**Supplementary table 1.**

**Results obtained by gene set enrichment analysis**

**Gene sets that are downregulated by plant stanol esters in the duodenum**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| NAME | SIZE | NES FDR q-val | | |  |
| NCI\_INTEGRIN1\_PATHWAY | 66 | -2.516827 | 0 |
| NCI\_SYNDECAN\_1\_PATHWAY | 46 | -2.2569048 | 0.002685779 |
| REACT\_REGULATION OF INSULIN-LIKE GROWTH FACTOR (IGF) ACTIVITY BY  INSULIN-LIKE GROWTH FACTOR BINDING PROTEINS (IGFBPS) | 17 | -2.1875362 | 0.004080313 |
| WIP\_HS\_CELL\_JUNCTION\_ORGANIZATION | 26 | -2.171162 | 0.004393161 |
| KEGG\_FOCAL ADHESION | 199 | -2.0996954 | 0.004419543 |
| NCI\_INTEGRIN2\_PATHWAY | 28 | -2.1011589 | 0.004447967 |
| WIP\_HS\_HYPERTROPHY\_MODEL | 20 | -2.101588 | 0.00481863 |
| NCI\_THROMBIN\_PAR4\_PATHWAY | 15 | -2.0804775 | 0.005107116 |
| KEGG\_RHEUMATOID ARTHRITIS | 87 | -2.1062334 | 0.005135058 |
| WIP\_HS\_FOCAL\_ADHESION | 184 | -2.0827188 | 0.005280236 |
| KEGG\_STAPHYLOCOCCUS AUREUS INFECTION | 47 | -2.1533434 | 0.005370778 |
| REACT\_CELL-EXTRACELLULAR MATRIX INTERACTIONS | 18 | -2.1087608 | 0.005509245 |
| KEGG\_MALARIA | 49 | -2.0699227 | 0.005591909 |
| WIP\_HS\_COMPLEMENT\_AND\_COAGULATION\_CASCADES | 50 | -2.1210685 | 0.005891486 |
| REACT\_UNFOLDED PROTEIN RESPONSE | 61 | -2.0571463 | 0.005922272 |
| REACT\_INTEGRIN CELL SURFACE INTERACTIONS | 83 | -2.0602016 | 0.005952656 |
| REACT\_ACTIVATION OF CHAPERONES BY IRE1ALPHA | 46 | -2.1112733 | 0.005977918 |
| NCI\_A6B1\_A6B4\_INTEGRIN\_PATHWAY | 44 | -2.126846 | 0.00670623 |
| KEGG\_ECM-RECEPTOR INTERACTION | 83 | -2.1233795 | 0.006733127 |
| KEGG\_COMPLEMENT AND COAGULATION CASCADES | 66 | -2.019622 | 0.007821667 |
| KEGG\_ENDOCYTOSIS | 200 | -2.0226157 | 0.007885248 |
| REACT\_CELL JUNCTION ORGANIZATION | 104 | -1.9976541 | 0.01057727 |
| NCI\_FRA\_PATHWAY | 35 | -1.9861963 | 0.011043767 |
| KEGG\_PHAGOSOME | 140 | -1.9743463 | 0.012019157 |
| WIP\_HS\_FORMATION\_OF\_FIBRIN\_CLOT\_(CLOTTING\_CASCADE) | 21 | -1.9450542 | 0.015547345 |
| BIOC\_GSK3PATHWAY | 26 | -1.9210209 | 0.01989135 |
| REACT\_PHOSPHORYLATION OF CD3 AND TCR ZETA CHAINS | 22 | -1.9129343 | 0.02119102 |
| WIP\_HS\_ADIPOGENESIS | 129 | -1.9077684 | 0.021719502 |
| REACT\_TRANSLOCATION OF ZAP-70 TO IMMUNOLOGICAL SYNAPSE | 20 | -1.9024669 | 0.022173952 |
| BIOC\_UCALPAINPATHWAY | 16 | -1.8921101 | 0.023656894 |
| NCI\_TGFBRPATHWAY | 54 | -1.8843185 | 0.024802482 |
| WIP\_HS\_TGF\_BETA\_SIGNALING\_PATHWAY | 55 | -1.8856295 | 0.024821145 |
| NCI\_IL3\_PATHWAY | 25 | -1.8815131 | 0.025139857 |
| KEGG\_SALMONELLA INFECTION | 81 | -1.8764603 | 0.026123513 |
| BIOC\_MCALPAINPATHWAY | 24 | -1.8679522 | 0.027809104 |
| NCI\_THROMBIN\_PAR1\_PATHWAY | 42 | -1.8634603 | 0.02796165 |
| REACT\_SIGNALING BY NOTCH | 16 | -1.8268088 | 0.040638156 |
| NCI\_INTEGRIN3\_PATHWAY | 43 | -1.8198379 | 0.04231469 |
| KEGG\_AMOEBIASIS | 105 | -1.8162376 | 0.04253086 |
| NCI\_ARF6\_PATHWAY | 35 | -1.8099927 | 0.043524038 |
| NCI\_HDAC\_CLASSI\_PATHWAY | 65 | -1.8103682 | 0.044375475 |
| KEGG\_PERTUSSIS | 71 | -1.7898647 | 0.05071092 |
| BIOC\_INTEGRINPATHWAY | 35 | -1.792223 | 0.05072901 |
| REACT\_CLASS B\_2 (SECRETIN FAMILY RECEPTORS) | 87 | -1.787039 | 0.05131976 |
| KEGG\_PATHWAYS IN CANCER | 325 | -1.7792944 | 0.051670585 |
| REACT\_SEMAPHORIN INTERACTIONS | 66 | -1.7746155 | 0.05235397 |
| WIP\_HS\_OSTEOBLAST\_SIGNALING | 16 | -1.7798971 | 0.052624457 |
| NCI\_AVB3\_INTEGRIN\_PATHWAY | 73 | -1.7809161 | 0.05325411 |
| KEGG\_GRAFT-VERSUS-HOST DISEASE | 38 | -1.7689866 | 0.054013122 |
| NCI\_NCADHERINPATHWAY | 36 | -1.7637521 | 0.055912357 |
| NCI\_IL8CXCR2\_PATHWAY | 33 | -1.7589175 | 0.057548076 |
| NCI\_FAK\_PATHWAY | 57 | -1.7563629 | 0.057670083 |
| REACT\_PLATELET DEGRANULATION | 76 | -1.7409264 | 0.05798876 |
| KEGG\_OSTEOCLAST DIFFERENTIATION | 124 | -1.7421538 | 0.058424335 |
| REACT\_G ALPHA (I) SIGNALLING EVENTS | 181 | -1.7528639 | 0.058582544 |
| KEGG\_PPAR SIGNALING PATHWAY | 68 | -1.742696 | 0.059181325 |
| NCI\_AMB2\_NEUTROPHILS\_PATHWAY | 41 | -1.7323977 | 0.059293076 |
| NCI\_UPA\_UPAR\_PATHWAY | 42 | -1.7492006 | 0.059753202 |
| KEGG\_VASOPRESSIN-REGULATED WATER REABSORPTION | 44 | -1.7432964 | 0.059890017 |
| BIOC\_INTRINSICPATHWAY | 22 | -1.7325069 | 0.060204767 |
| NCI\_TOLL\_ENDOGENOUS\_PATHWAY | 26 | -1.7441595 | 0.060437705 |
| WIP\_HS\_VITAMIN\_A\_AND\_CAROTENOID\_METABOLISM | 42 | -1.7286792 | 0.0606352 |
| REACT\_FORMATION OF FIBRIN CLOT (CLOTTING CASCADE) | 28 | -1.7329628 | 0.060949355 |
| WIP\_HS\_INFLAMMATORY\_RESPONSE\_PATHWAY | 32 | -1.7446257 | 0.06134299 |
| WIP\_HS\_BLOOD\_CLOTTING\_CASCADE | 21 | -1.715845 | 0.061414145 |
| REACT\_GENERATION OF SECOND MESSENGER MOLECULES | 33 | -1.723928 | 0.061582964 |
| REACT\_GPCR LIGAND BINDING | 397 | -1.7254971 | 0.06164039 |
| NCI\_LYSOPHOSPHOLIPID\_PATHWAY | 65 | -1.716085 | 0.06219608 |
| WIP\_HS\_SELENIUM\_PATHWAY | 80 | -1.7175808 | 0.062397294 |
| KEGG\_LEISHMANIASIS | 66 | -1.7182596 | 0.063000046 |
| NCI\_SYNDECAN\_2\_PATHWAY | 33 | -1.7199837 | 0.063099645 |
| KEGG\_GLYCOSAMINOGLYCAN BIOSYNTHESIS - CHONDROITIN SULFATE | 22 | -1.7095063 | 0.06400889 |
| REACT\_EGFR DOWNREGULATION | 27 | -1.6990749 | 0.069253564 |
| NCI\_INTEGRIN\_A4B1\_PATHWAY | 32 | -1.6928486 | 0.07120293 |
| REACT\_RESPONSE TO ELEVATED PLATELET CYTOSOLIC CA2+ | 81 | -1.6913509 | 0.07130606 |
| KEGG\_HEDGEHOG SIGNALING PATHWAY | 56 | -1.6940371 | 0.07133568 |
| WIP\_HS\_INTEGRIN-MEDIATED\_CELL\_ADHESION | 99 | -1.6858629 | 0.07251837 |
| KEGG\_TYPE I DIABETES MELLITUS | 41 | -1.6858953 | 0.07346016 |
| REACT\_SIGNALING BY PDGF | 65 | -1.6634058 | 0.086486675 |
| NCI\_ATF2\_PATHWAY | 57 | -1.6586635 | 0.087702215 |
| WIP\_HS\_ALPHA\_6\_BETA\_4\_SIGNALING\_PATHWAY | 33 | -1.6542282 | 0.08811228 |
| WIP\_HS\_NOTCH\_SIGNALING\_PATHWAY | 45 | -1.6587815 | 0.08874972 |
| WIP\_HS\_ADIPOCYTE\_TARBASE | 17 | -1.6546286 | 0.088790506 |
| NCI\_WNT\_SIGNALING\_PATHWAY | 28 | -1.6480742 | 0.08907181 |
| KEGG\_NOTCH SIGNALING PATHWAY | 46 | -1.6549485 | 0.08968073 |
| REACT\_FORMATION OF PLATELET PLUG | 256 | -1.6505536 | 0.0897312 |
| KEGG\_TIGHT JUNCTION | 130 | -1.6480842 | 0.09010753 |
| WIP\_HS\_MONOAMINE\_GPCRS | 33 | -1.6440396 | 0.0913208 |
| NCI\_ECADHERIN\_STABILIZATION\_PATHWAY | 39 | -1.636858 | 0.09460159 |
| NCI\_AP1\_PATHWAY | 69 | -1.637887 | 0.0949269 |
| NCI\_LKB1\_PATHWAY | 46 | -1.6294125 | 0.09664975 |
| NCI\_MET\_PATHWAY | 76 | -1.6306827 | 0.09690344 |
| NCI\_INTEGRIN5\_PATHWAY | 17 | -1.6320456 | 0.09693751 |
| WIP\_HS\_WNT\_SIGNALING\_PATHWAY | 60 | -1.6263632 | 0.097666495 |
| NCI\_ARF\_3PATHWAY | 19 | -1.6226149 | 0.09845453 |
| BIOC\_CARDIACEGFPATHWAY | 16 | -1.6232773 | 0.0991219 |
| REACT\_LIPOPROTEIN METABOLISM | 23 | -1.6203897 | 0.099194124 |
| KEGG\_AFRICAN TRYPANOSOMIASIS | 34 | -1.6114346 | 0.100896195 |
| WIP\_HS\_TGF\_BETA\_SIGNALING\_PATHWAY\_NETPATH | 117 | -1.6124537 | 0.10108863 |
| NCI\_BETACATENIN\_NUC\_PATHWAY | 78 | -1.6135883 | 0.101423405 |
| REACT\_INTERFERON GAMMA SIGNALING | 69 | -1.6146196 | 0.10159799 |
| REACT\_PD-1 SIGNALING | 25 | -1.6149954 | 0.10242935 |
| KEGG\_BLADDER CANCER | 42 | -1.6066388 | 0.10381552 |
| NCI\_SMAD2\_3NUCLEARPATHWAY | 81 | -1.5955641 | 0.111029014 |
| KEGG\_MELANOGENESIS | 100 | -1.5961261 | 0.11160446 |
| BIOC\_AKTPATHWAY | 15 | -1.5898471 | 0.11536199 |
| WIP\_HS\_PROSTAGLANDIN\_SYNTHESIS\_AND\_REGULATION | 30 | -1.586792 | 0.116978504 |
| REACT\_REGULATION OF LIPID METABOLISM BY PEROXISOME PROLIFERATOR-ACTIVATED RECEPTOR ALPHA (PPARALPHA) | 53 | -1.582807 | 0.11985245 |
| REACT\_CLASS A\_1 (RHODOPSIN-LIKE RECEPTORS) | 295 | -1.5788364 | 0.122499 |
| NCI\_HIF1\_TFPATHWAY | 64 | -1.5774356 | 0.12256517 |
| REACT\_TIGHT JUNCTION INTERACTIONS | 30 | -1.5659175 | 0.13256575 |
| KEGG\_ADIPOCYTOKINE SIGNALING PATHWAY | 67 | -1.5592072 | 0.13791448 |
| KEGG\_ALLOGRAFT REJECTION | 35 | -1.5465683 | 0.14857985 |
| WIP\_HS\_MEMBRANE\_TRAFFICKING | 22 | -1.5472488 | 0.14909333 |
| NCI\_ENDOTHELINPATHWAY | 62 | -1.543546 | 0.15019934 |
| WIP\_HS\_EPO\_RECEPTOR\_SIGNALING | 26 | -1.5410379 | 0.15174824 |
| REACT\_PLATELET ACTIVATION | 238 | -1.5339875 | 0.15299669 |
| REACT\_G ALPHA (Q) SIGNALLING EVENTS | 177 | -1.5349752 | 0.1533087 |
| KEGG\_CYTOKINE-CYTOKINE RECEPTOR INTERACTION | 257 | -1.5322485 | 0.15363297 |
| WIP\_HS\_MATRIX\_METALLOPROTEINASES | 29 | -1.535217 | 0.15433863 |
| REACT\_ERK\_MAPK TARGETS | 21 | -1.5370679 | 0.1549077 |
| REACT\_NEF-MEDIATES DOWN MODULATION OF CELL SURFACE RECEPTORS BY RECRUITING THEM TO CLATHRIN ADAPTERS | 21 | -1.5354061 | 0.15544057 |
| REACT\_CRMPS IN SEMA3A SIGNALING | 16 | -1.5244482 | 0.15710972 |
| WIP\_HS\_PROTEINS\_AND\_DNA\_SEQUENCES\_IN\_CARDICAC\_STRUCTURES | 27 | -1.5230957 | 0.1572873 |
| WIP\_HS\_GPCRS,\_CLASS\_B\_SECRETIN-LIKE | 23 | -1.5250324 | 0.15759642 |
| KEGG\_RENAL CELL CARCINOMA | 70 | -1.5271759 | 0.15772222 |
| REACT\_GAP JUNCTION TRAFFICKING AND REGULATION | 41 | -1.5253758 | 0.15845528 |
| REACT\_AXON GUIDANCE | 278 | -1.5149097 | 0.1654977 |
| REACT\_LIPID DIGESTION, MOBILIZATION, AND TRANSPORT | 40 | -1.5119251 | 0.16738342 |
| REACT\_CELL-CELL JUNCTION ORGANIZATION | 61 | -1.5050464 | 0.16878048 |
| KEGG\_TGF-BETA SIGNALING PATHWAY | 83 | -1.5028958 | 0.16883685 |
| REACT\_PEPTIDE LIGAND-BINDING RECEPTORS | 184 | -1.5094548 | 0.1688861 |
| WIP\_HS\_MYOMETRIAL\_RELAXATION\_AND\_CONTRACTION\_PATHWAYS | 155 | -1.5056959 | 0.16939595 |
| REACT\_POST-TRANSLATIONAL MODIFICATION\_ GAMMA CARBOXYLATION AND HYPUSINE FORMATION | 15 | -1.503335 | 0.16960883 |
| REACT\_THROMBIN SIGNALLING THROUGH PROTEINASE ACTIVATED RECEPTORS (PARS) | 32 | -1.5063773 | 0.16998251 |
| REACT\_SEMA3A PAK DEPENDENT AXON REPULSION | 15 | -1.5067725 | 0.1708421 |
| KEGG\_CHRONIC MYELOID LEUKEMIA | 73 | -1.4983668 | 0.17195982 |
| KEGG\_ACUTE MYELOID LEUKEMIA | 57 | -1.496947 | 0.17256173 |
| KEGG\_CHEMOKINE SIGNALING PATHWAY | 183 | -1.4988633 | 0.17259136 |
| KEGG\_WNT SIGNALING PATHWAY | 148 | -1.4920781 | 0.1769617 |
| WIP\_HS\_FOLATE\_METABOLISM | 65 | -1.4899328 | 0.17858484 |
| REACT\_OTHER SEMAPHORIN INTERACTIONS | 16 | -1.4877137 | 0.17997338 |
| REACT\_GAP JUNCTION TRAFFICKING | 39 | -1.480795 | 0.18823417 |
| WIP\_HS\_ENDOCHONDRAL\_OSSIFICATION | 62 | -1.4766576 | 0.19125266 |
| REACT\_GAP JUNCTION ASSEMBLY | 28 | -1.477149 | 0.19192263 |
| WIP\_HS\_TRANSPORT\_OF\_VITAMINS\_NUCLEOSIDES\_AND\_RELATED\_MOLECULES | 20 | -1.4690968 | 0.19298649 |
| REACT\_AMINE LIGAND-BINDING RECEPTORS | 40 | -1.4743836 | 0.1930017 |
| NCI\_CXCR4\_PATHWAY | 100 | -1.4677038 | 0.19338769 |
| NCI\_MYC\_REPRESSPATHWAY | 62 | -1.4728765 | 0.19345607 |
| KEGG\_BASAL CELL CARCINOMA | 55 | -1.4715114 | 0.19386977 |
| KEGG\_HEMATOPOIETIC CELL LINEAGE | 83 | -1.4704046 | 0.19387917 |
| REACT\_SIGNALING BY TGF BETA | 16 | -1.4691676 | 0.19414139 |
| KEGG\_LYSOSOME | 121 | -1.4655285 | 0.19500305 |
| WIP\_HS\_IL-4\_SIGNALING\_PATHWAY | 46 | -1.4633046 | 0.19657215 |
| WIP\_HS\_ACE\_INHIBITOR\_PATHWAY | 17 | -1.4575548 | 0.20282467 |
| WIP\_HS\_GPCRS,\_CLASS\_A\_RHODOPSIN-LIKE | 250 | -1.4547492 | 0.20383579 |
| KEGG\_GAP JUNCTION | 86 | -1.4548982 | 0.20499626 |
| KEGG\_PATHOGENIC ESCHERICHIA COLI INFECTION | 52 | -1.4499096 | 0.20531315 |
| REACT\_SMOOTH MUSCLE CONTRACTION | 24 | -1.4504787 | 0.20584585 |
| REACT\_HEMOSTASIS | 470 | -1.4511502 | 0.20618266 |
| BIOC\_NTHIPATHWAY | 22 | -1.4481739 | 0.20640859 |
| REACT\_POST-CHAPERONIN TUBULIN FOLDING PATHWAY | 16 | -1.4518943 | 0.20641881 |
| KEGG\_CHAGAS DISEASE (AMERICAN TRYPANOSOMIASIS) | 101 | -1.4435645 | 0.20894559 |
| KEGG\_OTHER TYPES OF O-GLYCAN BIOSYNTHESIS | 40 | -1.4440489 | 0.20959851 |
| KEGG\_HTLV-I INFECTION | 260 | -1.4419874 | 0.20961148 |
| NCI\_RHOA\_PATHWAY | 44 | -1.4407145 | 0.21007745 |
| BIOC\_ALKPATHWAY | 31 | -1.4445107 | 0.21042255 |
| REACT\_GLUCAGON SIGNALING IN METABOLIC REGULATION | 33 | -1.438712 | 0.2116662 |
| NCI\_ALK1PATHWAY | 25 | -1.435897 | 0.21287793 |
| REACT\_SIGNALING BY RHO GTPASES | 122 | -1.436009 | 0.21396358 |
| KEGG\_VIRAL MYOCARDITIS | 68 | -1.4304963 | 0.2140216 |
| REACT\_TRAF6 MEDIATED INDUCTION OF PROINFLAMMATORY CYTOKINES | 62 | -1.4295639 | 0.21416487 |
| KEGG\_SMALL CELL LUNG CANCER | 85 | -1.428473 | 0.21444915 |
| REACT\_P130CAS LINKAGE TO MAPK SIGNALING FOR INTEGRINS | 15 | -1.4249742 | 0.21448846 |
| REACT\_BASIGIN INTERACTIONS | 25 | -1.4310336 | 0.21449189 |
| BIOC\_NO1PATHWAY | 28 | -1.4256574 | 0.21467511 |
| KEGG\_LEUKOCYTE TRANSENDOTHELIAL MIGRATION | 115 | -1.4273648 | 0.21475066 |
| REACT\_NUCLEAR EVENTS (KINASE AND TRANSCRIPTION FACTOR ACTIVATION) | 24 | -1.4228404 | 0.21488416 |
| BIOC\_PTDINSPATHWAY | 22 | -1.423338 | 0.21536008 |
| KEGG\_TOXOPLASMOSIS | 128 | -1.431125 | 0.21563008 |
| NCI\_IL8CXCR1\_PATHWAY | 27 | -1.4257461 | 0.21574776 |
| WIP\_HS\_COMPLEMENT\_ACTIVATION,\_CLASSICAL\_PATHWAY | 15 | -1.4194396 | 0.21617073 |
| REACT\_G-PROTEIN ACTIVATION | 27 | -1.4208612 | 0.21645153 |
| REACT\_RHO GTPASE CYCLE | 122 | -1.431385 | 0.21655259 |
| KEGG\_NEUROACTIVE LIGAND-RECEPTOR INTERACTION | 270 | -1.4196968 | 0.21693525 |
| NCI\_EPOPATHWAY | 33 | -1.4314885 | 0.21775728 |
| REACT\_SEMA4D IN SEMAPHORIN SIGNALING | 29 | -1.4138128 | 0.2231729 |
| BIOC\_TIDPATHWAY | 19 | -1.4110476 | 0.22605541 |
| NCI\_KITPATHWAY | 52 | -1.4067771 | 0.22865446 |
| WIP\_HS\_NGF\_SIGNALLING\_VIA\_TRKA\_FROM\_THE\_PLASMA\_MEMBRANE | 30 | -1.4080522 | 0.22942479 |
| WIP\_HS\_STATIN\_PATHWAY | 29 | -1.4069961 | 0.22959943 |
| KEGG\_CELL ADHESION MOLECULES (CAMS) | 131 | -1.4045786 | 0.23051059 |
| NCI\_ER\_NONGENOMIC\_PATHWAY | 39 | -1.4016439 | 0.23372273 |
| WIP\_HS\_INTEGRIN\_CELL\_SURFACE\_INTERACTIONS | 15 | -1.3972905 | 0.2353801 |
| REACT\_NCAM1 INTERACTIONS | 44 | -1.3988782 | 0.23552307 |
| REACT\_SEMA4D INDUCED CELL MIGRATION AND GROWTH-CONE COLLAPSE | 24 | -1.397932 | 0.23562428 |
| KEGG\_PRION DISEASES | 36 | -1.3994871 | 0.23592159 |
| WIP\_HS\_ANGIOGENESIS | 23 | -1.3949829 | 0.23631014 |
| REACT\_RECYCLING PATHWAY OF L1 | 41 | -1.3954719 | 0.23681228 |
| KEGG\_TUBERCULOSIS | 170 | -1.3936366 | 0.2369553 |
| WIP\_HS\_SENESCENCE\_AND\_AUTOPHAGY | 97 | -1.3878144 | 0.24239676 |
| REACT\_TOLL LIKE RECEPTOR 3 (TLR3) CASCADE | 67 | -1.3880774 | 0.24317573 |
| KEGG\_GLYCOSAMINOGLYCAN BIOSYNTHESIS - KERATAN SULFATE | 15 | -1.3887426 | 0.24337073 |
| NCI\_FGF\_PATHWAY | 54 | -1.3854147 | 0.24495004 |
| REACT\_DARPP-32 EVENTS | 26 | -1.3834673 | 0.24555515 |
| REACT\_IMMUNOREGULATORY INTERACTIONS BETWEEN A LYMPHOID AND A NON-LYMPHOID CELL | 67 | -1.3842039 | 0.2456227 |
| WIP\_HS\_WNT\_SIGNALING\_PATHWAY\_AND\_PLURIPOTENCY | 97 | -1.3820606 | 0.24647345 |
| BIOC\_NFKBPATHWAY | 22 | -1.3798778 | 0.2472639 |
| BIOC\_ETSPATHWAY | 18 | -1.380202 | 0.2478323 |
| NCI\_INTEGRIN\_CS\_PATHWAY | 26 | -1.3764541 | 0.25135562 |
| NCI\_ECADHERIN\_NASCENTAJ\_PATHWAY | 38 | -1.3689458 | 0.25710696 |
| REACT\_G ALPHA (S) SIGNALLING EVENTS | 117 | -1.3694783 | 0.25753072 |
| REACT\_L1CAM INTERACTIONS | 106 | -1.3716987 | 0.25777686 |
| WIP\_HS\_NICOTINE\_ACTIVITY\_ON\_DOPAMINERGIC\_NEURONS | 21 | -1.3694977 | 0.25870213 |
| WIP\_HS\_CALCIUM\_REGULATION\_IN\_THE\_CARDIAC\_CELL | 148 | -1.3697174 | 0.25955224 |
| WIP\_HS\_REGULATION\_OF\_ACTIN\_CYTOSKELETON | 144 | -1.3647416 | 0.26122883 |
| KEGG\_REGULATION OF ACTIN CYTOSKELETON | 210 | -1.3635079 | 0.2618499 |
| WIP\_HS\_LEUKOCYTE\_TARBASE | 123 | -1.364777 | 0.26236445 |
| REACT\_NGF SIGNALLING VIA TRKA FROM THE PLASMA MEMBRANE | 137 | -1.3620181 | 0.26311514 |
| BIOC\_PPARAPATHWAY | 50 | -1.3601074 | 0.26368612 |
| REACT\_MEMBRANE TRAFFICKING | 139 | -1.3609055 | 0.26370448 |
| NCI\_INSULIN\_PATHWAY | 43 | -1.357729 | 0.26649392 |
