY1/POPDC2/TPM1/BVES/SCN7A/ATP1B2/ATP1A2/PPP1R1A/AGT/KCNK2/TPM2/ADCY5/CACNB2/SCN4B/AGTR1/ACTC  | 15    |
| hsa04512 | ECM-receptor interaction                        | 6.24E-07 | CACNG4/SLC8A2/ITGA7/IGF1/ADCY1/TPM1/DES/ITGA8/DTNA/AGT/DMD/SGCA/TPM2/CACNB2/LAMA2/ACTC1/SGCD/PRKAA2/CADRA1D/HTR2B/PTH1R/NPY/STR5/GRPR/GHR/PTGER3/GRIK5/HTR2A/GLP2R/TAC1/CHRNA3/CTSG/LEPR/UCN3/CNR1/TACR1/GIP/GLRB/TAC3/VIP/AGT/GRP/CCKAR/PTGFR/NPSR1/SCT/TACR2/F2/CHRM2/GCG/ADRA1D/ADCY1/PLA2G3/IRAG1/ACTG2/CALD1/PRKG1/ACTA2/MYH11/PPP1R14A/PLA2G5/PPP1R12B/AGT/KCNMB1/GUCY1A1/ADCY5/KCNMA1/MYL9/AGADRA1D/PLN/CACNG4/SLC8A2/ADCY1/POPDC2/TPM1/BVES/SCN7A/ATP1B2/ATP1A2/PPP1R1A/AGT/KCNK2/TPM2/ADCY5/CACNB2/SCN4B/AGTR1/ACTC  | 15    |
| hsa04972 | Pancreatic secretion                            | 7.22E-07 | CACNG4/SLC8A2/ITGA7/IGF1/ADCY1/TPM1/DES/ITGA8/DTNA/AGT/DMD/SGCA/TPM2/CACNB2/LAMA2/ACTC1/SGCD/PRKAA2/CADRA1D/HTR2B/PTH1R/NPY/STR5/GRPR/GHR/PTGER3/GRIK5/HTR2A/GLP2R/TAC1/CHRNA3/CTSG/LEPR/UCN3/CNR1/TACR1/GIP/GLRB/TAC3/VIP/AGT/GRP/CCKAR/PTGFR/NPSR1/SCT/TACR2/F2/CHRM2/GCG/ADRA1D/ADCY1/PLA2G3/IRAG1/ACTG2/CALD1/PRKG1/ACTA2/MYH11/PPP1R14A/PLA2G5/PPP1R12B/AGT/KCNMB1/GUCY1A1/ADCY5/KCNMA1/MYL9/AGADRA1D/PLN/CACNG4/SLC8A2/ADCY1/POPDC2/TPM1/BVES/SCN7A/ATP1B2/ATP1A2/PPP1R1A/AGT/KCNK2/TPM2/ADCY5/CACNB2/SCN4B/AGTR1/ACTC  | 16    |
| hsa04514 | Cell adhesion molecules                         | 3.88E-06 | CACNG4/SLC8A2/ITGA7/IGF1/ADCY1/TPM1/DES/ITGA8/DTNA/AGT/DMD/SGCA/TPM2/CACNB2/LAMA2/ACTC1/SGCD/PRKAA2/CADRA1D/HTR2B/PTH1R/NPY/STR5/GRPR/GHR/PTGER3/GRIK5/HTR2A/GLP2R/TAC1/CHRNA3/CTSG/LEPR/UCN3/CNR1/TACR1/GIP/GLRB/TAC3/VIP/AGT/GRP/CCKAR/PTGFR/NPSR1/SCT/TACR2/F2/CHRM2/GCG/ADRA1D/ADCY1/PLA2G3/IRAG1/ACTG2/CALD1/PRKG1/ACTA2/MYH11/PPP1R14A/PLA2G5/PPP1R12B/AGT/KCNMB1/GUCY1A1/ADCY5/KCNMA1/MYL9/AGADRA1D/PLN/CACNG4/SLC8A2/ADCY1/POPDC2/TPM1/BVES/SCN7A/ATP1B2/ATP1A2/PPP1R1A/AGT/KCNK2/TPM2/ADCY5/CACNB2/SCN4B/AGTR1/ACTC  | 19    |
| hsa04022 | cGMP-PKG signaling pathway                      | 8.85E-06 | CACNG4/SLC8A2/ITGA7/IGF1/ADCY1/TPM1/DES/ITGA8/DTNA/AGT/DMD/SGCA/TPM2/CACNB2/LAMA2/ACTC1/SGCD/PRKAA2/CADRA1D/HTR2B/PTH1R/NPY/STR5/GRPR/GHR/PTGER3/GRIK5/HTR2A/GLP2R/TAC1/CHRNA3/CTSG/LEPR/UCN3/CNR1/TACR1/GIP/GLRB/TAC3/VIP/AGT/GRP/CCKAR/PTGFR/NPSR1/SCT/TACR2/F2/CHRM2/GCG/ADRA1D/ADCY1/PLA2G3/IRAG1/ACTG2/CALD1/PRKG1/ACTA2/MYH11/PPP1R14A/PLA2G5/PPP1R12B/AGT/KCNMB1/GUCY1A1/ADCY5/KCNMA1/MYL9/AGADRA1D/PLN/CACNG4/SLC8A2/ADCY1/POPDC2/TPM1/BVES/SCN7A/ATP1B2/ATP1A2/PPP1R1A/AGT/KCNK2/TPM2/ADCY5/CACNB2/SCN4B/AGTR1/ACTC  | 19    |