| KEGG\_SYNAPTIC VESICLE CYCLE | 64 | -1.3535997 | 0.2721008 |
| NCI\_AJDISS\_2PATHWAY | 48 | -1.3525404 | 0.27254638 |
| NCI\_HES\_HEYPATHWAY | 48 | -1.3512582 | 0.27349183 |
| NCI\_INTEGRIN\_A9B1\_PATHWAY | 24 | -1.3495235 | 0.27391037 |
| REACT\_TRAF6 MEDIATED NF-KB ACTIVATION | 20 | -1.3497047 | 0.27488026 |
| REACT\_TOLL LIKE RECEPTOR 7\_8 (TLR7\_8) CASCADE | 74 | -1.3470442 | 0.27671427 |
| KEGG\_ANTIGEN PROCESSING AND PRESENTATION | 67 | -1.343798 | 0.28072375 |
| REACT\_MUSCLE CONTRACTION | 51 | -1.3414843 | 0.28187972 |
| WIP\_HS\_CYTOKINES\_AND\_INFLAMMATORY\_RESPONSE | 23 | -1.3420691 | 0.2821284 |
| REACT\_MYD88 DEPENDENT CASCADE INITIATED ON ENDOSOME | 74 | -1.3381009 | 0.2863245 |
| NCI\_ECADHERIN\_KERATINOCYTE\_PATHWAY | 19 | -1.335203 | 0.28756398 |
| REACT\_MAPK TARGETS\_ NUCLEAR EVENTS MEDIATED BY MAP KINASES | 30 | -1.3344629 | 0.2877532 |
| NCI\_EPHBFWDPATHWAY | 37 | -1.3360643 | 0.28848806 |
| KEGG\_ARRHYTHMOGENIC RIGHT VENTRICULAR CARDIOMYOPATHY (ARVC) | 74 | -1.3353225 | 0.28860995 |
| BIOC\_INFLAMPATHWAY | 29 | -1.3294753 | 0.28986192 |
| NCI\_VEGFR1\_2\_PATHWAY | 68 | -1.3283716 | 0.29044476 |
| REACT\_OPIOID SIGNALLING | 81 | -1.3296751 | 0.2907747 |
| NCI\_HDAC\_CLASSII\_PATHWAY | 34 | -1.3271699 | 0.29137713 |
| REACT\_PLATELET ACTIVATION TRIGGERS | 81 | -1.330037 | 0.2914578 |
| NCI\_NOTCH\_PATHWAY | 59 | -1.3314188 | 0.2916233 |
| NCI\_S1P\_S1P3\_PATHWAY | 29 | -1.3253999 | 0.29204002 |
| KEGG\_EPITHELIAL CELL SIGNALING IN HELICOBACTER PYLORI INFECTION | 68 | -1.3303767 | 0.29214394 |
| WIP\_HS\_OSTEOCLAST\_SIGNALING | 19 | -1.3256336 | 0.29281995 |
| WIP\_HS\_IL-6\_SIGNALING\_PATHWAY | 44 | -1.3227372 | 0.29519865 |
| KEGG\_INTESTINAL IMMUNE NETWORK FOR IGA PRODUCTION | 46 | -1.3180002 | 0.29873544 |
| WIP\_HS\_CIRCADIAN\_CLOCK | 17 | -1.3170964 | 0.29925942 |
| WIP\_HS\_EBV\_LMP1\_SIGNALING | 22 | -1.3182994 | 0.2993543 |
| BIOC\_ECMPATHWAY | 22 | -1.3183466 | 0.30050159 |
| REACT\_PKA ACTIVATION | 16 | -1.3188463 | 0.3007969 |
| WIP\_HS\_NUCLEAR\_RECEPTORS | 38 | -1.3128996 | 0.30302584 |
| NCI\_GMCSF\_PATHWAY | 36 | -1.3133506 | 0.30340272 |
| REACT\_TRAF6 MEDIATED INDUCTION OF NFKB AND MAP KINASES UPON TLR7\_8 OR 9 ACTIVATION | 73 | -1.3119702 | 0.30347455 |
| BIOC\_RELAPATHWAY | 16 | -1.3112502 | 0.30363083 |
| REACT\_PHOSPHOLIPASE C-MEDIATED CASCADE | 23 | -1.3138072 | 0.303722 |
| REACT\_SIGNALLING BY NGF | 222 | -1.3103436 | 0.30405408 |
| NCI\_TRKRPATHWAY | 61 | -1.3066239 | 0.3094807 |
| NCI\_S1P\_S1P1\_PATHWAY | 21 | -1.3051281 | 0.31103525 |
| REACT\_PLC BETA MEDIATED EVENTS | 44 | -1.3028213 | 0.31410813 |
| NCI\_RXR\_VDR\_PATHWAY | 21 | -1.2991128 | 0.3171248 |
| KEGG\_JAK-STAT SIGNALING PATHWAY | 153 | -1.2975506 | 0.31756163 |
| WIP\_HS\_VITAMIN\_B12\_METABOLISM | 51 | -1.3002611 | 0.31780103 |
| NCI\_TAP63PATHWAY | 51 | -1.299286 | 0.31809014 |
| NCI\_DELTANP63PATHWAY | 44 | -1.2978015 | 0.31834918 |
| NCI\_S1P\_META\_PATHWAY | 21 | -1.2953125 | 0.3202682 |
| KEGG\_ASTHMA | 28 | -1.2937669 | 0.32149705 |
| KEGG\_DILATED CARDIOMYOPATHY | 90 | -1.2912899 | 0.32472187 |
| REACT\_PKA ACTIVATION IN GLUCAGON SIGNALLING | 17 | -1.2873465 | 0.32727414 |
| WIP\_HS\_PEPTIDE\_GPCRS | 71 | -1.2862879 | 0.3278438 |
| KEGG\_GALACTOSE METABOLISM | 28 | -1.2889804 | 0.32787254 |
| NCI\_RHOA\_REG\_PATHWAY | 43 | -1.2875054 | 0.32818583 |
| WIP\_HS\_DNA\_DAMAGE\_RESPONSE\_(ONLY\_ATM\_DEPENDENT) | 86 | -1.2878505 | 0.32881188 |
| REACT\_TOLL LIKE RECEPTOR 9 (TLR9) CASCADE | 76 | -1.2845625 | 0.32969648 |
| NCI\_AVB3\_OPN\_PATHWAY | 31 | -1.2834233 | 0.33054975 |
| NCI\_P38\_MK2PATHWAY | 21 | -1.2825772 | 0.3309706 |
| NCI\_BMPPATHWAY | 41 | -1.2796967 | 0.33399275 |
| REACT\_G-PROTEIN MEDIATED EVENTS | 45 | -1.2802211 | 0.3342208 |
| REACT\_SIGNAL TRANSDUCTION BY L1 | 35 | -1.2762343 | 0.3344645 |
| WIP\_HS\_EGF\_RECEPTOR\_SIGNALING\_PATHWAY | 143 | -1.2765329 | 0.33501732 |
| KEGG\_HYPERTROPHIC CARDIOMYOPATHY (HCM) | 82 | -1.2767076 | 0.33584678 |
| BIOC\_DCPATHWAY | 21 | -1.2780049 | 0.3358851 |
| NCI\_RB\_1PATHWAY | 64 | -1.2769152 | 0.33661267 |
| BIOC\_IL1RPATHWAY | 31 | -1.2716105 | 0.34190932 |
| REACT\_SIGNALING BY INSULIN RECEPTOR | 107 | -1.2706758 | 0.34257248 |
| NCI\_RAC1\_PATHWAY | 53 | -1.2645494 | 0.35071996 |
| REACT\_P75NTR SIGNALS VIA NF-KB | 16 | -1.2648853 | 0.3512657 |
| BIOC\_LAIRPATHWAY | 16 | -1.2655524 | 0.35128078 |
| KEGG\_PORPHYRIN AND CHLOROPHYLL METABOLISM | 37 | -1.2616361 | 0.3539874 |
| REACT\_FATTY ACID, TRIACYLGLYCEROL, AND KETONE BODY METABOLISM | 108 | -1.2621293 | 0.35422772 |
| WIP\_HS\_REGULATION\_OF\_TOLL-LIKE\_RECEPTOR\_SIGNALING\_PATHWAY | 141 | -1.2607968 | 0.3544035 |
| REACT\_REGULATION OF WATER BALANCE BY RENAL AQUAPORINS | 40 | -1.2585499 | 0.35600674 |
| NCI\_PS1PATHWAY | 46 | -1.2587126 | 0.35696965 |
| REACT\_NUCLEAR RECEPTOR TRANSCRIPTION PATHWAY | 51 | -1.2563233 | 0.35909295 |
| REACT\_VIRAL DSRNA\_TLR3\_TRIF COMPLEX ACTIVATES RIP1 | 25 | -1.2552323 | 0.36004928 |
| KEGG\_SHIGELLOSIS | 61 | -1.2544637 | 0.3603603 |
| REACT\_NUCLEOTIDE-LIKE (PURINERGIC) RECEPTORS | 15 | -1.2530085 | 0.36077216 |
| KEGG\_INFLUENZA A | 166 | -1.2533646 | 0.3613034 |
| BIOC\_PTENPATHWAY | 16 | -1.2491381 | 0.36217624 |
| NCI\_ARF6\_TRAFFICKINGPATHWAY | 49 | -1.2496071 | 0.3623627 |
| REACT\_THE ROLE OF NEF IN HIV-1 REPLICATION AND DISEASE PATHOGENESIS | 28 | -1.2514256 | 0.36253494 |
| NCI\_ANTHRAXPATHWAY | 20 | -1.2500473 | 0.36278492 |
| REACT\_NCAM SIGNALING FOR NEURITE OUT-GROWTH | 70 | -1.2501855 | 0.36375433 |
| WIP\_HS\_BASE\_EXCISION\_REPAIR | 15 | -1.2454897 | 0.36806828 |
| NCI\_LYMPHANGIOGENESIS\_PATHWAY | 24 | -1.2431998 | 0.37132442 |
| REACT\_PREFOLDIN MEDIATED TRANSFER OF SUBSTRATE TO CCT\_TRIC | 25 | -1.2409574 | 0.3746442 |
| WIP\_HS\_APOPTOTIC\_EXECUTION\_PHASE | 34 | -1.2398382 | 0.37550807 |
| REACT\_GABA B RECEPTOR ACTIVATION | 38 | -1.2366744 | 0.37667158 |
| REACT\_SYNTHESIS OF SUBSTRATES IN N-GLYCAN BIOSYTHESIS | 16 | -1.2359641 | 0.3769078 |
| BIOC\_TOLLPATHWAY | 32 | -1.236728 | 0.3777792 |
| REACT\_G ALPHA (Z) SIGNALLING EVENTS | 37 | -1.2377931 | 0.37810984 |
| REACT\_FRS2-MEDIATED CASCADE | 27 | -1.2371682 | 0.378117 |
| REACT\_PI3K CASCADE | 68 | -1.2340924 | 0.3793052 |
| NCI\_PTP1BPATHWAY | 51 | -1.2333807 | 0.37962627 |
| REACT\_INTRINSIC PATHWAY | 16 | -1.2326249 | 0.37983146 |
| NCI\_NEPHRIN\_NEPH1\_PATHWAY | 31 | -1.229974 | 0.38264585 |
| NCI\_HNF3APATHWAY | 43 | -1.2286769 | 0.38280097 |
| REACT\_ACTIVATION OF GABAB RECEPTORS | 38 | -1.230233 | 0.38331634 |
| REACT\_PLATELET AGGREGATION (PLUG FORMATION) | 34 | -1.2288164 | 0.3837822 |
| WIP\_HS\_HEART\_DEVELOPMENT | 44 | -1.2273599 | 0.3842558 |
| NCI\_HIF2PATHWAY | 34 | -1.2254661 | 0.3868714 |
| WIP\_HS\_EPITHELIUM\_TARBASE | 268 | -1.2247461 | 0.38721177 |
| NCI\_REG\_GR\_PATHWAY | 81 | -1.219155 | 0.39730915 |
| WIP\_HS\_GPCR\_LIGAND\_BINDING | 121 | -1.2144705 | 0.40602964 |
| BIOC\_RARRXRPATHWAY | 15 | -1.213318 | 0.40713018 |
| REACT\_FGFR LIGAND BINDING AND ACTIVATION | 20 | -1.2115468 | 0.40840098 |
| WIP\_HS\_METABOLISM\_OF\_WATER-SOLUBLE\_VITAMINS\_AND\_COFACTORS | 19 | -1.2108414 | 0.408717 |
| WIP\_HS\_METABOLISM\_OF\_CARBOHYDRATES | 20 | -1.2117199 | 0.40925097 |
| REACT\_PI-3K CASCADE | 66 | -1.2094123 | 0.41052437 |
| REACT\_CHEMOKINE RECEPTORS BIND CHEMOKINES | 53 | -1.207941 | 0.4113079 |
| KEGG\_PENTOSE PHOSPHATE PATHWAY | 28 | -1.2084793 | 0.41131175 |
| NCI\_ALPHASYNUCLEIN\_PATHWAY | 32 | -1.2065916 | 0.41294283 |
| NCI\_PDGFRAPATHWAY | 21 | -1.2041423 | 0.41708994 |
| KEGG\_DORSO-VENTRAL AXIS FORMATION | 24 | -1.1993685 | 0.42625624 |
| BIOC\_GATA3PATHWAY | 16 | -1.1974596 | 0.42917648 |
| WIP\_HS\_METABOLISM\_OF\_STEROID\_HORMONES\_AND\_VITAMINS\_A\_AND\_D | 23 | -1.1929073 | 0.43757138 |
| KEGG\_NEUROTROPHIN SIGNALING PATHWAY | 126 | -1.190998 | 0.44054902 |
| BIOC\_VEGFPATHWAY | 25 | -1.1897948 | 0.44064066 |
| REACT\_GLUCAGON-TYPE LIGAND RECEPTORS | 33 | -1.1901531 | 0.44119906 |
| WIP\_HS\_HEDGEHOG\_SIGNALING\_PATHWAY | 18 | -1.1883899 | 0.4425765 |
| REACT\_INSULIN RECEPTOR RECYCLING | 25 | -1.1877018 | 0.44270614 |
| REACT\_G BETA\_GAMMA SIGNALLING THROUGH PI3KGAMMA | 24 | -1.184877 | 0.44511476 |
| REACT\_COMPLEMENT CASCADE | 19 | -1.1856431 | 0.4459047 |
| REACT\_FGFR2 LIGAND BINDING AND ACTIVATION | 16 | -1.1838837 | 0.44604436 |
| NCI\_IGF1\_PATHWAY | 28 | -1.184936 | 0.44626835 |
| REACT\_CELL SURFACE INTERACTIONS AT THE VASCULAR WALL | 90 | -1.1815531 | 0.44989365 |
| NCI\_IL23PATHWAY | 37 | -1.1766828 | 0.45680127 |
| REACT\_G-PROTEIN BETA\_GAMMA SIGNALLING | 27 | -1.1771526 | 0.45706877 |
| REACT\_CAM PATHWAY | 28 | -1.177331 | 0.45800745 |
| REACT\_TAK1 ACTIVATES NFKB BY PHOSPHORYLATION AND ACTIVATION OF IKKS COMPLEX | 22 | -1.1741171 | 0.4599985 |
| KEGG\_ADHERENS JUNCTION | 73 | -1.1745479 | 0.46034825 |
| REACT\_ADHERENS JUNCTIONS INTERACTIONS | 31 | -1.1703278 | 0.46090764 |
| REACT\_GRB2\_SOS PROVIDES LINKAGE TO MAPK SIGNALING FOR INTERGRINS | 15 | -1.1730821 | 0.46110734 |
| REACT\_SIGNALING BY FGFR | 70 | -1.1703616 | 0.46211597 |
| REACT\_INSULIN RECEPTOR SIGNALLING CASCADE | 84 | -1.1707394 | 0.46250755 |
| WIP\_HS\_RANKL-RANK\_SIGNALING\_PATHWAY | 55 | -1.1707431 | 0.46380648 |
| WIP\_HS\_PHASE\_1\_-\_FUNCTIONALIZATION\_OF\_COMPOUNDS | 52 | -1.1709182 | 0.46468276 |
| WIP\_HS\_INSULIN\_SIGNALING | 160 | -1.1670194 | 0.46722156 |
| REACT\_IRS-MEDIATED SIGNALLING | 79 | -1.164607 | 0.47017905 |
| REACT\_SIGNALING BY EGFR | 51 | -1.1648427 | 0.470936 |
| WIP\_HS\_G13\_SIGNALING\_PATHWAY | 37 | -1.1624866 | 0.47119623 |
| REACT\_CALMODULIN INDUCED EVENTS | 28 | -1.1619432 | 0.4711985 |
| KEGG\_CYTOSOLIC DNA-SENSING PATHWAY | 59 | -1.1612631 | 0.47142413 |
| KEGG\_PENTOSE AND GLUCURONATE INTERCONVERSIONS | 27 | -1.1634768 | 0.47155502 |
| WIP\_HS\_SQUAMOUS\_CELL\_TARBASE | 116 | -1.1626996 | 0.47199154 |
| WIP\_HS\_GPCRS,\_CLASS\_C\_METABOTROPIC\_GLUTAMATE,\_PHEROMONE | 15 | -1.1599413 | 0.47307315 |
| REACT\_INTERFERON SIGNALING | 106 | -1.1567708 | 0.4790937 |
| REACT\_DOWNSTREAM SIGNALING OF ACTIVATED FGFR | 70 | -1.1542335 | 0.48343566 |
| REACT\_CIRCADIAN CLOCK | 26 | -1.1531781 | 0.4844339 |
| REACT\_CA-DEPENDENT EVENTS | 30 | -1.1516185 | 0.48681098 |
| KEGG\_FRUCTOSE AND MANNOSE METABOLISM | 35 | -1.1501391 | 0.48887566 |
| WIP\_HS\_IL-3\_SIGNALING\_PATHWAY | 45 | -1.1489478 | 0.49037644 |
| WIP\_HS\_FATTY\_ACID\_BETA\_OXIDATION | 31 | -1.1481342 | 0.49103773 |
| NCI\_ILK\_PATHWAY | 44 | -1.1438872 | 0.4996161 |
| REACT\_DIABETES PATHWAYS | 328 | -1.1432915 | 0.49980262 |
| REACT\_IRS-RELATED EVENTS | 79 | -1.1399932 | 0.50645435 |
| NCI\_S1P\_S1P2\_PATHWAY | 24 | -1.1393013 | 0.5068394 |
| REACT\_THROMBOXANE SIGNALLING THROUGH TP RECEPTOR | 23 | -1.1382306 | 0.50810254 |
| NCI\_P73PATHWAY | 72 | -1.1365045 | 0.5109347 |
| REACT\_SIGNAL AMPLIFICATION | 31 | -1.1355565 | 0.5118219 |
| NCI\_IL4\_2PATHWAY | 60 | -1.1336454 | 0.5150466 |
| REACT\_ADP SIGNALLING THROUGH P2Y PURINOCEPTOR 1 | 25 | -1.1287234 | 0.5201313 |
| NCI\_TXA2PATHWAY | 54 | -1.1297508 | 0.5204232 |
| KEGG\_ENDOMETRIAL CANCER | 52 | -1.1291401 | 0.52062476 |
| REACT\_APOPTOTIC CLEAVAGE OF CELLULAR PROTEINS | 37 | -1.1236246 | 0.5206403 |
| KEGG\_MAPK SIGNALING PATHWAY | 263 | -1.1299706 | 0.52122045 |
| REACT\_PKA-MEDIATED PHOSPHORYLATION OF CREB | 17 | -1.1304957 | 0.52136254 |
| BIOC\_MEF2DPATHWAY | 18 | -1.1238259 | 0.5214987 |
| BIOC\_TOB1PATHWAY | 16 | -1.1264248 | 0.5217563 |
| REACT\_MAP KINASE ACTIVATION IN TLR CASCADE | 53 | -1.1268862 | 0.5219803 |
| NCI\_TCRCALCIUMPATHWAY | 30 | -1.1223744 | 0.5224454 |
| KEGG\_RETINOL METABOLISM | 58 | -1.1255432 | 0.522547 |
| WIP\_HS\_GPCRS,\_OTHER | 88 | -1.1238822 | 0.52268344 |
| WIP\_HS\_SIGNAL\_TRANSDUCTION\_OF\_S1P\_RECEPTOR | 24 | -1.1271161 | 0.5227659 |
| REACT\_G ALPHA (12\_13) SIGNALLING EVENTS | 77 | -1.1242362 | 0.5230676 |
| KEGG\_MELANOMA | 70 | -1.124467 | 0.5238272 |
| NCI\_CONE\_PATHWAY | 23 | -1.1204966 | 0.52574176 |
| NCI\_IL12\_2PATHWAY | 62 | -1.1182847 | 0.52987534 |
| REACT\_INHIBITION OF INSULIN SECRETION BY ADRENALINE\_NORADRENALINE | 29 | -1.1155202 | 0.53398025 |
| WIP\_HS\_MONOAMINE\_TRANSPORT | 32 | -1.1158803 | 0.5344182 |
| REACT\_PROSTACYCLIN SIGNALLING THROUGH PROSTACYCLIN RECEPTOR | 19 | -1.1138027 | 0.5366635 |
| BIOC\_CHEMICALPATHWAY | 20 | -1.1120424 | 0.537253 |
| NCI\_NECTIN\_PATHWAY | 28 | -1.112113 | 0.5384031 |
| KEGG\_VIBRIO CHOLERAE INFECTION | 54 | -1.1123827 | 0.53905135 |
| NCI\_IL1PATHWAY | 32 | -1.1102417 | 0.5404976 |
| NCI\_LIS1PATHWAY | 31 | -1.1070067 | 0.54454184 |
| KEGG\_MUCIN TYPE O-GLYCAN BIOSYNTHESIS | 30 | -1.1056596 | 0.5451173 |
| KEGG\_INSULIN SIGNALING PATHWAY | 136 | -1.1071707 | 0.54543364 |
| REACT\_COSTIMULATION BY THE CD28 FAMILY | 66 | -1.1077136 | 0.5455507 |
| REACT\_TRANSCRIPTIONAL REGULATION OF WHITE ADIPOCYTE DIFFERENTIATION | 56 | -1.1047531 | 0.5459099 |
| BIOC\_MITOCHONDRIAPATHWAY | 19 | -1.1058533 | 0.54598856 |
| REACT\_AQUAPORIN-MEDIATED TRANSPORT | 47 | -1.1001604 | 0.5478362 |
| REACT\_LYSOSOME VESICLE BIOGENESIS | 24 | -1.1009787 | 0.54846543 |
| NCI\_CMYB\_PATHWAY | 82 | -1.1030763 | 0.5485763 |
| WIP\_HS\_METABOLISM\_OF\_AMINO\_ACIDS\_AND\_DERIVATIVES | 33 | -1.1002188 | 0.5489678 |
| REACT\_DOWNSTREAM TCR SIGNALING | 47 | -1.1023827 | 0.54897153 |
| BIOC\_CK1PATHWAY | 17 | -1.1010238 | 0.5496767 |
| NCI\_GLYPICAN\_1PATHWAY | 27 | -1.0988207 | 0.5498939 |
| BIOC\_ERYTHPATHWAY | 15 | -1.1013991 | 0.550048 |
| BIOC\_BADPATHWAY | 22 | -1.0980482 | 0.5505666 |
| REACT\_COOPERATION OF PREFOLDIN AND TRIC\_CCT IN ACTIN AND TUBULIN FOLDING | 26 | -1.0969405 | 0.5508404 |
| NCI\_ERBB1\_DOWNSTREAM\_PATHWAY | 107 | -1.0953931 | 0.5508641 |
| NCI\_PI3KPLCTRKPATHWAY | 35 | -1.0971687 | 0.5515515 |
| WIP\_HS\_MITOCHONDRIAL\_LC-FATTY\_ACID\_BETA-OXIDATION | 17 | -1.0961225 | 0.551726 |
| NCI\_SYNDECAN\_4\_PATHWAY | 31 | -1.0955731 | 0.5517363 |
| NCI\_MTOR\_4PATHWAY | 68 | -1.0944061 | 0.55198085 |
| WIP\_HS\_INTERFERON\_TYPE\_I | 28 | -1.0925094 | 0.5538849 |
| WIP\_HS\_NUCLEAR\_RECEPTORS\_IN\_LIPID\_METABOLISM\_AND\_TOXICITY | 36 | -1.0926762 | 0.5548107 |
| WIP\_HS\_T\_CELL\_RECEPTOR\_SIGNALING\_PATHWAY | 133 | -1.0902625 | 0.5568671 |
| KEGG\_PROTEIN DIGESTION AND ABSORPTION | 78 | -1.0896752 | 0.5570541 |
| WIP\_HS\_IL-5\_SIGNALING\_PATHWAY | 34 | -1.0902792 | 0.5581432 |
| BIOC\_P53HYPOXIAPATHWAY | 20 | -1.087355 | 0.5617385 |
| WIP\_HS\_ANGIOGENESIS\_OVERVIEW | 50 | -1.0857601 | 0.5644904 |
| KEGG\_BILE SECRETION | 69 | -1.0839142 | 0.5678238 |
| REACT\_PRESYNAPTIC FUNCTION OF KAINATE RECEPTORS | 21 | -1.0821416 | 0.56987673 |
| REACT\_NEURORANSMITTER RECEPTOR BINDING AND DOWNSTREAM TRANSMISSION IN THE POSTSYNAPTIC CELL | 134 | -1.0822127 | 0.5710062 |
| KEGG\_BACTERIAL INVASION OF EPITHELIAL CELLS | 70 | -1.0798103 | 0.57193404 |
| KEGG\_AXON GUIDANCE | 127 | -1.0806845 | 0.5722993 |
| REACT\_NRAGE SIGNALS DEATH THROUGH JNK | 47 | -1.0799708 | 0.572814 |
| BIOC\_RASPATHWAY | 21 | -1.0775762 | 0.57645196 |
| KEGG\_AMINO SUGAR AND NUCLEOTIDE SUGAR METABOLISM | 48 | -1.0767876 | 0.577192 |
| KEGG\_HERPES SIMPLEX INFECTION | 176 | -1.0750115 | 0.5803576 |
| REACT\_INTEGRIN ALPHAIIB BETA3 SIGNALING | 27 | -1.0724274 | 0.5854908 |
| BIOC\_STEMPATHWAY | 15 | -1.0713186 | 0.585781 |
| BIOC\_SPPAPATHWAY | 21 | -1.0714908 | 0.5866836 |
| KEGG\_AMYOTROPHIC LATERAL SCLEROSIS (ALS) | 49 | -1.0704471 | 0.58675766 |
| REACT\_PLATELET HOMEOSTASIS | 79 | -1.0696338 | 0.58748096 |
| REACT\_TCR SIGNALING | 64 | -1.0685602 | 0.5889485 |
| REACT\_ADP SIGNALLING THROUGH P2Y PURINOCEPTOR 12 | 21 | -1.0650718 | 0.5966781 |
| KEGG\_ALDOSTERONE-REGULATED SODIUM REABSORPTION | 42 | -1.0640478 | 0.59787184 |
| REACT\_SHC-MEDIATED CASCADE | 20 | -1.0629265 | 0.59934986 |
| WIP\_HS\_SIGNALING\_OF\_HEPATOCYTE\_GROWTH\_FACTOR\_RECEPTOR | 33 | -1.0596141 | 0.6064468 |
| KEGG\_THYROID CANCER | 29 | -1.0575067 | 0.60931194 |
| NCI\_TNFPATHWAY | 46 | -1.0577168 | 0.61011547 |
| BIOC\_MAPKPATHWAY | 84 | -1.054854 | 0.6135202 |
| BIOC\_METPATHWAY | 35 | -1.0548719 | 0.61484814 |
| REACT\_TRANSFERRIN ENDOCYTOSIS AND RECYCLING | 27 | -1.0536779 | 0.6152992 |
| BIOC\_RHOPATHWAY | 30 | -1.0527707 | 0.6163077 |
| KEGG\_PANCREATIC CANCER | 70 | -1.0521327 | 0.6166336 |
| NCI\_RETINOIC\_ACID\_PATHWAY | 27 | -1.0512156 | 0.6175639 |
| BIOC\_EIF4PATHWAY | 21 | -1.0470151 | 0.62710226 |
| NCI\_INSULIN\_GLUCOSE\_PATHWAY | 29 | -1.0452392 | 0.63038224 |
| NCI\_WNT\_CANONICAL\_PATHWAY | 20 | -1.0424312 | 0.63633287 |
| NCI\_P53DOWNSTREAMPATHWAY | 135 | -1.040791 | 0.63935095 |
| REACT\_PAUSING AND RECOVERY OF TAT-MEDIATED HIV-1 ELONGATION | 30 | -1.0389498 | 0.6415792 |
| REACT\_TAT-MEDIATED HIV-1 ELONGATION ARREST AND RECOVERY | 30 | -1.0393205 | 0.64197373 |
| KEGG\_ASCORBATE AND ALDARATE METABOLISM | 21 | -1.0376697 | 0.6436286 |
| REACT\_METABOLISM OF LIPIDS AND LIPOPROTEINS | 276 | -1.0366014 | 0.6437216 |
| NCI\_BETACATENIN\_DEG\_PATHWAY | 18 | -1.0369934 | 0.6440515 |
| KEGG\_OLFACTORY TRANSDUCTION | 362 | -1.0338129 | 0.64987993 |
| KEGG\_FC GAMMA R-MEDIATED PHAGOCYTOSIS | 91 | -1.0316674 | 0.65167487 |
| KEGG\_ENDOCRINE AND OTHER FACTOR-REGULATED CALCIUM REABSORPTION | 49 | -1.0317727 | 0.65268356 |
| REACT\_REGULATION OF INSULIN SECRETION BY GLUCAGON-LIKE PEPTIDE-1 | 43 | -1.0303721 | 0.6536598 |
| REACT\_ABORTIVE ELONGATION OF HIV-1 TRANSCRIPT IN THE ABSENCE OF TAT | 24 | -1.0319289 | 0.65366966 |
| REACT\_CLASS C\_3 (METABOTROPIC GLUTAMATE\_PHEROMONE RECEPTORS) | 15 | -1.0296044 | 0.6542611 |
| KEGG\_COLLECTING DUCT ACID SECRETION | 27 | -1.0285336 | 0.6557525 |
| NCI\_PDGFRBPATHWAY | 126 | -1.027336 | 0.6562709 |
| NCI\_EPHA2\_FWDPATHWAY | 17 | -1.0277543 | 0.6564577 |
| NCI\_IL6\_7PATHWAY | 45 | -1.0248615 | 0.6612394 |
| WIP\_HS\_IL-1\_PATHWAY | 53 | -1.0230753 | 0.6632569 |
| NCI\_ERBB1\_INTERNALIZATION\_PATHWAY | 38 | -1.02197 | 0.66353065 |
| WIP\_HS\_TRIACYLGLYCERIDE\_SYNTHESIS | 23 | -1.0232943 | 0.6639888 |
| REACT\_REGULATION OF INSULIN SECRETION | 86 | -1.0210963 | 0.66449374 |
| KEGG\_GLUTAMATERGIC SYNAPSE | 122 | -1.0220306 | 0.6647518 |
| REACT\_INHIBITION OF VOLTAGE GATED CA2+ CHANNELS VIA GBETA\_GAMMA SUBUNITS | 25 | -1.0181361 | 0.66955847 |
| KEGG\_ABC TRANSPORTERS | 44 | -1.018484 | 0.6700634 |
| WIP\_HS\_INTERLEUKIN-3,\_5\_AND\_GM-CSF\_SIGNALING | 18 | -1.0168163 | 0.67168206 |
| REACT\_IRON UPTAKE AND TRANSPORT | 37 | -1.0088804 | 0.67373717 |
| NCI\_PRLSIGNALINGEVENTSPATHWAY | 23 | -1.0070639 | 0.674568 |
| BIOC\_WNTPATHWAY | 23 | -1.0090818 | 0.67464536 |
| WIP\_HS\_CELL\_SURFACE\_INTERACTIONS\_AT\_THE\_VASCULAR\_WALL | 36 | -1.0071677 | 0.67562395 |
| KEGG\_PROTEASOME | 43 | -1.0091841 | 0.675729 |
| BIOC\_ERK5PATHWAY | 16 | -1.0097294 | 0.6757307 |
| REACT\_ACTIVATION OF G PROTEIN GATED POTASSIUM CHANNELS | 25 | -1.0075396 | 0.6758964 |
| KEGG\_APOPTOSIS | 83 | -1.0110698 | 0.676158 |
| REACT\_PLC-GAMMA1 SIGNALLING | 36 | -1.0115467 | 0.676205 |
| WIP\_HS\_KIT\_RECEPTOR\_SIGNALING\_PATHWAY | 56 | -1.0144086 | 0.6766462 |
| BIOC\_CXCR4PATHWAY | 23 | -1.0097852 | 0.67696667 |
| WIP\_HS\_SIGNALING\_BY\_INSULIN\_RECEPTOR | 19 | -1.0102528 | 0.67707354 |
| REACT\_FORMATION OF TUBULIN FOLDING INTERMEDIATES BY CCT\_TRIC | 19 | -1.0115777 | 0.6774873 |
| KEGG\_CALCIUM SIGNALING PATHWAY | 175 | -1.0125772 | 0.6775786 |
| NCI\_IFNGPATHWAY | 42 | -1.0129124 | 0.67800033 |
| REACT\_PLATELET SENSITIZATION BY LDL | 15 | -1.0118722 | 0.67809427 |
| REACT\_GABA SYNTHESIS, RELEASE, REUPTAKE AND DEGRADATION | 19 | -1.013392 | 0.67810714 |
| NCI\_RHODOPSIN\_PATHWAY | 23 | -1.0024947 | 0.6826123 |
| REACT\_G BETA\_GAMMA SIGNALLING THROUGH PLC BETA | 20 | -1.0033519 | 0.68300766 |
| KEGG\_GLYCOSAMINOGLYCAN DEGRADATION | 19 | -1.002682 | 0.6834041 |
| REACT\_G PROTEIN GATED POTASSIUM CHANNELS | 25 | -1.0005584 | 0.6838232 |
| REACT\_PKB-MEDIATED EVENTS | 27 | -1.001529 | 0.6838499 |
| REACT\_P75 NTR RECEPTOR-MEDIATED SIGNALLING | 86 | -1.0009305 | 0.6841204 |
| REACT\_TRANSMISSION ACROSS CHEMICAL SYNAPSES | 187 | 0.99859804 | 0.68794435 |
| NCI\_ARF6DOWNSTREAMPATHWAY | 15 | -0.997868 | 0.6885309 |
| BIOC\_AMIPATHWAY | 21 | 0.99595577 | 0.6908544 |
| REACT\_PHASE 1 - FUNCTIONALIZATION OF COMPOUNDS | 67 | 0.99643993 | 0.69097674 |
| BIOC\_IGF1RPATHWAY | 15 | -0.9938826 | 0.69483954 |
| NCI\_CDC42\_PATHWAY | 70 | -0.9917155 | 0.699443 |
| WIP\_HS\_SIDS\_SUSCEPTIBILITY\_PATHWAYS | 63 | -0.989781 | 0.70340484 |
| WIP\_HS\_CYTOCHROME\_P450 | 64 | -0.9876152 | 0.7076907 |
| KEGG\_SALIVARY SECRETION | 85 | -0.9849837 | 0.7093384 |
| WIP\_HS\_ANDROGEN\_RECEPTOR | 87 | 0.98541003 | 0.7096553 |
| NCI\_CERAMIDE\_PATHWAY | 45 | -0.9858623 | 0.70978814 |
| BIOC\_CSKPATHWAY | 21 | -0.9861665 | 0.7103529 |
| NCI\_RET\_PATHWAY | 37 | 0.98254997 | 0.7145938 |
| REACT\_TRAF3-DEPENDENT IRF ACTIVATION PATHWAY | 18 | -0.979266 | 0.7165919 |
| NRF2\_TARGETS | 61 | -0.9795431 | 0.71718395 |
| REACT\_ACTIVATION OF KAINATE RECEPTORS UPON GLUTAMATE BINDING | 32 | 0.97960764 | 0.718377 |
| NCI\_IL27PATHWAY | 26 | 0.98019975 | 0.7195198 |
| NCI\_P38ALPHABETADOWNSTREAMPATHWAY | 38 | -0.9796165 | 0.7197248 |
| BIOC\_ERKPATHWAY | 29 | -0.977551 | 0.7197444 |
| NCI\_PI3KCIAKTPATHWAY | 34 | 0.97622335 | 0.72188705 |
| REACT\_INTEGRATION OF ENERGY METABOLISM | 113 | 0.97527945 | 0.72311175 |
| WIP\_HS\_PROTEASOME\_DEGRADATION | 63 | -0.9726609 | 0.72841275 |
| KEGG\_GLYCOSPHINGOLIPID BIOSYNTHESIS - LACTO AND NEOLACTO SERIES | 25 | -0.9706235 | 0.73112094 |
| WIP\_HS\_TOLL-LIKE\_RECEPTOR\_SIGNALING\_PATHWAY | 100 | -0.9708635 | 0.7319103 |
| BIOC\_NOS1PATHWAY | 21 | -0.9683636 | 0.7357623 |
| NCI\_TCPTP\_PATHWAY | 40 | 0.96539956 | 0.740884 |
| REACT\_ACTIVATED AMPK STIMULATES FATTY-ACID OXIDATION IN MUSCLE | 16 | 0.96557873 | 0.74180555 |
| REACT\_CYTOKINE SIGNALING IN IMMUNE SYSTEM | 203 | -0.9635045 | 0.7446593 |
| REACT\_GABA RECEPTOR ACTIVATION | 52 | -0.9601898 | 0.75082326 |
| REACT\_PIP3 ACTIVATES AKT SIGNALING | 27 | -0.9605025 | 0.7514351 |
| BIOC\_TNFR2PATHWAY | 18 | 0.95721716 | 0.7560406 |
| WIP\_HS\_GLUCURONIDATION | 20 | 0.95741767 | 0.7568734 |
| NCI\_ERBB1\_RECEPTOR\_PROXIMAL\_PATHWAY | 33 | -0.9553951 | 0.75939184 |
| WIP\_HS\_MICRORNAS\_IN\_CARDIOMYOCYTE\_HYPERTROPHY | 100 | 0.95221573 | 0.76662844 |
| REACT\_PI3K\_AKT ACTIVATION | 36 | 0.95041335 | 0.76880217 |
| WIP\_HS\_SELENIUM\_METABOLISM\_AND\_SELENOPROTEINS | 41 | -0.9504498 | 0.77009755 |
| REACT\_GPVI-MEDIATED ACTIVATION CASCADE | 32 | -0.9472339 | 0.7731985 |
| REACT\_SYNAPTIC TRANSMISSION | 264 | -0.9480348 | 0.773889 |
| WIP\_HS\_METAPATHWAY\_BIOTRANSFORMATION | 168 | -0.9472691 | 0.77452475 |
| REACT\_INWARDLY RECTIFYING K+ CHANNELS | 30 | 0.94519556 | 0.7755826 |
| KEGG\_PROSTATE CANCER | 88 | -0.9442347 | 0.7767461 |
| KEGG\_HEPATITIS C | 132 | 0.94525194 | 0.77688336 |
| NCI\_RAC1\_REG\_PATHWAY | 38 | -0.943504 | 0.7773629 |
| NCI\_VEGFR1\_PATHWAY | 28 | 0.94287425 | 0.7776096 |
| WIP\_HS\_MUSCLE\_CELL\_TARBASE | 326 | -0.9422526 | 0.7778967 |
| WIP\_HS\_G\_PROTEIN\_SIGNALING\_PATHWAYS | 91 | -0.9359065 | 0.7919125 |
| BIOC\_EPOPATHWAY | 19 | 0.93634707 | 0.79213583 |
| REACT\_GLUTAMATE NEUROTRANSMITTER RELEASE CYCLE | 15 | -0.9315152 | 0.79751724 |
| WIP\_HS\_TYPE\_II\_INTERFERON\_SIGNALING\_(IFNG) | 36 | 0.93168366 | 0.7985061 |
| WIP\_HS\_MAPK\_SIGNALING\_PATHWAY | 160 | -0.9323808 | 0.79948556 |
| BIOC\_TH1TH2PATHWAY | 17 | 0.93180525 | 0.7996268 |
| WIP\_HS\_GLUTATHIONE\_METABOLISM | 20 | -0.9286428 | 0.80360687 |
| REACT\_SIGNALLING TO RAS | 27 | -0.9248177 | 0.8050905 |
| BIOC\_VIPPATHWAY | 27 | 0.92621475 | 0.80579674 |
| REACT\_AMINO ACID AND OLIGOPEPTIDE SLC TRANSPORTERS | 46 | 0.92494607 | 0.80616707 |
| KEGG\_PHOSPHATIDYLINOSITOL SIGNALING SYSTEM | 78 | 0.92552406 | 0.8061685 |
| REACT\_CYTOCHROME P450 - ARRANGED BY SUBSTRATE TYPE | 49 | -0.9264795 | 0.80649126 |
| NCI\_IL2\_1PATHWAY | 55 | 0.92696184 | 0.8065686 |
| WIP\_HS\_TRANSPORT\_OF\_INORGANIC\_CATIONS-ANIONS\_AND\_AMINO\_ACIDS-OLIGOPEPTIDES | 34 | 0.92198366 | 0.8068674 |
| WIP\_HS\_APOPTOSIS | 83 | -0.921357 | 0.8071082 |
| BIOC\_P38MAPKPATHWAY | 38 | 0.92200416 | 0.8082315 |
| KEGG\_NON-SMALL CELL LUNG CANCER | 54 | 0.92201245 | 0.80962604 |
| KEGG\_AUTOIMMUNE THYROID DISEASE | 49 | -0.9194328 | 0.8104239 |
| NCI\_LPA4\_PATHWAY | 15 | 0.91884935 | 0.81047606 |
| REACT\_RIG-I\_MDA5 MEDIATED INDUCTION OF IFN-ALPHA\_BETA PATHWAYS | 67 | 0.92209893 | 0.81079876 |
| REACT\_RNA POLYMERASE III TRANSCRIPTION INITIATION FROM TYPE 3 PROMOTER | 22 | -0.9160314 | 0.8149848 |
| REACT\_MTOR SIGNALLING | 26 | -0.9161427 | 0.81606215 |
| BIOC\_ACTINYPATHWAY | 18 | -0.9140962 | 0.8170793 |
| WIP\_HS\_P38\_MAPK\_SIGNALING\_PATHWAY | 34 | -0.91458 | 0.817283 |
| REACT\_MICRORNA (MIRNA) BIOGENESIS | 23 | 0.91088104 | 0.8238279 |
| REACT\_ADAPTIVE IMMUNITY SIGNALING | 406 | -0.9094795 | 0.82598597 |
| REACT\_DESTABILIZATION OF MRNA BY AUF1 (HNRNP D0) | 54 | -0.9062387 | 0.8328476 |
| REACT\_POST NMDA RECEPTOR ACTIVATION EVENTS | 33 | 0.90536386 | 0.8336285 |
| REACT\_UBIQUITIN-DEPENDENT DEGRADATION OF CYCLIN D | 49 | 0.90323496 | 0.8375477 |
| NCI\_HNF3BPATHWAY | 43 | 0.90237796 | 0.83834934 |
| REACT\_INTERACTION BETWEEN L1 AND ANKYRINS | 28 | -0.8998581 | 0.8420232 |
| REACT\_REGULATORY RNA PATHWAYS | 23 | 0.90019506 | 0.84251106 |
| REACT\_GLYCOLYSIS | 24 | -0.8978908 | 0.84551007 |
| REACT\_PAUSING AND RECOVERY OF HIV-1 ELONGATION | 31 | -0.8968601 | 0.8467614 |
| REACT\_UBIQUITIN-DEPENDENT DEGRADATION OF CYCLIN D1 | 49 | -0.8956067 | 0.8482947 |
| REACT\_PAUSING AND RECOVERY OF ELONGATION | 31 | -0.8930215 | 0.8531924 |
| WIP\_HS\_ENERGY\_METABOLISM | 46 | -0.8914429 | 0.85427845 |
| BIOC\_GHPATHWAY | 26 | 0.89149827 | 0.85557336 |
| REACT\_OLFACTORY SIGNALING PATHWAY | 325 | -0.8885185 | 0.855764 |
| WIP\_HS\_ERBB\_SIGNALING\_PATHWAY | 53 | 0.88859326 | 0.8570182 |
| WIP\_HS\_EUKARYOTIC\_TRANSCRIPTION\_INITIATION | 40 | -0.8889555 | 0.8575228 |
| KEGG\_CARDIAC MUSCLE CONTRACTION | 71 | 0.88714814 | 0.8577806 |
| KEGG\_GLYCOSAMINOGLYCAN BIOSYNTHESIS - HEPARAN SULFATE | 26 | 0.88919884 | 0.8583471 |
| KEGG\_PHOTOTRANSDUCTION | 28 | -0.8841416 | 0.85933995 |
| REACT\_HIV-1 ELONGATION ARREST AND RECOVERY | 31 | -0.8842374 | 0.8605504 |
| KEGG\_RENIN-ANGIOTENSIN SYSTEM | 17 | -0.8845202 | 0.86128277 |
| NCI\_MAPKTRKPATHWAY | 34 | -0.8827438 | 0.8614859 |
| WIP\_HS\_NETRIN-1\_SIGNALING | 17 | -0.8847755 | 0.8621163 |
| REACT\_SIGNALING BY BMP | 23 | 0.87886375 | 0.8664226 |
| REACT\_REMOVAL OF DNA PATCH CONTAINING ABASIC RESIDUE | 17 | 0.87983596 | 0.86699754 |
| REACT\_ELONGATION ARREST AND RECOVERY | 31 | 0.87901175 | 0.8675022 |
| KEGG\_TOLL-LIKE RECEPTOR SIGNALING PATHWAY | 100 | 0.87713075 | 0.8692509 |
| WIP\_HS\_LYMPHOCYTE\_TARBASE | 404 | -0.8758646 | 0.87097734 |
| NCI\_IL2\_PI3KPATHWAY | 37 | 0.87263554 | 0.8772283 |
| REACT\_GOLGI ASSOCIATED VESICLE BIOGENESIS | 52 | -0.8716844 | 0.8780375 |
| WIP\_HS\_INTRINSIC\_PATHWAY\_FOR\_APOPTOSIS | 20 | 0.86854106 | 0.87966526 |
| NCI\_CDC42\_REG\_PATHWAY | 30 | 0.86884934 | 0.8803331 |
| BIOC\_CARM\_ERPATHWAY | 25 | -0.868851 | 0.8817628 |
| BIOC\_NKTPATHWAY | 28 | -0.8689383 | 0.88301075 |
| REACT\_RESOLUTION OF ABASIC SITES (AP SITES) | 19 | -0.8652218 | 0.8830971 |
| NCI\_NETRIN\_PATHWAY | 30 | -0.8654942 | 0.88389164 |
| WIP\_HS\_NEURORANSMITTER\_RECEPTOR\_BINDING\_AND\_DOWNSTREAM\_TRANSMISSION\_IN\_  THE\_POSTSYNAPTIC\_CELL | 17 | -0.8657733 | 0.884739 |
| REACT\_SIGNAL REGULATORY PROTEIN (SIRP) FAMILY INTERACTIONS | 16 | 0.86335623 | 0.8858465 |
| KEGG\_HUNTINGTON'S DISEASE | 173 | -0.858968 | 0.887335 |
| REACT\_EFFECTS OF PIP2 HYDROLYSIS | 24 | -0.8594127 | 0.88775986 |
| REACT\_AMINO ACID TRANSPORT ACROSS THE PLASMA MEMBRANE | 30 | -0.8605682 | 0.8879284 |
| REACT\_STEROID HORMONES | 25 | -0.8598426 | 0.88818026 |
| NCI\_FCER1PATHWAY | 58 | -0.8609238 | 0.8885432 |
| REACT\_GLUCONEOGENESIS | 30 | 0.85662943 | 0.8896404 |
| REACT\_CELL DEATH SIGNALLING VIA NRAGE, NRIF AND NADE | 64 | 0.86097336 | 0.8898871 |
| REACT\_RESOLUTION OF AP SITES VIA THE MULTIPLE-NUCLEOTIDE PATCH REPLACEMENT PATHWAY | 17 | -0.8571132 | 0.89005744 |
| NCI\_NFKAPPABATYPICALPATHWAY | 17 | -0.8543824 | 0.8904517 |
| NCI\_HEDGEHOG\_2PATHWAY | 22 | -0.854836 | 0.8908155 |
| REACT\_CREB PHOSPHORYLATION THROUGH THE ACTIVATION OF RAS | 27 | -0.8501223 | 0.89101493 |
| REACT\_BASE EXCISION REPAIR | 19 | 0.84922475 | 0.8915269 |
| NCI\_MYC\_ACTIVPATHWAY | 76 | -0.8550326 | 0.8918186 |
| NCI\_ANGIOPOIETINRECEPTOR\_PATHWAY | 48 | -0.8517076 | 0.89203477 |
| REACT\_INTERACTIONS OF THE IMMUNOGLOBULIN SUPERFAMILY (IGSF) MEMBER PROTEINS | 49 | -0.8501917 | 0.89224505 |
| KEGG\_STEROID HORMONE BIOSYNTHESIS | 49 | -0.8528496 | 0.8923877 |
| WIP\_HS\_SIGNALLING\_BY\_NGF | 15 | 0.85080993 | 0.8924719 |
| REACT\_NEGATIVE REGULATORS OF RIG-I\_MDA5 SIGNALING | 34 | 0.85195625 | 0.89290214 |
| REACT\_VPU MEDIATED DEGRADATION OF CD4 | 50 | -0.8451778 | 0.8974254 |
| KEGG\_FAT DIGESTION AND ABSORPTION | 45 | -0.8455903 | 0.8980119 |
| WIP\_HS\_IL-7\_SIGNALING\_PATHWAY | 26 | 0.84199375 | 0.9013997 |
| REACT\_DEGRADATION OF BETA-CATENIN BY THE DESTRUCTION COMPLEX | 63 | -0.8409376 | 0.9021428 |
| KEGG\_CHOLINERGIC SYNAPSE | 112 | 0.84201515 | 0.90274715 |
| REACT\_ACTIVATION OF NMDA RECEPTOR UPON GLUTAMATE BINDING AND POSTSYNAPTIC EVENTS | 37 | -0.8339963 | 0.9096141 |
| REACT\_NITRIC OXIDE STIMULATES GUANYLATE CYCLASE | 27 | 0.83526576 | 0.9097803 |
| KEGG\_NOD-LIKE RECEPTOR SIGNALING PATHWAY | 58 | -0.8309528 | 0.91017705 |
| WIP\_HS\_SEMAPHORIN\_INTERACTIONS | 17 | 0.83227646 | 0.9103001 |
| REACT\_NEUROTRANSMITTER RELEASE CYCLE | 36 | 0.83549744 | 0.9106928 |
| BIOC\_RACCYCDPATHWAY | 22 | -0.8341308 | 0.9107534 |
| KEGG\_OXIDATIVE PHOSPHORYLATION | 117 | -0.8326986 | 0.91087544 |
| WIP\_HS\_TCR\_SIGNALING | 22 | 0.83110476 | 0.9112449 |
| REACT\_DOWN-STREAM SIGNAL TRANSDUCTION | 36 | 0.83584356 | 0.91144556 |
| REACT\_RECRUITMENT OF NUMA TO MITOTIC CENTROSOMES | 22 | -0.8279155 | 0.9149391 |
| BIOC\_NFATPATHWAY | 52 | 0.82622474 | 0.9153789 |
| WIP\_HS\_RIG-I-MDA5\_MEDIATED\_INDUCTION\_OF\_IFN-ALPHA-BETA\_PATHWAYS | 21 | -0.8254265 | 0.9154514 |
| REACT\_SIGNALING BY WNT | 63 | -0.8238628 | 0.9156794 |
| KEGG\_RNA POLYMERASE | 30 | -0.8267628 | 0.9157317 |
| BIOC\_FMLPPATHWAY | 36 | -0.8245388 | 0.9157599 |
| NCI\_FOXOPATHWAY | 49 | -0.8119982 | 0.91578543 |
| PPARA\_TARGETS | 172 | -0.8124002 | 0.91638005 |
| BIOC\_HDACPATHWAY | 29 | -0.8104574 | 0.91717684 |
| NCI\_AR\_NONGENOMIC\_PATHWAY | 30 | 0.81493026 | 0.9172852 |
| REACT\_TRANS-GOLGI NETWORK VESICLE BUDDING | 59 | 0.81257546 | 0.9173726 |
| BIOC\_CYTOKINEPATHWAY | 20 | -0.8141279 | 0.91739655 |
| KEGG\_COLORECTAL CANCER | 62 | 0.80950797 | 0.9175653 |
| KEGG\_DRUG METABOLISM - OTHER ENZYMES | 46 | 0.81294376 | 0.9180954 |
| REACT\_POTASSIUM CHANNELS | 97 | -0.8081659 | 0.9184647 |
| WIP\_HS\_OXIDATIVE\_STRESS | 28 | 0.81501734 | 0.9184665 |
| REACT\_SIGNALING BY INTERLEUKINS | 104 | 0.82134354 | 0.91893655 |
| BIOC\_41BBPATHWAY | 18 | -0.8191611 | 0.9189932 |
| REACT\_CLATHRIN DERIVED VESICLE BUDDING | 59 | -0.8152232 | 0.9194804 |
| REACT\_ACTIVATED TAK1 MEDIATES P38 MAPK ACTIVATION | 21 | 0.81962395 | 0.91949296 |
| BIOC\_STRESSPATHWAY | 25 | -0.8200122 | 0.92010576 |
| REACT\_BIOLOGICAL OXIDATIONS | 130 | -0.8153653 | 0.9205997 |
| REACT\_INTERLEUKIN-1 SIGNALING | 43 | 0.80610335 | 0.9207271 |
| REACT\_KINESINS | 37 | -0.80513 | 0.9211056 |
| NCI\_P75NTRPATHWAY | 66 | 0.80427504 | 0.9211586 |