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| hsa04020 | Calcium signaling pathway           | 1.57E-05 | CACNA1H/ADRA1D/HTR2B/GRP<br>R/PLN/SLC8A2/FGF2/ADCY1/<br>PTGER3/HTR2A/FGF10/FGF7/<br>TACR1/PDE1A/NFATC4/CASQ2<br>/CCKAR/PTGFR/TACR2/NGF/C<br>NPY/SSTR5/PLN/GLI3/ADCY1<br>/POPDC2/PTGER3/PDE3A/BVE | 24 |
| hsa04024 | cAMP signaling pathway              | 2.23E-05 | S/AMH/ATP1B2/ATP1A2/GIP/<br>VIP/KCNK2/ADCY5/CHRM2/GC<br>SLC8A2/COL8A1/ATP1B2/COL   | 22 |
| hsa04974 | Protein digestion and absorption    | 8.61E-05 | 26A1/ATP1A2/CTRB1/ELN/CP<br>A2/COL2A1/COL14A1/COL21A   | 13 |
| hsa04975 | Fat digestion and absorption        | 0.000134 | PNLIP/PLA2G3/APOA1/PLA2G<br>5/APOB/PNLIPRP2/PNLIPRP1<br>ADCY1/ATP1B2/ATP1A2/GIP/   | 8  |
| hsa04911 | Insulin secretion                   | 0.000267 | KCNMB1/CCKAR/ADCY5/KCNMA<br>1/GCG/ADCYAP1/CACNA1C<br>CACNG4/SLC8A2/TPM1/ATP1B  | 11 |
| hsa04260 | Cardiac muscle contraction          | 0.000296 | 2/ATP1A2/CASQ2/TPM2/CACN<br>B2/ACTC1/COX7A1/CACNA1C<br>PDE3A/PDE1A/AGT/GUCY1A1/<br>ADCY5/KCNMA1/AGTR1/ADCYA  | 11 |
| hsa04924 | Renin secretion                     | 0.000829 | THBS4/RELN/ITGA7/IGF1/IT<br>GA8/TNC/PPP1R12B/FLNA/CO<br>L2A1/COL4A6/MYL9/TNXB/LA<br>MA2/TNN/MYLK/ITGA9/VTN   | 9  |
| hsa04510 | Focal adhesion                      | 0.001093 | ADIPOQ/APOA1/FABP4/APOC3<br>/PLIN4/APOA2/PLIN1/CD36/<br>ADRA1D/ADCY1/MUC5AC/PRKG   | 17 |
| hsa03320 | PPAR signaling pathway              | 0.001517 | 1/ATP1B2/DMBT1/ATP1A2/GU<br>CY1A1/ADCY5/KCNMA1   | 9  |
| hsa04970 | Salivary secretion                  | 0.001965 | CACNA1H/KCNK3/ADCY1/AGT/<br>KCNK2/ADCY5/AGTR1/CACNA1<br>TRPC4/RGMA/NTN1/SLIT3/CF   | 10 |
| hsa04927 | Cortisol synthesis and secretion    | 0.002336 | L2/SEMA3E/NFATC4/PLXNA4/<br>BOC/MYL9/TRPC1/SLIT2/CXC<br>CACNA1H/KCNK3/ADCY1/ATP1   | 8  |
| hsa04360 | Axon guidance                       | 0.002593 | B2/ATP1A2/PRKD1/AGT/ADCY<br>5/AGTR1/CACNA1C  | 15 |
| hsa04925 | Aldosterone synthesis and secretion | 0.002904 | FGA/F13A1/C7/F7/FGG/SERP<br>INF2/SERPIND1/F2/VTN   | 10 |
| hsa04610 | Complement and coagulation cascades | 0.003921 | HTR2B/TUBB4A/TUBA3C/ADCY<br>1/HTR2A/PRKG1/GUCY1A1/AD   | 9  |
| hsa04540 | Gap junction                        | 0.004573 | NPY/ADCY1/PTGER3/PRKG1/F<br>ABP4/PLIN1/ADCY5   | 9  |
| hsa04923 | Regulation of lipolysis in          | 0.004839 |  | 7  |