| REACT\_REGULATION OF APOPTOSIS | 59 | -0.8164444 | 0.92134655 |
| KEGG\_ALZHEIMER'S DISEASE | 156 | -0.8155999 | 0.92154074 |
| BIOC\_KERATINOCYTEPATHWAY | 43 | 0.81670254 | 0.9222758 |
| WIP\_HS\_L1CAM\_INTERACTIONS | 23 | -0.8010189 | 0.9254635 |
| NCI\_IL12\_STAT4PATHWAY | 32 | -0.7998395 | 0.9261527 |
| KEGG\_RIG-I-LIKE RECEPTOR SIGNALING PATHWAY | 70 | -0.7915944 | 0.9342809 |
| REACT\_RNA POLYMERASE III TRANSCRIPTION INITIATION FROM TYPE 2 PROMOTER | 20 | 0.79194766 | 0.93506813 |
| REACT\_METABOLISM OF STEROID HORMONES AND VITAMINS A AND D | 32 | -0.7923311 | 0.9358133 |
| REACT\_RNA POL II CTD PHOSPHORYLATION AND INTERACTION WITH CE\_1 | 26 | -0.7924709 | 0.9369405 |
| REACT\_CDK-MEDIATED PHOSPHORYLATION AND REMOVAL OF CDC6 | 49 | -0.7848717 | 0.9409049 |
| REACT\_ENDOSOMAL SORTING COMPLEX REQUIRED FOR TRANSPORT (ESCRT) | 26 | 0.78532666 | 0.94150454 |
| WIP\_HS\_IL-2\_SIGNALING\_PATHWAY | 36 | -0.7853505 | 0.9428575 |
| WIP\_HS\_FATTY\_ACID,\_TRIACYLGLYCEROL,\_AND\_KETONE\_BODY\_METABOLISM | 32 | 0.77702147 | 0.9435855 |
| WIP\_HS\_REGULATION\_OF\_BETA-CELL\_DEVELOPMENT | 19 | -0.7817896 | 0.94427556 |
| REACT\_RNA POL II CTD PHOSPHORYLATION AND INTERACTION WITH CE | 26 | -0.7773345 | 0.944496 |
| REACT\_NA+\_CL- DEPENDENT NEUROTRANSMITTER TRANSPORTERS | 18 | -0.779327 | 0.9454927 |
| BIOC\_MTORPATHWAY | 20 | 0.77836937 | 0.9457069 |
| NCI\_ERBB2ERBB3PATHWAY | 43 | 0.77736634 | 0.94581085 |
| REACT\_RNA POLYMERASE III TRANSCRIPTION INITIATION FROM TYPE 1 PROMOTER | 21 | 0.77985746 | 0.94598764 |
| REACT\_RAS ACTIVATION UOPN CA2+ INFUX THROUGH NMDA RECEPTOR | 17 | -0.7732454 | 0.94649595 |
| REACT\_REGULATION OF ACTIVATED PAK-2P34 BY PROTEASOME MEDIATED DEGRADATION | 48 | -0.7736366 | 0.9472822 |
| REACT\_PROTEIN FOLDING | 52 | -0.7697871 | 0.9474538 |
| NCI\_PI3KCIPATHWAY | 47 | -0.7684332 | 0.9480446 |
| REACT\_METABOLISM OF WATER-SOLUBLE VITAMINS AND COFACTORS | 50 | -0.7698146 | 0.9487746 |
| WIP\_HS\_TOR\_SIGNALING | 33 | -0.7707179 | 0.948899 |
| WIP\_HS\_TNF-ALPHA-NF-KB\_SIGNALING\_PATHWAY | 185 | 0.76326776 | 0.95402294 |
| REACT\_INTRINSIC PATHWAY FOR APOPTOSIS | 27 | -0.7567087 | 0.9574191 |
| KEGG\_GASTRIC ACID SECRETION | 74 | -0.7582336 | 0.95810413 |
| WIP\_HS\_STRIATED\_MUSCLE\_CONTRACTION | 38 | 0.75690603 | 0.9585296 |
| REACT\_SHC EVENTS IN EGFR SIGNALING | 15 | -0.7582387 | 0.959467 |
| REACT\_SIGNALLING TO ERKS | 35 | -0.7462958 | 0.9693375 |
| WIP\_HS\_NOD\_PATHWAY | 39 | 0.73478913 | 0.97464085 |
| REACT\_METABOLISM OF POLYAMINES | 15 | -0.7405715 | 0.9749018 |
| WIP\_HS\_SIGNALING\_BY\_EGFR | 19 | -0.7353128 | 0.97539115 |
| KEGG\_SPHINGOLIPID METABOLISM | 40 | 0.73160094 | 0.9754908 |
| NCI\_REELINPATHWAY | 28 | -0.7303359 | 0.9754908 |
| BIOC\_PYK2PATHWAY | 28 | 0.73264873 | 0.9757246 |
| KEGG\_PARKINSON'S DISEASE | 115 | -0.7371577 | 0.9760394 |
| REACT\_TRAFFICKING OF GLUR2-CONTAINING AMPA RECEPTORS | 15 | 0.73808575 | 0.9763418 |
| KEGG\_ERBB SIGNALING PATHWAY | 86 | -0.7354837 | 0.9765433 |
| REACT\_APOPTOSIS | 142 | 0.72658575 | 0.9769497 |
| WIP\_HS\_MAPK\_CASCADE | 29 | -0.7273852 | 0.97742826 |
| REACT\_CTLA4 INHIBITORY SIGNALING | 21 | 0.72433704 | 0.97792387 |
| KEGG\_NATURAL KILLER CELL MEDIATED CYTOTOXICITY | 127 | -0.7151084 | 0.9804087 |
| WIP\_HS\_GLYCOLYSIS\_AND\_GLUCONEOGENESIS | 44 | -0.7203189 | 0.9807328 |
| BIOC\_IL2RBPATHWAY | 34 | -0.7159222 | 0.980962 |
| REACT\_REGULATION OF ORNITHINE DECARBOXYLASE (ODC) | 49 | 0.70709014 | 0.9810429 |
| NCI\_MYC\_PATHWAY | 22 | -0.7164114 | 0.9818158 |
| NCI\_WNT\_NONCANONICAL\_PATHWAY | 32 | -0.703191 | 0.9818903 |
| NCI\_CIRCADIANPATHWAY | 16 | 0.70761085 | 0.9819368 |
| KEGG\_CIRCADIAN RHYTHM - MAMMAL | 22 | -0.7041839 | 0.9822975 |
| REACT\_GLUCOSE METABOLISM | 62 | 0.71710616 | 0.9825145 |
| KEGG\_MTOR SIGNALING PATHWAY | 51 | -0.7083017 | 0.98269784 |
| WIP\_HS\_KEAP1-NRF2\_PATHWAY | 15 | 0.70869654 | 0.98364556 |
| KEGG\_LONG-TERM POTENTIATION | 68 | -0.697762 | 0.98397774 |
| BIOC\_PGC1APATHWAY | 22 | -0.7093381 | 0.98442847 |
| REACT\_INTERLEUKIN RECEPTOR SHC SIGNALING | 29 | 0.69499123 | 0.9849469 |
| REACT\_NRIF SIGNALS CELL DEATH FROM THE NUCLEUS | 16 | 0.69819957 | 0.984954 |
| REACT\_TRANSPORT OF VITAMINS, NUCLEOSIDES, AND RELATED MOLECULES | 31 | -0.6895254 | 0.9852659 |
| REACT\_ANTIGEN PRESENTATION\_ FOLDING, ASSEMBLY AND PEPTIDE LOADING OF CLASS I MHC | 25 | 0.69228727 | 0.98581505 |
| REACT\_CHAPERONIN-MEDIATED PROTEIN FOLDING | 47 | -0.690024 | 0.98621136 |
| REACT\_AUTODEGRADATION OF THE E3 UBIQUITIN LIGASE COP1 | 50 | -0.684806 | 0.9863104 |
| REACT\_TIE2 SIGNALING | 18 | -0.6862933 | 0.9865162 |
| NCI\_SYNDECAN\_3\_PATHWAY | 17 | 0.66522783 | 0.9970046 |
| WIP\_HS\_OXIDATIVE\_PHOSPHORYLATION | 52 | 0.66616017 | 0.9977898 |
| WIP\_HS\_TYPE\_II\_DIABETES\_MELLITUS | 20 | -0.6611811 | 0.9981646 |
| WIP\_HS\_TRANSPORT\_OF\_GLUCOSE\_AND\_OTHER\_SUGARS,\_BILE\_SALTS\_AND\_ORGANIC\_ACIDS,\_METAL\_IONS\_AND\_AMINE\_COMPOUNDS | 51 | -0.658092 | 0.9987113 |
| REACT\_TRAFFICKING OF AMPA RECEPTORS | 29 | 0.41925368 | 0.99966943 |
| REACT\_INTERLEUKIN-2 SIGNALING | 39 | -0.641405 | 1 |
| REACT\_VIF-MEDIATED DEGRADATION OF APOBEC3G | 52 | -0.6381986 | 1 |
| REACT\_PURINE METABOLISM | 31 | -0.6366025 | 1 |
| REACT\_STRIATED MUSCLE CONTRACTION | 31 | -0.6342541 | 1 |
| KEGG\_GLIOMA | 65 | -0.6325335 | 1 |
| REACT\_SCF-BETA-TRCP MEDIATED DEGRADATION OF EMI1 | 53 | 0.62113315 | 1 |
| WIP\_HS\_PHYSIOLOGICAL\_AND\_PATHOLOGICAL\_HYPERTROPHY\_OF\_THE\_HEART | 24 | 0.61844116 | 1 |
| NCI\_CD8TCRDOWNSTREAMPATHWAY | 67 | 0.61799973 | 1 |
| REACT\_FRS2-MEDIATED ACTIVATION | 17 | 0.61633027 | 1 |
| REACT\_NEPHRIN INTERACTIONS | 22 | 0.61219424 | 1 |
| BIOC\_NO2IL12PATHWAY | 15 | 0.61146504 | 1 |
| REACT\_STABILIZATION OF P53 | 51 | -0.6082613 | 1 |
| KEGG\_FATTY ACID METABOLISM | 43 | -0.6048434 | 1 |
| REACT\_INTERFERON ALPHA\_BETA SIGNALING | 64 | -0.5990023 | 1 |
| KEGG\_TYPE II DIABETES MELLITUS | 47 | 0.58905286 | 1 |
| KEGG\_GLYOXYLATE AND DICARBOXYLATE METABOLISM | 18 | 0.58309853 | 1 |
| KEGG\_VEGF SIGNALING PATHWAY | 73 | -0.574423 | 1 |
| WIP\_HS\_SMALL\_LIGAND\_GPCRS | 18 | -0.5686568 | 1 |
| BIOC\_BIOPEPTIDESPATHWAY | 37 | -0.5649672 | 1 |
| REACT\_SHC-MEDIATED SIGNALLING | 15 | 0.56270385 | 1 |
| REACT\_NETRIN-1 SIGNALING | 42 | -0.5580172 | 1 |
| KEGG\_GLYCOSPHINGOLIPID BIOSYNTHESIS - GANGLIO SERIES | 15 | -0.5510827 | 1 |
| WIP\_HS\_FATTY\_ACID\_BIOSYNTHESIS | 22 | 0.54618335 | 1 |
| REACT\_ARMS-MEDIATED ACTIVATION | 17 | -0.5448883 | 1 |
| BIOC\_IL3PATHWAY | 15 | -0.5304213 | 1 |
| BIOC\_GCRPATHWAY | 17 | 0.52831477 | 1 |
| WIP\_HS\_SULFATION\_BIOTRANSFORMATION\_REACTION | 15 | -0.5242575 | 1 |
| REACT\_SHC-RELATED EVENTS | 17 | 0.52345765 | 1 |
| BIOC\_AT1RPATHWAY | 32 | -0.5022525 | 1 |
| NCI\_SMAD2\_3PATHWAY | 19 | -0.4634656 | 1 |
| NCI\_TCR\_PATHWAY | 63 | 0.44482437 | 1 |
| WIP\_HS\_UREA\_CYCLE\_AND\_METABOLISM\_OF\_AMINO\_GROUPS | 19 | 0.42663968 | 1 |
| REACT\_GLUTAMATE BINDING, ACTIVATION OF AMPA RECEPTORS AND SYNAPTIC PLASTICITY | 29 | 0.42084977 | 1 |

**Gene sets that are upregulated by plant stanol esters in the duodenum**

|  |  |  |  |
| --- | --- | --- | --- |
| NAME | SIZE | NES | FDR q-val |
| REACT\_MEIOTIC RECOMBINATION | 68 | 2.378703 | 1.61E-04 |
| REACT\_GENERIC TRANSCRIPTION PATHWAY | 243 | 2.3804083 | 2.15E-04 |
| REACT\_NUCLEOSOME ASSEMBLY | 56 | 2.4310377 | 3.22E-04 |
| REACT\_ACTIVATION OF THE PRE-REPLICATIVE COMPLEX | 29 | 2.2564898 | 4.13E-04 |
| REACT\_CHROMOSOME MAINTENANCE | 86 | 2.2374277 | 4.58E-04 |
| REACT\_DEPOSITION OF NEW CENPA-CONTAINING NUCLEOSOMES AT THE CENTROMERE | 56 | 2.4662979 | 6.44E-04 |
| REACT\_G2\_M CHECKPOINTS | 43 | 2.119922 | 0.002603472 |
| REACT\_ACTIVATION OF ATR IN RESPONSE TO REPLICATION STRESS | 37 | 2.083857 | 0.003269152 |
| KEGG\_FANCONI ANEMIA PATHWAY | 48 | 2.095805 | 0.003505437 |
| WIP\_HS\_DNA\_REPLICATION | 42 | 2.0610008 | 0.003926359 |
| REACT\_FORMATION OF THE TERNARY COMPLEX, AND SUBSEQUENTLY, THE 43S COMPLEX | 41 | 1.9880136 | 0.009732455 |
| REACT\_E2F MEDIATED REGULATION OF DNA REPLICATION | 26 | 1.9720768 | 0.010193897 |
| NCI\_FANCONI\_PATHWAY | 45 | 1.9908351 | 0.010230979 |
| REACT\_PACKAGING OF TELOMERE ENDS | 42 | 1.976304 | 0.010277303 |
| REACT\_EUKARYOTIC TRANSLATION ELONGATION | 74 | 1.9178766 | 0.011302118 |
| REACT\_TELOMERE MAINTENANCE | 65 | 1.9196925 | 0.011417139 |
| REACT\_M PHASE | 105 | 1.9207503 | 0.011759898 |
| REACT\_GTP HYDROLYSIS AND JOINING OF THE 60S RIBOSOMAL SUBUNIT | 90 | 1.9215971 | 0.012198463 |
| REACT\_MITOTIC M-M\_G1 PHASES | 182 | 1.9081867 | 0.012254418 |
| REACT\_CELL CYCLE, MITOTIC | 311 | 1.9028229 | 0.0124336 |
| REACT\_DNA REPLICATION | 204 | 1.945159 | 0.012493482 |
| REACT\_VIRAL MRNA TRANSLATION | 69 | 1.9237849 | 0.012543645 |
| REACT\_INSULIN SYNTHESIS AND PROCESSING | 114 | 1.9498422 | 0.012569422 |
| REACT\_PEPTIDE CHAIN ELONGATION | 71 | 1.926033 | 0.012886466 |
| REACT\_FORMATION OF A POOL OF FREE 40S SUBUNITS | 80 | 1.9372418 | 0.012919904 |
| REACT\_INFLUENZA VIRAL RNA TRANSCRIPTION AND REPLICATION | 69 | 1.8973949 | 0.012943985 |
| BIOC\_ATRBRCAPATHWAY | 21 | 1.885532 | 0.013271937 |
| REACT\_DNA REPAIR | 104 | 1.883172 | 0.01327832 |
| KEGG\_RNA DEGRADATION | 68 | 1.92797 | 0.013348826 |
| REACT\_MITOTIC PROMETAPHASE | 101 | 1.8862672 | 0.013516876 |
| REACT\_MITOCHONDRIAL TRNA AMINOACYLATION | 21 | 1.8691418 | 0.013611835 |
| KEGG\_NUCLEOTIDE EXCISION REPAIR | 44 | 1.8711255 | 0.013738437 |
| REACT\_EUKARYOTIC TRANSLATION TERMINATION | 71 | 1.8880931 | 0.013802896 |
| KEGG\_RIBOSOME | 75 | 1.9297081 | 0.013890217 |
| REACT\_L13A-MEDIATED TRANSLATIONAL SILENCING OF CERULOPLASMIN EXPRESSION | 89 | 1.8759965 | 0.013904888 |
| REACT\_3 -UTR-MEDIATED TRANSLATIONAL REGULATION | 89 | 1.8714641 | 0.014110082 |
| NCI\_BARD1PATHWAY | 29 | 1.8885704 | 0.014131621 |
| REACT\_POST-ELONGATION PROCESSING OF INTRON-CONTAINING PRE-MRNA | 32 | 1.8625302 | 0.014203563 |
| KEGG\_DNA REPLICATION | 35 | 1.8340985 | 0.017048083 |
| REACT\_CLEAVAGE OF GROWING TRANSCRIPT IN THE TERMINATION REGION | 41 | 1.8361474 | 0.017085118 |
| WIP\_HS\_DOUBLE-STRAND\_BREAK\_REPAIR | 18 | 1.8429781 | 0.017158063 |
| WIP\_HS\_G1\_TO\_S\_CELL\_CYCLE\_CONTROL | 68 | 1.8381835 | 0.01717608 |
| REACT\_FANCONI ANEMIA PATHWAY | 22 | 1.8384906 | 0.017544424 |
| REACT\_TRANSLATION | 104 | 1.842983 | 0.017598012 |
| REACT\_NONSENSE MEDIATED DECAY INDEPENDENT OF THE EXON JUNCTION COMPLEX | 76 | 1.8214161 | 0.017691938 |
| REACT\_CAP-DEPENDENT TRANSLATION INITIATION | 97 | 1.8216972 | 0.01797157 |
| REACT\_RIBOSOMAL SCANNING AND START CODON RECOGNITION | 47 | 1.8253067 | 0.017971622 |
| REACT\_MRNA 3-END PROCESSING | 32 | 1.8227792 | 0.018052697 |
| REACT\_GLOBAL GENOMIC NER (GG-NER) | 32 | 1.8266929 | 0.018122504 |
| REACT\_EUKARYOTIC TRANSLATION INITIATION | 97 | 1.815618 | 0.018402794 |
| REACT\_POST-ELONGATION PROCESSING OF THE TRANSCRIPT | 41 | 1.8067726 | 0.019576171 |
| REACT\_MEIOTIC SYNAPSIS | 67 | 1.8009421 | 0.020392822 |
| REACT\_RNA POLYMERASE II TRANSCRIPTION TERMINATION | 41 | 1.7914498 | 0.021780752 |
| REACT\_DOUBLE-STRAND BREAK REPAIR | 21 | 1.7918208 | 0.022098092 |
| REACT\_DNA STRAND ELONGATION | 30 | 1.7854251 | 0.022327205 |
| REACT\_TRANSLATION INITIATION COMPLEX FORMATION | 47 | 1.7868625 | 0.0224376 |
| WIP\_HS\_DNA\_DAMAGE\_RESPONSE | 67 | 1.7750766 | 0.02435408 |
| NCI\_AURORA\_B\_PATHWAY | 39 | 1.7729477 | 0.024408404 |
| REACT\_ACTIVATION OF THE MRNA UPON BINDING OF THE CAP-BINDING COMPLEX AND EIFS, AND SUBSEQUENT BINDING TO 43S | 48 | 1.7658637 | 0.02511895 |
| WIP\_HS\_ONE\_CARBON\_METABOLISM | 26 | 1.7666795 | 0.025320359 |
| WIP\_HS\_CYTOPLASMIC\_RIBOSOMAL\_PROTEINS | 75 | 1.7555957 | 0.027216377 |
| REACT\_HOMOLOGOUS RECOMBINATION REPAIR OF REPLICATION-INDEPENDENT DOUBLE-STRAND BREAKS | 15 | 1.7424998 | 0.030293629 |
| REACT\_BRANCHED-CHAIN AMINO ACID CATABOLISM | 17 | 1.7404683 | 0.030548058 |
| REACT\_VPR-MEDIATED NUCLEAR IMPORT OF PICS | 31 | 1.731048 | 0.0327403 |
| REACT\_REV-MEDIATED NUCLEAR EXPORT OF HIV-1 RNA | 30 | 1.7164179 | 0.036722865 |
| REACT\_FORMATION OF INCISION COMPLEX IN GG-NER | 19 | 1.7106096 | 0.037415907 |
| REACT\_AMYLOIDS | 71 | 1.7117784 | 0.037504088 |
| REACT\_INTERACTIONS OF REV WITH HOST CELLULAR PROTEINS | 32 | 1.7081169 | 0.037769493 |
| REACT\_DUAL INCISION REACTION IN GG-NER | 19 | 1.6988518 | 0.04046881 |
| REACT\_HOMOLOGOUS RECOMBINATION REPAIR | 15 | 1.6889337 | 0.044044312 |
| REACT\_INTERACTIONS OF VPR WITH HOST CELLULAR PROTEINS | 34 | 1.6834903 | 0.045533516 |
| WIP\_HS\_INSULIN\_SYNTHESIS\_AND\_PROCESSING | 16 | 1.6654148 | 0.052061014 |
| REACT\_TELOMERE C-STRAND (LAGGING STRAND) SYNTHESIS | 21 | 1.6466769 | 0.060592912 |
| REACT\_REGULATION OF GLUCOKINASE BY GLUCOKINASE REGULATORY PROTEIN | 29 | 1.6396768 | 0.06361181 |
| KEGG\_MISMATCH REPAIR | 23 | 1.6375519 | 0.06400591 |
| REACT\_NUCLEAR IMPORT OF REV PROTEIN | 31 | 1.6352028 | 0.06454828 |
| REACT\_REGULATION OF GENE EXPRESSION IN BETA CELLS | 83 | 1.6301234 | 0.06639114 |
| KEGG\_BETA-ALANINE METABOLISM | 27 | 1.6266313 | 0.06732291 |
| REACT\_REGULATION OF BETA-CELL DEVELOPMENT | 93 | 1.6223646 | 0.06905022 |
| WIP\_HS\_MIRNA\_REGULATION\_OF\_DNA\_DAMAGE\_RESPONSE | 89 | 1.6162292 | 0.07172202 |
| REACT\_NONSENSE MEDIATED DECAY ENHANCED BY THE EXON JUNCTION COMPLEX | 93 | 1.6011086 | 0.07971767 |
| REACT\_POST-ELONGATION PROCESSING OF INTRONLESS PRE-MRNA | 23 | 1.5936689 | 0.08063398 |
| WIP\_HS\_MRNA\_PROCESSING | 123 | 1.5944222 | 0.081031784 |
| REACT\_NONSENSE-MEDIATED DECAY | 93 | 1.5966653 | 0.08163467 |
| WIP\_HS\_MITOTIC\_M-M-G1\_PHASES | 15 | 1.5949175 | 0.08174587 |
| REACT\_LAGGING STRAND SYNTHESIS | 19 | 1.5820853 | 0.08735343 |
| REACT\_G1\_S TRANSITION | 99 | 1.5744117 | 0.09060862 |
| REACT\_PROCESSING OF CAPPED INTRONLESS PRE-MRNA | 23 | 1.5745016 | 0.09157712 |
| REACT\_TRNA AMINOACYLATION | 42 | 1.5703608 | 0.09283547 |
| REACT\_SNRNP ASSEMBLY | 21 | 1.559787 | 0.09760461 |
| REACT\_MITOTIC G1-G1\_S PHASES | 110 | 1.5615377 | 0.0983764 |
| REACT\_HIV LIFE CYCLE | 100 | 1.5598027 | 0.098661266 |
| NCI\_ATM\_PATHWAY | 34 | 1.5563784 | 0.09899831 |
| WIP\_HS\_CELL\_CYCLE | 89 | 1.549417 | 0.10320708 |
| WIP\_HS\_ESTROGEN\_SIGNALING\_PATHWAY | 20 | 1.5443066 | 0.10584806 |
| WIP\_HS\_PROCESSING\_OF\_CAPPED\_INTRON-CONTAINING\_PRE-MRNA | 49 | 1.537101 | 0.109453715 |
| REACT\_DEADENYLATION-DEPENDENT MRNA DECAY | 43 | 1.5376058 | 0.11023733 |
| WIP\_HS\_GENERIC\_TRANSCRIPTION\_PATHWAY | 16 | 1.5303189 | 0.11153033 |
| REACT\_METABOLISM OF NON-CODING RNA | 21 | 1.5317658 | 0.11162787 |
| KEGG\_CELL CYCLE | 123 | 1.5323809 | 0.11231977 |
| REACT\_LATE PHASE OF HIV LIFE CYCLE | 89 | 1.5270561 | 0.11293117 |
| KEGG\_VALINE, LEUCINE AND ISOLEUCINE DEGRADATION | 43 | 1.5170919 | 0.119367756 |
| NCI\_ATR\_PATHWAY | 39 | 1.515664 | 0.1196758 |
| REACT\_CELL CYCLE CHECKPOINTS | 116 | 1.5176613 | 0.12002052 |
| REACT\_S PHASE | 108 | 1.5126815 | 0.12008219 |
| REACT\_RNA POLYMERASE II TRANSCRIPTION | 98 | 1.5127124 | 0.121212326 |
| KEGG\_PEROXISOME | 77 | 1.5054296 | 0.124107175 |
| KEGG\_SPLICEOSOME | 120 | 1.5064341 | 0.12446909 |
| KEGG\_PROPANOATE METABOLISM | 32 | 1.5009522 | 0.12723483 |
| KEGG\_RNA TRANSPORT | 137 | 1.4976506 | 0.1292126 |
| REACT\_ION CHANNEL TRANSPORT | 59 | 1.4949399 | 0.13047893 |
| REACT\_NUCLEOTIDE EXCISION REPAIR | 49 | 1.488006 | 0.13562766 |
| REACT\_BILE ACID AND BILE SALT METABOLISM | 27 | 1.483343 | 0.13878152 |
| NCI\_PLK1\_PATHWAY | 44 | 1.4785281 | 0.14214264 |
| KEGG\_PANTOTHENATE AND COA BIOSYNTHESIS | 17 | 1.475175 | 0.14430933 |
| REACT\_SYNTHESIS OF DNA | 94 | 1.4657161 | 0.14645666 |
| WIP\_HS\_FAS\_PATHWAY\_AND\_STRESS\_INDUCTION\_OF\_HSP\_REGULATION | 38 | 1.466204 | 0.14723714 |
| KEGG\_ONE CARBON POOL BY FOLATE | 17 | 1.4668266 | 0.14778033 |
| REACT\_SYNTHESIS OF BILE ACIDS AND BILE SALTS VIA 7ALPHA-HYDROXYCHOLESTEROL | 15 | 1.4672084 | 0.1486501 |
| REACT\_GLUCOSE TRANSPORT | 39 | 1.4690247 | 0.14940195 |
| REACT\_PEROXISOMAL LIPID METABOLISM | 20 | 1.4672145 | 0.14992061 |
| KEGG\_TASTE TRANSDUCTION | 49 | 1.4567549 | 0.15436277 |
| REACT\_TRANSCRIPTION | 138 | 1.4528747 | 0.15710525 |
| WIP\_HS\_CELL\_CYCLE\_CHECKPOINTS | 15 | 1.4492832 | 0.15849923 |
| REACT\_M\_G1 TRANSITION | 77 | 1.4504251 | 0.15850942 |
| REACT\_DNA REPLICATION PRE-INITIATION | 77 | 1.4406704 | 0.1627325 |
| REACT\_HEXOSE TRANSPORT | 41 | 1.442552 | 0.16325326 |
| REACT\_METABOLISM OF RNA | 221 | 1.4408305 | 0.16383341 |
| KEGG\_HOMOLOGOUS RECOMBINATION | 28 | 1.4428376 | 0.16424577 |
| REACT\_TRANSCRIPTION-COUPLED NER (TC-NER) | 44 | 1.4300518 | 0.17227583 |
| KEGG\_SYSTEMIC LUPUS ERYTHEMATOSUS | 115 | 1.4302188 | 0.1733893 |
| KEGG\_AMINOACYL-TRNA BIOSYNTHESIS | 42 | 1.4204319 | 0.18215114 |
| REACT\_APC-CDC20 MEDIATED DEGRADATION OF NEK2A | 23 | 1.4109553 | 0.19110015 |
| WIP\_HS\_NUCLEOTIDE\_METABOLISM | 18 | 1.4111469 | 0.1923342 |
| REACT\_METABOLISM OF MRNA | 202 | 1.4075586 | 0.19247878 |
| REACT\_FORMATION OF TRANSCRIPTION-COUPLED NER (TC-NER) REPAIR COMPLEX | 28 | 1.4084911 | 0.1927303 |
| BIOC\_FASPATHWAY | 27 | 1.4028053 | 0.19424675 |
| REACT\_TRANSPORT OF MATURE TRANSCRIPT TO CYTOPLASM | 26 | 1.4049156 | 0.19433534 |
| NCI\_TELOMERASEPATHWAY | 66 | 1.4033697 | 0.19483574 |
| REACT\_SYNTHESIS OF BILE ACIDS AND BILE SALTS | 19 | 1.4009771 | 0.19518316 |
| BIOC\_ATMPATHWAY | 19 | 1.3982697 | 0.19704238 |
| KEGG\_BASAL TRANSCRIPTION FACTORS | 41 | 1.3938016 | 0.20121098 |
| REACT\_DUAL INCISION REACTION IN TC-NER | 28 | 1.390978 | 0.20335156 |
| REACT\_LIGAND-GATED ION CHANNEL TRANSPORT | 24 | 1.3856533 | 0.20880158 |
| KEGG\_TRYPTOPHAN METABOLISM | 40 | 1.3431435 | 0.27057818 |
| KEGG\_GLYCINE, SERINE AND THREONINE METABOLISM | 32 | 1.3384537 | 0.27617842 |
| KEGG\_GLYCOSYLPHOSPHATIDYLINOSITOL(GPI)-ANCHOR BIOSYNTHESIS | 25 | 1.3258797 | 0.29184854 |
| KEGG\_PROTEIN EXPORT | 21 | 1.3276616 | 0.29251647 |
| REACT\_EXTENSION OF TELOMERES | 23 | 1.3262056 | 0.2931878 |
| KEGG\_PRIMARY BILE ACID BIOSYNTHESIS | 16 | 1.3179884 | 0.2998317 |
| REACT\_TRANSPORT OF MATURE MRNA DERIVED FROM AN INTRON-CONTAINING TRANSCRIPT | 22 | 1.3201799 | 0.2998357 |
| REACT\_GAP-FILLING DNA REPAIR SYNTHESIS AND LIGATION IN GG-NER | 16 | 1.3182776 | 0.30125666 |
| REACT\_SYNTHESIS AND INTERCONVERSION OF NUCLEOTIDE DI- AND TRIPHOSPHATES | 16 | 1.3103149 | 0.31136438 |
| WIP\_HS\_TRYPTOPHAN\_METABOLISM | 47 | 1.2995659 | 0.32932225 |
| REACT\_RNA POLYMERASE I TRANSCRIPTION INITIATION | 20 | 1.2952449 | 0.33539447 |
| WIP\_HS\_INTEGRATED\_CANCER\_PATHWAY | 35 | 1.2922065 | 0.3390888 |
| REACT\_RNA POLYMERASE I TRANSCRIPTION TERMINATION | 20 | 1.2911146 | 0.33916268 |
| KEGG\_LYSINE DEGRADATION | 47 | 1.28658 | 0.33916634 |
| KEGG\_LINOLEIC ACID METABOLISM | 29 | 1.281611 | 0.34017646 |
| REACT\_GAP-FILLING DNA REPAIR SYNTHESIS AND LIGATION IN TC-NER | 16 | 1.286722 | 0.34107068 |
| REACT\_RNA POLYMERASE I PROMOTER ESCAPE | 19 | 1.2830566 | 0.3414708 |
| REACT\_NUCLEOTIDE-BINDING DOMAIN, LEUCINE RICH REPEAT CONTAINING RECEPTOR (NLR) SIGNALING PATHWAYS | 51 | 1.2817001 | 0.3420608 |
| REACT\_REGULATION OF SIGNALING BY CBL | 22 | 1.287219 | 0.34229684 |
| REACT\_REPAIR SYNTHESIS OF PATCH ~27-30 BASES LONG BY DNA POLYMERASE | 15 | 1.2835267 | 0.3427971 |
| REACT\_METABOLISM OF PROTEINS | 278 | 1.2877892 | 0.34347197 |
| KEGG\_ARACHIDONIC ACID METABOLISM | 54 | 1.2675792 | 0.36563432 |
| REACT\_REPAIR SYNTHESIS FOR GAP-FILLING BY DNA POLYMERASE IN TC-NER | 15 | 1.2639592 | 0.36840832 |
| BIOC\_IL7PATHWAY | 16 | 1.264277 | 0.3700122 |
| WIP\_HS\_TRNA\_AMINOACYLATION | 20 | 1.261501 | 0.37126002 |
| REACT\_MRNA SPLICING | 103 | 1.2600371 | 0.3722351 |
| WIP\_HS\_FATTY\_ACID\_OMEGA\_OXIDATION | 15 | 1.2571733 | 0.37573558 |
| REACT\_MRNA SPLICING - MAJOR PATHWAY | 103 | 1.2521832 | 0.38369492 |
| REACT\_RNA POLYMERASE I CHAIN ELONGATION | 18 | 1.2481638 | 0.38950914 |
| NCI\_FASPATHWAY | 38 | 1.2467451 | 0.39054674 |
| REACT\_FORMATION AND MATURATION OF MRNA TRANSCRIPT | 152 | 1.2428784 | 0.39212364 |
| REACT\_PYRUVATE METABOLISM AND CITRIC ACID (TCA) CYCLE | 40 | 1.2446929 | 0.39279908 |
| KEGG\_P53 SIGNALING PATHWAY | 68 | 1.2435734 | 0.39293304 |
| KEGG\_TYROSINE METABOLISM | 40 | 1.2370843 | 0.40220648 |
| WIP\_HS\_SEROTONIN\_HTR1\_GROUP\_AND\_FOS\_PATHWAY | 33 | 1.2354221 | 0.40356973 |
| REACT\_DESTABILIZATION OF MRNA BY KSRP | 17 | 1.232216 | 0.40820765 |
| REACT\_LOSS OF PROTEINS REQUIRED FOR INTERPHASE MICROTUBULE ORGANIZATIONÂ FROM THE CENTROSOME | 58 | 1.2234236 | 0.42012203 |
| BIOC\_BCRPATHWAY | 34 | 1.2244029 | 0.42029324 |
| WIP\_HS\_BILE\_ACID\_AND\_BILE\_SALT\_METABOLISM | 27 | 1.2216908 | 0.42162374 |
| WIP\_HS\_APOPTOSIS\_MODULATION\_BY\_HSP70 | 18 | 1.2246425 | 0.42202282 |
| NCI\_E2F\_PATHWAY | 70 | 1.2144313 | 0.43607897 |
| REACT\_LOSS OF NLP FROM MITOTIC CENTROSOMES | 58 | 1.2095088 | 0.44262066 |
| REACT\_DEADENYLATION OF MRNA | 20 | 1.2097428 | 0.44447637 |
| KEGG\_ARGININE AND PROLINE METABOLISM | 52 | 1.198222 | 0.46422532 |
| REACT\_RNA POLYMERASE I TRANSCRIPTION | 23 | 1.1983175 | 0.466474 |
| REACT\_ION TRANSPORT BY P-TYPE ATPASES | 35 | 1.1931821 | 0.473655 |
| REACT\_MRNA PROCESSING | 125 | 1.1890142 | 0.48105675 |
| REACT\_G2\_M TRANSITION | 87 | 1.1856244 | 0.48676598 |
| KEGG\_MRNA SURVEILLANCE PATHWAY | 76 | 1.1778641 | 0.50037295 |
| REACT\_RNA POLYMERASE I PROMOTER CLEARANCE | 21 | 1.1785507 | 0.50130934 |
| REACT\_ASSOCIATION OF TRIC\_CCT WITH TARGET PROTEINS DURING BIOSYNTHESIS | 29 | 1.1702472 | 0.51646745 |
| BIOC\_CCR3PATHWAY | 21 | 1.162819 | 0.5330977 |
| WIP\_HS\_MITOCHONDRIAL\_GENE\_EXPRESSION | 20 | 1.1434481 | 0.54861444 |
| REACT\_PYRUVATE METABOLISM | 18 | 1.1436105 | 0.5508085 |
| REACT\_INACTIVATION OF APC\_C VIA DIRECT INHIBITION OF THE APC\_C COMPLEX | 18 | 1.1443352 | 0.55156124 |
| NCI\_P38\_MKK3\_6PATHWAY | 29 | 1.1401393 | 0.5519817 |
| REACT\_RECRUITMENT OF MITOTIC CENTROSOME PROTEINS AND COMPLEXES | 76 | 1.1406162 | 0.5533642 |
| REACT\_RNA POLYMERASE II PRE-TRANSCRIPTION EVENTS | 57 | 1.1486068 | 0.5538751 |
| REACT\_PHOSPHORYLATION OF THE APC\_C | 17 | 1.1443832 | 0.5541289 |
| REACT\_PROCESSING OF CAPPED INTRON-CONTAINING PRE-MRNA | 107 | 1.1495575 | 0.5542587 |
| REACT\_G1 PHASE | 19 | 1.1503713 | 0.5547852 |
| KEGG\_PANCREATIC SECRETION | 98 | 1.1451926 | 0.5547944 |
| WIP\_HS\_ID\_SIGNALING\_PATHWAY | 19 | 1.1472143 | 0.5549339 |
| REACT\_REGULATION OF DNA REPLICATION | 71 | 1.1460394 | 0.5552987 |
| NCI\_BCR\_5PATHWAY | 66 | 1.1355104 | 0.55647254 |
| REACT\_INHIBITION OF THE PROTEOLYTIC ACTIVITY OF APC\_C REQUIRED FOR THE ONSET OF ANAPHASE BY MITOTIC SPINDLE CHECKPOINT COMPONENTS | 18 | 1.1515535 | 0.55720913 |
| BIOC\_IL2PATHWAY | 22 | 1.1505162 | 0.5572639 |
| REACT\_CENTROSOME MATURATION | 76 | 1.1340772 | 0.55761296 |
| REACT\_GLUTATHIONE CONJUGATION | 24 | 1.1359516 | 0.5577154 |
| KEGG\_ALPHA-LINOLENIC ACID METABOLISM | 19 | 1.1327853 | 0.5584031 |
| REACT\_MITOTIC G2-G2\_M PHASES | 90 | 1.151968 | 0.5589325 |
| REACT\_CYCLIN D ASSOCIATED EVENTS IN G1 | 19 | 1.1364051 | 0.559108 |
| WIP\_HS\_TP53\_NETWORK | 19 | 1.1311723 | 0.55995446 |
| NCI\_HIVNEFPATHWAY | 35 | 1.1294754 | 0.5616916 |
| REACT\_RNA POLYMERASE I, RNA POLYMERASE III, AND MITOCHONDRIAL TRANSCRIPTION | 54 | 1.1267527 | 0.56619 |
| KEGG\_REGULATION OF AUTOPHAGY | 32 | 1.1230663 | 0.5734139 |
| REACT\_INFLAMMASOMES | 17 | 1.1148727 | 0.59237313 |
| KEGG\_GABAERGIC SYNAPSE | 88 | 1.1114373 | 0.5963368 |
| REACT\_REMOVAL OF LICENSING FACTORS FROM ORIGINS | 71 | 1.112228 | 0.59680885 |
| REACT\_TRANSCRIPTION OF THE HIV GENOME | 59 | 1.1079974 | 0.6029972 |
| BIOC\_HCMVPATHWAY | 16 | 1.1055218 | 0.60698545 |
| KEGG\_GLUTATHIONE METABOLISM | 44 | 1.1034038 | 0.60998464 |
| REACT\_NOD1\_2 SIGNALING PATHWAY | 35 | 1.1011559 | 0.61078566 |
| WIP\_HS\_TRANSLATION\_FACTORS | 48 | 1.1013134 | 0.61307317 |
| KEGG\_PYRIMIDINE METABOLISM | 94 | 1.0991766 | 0.6136148 |
| REACT\_MITOTIC SPINDLE CHECKPOINT | 19 | 1.0964221 | 0.615942 |
| REACT\_TRANSMEMBRANE TRANSPORT OF SMALL MOLECULES | 396 | 1.0968674 | 0.6174178 |
| REACT\_APC\_C\_CDC20 MEDIATED DEGRADATION OF CYCLIN B | 21 | 1.0873717 | 0.63780653 |
| KEGG\_HISTIDINE METABOLISM | 29 | 1.0861975 | 0.6382157 |
| REACT\_MRNA SPLICING - MINOR PATHWAY | 42 | 1.0839185 | 0.6417256 |
| WIP\_HS\_ESTROGEN\_METABOLISM | 16 | 1.0810884 | 0.64715475 |
| NCI\_HIF1APATHWAY | 18 | 1.0787908 | 0.64803493 |
| BIOC\_G2PATHWAY | 22 | 1.0793803 | 0.6491482 |
| BIOC\_INSULINPATHWAY | 21 | 1.0759946 | 0.6530462 |
| REACT\_REGULATION OF IFNA SIGNALING | 25 | 1.0750324 | 0.653126 |
| BIOC\_IGF1PATHWAY | 20 | 1.0709957 | 0.6617551 |
| BIOC\_CELLCYCLEPATHWAY | 22 | 1.06124 | 0.68674874 |
| BIOC\_EGFPATHWAY | 26 | 1.0590082 | 0.6900798 |
| NCI\_ERBB4\_PATHWAY | 35 | 1.0519502 | 0.7081372 |
| REACT\_SYNTHESIS OF GLYCOSYLPHOSPHATIDYLINOSITOL (GPI) | 16 | 1.050832 | 0.70852596 |
| REACT\_RNA POLYMERASE II PROMOTER ESCAPE | 39 | 1.0447036 | 0.7239212 |
| REACT\_RNA POLYMERASE II HIV-1 PROMOTER ESCAPE | 39 | 1.0380838 | 0.73180187 |
| REACT\_RNA POLYMERASE II TRANSCRIPTION ELONGATION | 41 | 1.0364635 | 0.73356086 |
| NCI\_HEDGEHOG\_GLIPATHWAY | 48 | 1.0383317 | 0.73401403 |
| REACT\_RNA POLYMERASE II TRANSCRIPTION PRE-INITIATION AND PROMOTER OPENING | 39 | 1.0398222 | 0.7355081 |
| REACT\_RNA POLYMERASE II TRANSCRIPTION INITIATION | 39 | 1.0385461 | 0.7363945 |
| NCI\_AR\_TF\_PATHWAY | 52 | 1.034151 | 0.7373598 |
| REACT\_RNA POLYMERASE II TRANSCRIPTION INITIATION AND PROMOTER CLEARANCE | 39 | 1.0293341 | 0.74277896 |
| REACT\_HIV-1 TRANSCRIPTION INITIATION | 39 | 1.0300338 | 0.7436387 |
| NCI\_EPHA\_FWDPATHWAY | 34 | 1.0303422 | 0.7457246 |
| REACT\_PYRIMIDINE METABOLISM | 24 | 1.0206865 | 0.7474252 |
| REACT\_SWITCHING OF ORIGINS TO A POST-REPLICATIVE STATE | 69 | 1.0211016 | 0.749097 |
| BIOC\_HIVNEFPATHWAY | 52 | 1.0188136 | 0.7500841 |
| NCI\_DNAPK\_PATHWAY | 16 | 1.0217148 | 0.75029016 |
| REACT\_ORC1 REMOVAL FROM CHROMATIN | 69 | 1.0218799 | 0.7528059 |
| BIOC\_TNFR1PATHWAY | 28 | 1.0246376 | 0.7536426 |
| REACT\_ASSEMBLY OF THE PRE-REPLICATIVE COMPLEX | 63 | 1.0220853 | 0.7551214 |
| REACT\_CONVERSION FROM APC\_C\_CDC20 TO APC\_C\_CDH1 IN LATE ANAPHASE | 17 | 1.0230458 | 0.755287 |
| REACT\_FORMATION OF RNA POL II ELONGATION COMPLEX | 41 | 1.0150919 | 0.75764763 |
| REACT\_POST-TRANSLATIONAL MODIFICATION\_ SYNTHESIS OF GPI-ANCHORED PROTEINS | 25 | 1.0119196 | 0.75847465 |
| BIOC\_NGFPATHWAY | 18 | 1.0121773 | 0.7605787 |
| REACT\_FORMATION OF HIV-1 ELONGATION COMPLEX IN THE ABSENCE OF HIV-1 TAT | 41 | 1.0122671 | 0.7631827 |
| BIOC\_CASPASEPATHWAY | 21 | 1.0087177 | 0.7649667 |
| KEGG\_SNARE INTERACTIONS IN VESICULAR TRANSPORT | 35 | 1.0074273 | 0.7658832 |
| WIP\_HS\_OVARIAN\_INFERTILITY\_GENES | 29 | 1.0043994 | 0.7719019 |
| KEGG\_PYRUVATE METABOLISM | 39 | 1.0024658 | 0.7749426 |
| KEGG\_LONG-TERM DEPRESSION | 68 | 0.9986966 | 0.7833789 |
| WIP\_HS\_ASPARAGINE\_N-LINKED\_GLYCOSYLATION | 37 | 0.99478704 | 0.79214275 |
| REACT\_AMINE COMPOUND SLC TRANSPORTERS | 29 | 0.968136 | 0.7971276 |
| NCI\_IL2\_STAT5PATHWAY | 30 | 0.96708065 | 0.79731315 |
| REACT\_CHOLESTEROL BIOSYNTHESIS | 21 | 0.9831306 | 0.7978712 |
| KEGG\_VASCULAR SMOOTH MUSCLE CONTRACTION | 115 | 0.96960866 | 0.79819256 |
| KEGG\_NITROGEN METABOLISM | 23 | 0.96846235 | 0.7988508 |
| KEGG\_PHENYLALANINE METABOLISM | 16 | 0.99144256 | 0.79903364 |
| REACT\_SLC-MEDIATED TRANSMEMBRANE TRANSPORT | 247 | 0.9836261 | 0.79920864 |
| REACT\_ANTIGEN PROCESSING\_ UBIQUITINATION & PROTEASOME DEGRADATION | 212 | 0.98645276 | 0.7994353 |
| BIOC\_TALL1PATHWAY | 15 | 0.985428 | 0.79962677 |
| KEGG\_UBIQUITIN MEDIATED PROTEOLYSIS | 133 | 0.97655576 | 0.7998835 |
| KEGG\_STARCH AND SUCROSE METABOLISM | 45 | 0.9775006 | 0.79996586 |
| REACT\_TRAF6 MEDIATED IRF7 ACTIVATION | 31 | 0.9698257 | 0.8002555 |
| WIP\_HS\_MIRNAS\_INVOLVED\_IN\_DDR | 46 | 0.9899728 | 0.800578 |
| KEGG\_CITRATE CYCLE (TCA CYCLE) | 30 | 0.98011273 | 0.8008502 |
| REACT\_APC\_C-MEDIATED DEGRADATION OF CELL CYCLE PROTEINS | 81 | 0.9733277 | 0.8008929 |
| REACT\_REGULATION OF MITOTIC CELL CYCLE | 81 | 0.9840112 | 0.8009085 |
| BIOC\_DEATHPATHWAY | 32 | 0.9740448 | 0.80157787 |
| WIP\_HS\_HYPOTHETICAL\_NETWORK\_FOR\_DRUG\_ADDICTION | 32 | 0.9702641 | 0.80162966 |
| NCI\_NFKAPPABCANONICALPATHWAY | 23 | 0.9710994 | 0.8017821 |
| WIP\_HS\_SEROTONIN\_RECEPTOR\_4-6-7\_AND\_NR3C\_SIGNALING | 19 | 0.98657256 | 0.8019472 |
| KEGG\_DRUG METABOLISM - CYTOCHROME P450 | 65 | 0.9884052 | 0.80228525 |
| REACT\_METABOLISM OF AMINO ACIDS AND DERIVATIVES | 195 | 0.97468334 | 0.8026036 |
| KEGG\_PURINE METABOLISM | 159 | 0.97753626 | 0.8026515 |
| REACT\_N-GLYCAN ANTENNAE ELONGATION IN THE MEDIAL\_TRANS-GOLGI | 20 | 0.9782867 | 0.80342704 |
| KEGG\_RIBOSOME BIOGENESIS IN EUKARYOTES | 72 | 0.98702526 | 0.8034842 |
| NCI\_EPHRINBREVPATHWAY | 30 | 0.980144 | 0.8035578 |
| KEGG\_GLYCEROPHOSPHOLIPID METABOLISM | 78 | 0.97128725 | 0.8040094 |
| KEGG\_STEROID BIOSYNTHESIS | 17 | 0.9619574 | 0.80926824 |
| REACT\_XENOBIOTICS | 15 | 0.960902 | 0.8096398 |
| REACT\_CDT1 ASSOCIATION WITH THE CDC6\_ORC\_ORIGIN COMPLEX | 57 | 0.9598787 | 0.8099555 |
| BIOC\_GPCRPATHWAY | 34 | 0.95887965 | 0.8100681 |
| REACT\_VOLTAGE GATED POTASSIUM CHANNELS | 42 | 0.9559332 | 0.8157641 |
| BIOC\_PDGFPATHWAY | 26 | 0.9481952 | 0.83463675 |
| REACT\_REGULATION OF APC\_C ACTIVATORS BETWEEN G1\_S AND EARLY ANAPHASE | 76 | 0.945393 | 0.8397642 |
| REACT\_HIV INFECTION | 185 | 0.93923795 | 0.8409323 |
| KEGG\_FC EPSILON RI SIGNALING PATHWAY | 78 | 0.938294 | 0.8409415 |
| NCI\_HDAC\_CLASSIII\_PATHWAY | 36 | 0.9400621 | 0.8413322 |
| WIP\_HS\_IMMUNOREGULATORY\_INTERACTIONS\_BETWEEN\_A\_LYMPHOID\_AND\_A\_NON-LYMPHOID\_CELL | 16 | 0.9403317 | 0.8433215 |
| BIOC\_RAC1PATHWAY | 22 | 0.93595177 | 0.84468997 |
| REACT\_CLASS I MHC MEDIATED ANTIGEN PROCESSING & PRESENTATION | 237 | 0.9416866 | 0.8448433 |
| BIOC\_CERAMIDEPATHWAY | 21 | 0.9406952 | 0.84496003 |
| KEGG\_OOCYTE MEIOSIS | 110 | 0.9417737 | 0.8473416 |
| WIP\_HS\_SEROTONIN\_RECEPTOR\_2\_AND\_ELK-SRF-GATA4\_SIGNALING | 17 | 0.9281596 | 0.8634123 |
| WIP\_HS\_METABOLISM\_OF\_RNA | 17 | 0.9251327 | 0.866421 |
| WIP\_HS\_INTEGRATION\_OF\_ENERGY\_METABOLISM | 26 | 0.92566997 | 0.8676751 |
| BIOC\_P53PATHWAY | 16 | 0.922323 | 0.86856216 |
| REACT\_ASPARAGINE N-LINKED GLYCOSYLATION | 85 | 0.9207314 | 0.8702385 |
| KEGG\_BASE EXCISION REPAIR | 33 | 0.91949785 | 0.87089175 |
| WIP\_HS\_TCA\_CYCLE | 31 | 0.9224754 | 0.87091064 |
| KEGG\_B CELL RECEPTOR SIGNALING PATHWAY | 73 | 0.9016415 | 0.9160364 |
| REACT\_MYOGENESIS | 29 | 0.88866746 | 0.93372226 |
| REACT\_SPHINGOLIPID METABOLISM | 31 | 0.8893906 | 0.9346858 |
| BIOC\_HSP27PATHWAY | 15 | 0.8898152 | 0.93632805 |
| KEGG\_GNRH SIGNALING PATHWAY | 100 | 0.8809018 | 0.93685347 |
| NCI\_CASPASE\_PATHWAY | 50 | 0.8906337 | 0.9371426 |
| REACT\_POST-TRANSLATIONAL PROTEIN MODIFICATION | 122 | 0.8794314 | 0.9379362 |
| REACT\_HIV-1 TRANSCRIPTION ELONGATION | 40 | 0.88115376 | 0.9389441 |
| REACT\_SIGNALING BY ROBO RECEPTOR | 32 | 0.8910338 | 0.93902445 |
| REACT\_GLYCOGEN BREAKDOWN (GLYCOGENOLYSIS) | 16 | 0.8778823 | 0.93915105 |
| REACT\_RAP1 SIGNALLING | 16 | 0.8917049 | 0.9401609 |
| WIP\_HS\_RNA\_POLYMERASE\_I,\_RNA\_POLYMERASE\_III,\_AND\_MITOCHONDRIAL\_TRANSCRIPTION | 24 | 0.8813958 | 0.9411027 |
| REACT\_BIOSYNTHESIS OF THE N-GLYCAN PRECURSOR (DOLICHOL LIPID-LINKED OLIGOSACCHARIDE, LLO) AND TRANSFER TO A NASCENT PROTEIN | 30 | 0.8817826 | 0.9430081 |
| REACT\_CYTOSOLIC TRNA AMINOACYLATION | 24 | 0.8719552 | 0.94337344 |
| BIOC\_EDG1PATHWAY | 22 | 0.8822159 | 0.94468284 |
| REACT\_TAT-MEDIATED ELONGATION OF THE HIV-1 TRANSCRIPT | 40 | 0.87234396 | 0.9452085 |
| WIP\_HS\_EICOSANOID\_SYNTHESIS | 19 | 0.88310724 | 0.9452962 |
| REACT\_CDO IN MYOGENESIS | 29 | 0.8738613 | 0.9470045 |
| WIP\_HS\_DIURNALLY\_REGULATED\_GENES\_WITH\_CIRCADIAN\_ORTHOLOGS | 48 | 0.8625206 | 0.9471884 |
| BIOC\_TELPATHWAY | 16 | 0.86018157 | 0.9472389 |
| REACT\_PHASE II CONJUGATION | 64 | 0.87264 | 0.94731104 |
| REACT\_FORMATION OF HIV-1 ELONGATION COMPLEX CONTAINING HIV-1 TAT | 40 | 0.86884123 | 0.94825786 |
| REACT\_CD28 CO-STIMULATION | 29 | 0.86316264 | 0.94837743 |
| KEGG\_MINERAL ABSORPTION | 51 | 0.86515814 | 0.9490638 |
| KEGG\_MEASLES | 133 | 0.8604404 | 0.94938195 |
| NCI\_AR\_PATHWAY | 56 | 0.8636605 | 0.9499161 |
| REACT\_NF-KB ACTIVATION THROUGH FADD\_RIP-1 PATHWAY MEDIATED BY CASPASE-8 AND -10 | 16 | 0.86567324 | 0.9505013 |
| REACT\_N-GLYCAN ANTENNAE ELONGATION | 15 | 0.8667167 | 0.95077837 |
| KEGG\_GLYCOLYSIS \_ GLUCONEOGENESIS | 61 | 0.8420548 | 0.9539457 |
| KEGG\_MATURITY ONSET DIABETES OF THE YOUNG | 25 | 0.8423355 | 0.9559582 |
| KEGG\_N-GLYCAN BIOSYNTHESIS | 49 | 0.8395467 | 0.9569094 |
| REACT\_DESTABILIZATION OF MRNA BY TRISTETRAPROLIN (TTP) | 16 | 0.8454201 | 0.9569981 |
| KEGG\_GLYCEROLIPID METABOLISM | 49 | 0.8424757 | 0.95829844 |
| REACT\_HOST INTERACTIONS OF HIV FACTORS | 124 | 0.83763254 | 0.95849586 |
| BIOC\_IL6PATHWAY | 21 | 0.83589065 | 0.95957726 |
| REACT\_TRANSPORT OF GLUCOSE AND OTHER SUGARS, BILE SALTS AND ORGANIC ACIDS, METAL IONS AND AMINE COMPOUNDS | 96 | 0.8454443 | 0.95963544 |
| REACT\_BIOSYNTHESIS OF AMINE AND PEPTIDE HORMONES | 19 | 0.8513291 | 0.95986617 |
| REACT\_METABOLISM OF HORMONES | 19 | 0.8499876 | 0.960169 |
| BIOC\_PAR1PATHWAY | 19 | 0.8523073 | 0.9603624 |
| REACT\_FACTORS INVOLVED IN MEGAKARYOCYTE DEVELOPMENT AND PLATELET PRODUCTION | 137 | 0.8425011 | 0.96090674 |
| KEGG\_ETHER LIPID METABOLISM | 34 | 0.8327149 | 0.9612754 |
| REACT\_TRIGLYCERIDE BIOSYNTHESIS | 33 | 0.8458436 | 0.96136993 |
| REACT\_ACTIVATION OF APC\_C AND APC\_C\_CDC20 MEDIATED DEGRADATION OF MITOTIC PROTEINS | 69 | 0.8468221 | 0.961832 |
| NCI\_NFAT\_TFPATHWAY | 48 | 0.8479211 | 0.9621069 |
| REACT\_MRNA CAPPING | 28 | 0.85273045 | 0.9621651 |
| KEGG\_BUTANOATE METABOLISM | 28 | 0.83314663 | 0.962928 |
| REACT\_APC\_C\_CDC20 MEDIATED DEGRADATION OF MITOTIC PROTEINS | 68 | 0.8299771 | 0.9643938 |
| REACT\_G1\_S DNA DAMAGE CHECKPOINTS | 59 | 0.82394296 | 0.9744948 |
| BIOC\_MPRPATHWAY | 22 | 0.82081133 | 0.9782566 |
| NCI\_FOXM1PATHWAY | 41 | 0.81629014 | 0.9847933 |
| KEGG\_PROXIMAL TUBULE BICARBONATE RECLAMATION | 23 | 0.8129189 | 0.9862656 |
| BIOC\_GLEEVECPATHWAY | 22 | 0.81121105 | 0.9868956 |
| KEGG\_INOSITOL PHOSPHATE METABOLISM | 57 | 0.81384677 | 0.9870935 |
| REACT\_JNK (C-JUN KINASES) PHOSPHORYLATION AND ACTIVATION MEDIATED BY ACTIVATED HUMAN TAK1 | 20 | 0.8063102 | 0.9936346 |
| WIP\_HS\_CHOLESTEROL\_BIOSYNTHESIS | 16 | 0.5488753 | 0.997302 |
| REACT\_RESPIRATORY ELECTRON TRANSPORT, ATP SYNTHESIS BY CHEMIOSMOTIC COUPLING, AND HEAT PRODUCTION BY UNCOUPLING PROTEINS. | 80 | 0.531929 | 0.99750364 |
| WIP\_HS\_ELECTRON\_TRANSPORT\_CHAIN | 89 | 0.556697 | 0.99807763 |
| BIOC\_NKCELLSPATHWAY | 20 | 0.56076694 | 0.9994543 |
| BIOC\_SPRYPATHWAY | 18 | 0.37152034 | 0.9999418 |
| BIOC\_CALCINEURINPATHWAY | 18 | 0.80025905 | 1 |
| REACT\_CREB PHOSPHORYLATION THROUGH THE ACTIVATION OF CAMKII | 15 | 0.79995614 | 1 |
| WIP\_HS\_FLUOROPYRIMIDINE\_ACTIVITY | 32 | 0.7898295 | 1 |
| KEGG\_METABOLISM OF XENOBIOTICS BY CYTOCHROME P450 | 74 | 0.78537434 | 1 |
| REACT\_CDC20\_PHOSPHO-APC\_C MEDIATED DEGRADATION OF CYCLIN A | 68 | 0.7788632 | 1 |
| REACT\_RNA POLYMERASE III ABORTIVE AND RETRACTIVE INITIATION | 29 | 0.77799255 | 1 |
| NCI\_CXCR3PATHWAY | 43 | 0.7748698 | 1 |
| REACT\_RNA POLYMERASE III TRANSCRIPTION | 29 | 0.7744814 | 1 |
| REACT\_RNA POLYMERASE III TRANSCRIPTION INITIATION | 29 | 0.7735506 | 1 |
| BIOC\_CCR5PATHWAY | 17 | 0.77262557 | 1 |
| REACT\_CD28 DEPENDENT PI3K\_AKT SIGNALING | 19 | 0.7670103 | 1 |
| NCI\_TRAIL\_PATHWAY | 28 | 0.76303 | 1 |
| WIP\_HS\_B\_CELL\_RECEPTOR\_SIGNALING\_PATHWAY | 93 | 0.7620933 | 1 |
| REACT\_ENERGY DEPENDENT REGULATION OF MTOR BY LKB1-AMPK | 16 | 0.7616884 | 1 |
| KEGG\_FATTY ACID ELONGATION | 23 | 0.76138115 | 1 |
| REACT\_CYCLIN E ASSOCIATED EVENTS DURING G1\_S TRANSITION | 62 | 0.75542486 | 1 |
| REACT\_FORMATION OF THE EARLY ELONGATION COMPLEX | 32 | 0.7540154 | 1 |
| REACT\_APOPTOTIC EXECUTION PHASE | 51 | 0.75224215 | 1 |
| REACT\_PLATELET CALCIUM HOMEOSTASIS | 19 | 0.7519733 | 1 |
| NCI\_NFAT\_3PATHWAY | 53 | 0.7513665 | 1 |
| KEGG\_OTHER GLYCAN DEGRADATION | 17 | 0.75088304 | 1 |
| WIP\_HS\_BIOGENIC\_AMINE\_SYNTHESIS | 15 | 0.75057125 | 1 |
| REACT\_METABOLISM OF VITAMINS AND COFACTORS | 57 | 0.7501392 | 1 |
| REACT\_CYCLIN A\_CDK2-ASSOCIATED EVENTS AT S PHASE ENTRY | 63 | 0.7491626 | 1 |
| REACT\_METABOLISM OF NUCLEOTIDES | 74 | 0.7489306 | 1 |
| REACT\_INTERLEUKIN-3, 5 AND GM-CSF SIGNALING | 50 | 0.744912 | 1 |
| WIP\_HS\_RNA\_POLYMERASE\_II\_TRANSCRIPTION | 19 | 0.7446348 | 1 |
| BIOC\_CTLA4PATHWAY | 17 | 0.7444379 | 1 |
| WIP\_HS\_FACTORS\_INVOLVED\_IN\_MEGAKARYOCYTE\_DEVELOPMENT\_AND\_PLATELET\_PRODUCTION | 25 | 0.7443581 | 1 |
| WIP\_HS\_INTEGRATED\_BREAST\_CANCER\_PATHWAY | 148 | 0.74331635 | 1 |
| REACT\_FORMATION OF THE HIV-1 EARLY ELONGATION COMPLEX | 32 | 0.7413008 | 1 |
| REACT\_REGULATION OF MRNA STABILITY BY PROTEINS THAT BIND AU-RICH ELEMENTS | 85 | 0.7381587 | 1 |
| REACT\_METABOLISM OF CARBOHYDRATES | 122 | 0.73759425 | 1 |
| REACT\_METAL ION SLC TRANSPORTERS | 25 | 0.7364327 | 1 |
| REACT\_TRANSPORT TO THE GOLGI AND SUBSEQUENT MODIFICATION | 36 | 0.7339492 | 1 |
| BIOC\_FCER1PATHWAY | 37 | 0.7316163 | 1 |
| REACT\_FATTY ACYL-COA BIOSYNTHESIS | 18 | 0.7301384 | 1 |
| REACT\_DESTABILIZATION OF MRNA BY BUTYRATE RESPONSE FACTOR 1 (BRF1) | 16 | 0.72989976 | 1 |
| BIOC\_G1PATHWAY | 24 | 0.7254205 | 1 |
| KEGG\_PROTEIN PROCESSING IN ENDOPLASMIC RETICULUM | 164 | 0.7250282 | 1 |
| KEGG\_PRIMARY IMMUNODEFICIENCY | 35 | 0.7250219 | 1 |
| NCI\_CD40\_PATHWAY | 30 | 0.72248936 | 1 |
| REACT\_P53-DEPENDENT G1\_S DNA DAMAGE CHECKPOINT | 56 | 0.71879375 | 1 |
| REACT\_P53-DEPENDENT G1 DNA DAMAGE RESPONSE | 56 | 0.71106374 | 1 |
| BIOC\_IL12PATHWAY | 20 | 0.7090475 | 1 |
| KEGG\_T CELL RECEPTOR SIGNALING PATHWAY | 106 | 0.70860654 | 1 |
| NCI\_P53REGULATIONPATHWAY | 57 | 0.7057207 | 1 |
| REACT\_UNBLOCKING OF NMDA RECEPTOR, GLUTAMATE BINDING AND ACTIVATION | 15 | 0.70570785 | 1 |
| KEGG\_NICOTINATE AND NICOTINAMIDE METABOLISM | 24 | 0.70453036 | 1 |
| REACT\_APC\_C\_CDH1 MEDIATED DEGRADATION OF CDC20 AND OTHER APC\_C\_CDH1 TARGETED PROTEINS IN LATE MITOSIS\_EARLY G1 | 68 | 0.70098805 | 1 |
| BIOC\_PROTEASOMEPATHWAY | 20 | 0.6990378 | 1 |
| KEGG\_CARBOHYDRATE DIGESTION AND ABSORPTION | 38 | 0.6968642 | 1 |
| KEGG\_PROGESTERONE-MEDIATED OOCYTE MATURATION | 86 | 0.68589526 | 1 |
| WIP\_HS\_SREBP\_SIGNALLING | 23 | 0.6846211 | 1 |
| NCI\_AURORA\_A\_PATHWAY | 30 | 0.6843209 | 1 |
| WIP\_HS\_TFS\_REGULATE\_MIRNAS\_RELATED\_TO\_CARDIAC\_HYPERTROPHY | 15 | 0.6843038 | 1 |
| BIOC\_TCRPATHWAY | 42 | 0.68344927 | 1 |
| BIOC\_IGF1MTORPATHWAY | 19 | 0.68343276 | 1 |
| BIOC\_TPOPATHWAY | 22 | 0.6811381 | 1 |
| REACT\_CITRIC ACID CYCLE (TCA CYCLE) | 19 | 0.6804265 | 1 |
| WIP\_HS\_TAMOXIFEN\_METABOLISM | 19 | 0.679555 | 1 |
| REACT\_APC\_C\_CDC20 MEDIATED DEGRADATION OF SECURIN | 63 | 0.6756876 | 1 |
| REACT\_TRANSPORT OF INORGANIC CATIONS\_ANIONS AND AMINO ACIDS\_OLIGOPEPTIDES | 92 | 0.675442 | 1 |
| REACT\_SCF(SKP2)-MEDIATED DEGRADATION OF P27\_P21 | 55 | 0.6720455 | 1 |
| WIP\_HS\_AMPK\_SIGNALING | 66 | 0.66023475 | 1 |
| BIOC\_ARFPATHWAY | 16 | 0.65473735 | 1 |
| KEGG\_BIOSYNTHESIS OF UNSATURATED FATTY ACIDS | 21 | 0.65039635 | 1 |
| KEGG\_CYSTEINE AND METHIONINE METABOLISM | 35 | 0.6495496 | 1 |
| WIP\_HS\_INTERFERON\_ALPHA-BETA\_SIGNALING | 24 | 0.6456023 | 1 |
| WIP\_HS\_GLYCOGEN\_METABOLISM | 36 | 0.6360382 | 1 |
| NCI\_P38ALPHABETAPATHWAY | 30 | 0.6322348 | 1 |
| REACT\_SIGNALLING TO P38 VIA RIT AND RIN | 15 | 0.62740105 | 1 |
| REACT\_CGMP EFFECTS | 21 | 0.6270971 | 1 |
| KEGG\_VITAMIN DIGESTION AND ABSORPTION | 24 | 0.6263575 | 1 |
| BIOC\_CHREBPPATHWAY | 16 | 0.6163224 | 1 |
| KEGG\_TERPENOID BACKBONE BIOSYNTHESIS | 15 | 0.61418086 | 1 |
| REACT\_ZINC TRANSPORTERS | 17 | 0.6113523 | 1 |
| BIOC\_CREBPATHWAY | 26 | 0.6099647 | 1 |
| KEGG\_ALANINE, ASPARTATE AND GLUTAMATE METABOLISM | 32 | 0.6076208 | 1 |
| REACT\_P53-INDEPENDENT DNA DAMAGE RESPONSE | 51 | 0.5882721 | 1 |
| REACT\_P53-INDEPENDENT G1\_S DNA DAMAGE CHECKPOINT | 51 | 0.5877525 | 1 |
| REACT\_UBIQUITIN MEDIATED DEGRADATION OF PHOSPHORYLATED CDC25A | 51 | 0.5865871 | 1 |
| REACT\_AUTODEGRADATION OF CDH1 BY CDH1\_APC\_C | 59 | 0.58478725 | 1 |
| BIOC\_NDKDYNAMINPATHWAY | 19 | 0.57469046 | 1 |
| REACT\_PROLONGED ERK ACTIVATION EVENTS | 18 | 0.5703706 | 1 |
| REACT\_RESPIRATORY ELECTRON TRANSPORT | 64 | 0.5653716 | 1 |
| NCI\_CD8TCRPATHWAY | 52 | 0.46953848 | 1 |

**Gene sets that are downregulated by plant stanol esters in the jejunum**

|  |  |  |  |
| --- | --- | --- | --- |
| NAME | SIZE | NES | FDR q-val |
| REACT\_TCR SIGNALING | 64 | -2.7842674 | 0 |
| REACT\_GENERATION OF SECOND MESSENGER MOLECULES | 33 | -2.7128708 | 0 |
| REACT\_PHOSPHORYLATION OF CD3 AND TCR ZETA CHAINS | 22 | -2.6339285 | 0 |
| REACT\_DOWNSTREAM TCR SIGNALING | 47 | -2.6302853 | 0 |
| REACT\_TRANSLOCATION OF ZAP-70 TO IMMUNOLOGICAL SYNAPSE | 20 | -2.5847416 | 0 |
| REACT\_CAP-DEPENDENT TRANSLATION INITIATION | 97 | -2.55525 | 0 |
| KEGG\_ANTIGEN PROCESSING AND PRESENTATION | 67 | -2.5460722 | 0 |
| REACT\_3 -UTR-MEDIATED TRANSLATIONAL REGULATION | 89 | -2.5451689 | 0 |
| REACT\_L13A-MEDIATED TRANSLATIONAL SILENCING OF CERULOPLASMIN EXPRESSION | 89 | -2.5269725 | 0 |
| REACT\_PD-1 SIGNALING | 25 | -2.5064895 | 0 |
| REACT\_GTP HYDROLYSIS AND JOINING OF THE 60S RIBOSOMAL SUBUNIT | 90 | -2.4936123 | 0 |
| REACT\_EUKARYOTIC TRANSLATION INITIATION | 97 | -2.483816 | 0 |
| KEGG\_SYSTEMIC LUPUS ERYTHEMATOSUS | 115 | -2.435714 | 0 |
| REACT\_TRANSLATION INITIATION COMPLEX FORMATION | 47 | -2.4325268 | 0 |
| REACT\_RIBOSOMAL SCANNING AND START CODON RECOGNITION | 47 | -2.4179363 | 0 |
| REACT\_TRANSLATION | 104 | -2.4048502 | 0 |
| REACT\_FORMATION OF A POOL OF FREE 40S SUBUNITS | 80 | -2.3954482 | 0 |
| REACT\_INSULIN SYNTHESIS AND PROCESSING | 114 | -2.3937945 | 0 |
| REACT\_FORMATION OF THE TERNARY COMPLEX, AND SUBSEQUENTLY, THE 43S COMPLEX | 41 | -2.389848 | 0 |
| REACT\_ACTIVATION OF THE MRNA UPON BINDING OF THE CAP-BINDING COMPLEX AND EIFS, AND SUBSEQUENT BINDING TO 43S | 48 | -2.389682 | 0 |
| KEGG\_STAPHYLOCOCCUS AUREUS INFECTION | 47 | -2.3645003 | 0 |
| KEGG\_RIBOSOME | 75 | -2.3644009 | 0 |
| REACT\_COSTIMULATION BY THE CD28 FAMILY | 66 | -2.361677 | 0 |
| REACT\_METABOLISM OF PROTEINS | 278 | -2.3371062 | 0 |
| WIP\_HS\_TCR\_SIGNALING | 22 | -2.3302045 | 0 |
| KEGG\_INTESTINAL IMMUNE NETWORK FOR IGA PRODUCTION | 46 | -2.3296049 | 0 |
| KEGG\_PROTEIN PROCESSING IN ENDOPLASMIC RETICULUM | 164 | -2.3262846 | 0 |
| NCI\_CD8TCRPATHWAY | 52 | -2.304063 | 0 |
| REACT\_NONSENSE-MEDIATED DECAY | 93 | -2.293876 | 0 |
| REACT\_NONSENSE MEDIATED DECAY ENHANCED BY THE EXON JUNCTION COMPLEX | 93 | -2.2839866 | 6.44E-05 |
| REACT\_PEPTIDE CHAIN ELONGATION | 71 | -2.2755551 | 1.20E-04 |
| REACT\_IMMUNOREGULATORY INTERACTIONS BETWEEN A LYMPHOID AND A NON-LYMPHOID CELL | 67 | -2.2526348 | 1.71E-04 |
| REACT\_VIRAL MRNA TRANSLATION | 69 | -2.2379568 | 2.06E-04 |
| WIP\_HS\_CYTOPLASMIC\_RIBOSOMAL\_PROTEINS | 75 | -2.2421746 | 2.12E-04 |
| REACT\_NONSENSE MEDIATED DECAY INDEPENDENT OF THE EXON JUNCTION COMPLEX | 76 | -2.251517 | 2.19E-04 |
| REACT\_EUKARYOTIC TRANSLATION TERMINATION | 71 | -2.2167008 | 2.74E-04 |
| KEGG\_T CELL RECEPTOR SIGNALING PATHWAY | 106 | -2.2172482 | 2.81E-04 |
| REACT\_NEGATIVE REGULATORS OF RIG-I\_MDA5 SIGNALING | 34 | -2.219321 | 2.88E-04 |
| REACT\_INFLUENZA VIRAL RNA TRANSCRIPTION AND REPLICATION | 69 | -2.2215464 | 2.96E-04 |
| REACT\_METABOLISM OF MRNA | 202 | -2.2254634 | 3.04E-04 |
| KEGG\_GRAFT-VERSUS-HOST DISEASE | 38 | -2.1901977 | 3.57E-04 |
| REACT\_METABOLISM OF RNA | 221 | -2.1771274 | 5.50E-04 |
| REACT\_REGULATION OF GENE EXPRESSION IN BETA CELLS | 83 | -2.180029 | 5.63E-04 |
| REACT\_MITOTIC PROMETAPHASE | 101 | -2.1566443 | 6.61E-04 |
| REACT\_M PHASE | 105 | -2.135072 | 8.90E-04 |
| REACT\_DNA REPLICATION | 204 | -2.1301587 | 0.0011093 |
| BIOC\_CTLA4PATHWAY | 17 | -2.1300561 | 0.0011263 |
| WIP\_HS\_ANDROGEN\_RECEPTOR | 87 | -2.1237693 | 0.0012572 |
| WIP\_HS\_T\_CELL\_RECEPTOR\_SIGNALING\_PATHWAY | 133 | -2.1051595 | 0.0018258 |
| REACT\_EUKARYOTIC TRANSLATION ELONGATION | 74 | -2.103858 | 0.0018987 |
| NCI\_TCR\_PATHWAY | 63 | -2.0944188 | 0.0020359 |
| WIP\_HS\_SIGNALING\_BY\_INSULIN\_RECEPTOR | 19 | -2.0951722 | 0.0020396 |
| WIP\_HS\_PROTEASOME\_DEGRADATION | 63 | -2.0787523 | 0.0023075 |
| REACT\_INTERFERON GAMMA SIGNALING | 69 | -2.0676367 | 0.0024216 |
| REACT\_MEIOTIC RECOMBINATION | 68 | -2.0693736 | 0.0024665 |
| REACT\_MITOTIC M-M\_G1 PHASES | 182 | -2.062092 | 0.0025288 |
| REACT\_ADAPTIVE IMMUNITY SIGNALING | 406 | -2.0621781 | 0.0025740 |
| KEGG\_PHAGOSOME | 140 | -2.0539527 | 0.0028336 |
| REACT\_ORC1 REMOVAL FROM CHROMATIN | 69 | -2.0263739 | 0.0034725 |
| REACT\_HOST INTERACTIONS OF HIV FACTORS | 124 | -2.0155544 | 0.0040259 |
| REACT\_REGULATION OF BETA-CELL DEVELOPMENT | 93 | -2.014027 | 0.0040431 |
| NCI\_HIVNEFPATHWAY | 35 | -2.014104 | 0.0041094 |
| REACT\_ASPARAGINE N-LINKED GLYCOSYLATION | 85 | -2.0069985 | 0.0041109 |
| KEGG\_ALLOGRAFT REJECTION | 35 | -2.0086465 | 0.0041194 |
| REACT\_NEPHRIN INTERACTIONS | 22 | -2.0101278 | 0.0041258 |
| BIOC\_HIVNEFPATHWAY | 52 | -1.9947405 | 0.0047546 |
| REACT\_CYCLIN E ASSOCIATED EVENTS DURING G1\_S TRANSITION | 62 | -1.9958225 | 0.0048267 |
| REACT\_SWITCHING OF ORIGINS TO A POST-REPLICATIVE STATE | 69 | -1.9888705 | 0.0048472 |
| KEGG\_PRIMARY IMMUNODEFICIENCY | 35 | -1.9823295 | 0.0052518 |
| REACT\_REGULATION OF DNA REPLICATION | 71 | -1.9771252 | 0.0053434 |
| KEGG\_PRION DISEASES | 36 | -1.981551 | 0.0053870 |
| WIP\_HS\_TGF\_BETA\_SIGNALING\_PATHWAY\_NETPATH | 117 | -1.9791789 | 0.0054187 |
| WIP\_HS\_EPITHELIUM\_TARBASE | 268 | -1.9633797 | 0.0062888 |
| REACT\_REMOVAL OF LICENSING FACTORS FROM ORIGINS | 71 | -1.9601609 | 0.0065274 |
| BIOC\_LAIRPATHWAY | 16 | -1.954688 | 0.0072012 |
| REACT\_CELL CYCLE CHECKPOINTS | 116 | -1.9530705 | 0.0072760 |
| NCI\_CASPASE\_PATHWAY | 50 | -1.9488778 | 0.0075158 |
| REACT\_CITRIC ACID CYCLE (TCA CYCLE) | 19 | -1.9423927 | 0.0076216 |
| REACT\_CHROMOSOME MAINTENANCE | 86 | -1.9450915 | 0.0076259 |
| BIOC\_CSKPATHWAY | 21 | -1.9461458 | 0.0076527 |
| BIOC\_FASPATHWAY | 27 | -1.9414146 | 0.0076627 |
| REACT\_SCF(SKP2)-MEDIATED DEGRADATION OF P27\_P21 | 55 | -1.939627 | 0.0077504 |
| REACT\_PREFOLDIN MEDIATED TRANSFER OF SUBSTRATE TO CCT\_TRIC | 25 | -1.933732 | 0.0081941 |
| REACT\_DEPOSITION OF NEW CENPA-CONTAINING NUCLEOSOMES AT THE CENTROMERE | 56 | -1.9298974 | 0.0082820 |
| NCI\_AP1\_PATHWAY | 69 | -1.9337924 | 0.0082929 |
| REACT\_NUCLEOSOME ASSEMBLY | 56 | -1.9307071 | 0.0083356 |
| WIP\_HS\_IMMUNOREGULATORY\_INTERACTIONS\_BETWEEN\_A\_LYMPHOID\_AND\_A\_NON-LYMPHOID\_CELL | 16 | -1.9251547 | 0.0083741 |
| WIP\_HS\_DIURNALLY\_REGULATED\_GENES\_WITH\_CIRCADIAN\_ORTHOLOGS | 48 | -1.9273775 | 0.0083761 |
| WIP\_HS\_EBV\_LMP1\_SIGNALING | 22 | -1.9242061 | 0.0084031 |
| KEGG\_VIRAL MYOCARDITIS | 68 | -1.9262896 | 0.0084279 |
| BIOC\_IL7PATHWAY | 16 | -1.9209546 | 0.0085805 |
| WIP\_HS\_FAS\_PATHWAY\_AND\_STRESS\_INDUCTION\_OF\_HSP\_REGULATION | 38 | -1.920987 | 0.0086748 |
| REACT\_HIV INFECTION | 185 | -1.9171771 | 0.0088615 |
| BIOC\_AMIPATHWAY | 21 | -1.917564 | 0.0088777 |
| BIOC\_DEATHPATHWAY | 32 | -1.9141177 | 0.0090519 |
| NCI\_BARD1PATHWAY | 29 | -1.9087899 | 0.0095138 |
| KEGG\_CELL ADHESION MOLECULES (CAMS) | 131 | -1.9039254 | 0.0099955 |
| NCI\_MYC\_PATHWAY | 22 | -1.9019222 | 0.0101368 |
| REACT\_MITOTIC G1-G1\_S PHASES | 110 | -1.8995363 | 0.0103119 |
| REACT\_DIABETES PATHWAYS | 328 | -1.8973919 | 0.0105052 |
| KEGG\_PATHOGENIC ESCHERICHIA COLI INFECTION | 52 | -1.8907917 | 0.0110540 |
| NCI\_TGFBRPATHWAY | 54 | -1.8863009 | 0.0114549 |
| WIP\_HS\_TRANSLATION\_FACTORS | 48 | -1.8853661 | 0.0114688 |
| NCI\_P73PATHWAY | 72 | -1.883953 | 0.0114996 |
| REACT\_COOPERATION OF PREFOLDIN AND TRIC\_CCT IN ACTIN AND TUBULIN FOLDING | 26 | -1.8817965 | 0.0115796 |
| KEGG\_RHEUMATOID ARTHRITIS | 87 | -1.8803602 | 0.0116265 |
| REACT\_TELOMERE MAINTENANCE | 65 | -1.8785378 | 0.0118064 |
| REACT\_S PHASE | 108 | -1.873125 | 0.0121421 |
| REACT\_CELL CYCLE, MITOTIC | 311 | -1.8740922 | 0.0121539 |
| NCI\_FOXOPATHWAY | 49 | -1.870385 | 0.0122075 |
| REACT\_DESTABILIZATION OF MRNA BY AUF1 (HNRNP D0) | 54 | -1.8709457 | 0.0122354 |
| REACT\_SYNTHESIS OF DNA | 94 | -1.8685075 | 0.0122770 |
| REACT\_AMYLOIDS | 71 | -1.8635806 | 0.0124761 |
| BIOC\_PROTEASOMEPATHWAY | 20 | -1.8600107 | 0.0124815 |
| KEGG\_SNARE INTERACTIONS IN VESICULAR TRANSPORT | 35 | -1.8606572 | 0.0125426 |
| REACT\_ASSEMBLY OF THE PRE-REPLICATIVE COMPLEX | 63 | -1.8583518 | 0.0125614 |
| REACT\_G1\_S TRANSITION | 99 | -1.8638831 | 0.0125707 |
| WIP\_HS\_TNF-ALPHA-NF-KB\_SIGNALING\_PATHWAY | 185 | -1.8606864 | 0.0126516 |
| REACT\_APOPTOSIS | 142 | -1.8520789 | 0.0133472 |
| REACT\_P53-DEPENDENT G1\_S DNA DAMAGE CHECKPOINT | 56 | -1.8492105 | 0.0136127 |
| WIP\_HS\_LEUKOCYTE\_TARBASE | 123 | -1.8477812 | 0.0136790 |
| WIP\_HS\_RIG-I-MDA5\_MEDIATED\_INDUCTION\_OF\_IFN-ALPHA-BETA\_PATHWAYS | 21 | -1.8457226 | 0.0138798 |
| REACT\_CYCLIN A\_CDK2-ASSOCIATED EVENTS AT S PHASE ENTRY | 63 | -1.8439052 | 0.0141556 |
| REACT\_TRAF3-DEPENDENT IRF ACTIVATION PATHWAY | 18 | -1.8425297 | 0.0142176 |
| REACT\_PACKAGING OF TELOMERE ENDS | 42 | -1.8385206 | 0.0142917 |
| BIOC\_CASPASEPATHWAY | 21 | -1.8396592 | 0.0143347 |
| WIP\_HS\_TCA\_CYCLE | 31 | -1.8363031 | 0.0144811 |
| REACT\_G1\_S DNA DAMAGE CHECKPOINTS | 59 | -1.8295165 | 0.0154561 |
| REACT\_P53-DEPENDENT G1 DNA DAMAGE RESPONSE | 56 | -1.8277172 | 0.0156923 |
| WIP\_HS\_IL-7\_SIGNALING\_PATHWAY | 26 | -1.8203634 | 0.0168564 |
| WIP\_HS\_LYMPHOCYTE\_TARBASE | 404 | -1.8208464 | 0.0169157 |
| REACT\_CD28 CO-STIMULATION | 29 | -1.8170772 | 0.0173611 |
| WIP\_HS\_MUSCLE\_CELL\_TARBASE | 326 | -1.8125937 | 0.0178232 |
| REACT\_REGULATION OF MITOTIC CELL CYCLE | 81 | -1.8043722 | 0.0188569 |
| REACT\_APC\_C-MEDIATED DEGRADATION OF CELL CYCLE PROTEINS | 81 | -1.8050677 | 0.0188887 |
| NCI\_E2F\_PATHWAY | 70 | -1.8018997 | 0.0191733 |
| REACT\_G2\_M CHECKPOINTS | 43 | -1.7951418 | 0.0201567 |
| NCI\_IL12\_STAT4PATHWAY | 32 | -1.7873021 | 0.0205628 |
| REACT\_ANTIGEN PRESENTATION\_ FOLDING, ASSEMBLY AND PEPTIDE LOADING OF CLASS I MHC | 25 | -1.7878684 | 0.0206168 |
| REACT\_GPVI-MEDIATED ACTIVATION CASCADE | 32 | -1.7893802 | 0.0206495 |
| KEGG\_TYPE I DIABETES MELLITUS | 41 | -1.7898797 | 0.0206938 |
| REACT\_MEIOTIC SYNAPSIS | 67 | -1.7906721 | 0.0207115 |
| NCI\_PI3KCIPATHWAY | 47 | -1.7880198 | 0.0207232 |
| KEGG\_RNA TRANSPORT | 137 | -1.775689 | 0.0230365 |
| REACT\_CD28 DEPENDENT PI3K\_AKT SIGNALING | 19 | -1.7712579 | 0.0237354 |
| REACT\_UBIQUITIN-DEPENDENT DEGRADATION OF CYCLIN D | 49 | -1.766661 | 0.0242046 |
| REACT\_CYTOKINE SIGNALING IN IMMUNE SYSTEM | 203 | -1.767501 | 0.0242117 |
| REACT\_UBIQUITIN-DEPENDENT DEGRADATION OF CYCLIN D1 | 49 | -1.7599629 | 0.0246223 |
| REACT\_REGULATION OF APC\_C ACTIVATORS BETWEEN G1\_S AND EARLY ANAPHASE | 76 | -1.7620531 | 0.0246992 |
| WIP\_HS\_B\_CELL\_RECEPTOR\_SIGNALING\_PATHWAY | 93 | -1.7627847 | 0.0247684 |
| REACT\_STABILIZATION OF P53 | 51 | -1.7599986 | 0.0247854 |
| REACT\_ACTIVATION OF APC\_C AND APC\_C\_CDC20 MEDIATED DEGRADATION OF MITOTIC PROTEINS | 69 | -1.7602918 | 0.0248778 |
| REACT\_AUTODEGRADATION OF THE E3 UBIQUITIN LIGASE COP1 | 50 | -1.7569433 | 0.0249640 |
| REACT\_CDC20\_PHOSPHO-APC\_C MEDIATED DEGRADATION OF CYCLIN A | 68 | -1.7573885 | 0.0250205 |
| REACT\_VPU MEDIATED DEGRADATION OF CD4 | 50 | -1.7483888 | 0.0266702 |
| BIOC\_RACCYCDPATHWAY | 22 | -1.7472049 | 0.0267692 |
| KEGG\_ASTHMA | 28 | -1.7420514 | 0.0280563 |
| REACT\_INTERFERON SIGNALING | 106 | -1.740381 | 0.0283844 |
| BIOC\_NFKBPATHWAY | 22 | -1.7351947 | 0.0291767 |
| NCI\_PDGFRBPATHWAY | 126 | -1.7356075 | 0.0292330 |
| REACT\_SYNTHESIS OF SUBSTRATES IN N-GLYCAN BIOSYTHESIS | 16 | -1.732897 | 0.0294402 |
| BIOC\_IGF1MTORPATHWAY | 19 | -1.7329501 | 0.0295880 |
| REACT\_REGULATION OF SIGNALING BY CBL | 22 | -1.7293481 | 0.0297690 |
| REACT\_RIG-I\_MDA5 MEDIATED INDUCTION OF IFN-ALPHA\_BETA PATHWAYS | 67 | -1.7309752 | 0.0297770 |
| REACT\_VIF-MEDIATED DEGRADATION OF APOBEC3G | 52 | -1.7300773 | 0.0297836 |
| REACT\_CDT1 ASSOCIATION WITH THE CDC6\_ORC\_ORIGIN COMPLEX | 57 | -1.7283152 | 0.0298420 |
| REACT\_CDK-MEDIATED PHOSPHORYLATION AND REMOVAL OF CDC6 | 49 | -1.7267152 | 0.0299797 |
| WIP\_HS\_INTEGRATED\_BREAST\_CANCER\_PATHWAY | 148 | -1.7262079 | 0.0299980 |
| REACT\_APC\_C\_CDC20 MEDIATED DEGRADATION OF MITOTIC PROTEINS | 68 | -1.7233094 | 0.0301939 |
| WIP\_HS\_G1\_TO\_S\_CELL\_CYCLE\_CONTROL | 68 | -1.7236655 | 0.0302107 |
| NCI\_SYNDECAN\_2\_PATHWAY | 33 | -1.7236961 | 0.0303456 |
| REACT\_TRANSCRIPTIONAL REGULATION OF WHITE ADIPOCYTE DIFFERENTIATION | 56 | -1.7240864 | 0.0303943 |
| KEGG\_CITRATE CYCLE (TCA CYCLE) | 30 | -1.7198011 | 0.0307492 |
| REACT\_SCF-BETA-TRCP MEDIATED DEGRADATION OF EMI1 | 53 | -1.7190727 | 0.0307906 |
| REACT\_TRANSPORT TO THE GOLGI AND SUBSEQUENT MODIFICATION | 36 | -1.7180576 | 0.0308967 |
| REACT\_INTERACTIONS OF VPR WITH HOST CELLULAR PROTEINS | 34 | -1.7173461 | 0.0309059 |
| NCI\_IL8CXCR2\_PATHWAY | 33 | -1.7140951 | 0.0313247 |
| BIOC\_PPARAPATHWAY | 50 | -1.7143399 | 0.0314509 |
| REACT\_APOPTOTIC CLEAVAGE OF CELLULAR PROTEINS | 37 | -1.7147769 | 0.0315153 |
| REACT\_GLUTATHIONE CONJUGATION | 24 | -1.7112465 | 0.0321136 |
| REACT\_APOPTOTIC EXECUTION PHASE | 51 | -1.708987 | 0.0324884 |
| BIOC\_TNFR1PATHWAY | 28 | -1.7072736 | 0.0325906 |
| WIP\_HS\_EGF\_RECEPTOR\_SIGNALING\_PATHWAY | 143 | -1.7077866 | 0.0326083 |
| REACT\_REGULATION OF MRNA STABILITY BY PROTEINS THAT BIND AU-RICH ELEMENTS | 85 | -1.7058785 | 0.0328798 |
| KEGG\_PROTEIN EXPORT | 21 | -1.6998718 | 0.0343555 |
| KEGG\_SPLICEOSOME | 120 | -1.6986877 | 0.0345799 |
| WIP\_HS\_APOPTOTIC\_EXECUTION\_PHASE | 34 | -1.696364 | 0.0351473 |
| NCI\_AVB3\_OPN\_PATHWAY | 31 | -1.6949124 | 0.0352401 |
| NCI\_PI3KPLCTRKPATHWAY | 35 | -1.6935076 | 0.0352943 |
| NCI\_EPHA2\_FWDPATHWAY | 17 | -1.6949892 | 0.0353992 |
| REACT\_ACTIVATION OF ATR IN RESPONSE TO REPLICATION STRESS | 37 | -1.6937554 | 0.0354226 |
| REACT\_POST-TRANSLATIONAL PROTEIN MODIFICATION | 122 | -1.691577 | 0.0357444 |
| KEGG\_HTLV-I INFECTION | 260 | -1.6904035 | 0.0359388 |
| NCI\_P53REGULATIONPATHWAY | 57 | -1.6818494 | 0.0384890 |
| REACT\_APC\_C\_CDH1 MEDIATED DEGRADATION OF CDC20 AND OTHER APC\_C\_CDH1 TARGETED PROTEINS IN LATE MITOSIS\_EARLY G1 | 68 | -1.6812025 | 0.0385410 |
| NCI\_SMAD2\_3PATHWAY | 19 | -1.6755605 | 0.0400557 |
| WIP\_HS\_IL-2\_SIGNALING\_PATHWAY | 36 | -1.6718608 | 0.0411114 |
| NCI\_CMYB\_PATHWAY | 82 | -1.6702152 | 0.0415022 |
| KEGG\_CELL CYCLE | 123 | -1.665398 | 0.0429475 |
| REACT\_REGULATION OF ACTIVATED PAK-2P34 BY PROTEASOME MEDIATED DEGRADATION | 48 | -1.6627896 | 0.0435856 |
| REACT\_COMPLEMENT CASCADE | 19 | -1.6609106 | 0.0440127 |
| NCI\_BMPPATHWAY | 41 | -1.6589949 | 0.0444671 |
| KEGG\_ENDOCYTOSIS | 200 | -1.6575677 | 0.0447855 |
| REACT\_CHAPERONIN-MEDIATED PROTEIN FOLDING | 47 | -1.6526381 | 0.0462066 |
| WIP\_HS\_SENESCENCE\_AND\_AUTOPHAGY | 97 | -1.6527703 | 0.0463967 |
| REACT\_SIGNALING BY WNT | 63 | -1.6509737 | 0.0466900 |
| NCI\_FANCONI\_PATHWAY | 45 | -1.6491129 | 0.0469089 |
| BIOC\_PTENPATHWAY | 16 | -1.6495442 | 0.0469866 |
| REACT\_FORMATION OF TUBULIN FOLDING INTERMEDIATES BY CCT\_TRIC | 19 | -1.6441555 | 0.0487773 |
| BIOC\_ACTINYPATHWAY | 18 | -1.6426996 | 0.0487801 |
| NCI\_PLK1\_PATHWAY | 44 | -1.6433187 | 0.0488116 |
| REACT\_DNA REPAIR | 104 | -1.6415869 | 0.0489903 |
| KEGG\_PERTUSSIS | 71 | -1.6408067 | 0.0490455 |
| REACT\_NUCLEOTIDE-LIKE (PURINERGIC) RECEPTORS | 15 | -1.6290517 | 0.0521285 |
| KEGG\_B CELL RECEPTOR SIGNALING PATHWAY | 73 | -1.6293371 | 0.0522236 |
| REACT\_APC\_C\_CDC20 MEDIATED DEGRADATION OF SECURIN | 63 | -1.627873 | 0.0523817 |
| REACT\_AUTODEGRADATION OF CDH1 BY CDH1\_APC\_C | 59 | -1.629532 | 0.0524126 |
| REACT\_INTERACTIONS OF REV WITH HOST CELLULAR PROTEINS | 32 | -1.6306992 | 0.0524141 |
| REACT\_ENDOSOMAL SORTING COMPLEX REQUIRED FOR TRANSPORT (ESCRT) | 26 | -1.6298946 | 0.0525440 |
| REACT\_DEGRADATION OF BETA-CATENIN BY THE DESTRUCTION COMPLEX | 63 | -1.6307737 | 0.0526408 |
| WIP\_HS\_COMPLEMENT\_ACTIVATION,\_CLASSICAL\_PATHWAY | 15 | -1.6311351 | 0.0527669 |
| REACT\_FRS2-MEDIATED ACTIVATION | 17 | -1.6205014 | 0.0547286 |
| BIOC\_NO1PATHWAY | 28 | -1.6208704 | 0.0548759 |
| KEGG\_RENIN-ANGIOTENSIN SYSTEM | 17 | -1.6188282 | 0.0549261 |
| BIOC\_INTEGRINPATHWAY | 35 | -1.6192075 | 0.0549741 |
| NCI\_P53DOWNSTREAMPATHWAY | 135 | -1.6209497 | 0.0551142 |
| NCI\_INTEGRIN2\_PATHWAY | 28 | -1.6172284 | 0.0553027 |
| REACT\_DNA REPLICATION PRE-INITIATION | 77 | -1.6144041 | 0.0563588 |
| REACT\_TRAF6 MEDIATED NF-KB ACTIVATION | 20 | -1.6113226 | 0.0575329 |
| REACT\_PROTEIN FOLDING | 52 | -1.6100764 | 0.0577471 |
| REACT\_SEMAPHORIN INTERACTIONS | 66 | -1.6071385 | 0.0586180 |
| REACT\_P53-INDEPENDENT G1\_S DNA DAMAGE CHECKPOINT | 51 | -1.6075953 | 0.0586491 |
| NCI\_ATR\_PATHWAY | 39 | -1.6058643 | 0.0589337 |
| REACT\_P53-INDEPENDENT DNA DAMAGE RESPONSE | 51 | -1.6047466 | 0.0591649 |
| REACT\_UBIQUITIN MEDIATED DEGRADATION OF PHOSPHORYLATED CDC25A | 51 | -1.6040059 | 0.0592029 |
| NCI\_NETRIN\_PATHWAY | 30 | -1.6018593 | 0.0598970 |
| NCI\_ERBB1\_DOWNSTREAM\_PATHWAY | 107 | -1.5993336 | 0.0608164 |
| KEGG\_PROTEASOME | 43 | -1.5976791 | 0.0612371 |
| KEGG\_GLUTATHIONE METABOLISM | 44 | -1.5911598 | 0.0629543 |
| REACT\_THE ROLE OF NEF IN HIV-1 REPLICATION AND DISEASE PATHOGENESIS | 28 | -1.5930822 | 0.0630753 |
| REACT\_MEMBRANE TRAFFICKING | 139 | -1.592467 | 0.0631264 |
| WIP\_HS\_NEURORANSMITTER\_RECEPTOR\_BINDING\_AND\_DOWNSTREAM\_TRANSMISSION\_IN\_THE\_POSTSYNAPTIC\_CELL | 17 | -1.5912176 | 0.063207 |
| WIP\_HS\_EUKARYOTIC\_TRANSCRIPTION\_INITIATION | 40 | -1.5901996 | 0.0632497 |
| NCI\_THROMBIN\_PAR1\_PATHWAY | 42 | -1.59137 | 0.0633937 |
| REACT\_M\_G1 TRANSITION | 77 | -1.5853184 | 0.0651804 |
| NCI\_CXCR4\_PATHWAY | 100 | -1.5847712 | 0.0652285 |
| REACT\_NUCLEAR IMPORT OF REV PROTEIN | 31 | -1.5827023 | 0.0659990 |
| NCI\_AR\_PATHWAY | 56 | -1.5816176 | 0.0661158 |
| NCI\_REELINPATHWAY | 28 | -1.5808228 | 0.0662182 |
| REACT\_CHEMOKINE RECEPTORS BIND CHEMOKINES | 53 | -1.5803381 | 0.0662296 |
| NCI\_AMB2\_NEUTROPHILS\_PATHWAY | 41 | -1.5749427 | 0.0680902 |
| KEGG\_CHEMOKINE SIGNALING PATHWAY | 183 | -1.5740159 | 0.0683264 |
| NCI\_ANGIOPOIETINRECEPTOR\_PATHWAY | 48 | -1.5749708 | 0.0683533 |
| BIOC\_NO2IL12PATHWAY | 15 | -1.5751034 | 0.0685665 |
| WIP\_HS\_SIGNALING\_BY\_EGFR | 19 | -1.5710088 | 0.0696576 |
| WIP\_HS\_SQUAMOUS\_CELL\_TARBASE | 116 | -1.56708 | 0.0714694 |
| KEGG\_TGF-BETA SIGNALING PATHWAY | 83 | -1.5652022 | 0.0721886 |
| REACT\_MRNA SPLICING - MINOR PATHWAY | 42 | -1.5608706 | 0.0725775 |
| WIP\_HS\_RNA\_POLYMERASE\_II\_TRANSCRIPTION | 19 | -1.5639218 | 0.0726353 |
| KEGG\_COMPLEMENT AND COAGULATION CASCADES | 66 | -1.5609955 | 0.0727639 |
| REACT\_FANCONI ANEMIA PATHWAY | 22 | -1.5627986 | 0.0729502 |
| REACT\_HIV LIFE CYCLE | 100 | -1.561678 | 0.0729795 |
| KEGG\_CHAGAS DISEASE (AMERICAN TRYPANOSOMIASIS) | 101 | -1.5610875 | 0.0730272 |
| BIOC\_G1PATHWAY | 24 | -1.56198 | 0.0730574 |
| REACT\_REV-MEDIATED NUCLEAR EXPORT OF HIV-1 RNA | 30 | -1.5547165 | 0.0756474 |
| REACT\_PROLONGED ERK ACTIVATION EVENTS | 18 | -1.552507 | 0.0758195 |
| REACT\_SIGNALING BY EGFR | 51 | -1.5528793 | 0.0758843 |
| KEGG\_LEISHMANIASIS | 66 | -1.551641 | 0.0759605 |
| REACT\_DEADENYLATION-DEPENDENT MRNA DECAY | 43 | -1.5506822 | 0.0759941 |
| BIOC\_TCRPATHWAY | 42 | -1.5531031 | 0.0760047 |
| WIP\_HS\_CELL\_CYCLE | 89 | -1.5534368 | 0.0760843 |
| REACT\_INTERACTIONS OF THE IMMUNOGLOBULIN SUPERFAMILY (IGSF) MEMBER PROTEINS | 49 | -1.5508205 | 0.0761531 |
| KEGG\_HEMATOPOIETIC CELL LINEAGE | 83 | -1.5466926 | 0.0778225 |
| KEGG\_THYROID CANCER | 29 | -1.5453415 | 0.0782540 |
| NCI\_ATM\_PATHWAY | 34 | -1.5429411 | 0.0792500 |
| REACT\_INTERLEUKIN-3, 5 AND GM-CSF SIGNALING | 50 | -1.5419972 | 0.0794504 |
| REACT\_SEMA3A PAK DEPENDENT AXON REPULSION | 15 | -1.5384244 | 0.0805903 |
| REACT\_SIGNALING BY TGF BETA | 16 | -1.5388002 | 0.0806950 |
| NCI\_ECADHERIN\_NASCENTAJ\_PATHWAY | 38 | -1.5391452 | 0.0807731 |
| REACT\_LOSS OF PROTEINS REQUIRED FOR INTERPHASE MICROTUBULE ORGANIZATIONÂ FROM THE CENTROSOME | 58 | -1.5363171 | 0.0813971 |
| REACT\_DNA STRAND ELONGATION | 30 | -1.5357447 | 0.0814320 |
| REACT\_SIGNALING BY BMP | 23 | -1.527808 | 0.0855717 |
| NCI\_FOXM1PATHWAY | 41 | -1.5266157 | 0.0856423 |
| KEGG\_GLYOXYLATE AND DICARBOXYLATE METABOLISM | 18 | -1.5266751 | 0.0859123 |
| WIP\_HS\_NETRIN-1\_SIGNALING | 17 | -1.5248747 | 0.0863627 |
| REACT\_SIGNALING BY PDGF | 65 | -1.52032 | 0.0880256 |
| REACT\_PLATELET ACTIVATION TRIGGERS | 81 | -1.5212446 | 0.0880396 |
| REACT\_SHC EVENTS IN EGFR SIGNALING | 15 | -1.5206009 | 0.0881419 |
| BIOC\_CELLCYCLEPATHWAY | 22 | -1.5214118 | 0.0882384 |
| WIP\_HS\_REGULATION\_OF\_ACTIN\_CYTOSKELETON | 144 | -1.5172567 | 0.0894650 |
| REACT\_LOSS OF NLP FROM MITOTIC CENTROSOMES | 58 | -1.5159569 | 0.0897155 |
| NCI\_MYC\_ACTIVPATHWAY | 76 | -1.516125 | 0.0898493 |
| REACT\_PLATELET DEGRANULATION | 76 | -1.513171 | 0.0914374 |
| BIOC\_RHOPATHWAY | 30 | -1.5122114 | 0.0917426 |
| REACT\_RESPONSE TO ELEVATED PLATELET CYTOSOLIC CA2+ | 81 | -1.5115788 | 0.0918581 |
| WIP\_HS\_ASPARAGINE\_N-LINKED\_GLYCOSYLATION | 37 | -1.507815 | 0.0935625 |
| WIP\_HS\_COMPLEMENT\_AND\_COAGULATION\_CASCADES | 50 | -1.5081809 | 0.0936324 |
| KEGG\_REGULATION OF ACTIN CYTOSKELETON | 210 | -1.5065362 | 0.0940452 |
| NCI\_FRA\_PATHWAY | 35 | -1.5055962 | 0.0943663 |
| WIP\_HS\_CELL\_SURFACE\_INTERACTIONS\_AT\_THE\_VASCULAR\_WALL | 36 | -1.5046431 | 0.0946759 |
| WIP\_HS\_IL-5\_SIGNALING\_PATHWAY | 34 | -1.5032794 | 0.0947181 |
| REACT\_LATE PHASE OF HIV LIFE CYCLE | 89 | -1.503364 | 0.0949720 |
| REACT\_ACTIVATED AMPK STIMULATES FATTY-ACID OXIDATION IN MUSCLE | 16 | -1.5021363 | 0.0951841 |
| NCI\_LIS1PATHWAY | 31 | -1.5016924 | 0.0951904 |
| WIP\_HS\_INSULIN\_SYNTHESIS\_AND\_PROCESSING | 16 | -1.5034271 | 0.0952630 |
| REACT\_MTOR SIGNALLING | 26 | -1.5003784 | 0.0957227 |
| NCI\_INTEGRIN1\_PATHWAY | 66 | -1.4994717 | 0.0960493 |
| NCI\_SMAD2\_3NUCLEARPATHWAY | 81 | -1.4980078 | 0.0963590 |
| REACT\_P75NTR SIGNALS VIA NF-KB | 16 | -1.4981441 | 0.0965949 |
| KEGG\_TUBERCULOSIS | 170 | -1.4958034 | 0.0975290 |
| REACT\_PROCESSING OF CAPPED INTRONLESS PRE-MRNA | 23 | -1.494282 | 0.0982754 |
| NCI\_TOLL\_ENDOGENOUS\_PATHWAY | 26 | -1.4920373 | 0.0988515 |
| REACT\_REGULATION OF APOPTOSIS | 59 | -1.4930129 | 0.0988593 |
| WIP\_HS\_FATTY\_ACID\_BETA\_OXIDATION | 31 | -1.492231 | 0.0990616 |
| KEGG\_RNA POLYMERASE | 30 | -1.4902083 | 0.0998047 |
| NCI\_TELOMERASEPATHWAY | 66 | -1.4889473 | 0.1004902 |
| WIP\_HS\_CELL\_CYCLE\_CHECKPOINTS | 15 | -1.4823538 | 0.1043601 |
| NCI\_PI3KCIAKTPATHWAY | 34 | -1.4825833 | 0.1045329 |
| REACT\_PKB-MEDIATED EVENTS | 27 | -1.4812008 | 0.1048329 |
| WIP\_HS\_L1CAM\_INTERACTIONS | 23 | -1.479568 | 0.1057563 |
| KEGG\_VASOPRESSIN-REGULATED WATER REABSORPTION | 44 | -1.4766737 | 0.1072227 |
| REACT\_REGULATION OF ORNITHINE DECARBOXYLASE (ODC) | 49 | -1.4769915 | 0.1073401 |
| NCI\_AURORA\_B\_PATHWAY | 39 | -1.4747299 | 0.1075591 |
| NCI\_FAK\_PATHWAY | 57 | -1.4751633 | 0.1075970 |
| WIP\_HS\_IL-3\_SIGNALING\_PATHWAY | 45 | -1.475496 | 0.1076925 |
| REACT\_CIRCADIAN CLOCK | 26 | -1.4723372 | 0.1086309 |
| NCI\_THROMBIN\_PAR4\_PATHWAY | 15 | -1.4693466 | 0.1103729 |
| REACT\_CELL DEATH SIGNALLING VIA NRAGE, NRIF AND NADE | 64 | -1.4644312 | 0.1134994 |
| NCI\_VEGFR1\_PATHWAY | 28 | -1.4628186 | 0.1144047 |
| REACT\_KINESINS | 37 | -1.4607167 | 0.1156640 |
| KEGG\_DNA REPLICATION | 35 | -1.4593993 | 0.1163601 |
| BIOC\_VIPPATHWAY | 27 | -1.4587888 | 0.1165289 |
| KEGG\_N-GLYCAN BIOSYNTHESIS | 49 | -1.457586 | 0.1169933 |
| NCI\_IL2\_PI3KPATHWAY | 37 | -1.4559821 | 0.1177883 |
| NCI\_HDAC\_CLASSII\_PATHWAY | 34 | -1.45537 | 0.1179366 |
| REACT\_PROCESSING OF CAPPED INTRON-CONTAINING PRE-MRNA | 107 | -1.4533772 | 0.1193036 |
| WIP\_HS\_APOPTOSIS | 83 | -1.4513698 | 0.1205572 |
| WIP\_HS\_RNA\_POLYMERASE\_I,\_RNA\_POLYMERASE\_III,\_AND\_MITOCHONDRIAL\_TRANSCRIPTION | 24 | -1.4490206 | 0.1219924 |
| REACT\_VPR-MEDIATED NUCLEAR IMPORT OF PICS | 31 | -1.4480762 | 0.1224433 |
| WIP\_HS\_INTEGRIN\_CELL\_SURFACE\_INTERACTIONS | 15 | -1.4468018 | 0.1231087 |
| KEGG\_CHRONIC MYELOID LEUKEMIA | 73 | -1.4450668 | 0.1233526 |
| KEGG\_VIBRIO CHOLERAE INFECTION | 54 | -1.4459577 | 0.1234134 |
| KEGG\_BLADDER CANCER | 42 | -1.4452628 | 0.1236181 |
| REACT\_MRNA PROCESSING | 125 | -1.4439274 | 0.1239025 |
| REACT\_POST-ELONGATION PROCESSING OF INTRONLESS PRE-MRNA | 23 | -1.4400449 | 0.1267123 |
| REACT\_CYCLIN D ASSOCIATED EVENTS IN G1 | 19 | -1.4392364 | 0.1270540 |
| WIP\_HS\_DNA\_REPLICATION | 42 | -1.4351085 | 0.1299119 |
| REACT\_DOWN-STREAM SIGNAL TRANSDUCTION | 36 | -1.4351511 | 0.1302651 |
| KEGG\_NOD-LIKE RECEPTOR SIGNALING PATHWAY | 58 | -1.4322 | 0.1318879 |
| REACT\_CLASS I MHC MEDIATED ANTIGEN PROCESSING & PRESENTATION | 237 | -1.431183 | 0.1323973 |
| REACT\_ARMS-MEDIATED ACTIVATION | 17 | -1.4303329 | 0.132702 |
| KEGG\_ENDOMETRIAL CANCER | 52 | -1.424552 | 0.1367493 |
| NCI\_FCER1PATHWAY | 58 | -1.4247001 | 0.1370397 |
| REACT\_G1 PHASE | 19 | -1.4231986 | 0.1372935 |
| WIP\_HS\_ADIPOCYTE\_TARBASE | 17 | -1.42344 | 0.1374573 |
| KEGG\_BUTANOATE METABOLISM | 28 | -1.4210093 | 0.1386764 |
| REACT\_DARPP-32 EVENTS | 26 | -1.4171257 | 0.1412572 |
| REACT\_IRS-MEDIATED SIGNALLING | 79 | -1.4172404 | 0.1415763 |
| REACT\_HEMOSTASIS | 470 | -1.4154873 | 0.1420711 |
| BIOC\_AKTPATHWAY | 15 | -1.4137528 | 0.1432866 |
| NCI\_NOTCH\_PATHWAY | 59 | -1.4097307 | 0.1466122 |
| NCI\_AR\_NONGENOMIC\_PATHWAY | 30 | -1.4079468 | 0.1478356 |
| NCI\_INTEGRIN\_A4B1\_PATHWAY | 32 | -1.4068393 | 0.1484647 |
| WIP\_HS\_METABOLISM\_OF\_RNA | 17 | -1.4056377 | 0.1487716 |
| REACT\_IRS-RELATED EVENTS | 79 | -1.405908 | 0.1488902 |
| KEGG\_PROSTATE CANCER | 88 | -1.4047164 | 0.1492244 |
| BIOC\_CERAMIDEPATHWAY | 21 | -1.4036568 | 0.1495057 |
| REACT\_E2F MEDIATED REGULATION OF DNA REPLICATION | 26 | -1.40379 | 0.1497737 |
| REACT\_APC\_C\_CDC20 MEDIATED DEGRADATION OF CYCLIN B | 21 | -1.4026805 | 0.1500484 |
| KEGG\_PPAR SIGNALING PATHWAY | 68 | -1.402031 | 0.1503218 |
| KEGG\_OSTEOCLAST DIFFERENTIATION | 124 | -1.3994007 | 0.1524682 |
| KEGG\_AUTOIMMUNE THYROID DISEASE | 49 | -1.3971249 | 0.1543225 |
| BIOC\_TNFR2PATHWAY | 18 | -1.3956162 | 0.1555008 |
| NCI\_CERAMIDE\_PATHWAY | 45 | -1.3951032 | 0.1555818 |
| REACT\_DESTABILIZATION OF MRNA BY BUTYRATE RESPONSE FACTOR 1 (BRF1) | 16 | -1.3941201 | 0.1560185 |
| REACT\_SIGNALING BY INTERLEUKINS | 104 | -1.3925078 | 0.1561728 |
| WIP\_HS\_IL-6\_SIGNALING\_PATHWAY | 44 | -1.393456 | 0.1562096 |
| NCI\_VEGFR1\_2\_PATHWAY | 68 | -1.3927803 | 0.1563922 |
| WIP\_HS\_DNA\_DAMAGE\_RESPONSE\_(ONLY\_ATM\_DEPENDENT) | 86 | -1.3896959 | 0.157228 |
| REACT\_REGULATION OF GLUCOKINASE BY GLUCOKINASE REGULATORY PROTEIN | 29 | -1.3899002 | 0.1574479 |
| KEGG\_PYRIMIDINE METABOLISM | 94 | -1.3899043 | 0.1578623 |
| NRF2\_TARGETS | 61 | -1.3902941 | 0.1579571 |
| NCI\_BCR\_5PATHWAY | 66 | -1.3873357 | 0.1585692 |
| BIOC\_ALKPATHWAY | 31 | -1.3876873 | 0.1586971 |
| WIP\_HS\_METABOLISM\_OF\_WATER-SOLUBLE\_VITAMINS\_AND\_COFACTORS | 19 | -1.3860854 | 0.1594048 |
| NCI\_HIF1\_TFPATHWAY | 64 | -1.3844734 | 0.1605630 |
| BIOC\_RASPATHWAY | 21 | -1.3824272 | 0.1621716 |
| REACT\_TRAF6 MEDIATED INDUCTION OF NFKB AND MAP KINASES UPON TLR7\_8 OR 9 ACTIVATION | 73 | -1.3818362 | 0.1622934 |
| WIP\_HS\_GLUTATHIONE\_METABOLISM | 20 | -1.3796532 | 0.1640992 |
| REACT\_SIGNAL REGULATORY PROTEIN (SIRP) FAMILY INTERACTIONS | 16 | -1.3760422 | 0.1673897 |
| REACT\_ASSOCIATION OF TRIC\_CCT WITH TARGET PROTEINS DURING BIOSYNTHESIS | 29 | -1.3750927 | 0.1679734 |
| NCI\_RAC1\_REG\_PATHWAY | 38 | -1.3744323 | 0.1682525 |
| NCI\_ARF6DOWNSTREAMPATHWAY | 15 | -1.3737662 | 0.1683587 |
| REACT\_PYRUVATE METABOLISM AND CITRIC ACID (TCA) CYCLE | 40 | -1.3702747 | 0.1715751 |
| REACT\_NUCLEOTIDE EXCISION REPAIR | 49 | -1.3690522 | 0.1722861 |
| BIOC\_GSK3PATHWAY | 26 | -1.3643271 | 0.1766921 |
| NCI\_INTEGRIN\_A9B1\_PATHWAY | 24 | -1.3628013 | 0.1777338 |
| REACT\_MYD88 DEPENDENT CASCADE INITIATED ON ENDOSOME | 74 | -1.3620172 | 0.1780976 |
| KEGG\_MEASLES | 133 | -1.3573394 | 0.1793089 |
| NCI\_P38ALPHABETADOWNSTREAMPATHWAY | 38 | -1.3568906 | 0.1793516 |
| REACT\_PLATELET ACTIVATION | 238 | -1.3590002 | 0.1794026 |
| WIP\_HS\_FACTORS\_INVOLVED\_IN\_MEGAKARYOCYTE\_DEVELOPMENT\_AND\_PLATELET\_PRODUCTION | 25 | -1.3575838 | 0.1794960 |
| REACT\_ABORTIVE ELONGATION OF HIV-1 TRANSCRIPT IN THE ABSENCE OF TAT | 24 | -1.3579085 | 0.1796597 |
| REACT\_P75 NTR RECEPTOR-MEDIATED SIGNALLING | 86 | -1.3592578 | 0.1796633 |
| REACT\_CTLA4 INHIBITORY SIGNALING | 21 | -1.3581773 | 0.1798188 |
| WIP\_HS\_INFLAMMATORY\_RESPONSE\_PATHWAY | 32 | -1.3594965 | 0.1798288 |
| KEGG\_DRUG METABOLISM - OTHER ENZYMES | 46 | -1.3597406 | 0.1800204 |
| KEGG\_RIG-I-LIKE RECEPTOR SIGNALING PATHWAY | 70 | -1.3535229 | 0.1816675 |
| REACT\_ELONGATION ARREST AND RECOVERY | 31 | -1.3538162 | 0.1817846 |
| NCI\_ARF\_3PATHWAY | 19 | -1.354208 | 0.1818233 |
| BIOC\_ATMPATHWAY | 19 | -1.3525141 | 0.1823429 |
| WIP\_HS\_IL-1\_PATHWAY | 53 | -1.3514131 | 0.1830975 |
| REACT\_FORMATION AND MATURATION OF MRNA TRANSCRIPT | 152 | -1.350384 | 0.1833803 |
| REACT\_RHO GTPASE CYCLE | 122 | -1.350504 | 0.1836682 |
| WIP\_HS\_INTERFERON\_ALPHA-BETA\_SIGNALING | 24 | -1.3442475 | 0.1898687 |
| REACT\_TOLL LIKE RECEPTOR 7\_8 (TLR7\_8) CASCADE | 74 | -1.3428835 | 0.1909468 |
| KEGG\_FC GAMMA R-MEDIATED PHAGOCYTOSIS | 91 | -1.3424112 | 0.1910744 |
| REACT\_APC-CDC20 MEDIATED DEGRADATION OF NEK2A | 23 | -1.3416002 | 0.1915194 |
| REACT\_CENTROSOME MATURATION | 76 | -1.3388301 | 0.1927114 |
| NCI\_RB\_1PATHWAY | 64 | -1.3361334 | 0.1927991 |
| REACT\_PAUSING AND RECOVERY OF TAT-MEDIATED HIV-1 ELONGATION | 30 | -1.3398625 | 0.1928866 |
| NCI\_S1P\_S1P2\_PATHWAY | 24 | -1.339412 | 0.1929368 |
| WIP\_HS\_ADIPOGENESIS | 129 | -1.3370935 | 0.1929542 |
| REACT\_SIGNALING BY RHO GTPASES | 122 | -1.3389585 | 0.1930136 |
| REACT\_TAT-MEDIATED HIV-1 ELONGATION ARREST AND RECOVERY | 30 | -1.3381913 | 0.1930197 |
| REACT\_NRIF SIGNALS CELL DEATH FROM THE NUCLEUS | 16 | -1.3372523 | 0.1931711 |
| KEGG\_MALARIA | 49 | -1.3354383 | 0.1931945 |
| REACT\_RECRUITMENT OF MITOTIC CENTROSOME PROTEINS AND COMPLEXES | 76 | -1.3361601 | 0.1932234 |
| BIOC\_NKCELLSPATHWAY | 20 | -1.3349223 | 0.1933184 |
| REACT\_MRNA SPLICING | 103 | -1.3375431 | 0.1933479 |
| REACT\_HIV-1 ELONGATION ARREST AND RECOVERY | 31 | -1.3363132 | 0.1934682 |
| REACT\_MITOTIC G2-G2\_M PHASES | 90 | -1.3335232 | 0.1940320 |
| NCI\_RAC1\_PATHWAY | 53 | -1.3336744 | 0.1942742 |
| NCI\_ENDOTHELINPATHWAY | 62 | -1.3321795 | 0.1950391 |
| WIP\_HS\_METABOLISM\_OF\_CARBOHYDRATES | 20 | -1.3308597 | 0.1960322 |
| NCI\_S1P\_S1P1\_PATHWAY | 21 | -1.327934 | 0.1978966 |
| REACT\_PAUSING AND RECOVERY OF ELONGATION | 31 | -1.3279591 | 0.1983369 |
| NCI\_TXA2PATHWAY | 54 | -1.3282968 | 0.1983588 |
| REACT\_NF-KB ACTIVATION THROUGH FADD\_RIP-1 PATHWAY MEDIATED BY CASPASE-8 AND -10 | 16 | -1.3270892 | 0.1983846 |
| REACT\_DESTABILIZATION OF MRNA BY TRISTETRAPROLIN (TTP) | 16 | -1.3266145 | 0.1984582 |
| NCI\_MET\_PATHWAY | 76 | -1.3250791 | 0.1997571 |
| NCI\_ERBB1\_INTERNALIZATION\_PATHWAY | 38 | -1.3245848 | 0.1999475 |
| KEGG\_COLORECTAL CANCER | 62 | -1.3239793 | 0.2001228 |
| REACT\_G2\_M TRANSITION | 87 | -1.3228748 | 0.2010472 |
| BIOC\_ECMPATHWAY | 22 | -1.3204966 | 0.2014583 |
| REACT\_INTRINSIC PATHWAY | 16 | -1.3220502 | 0.2015538 |
| KEGG\_SALMONELLA INFECTION | 81 | -1.3210299 | 0.2017263 |
| WIP\_HS\_FOLATE\_METABOLISM | 65 | -1.3205745 | 0.2018315 |
| REACT\_MRNA SPLICING - MAJOR PATHWAY | 103 | -1.3213478 | 0.2018839 |
| NCI\_RETINOIC\_ACID\_PATHWAY | 27 | -1.3182164 | 0.2035666 |
| BIOC\_MITOCHONDRIAPATHWAY | 19 | -1.3165278 | 0.2050841 |
| NCI\_NFAT\_TFPATHWAY | 48 | -1.3155464 | 0.2058390 |
| KEGG\_INFLUENZA A | 166 | -1.3138247 | 0.2070625 |
| REACT\_SIGNAL AMPLIFICATION | 31 | -1.3133242 | 0.2071119 |
| KEGG\_PANCREATIC CANCER | 70 | -1.3138872 | 0.2074184 |
| BIOC\_TIDPATHWAY | 19 | -1.3109466 | 0.2084972 |
| NCI\_ILK\_PATHWAY | 44 | -1.3116422 | 0.2085900 |
| WIP\_HS\_MITOCHONDRIAL\_GENE\_EXPRESSION | 20 | -1.3110836 | 0.2087608 |
| WIP\_HS\_SREBP\_SIGNALLING | 23 | -1.3075457 | 0.2104992 |
| REACT\_G ALPHA (12\_13) SIGNALLING EVENTS | 77 | -1.3069738 | 0.2107584 |
| BIOC\_RAC1PATHWAY | 22 | -1.3080126 | 0.2108302 |
| REACT\_SEMA4D IN SEMAPHORIN SIGNALING | 29 | -1.3057197 | 0.2109280 |
| REACT\_FORMATION OF PLATELET PLUG | 256 | -1.3075596 | 0.2109430 |
| REACT\_TOLL LIKE RECEPTOR 9 (TLR9) CASCADE | 76 | -1.3064327 | 0.2109500 |
| WIP\_HS\_NUCLEOTIDE\_METABOLISM | 18 | -1.3052771 | 0.2110321 |
| KEGG\_RIBOSOME BIOGENESIS IN EUKARYOTES | 72 | -1.3059816 | 0.2110563 |
| KEGG\_UBIQUITIN MEDIATED PROTEOLYSIS | 133 | -1.3085192 | 0.2110864 |
| WIP\_HS\_OXIDATIVE\_PHOSPHORYLATION | 52 | -1.3080605 | 0.2112373 |
| WIP\_HS\_BLOOD\_CLOTTING\_CASCADE | 21 | -1.3040491 | 0.2120022 |
| NCI\_IL2\_STAT5PATHWAY | 30 | -1.303632 | 0.2121186 |
| REACT\_GLUCAGON SIGNALING IN METABOLIC REGULATION | 33 | -1.3010364 | 0.2137829 |
| KEGG\_TOXOPLASMOSIS | 128 | -1.3010426 | 0.2142275 |
| NCI\_LKB1\_PATHWAY | 46 | -1.3016273 | 0.2142940 |
| REACT\_REGULATION OF LIPID METABOLISM BY PEROXISOME PROLIFERATOR-ACTIVATED RECEPTOR ALPHA (PPARALPHA) | 53 | -1.3013046 | 0.2143426 |
| NCI\_SYNDECAN\_4\_PATHWAY | 31 | -1.2976581 | 0.2175079 |
| REACT\_INSULIN RECEPTOR SIGNALLING CASCADE | 84 | -1.2970047 | 0.2179024 |
| REACT\_FACTORS INVOLVED IN MEGAKARYOCYTE DEVELOPMENT AND PLATELET PRODUCTION | 137 | -1.295447 | 0.2187700 |
| BIOC\_RELAPATHWAY | 16 | -1.2955934 | 0.2190862 |
| WIP\_HS\_CYTOKINES\_AND\_INFLAMMATORY\_RESPONSE | 23 | -1.2928108 | 0.2215417 |
| NCI\_AVB3\_INTEGRIN\_PATHWAY | 73 | -1.2923788 | 0.2215439 |
| REACT\_PAUSING AND RECOVERY OF HIV-1 ELONGATION | 31 | -1.29174 | 0.2218018 |
| REACT\_SEMA4D INDUCED CELL MIGRATION AND GROWTH-CONE COLLAPSE | 24 | -1.2908158 | 0.2219671 |
| BIOC\_MTORPATHWAY | 20 | -1.2900337 | 0.2220162 |
| REACT\_LYSOSOME VESICLE BIOGENESIS | 24 | -1.2909001 | 0.2223404 |
| REACT\_SIGNALLING TO P38 VIA RIT AND RIN | 15 | -1.2900645 | 0.2224306 |
| NCI\_LYMPHANGIOGENESIS\_PATHWAY | 24 | -1.2893087 | 0.2225244 |
| REACT\_LIPID DIGESTION, MOBILIZATION, AND TRANSPORT | 40 | -1.2884899 | 0.223086 |
| KEGG\_BACTERIAL INVASION OF EPITHELIAL CELLS | 70 | -1.2878494 | 0.2234717 |
| KEGG\_HERPES SIMPLEX INFECTION | 176 | -1.2850833 | 0.2239937 |
| REACT\_TRANSCRIPTION | 138 | -1.285132 | 0.2243812 |
| REACT\_EGFR DOWNREGULATION | 27 | -1.2852842 | 0.2246292 |
| KEGG\_SHIGELLOSIS | 61 | -1.2864647 | 0.2246378 |
| KEGG\_NATURAL KILLER CELL MEDIATED CYTOTOXICITY | 127 | -1.2858168 | 0.2248641 |
| WIP\_HS\_NGF\_SIGNALLING\_VIA\_TRKA\_FROM\_THE\_PLASMA\_MEMBRANE | 30 | -1.2853868 | 0.2249569 |
| REACT\_REGULATION OF WATER BALANCE BY RENAL AQUAPORINS | 40 | -1.2800454 | 0.2277513 |
| REACT\_SIGNALING BY INSULIN RECEPTOR | 107 | -1.2810831 | 0.2277971 |
| NCI\_REG\_GR\_PATHWAY | 81 | -1.2803769 | 0.2278243 |
| BIOC\_ARFPATHWAY | 16 | -1.2806306 | 0.2279045 |
| REACT\_BIOSYNTHESIS OF THE N-GLYCAN PRECURSOR (DOLICHOL LIPID-LINKED OLIGOSACCHARIDE, LLO) AND TRANSFER TO A NASCENT PROTEIN | 30 | -1.2795185 | 0.2279255 |
| NCI\_TNFPATHWAY | 46 | -1.2811655 | 0.2281247 |
| BIOC\_ATRBRCAPATHWAY | 21 | -1.281354 | 0.2283595 |
| REACT\_RNA POLYMERASE II PROMOTER ESCAPE | 39 | -1.275254 | 0.2325559 |
| REACT\_TOLL LIKE RECEPTOR 3 (TLR3) CASCADE | 67 | -1.2724326 | 0.2358748 |
| REACT\_CRMPS IN SEMA3A SIGNALING | 16 | -1.2707466 | 0.2361368 |
| REACT\_TRAF6 MEDIATED INDUCTION OF PROINFLAMMATORY CYTOKINES | 62 | -1.2708613 | 0.2364668 |
| NCI\_AR\_TF\_PATHWAY | 52 | -1.270872 | 0.2369168 |
| REACT\_NUCLEAR EVENTS (KINASE AND TRANSCRIPTION FACTOR ACTIVATION) | 24 | -1.2712094 | 0.2370265 |
| REACT\_NRAGE SIGNALS DEATH THROUGH JNK | 47 | -1.2682356 | 0.2392260 |
| WIP\_HS\_STATIN\_PATHWAY | 29 | -1.2672983 | 0.2399617 |
| REACT\_HIV-1 TRANSCRIPTION INITIATION | 39 | -1.2666138 | 0.2404383 |
| KEGG\_APOPTOSIS | 83 | -1.2661713 | 0.2405367 |
| WIP\_HS\_ID\_SIGNALING\_PATHWAY | 19 | -1.2642344 | 0.2424377 |
| NCI\_FGF\_PATHWAY | 54 | -1.2636153 | 0.2429223 |
| BIOC\_FCER1PATHWAY | 37 | -1.2631749 | 0.2430235 |
| KEGG\_MTOR SIGNALING PATHWAY | 51 | -1.260452 | 0.2451587 |
| REACT\_ANTIGEN PROCESSING\_ UBIQUITINATION & PROTEASOME DEGRADATION | 212 | -1.2611284 | 0.2453122 |
| REACT\_OTHER SEMAPHORIN INTERACTIONS | 16 | -1.2605562 | 0.2454995 |
| NCI\_SYNDECAN\_3\_PATHWAY | 17 | -1.2591484 | 0.2464302 |
| KEGG\_STEROID BIOSYNTHESIS | 17 | -1.2573992 | 0.2484283 |
| REACT\_RNA POLYMERASE II TRANSCRIPTION INITIATION | 39 | -1.2553422 | 0.2500885 |
| REACT\_RNA POLYMERASE II HIV-1 PROMOTER ESCAPE | 39 | -1.255678 | 0.2501919 |
| NCI\_MYC\_REPRESSPATHWAY | 62 | -1.2544584 | 0.2507224 |
| KEGG\_HUNTINGTON'S DISEASE | 173 | -1.2532055 | 0.2512982 |
| REACT\_THROMBIN SIGNALLING THROUGH PROTEINASE ACTIVATED RECEPTORS (PARS) | 32 | -1.2535603 | 0.2513406 |
| REACT\_FORMATION OF THE HIV-1 EARLY ELONGATION COMPLEX | 32 | -1.2521588 | 0.2522844 |
| BIOC\_CARDIACEGFPATHWAY | 16 | -1.2498226 | 0.2539486 |
| REACT\_SHC-RELATED EVENTS | 17 | -1.2499356 | 0.2542494 |
| REACT\_SHC-MEDIATED SIGNALLING | 15 | -1.2502759 | 0.2542753 |
| REACT\_MAP KINASE ACTIVATION IN TLR CASCADE | 53 | -1.2489257 | 0.2547635 |
| WIP\_HS\_MITOCHONDRIAL\_LC-FATTY\_ACID\_BETA-OXIDATION | 17 | -1.2481759 | 0.2551792 |
| WIP\_HS\_DNA\_DAMAGE\_RESPONSE | 67 | -1.2472976 | 0.2559206 |
| REACT\_INTRINSIC PATHWAY FOR APOPTOSIS | 27 | -1.2461306 | 0.2565927 |
| BIOC\_NFATPATHWAY | 52 | -1.2464179 | 0.2567124 |
| REACT\_FORMATION OF THE EARLY ELONGATION COMPLEX | 32 | -1.2455412 | 0.2569164 |
| REACT\_RNA POLYMERASE II TRANSCRIPTION INITIATION AND PROMOTER CLEARANCE | 39 | -1.2429705 | 0.2602147 |
| REACT\_RNA POLYMERASE II TRANSCRIPTION PRE-INITIATION AND PROMOTER OPENING | 39 | -1.2416428 | 0.2615891 |
| KEGG\_LEUKOCYTE TRANSENDOTHELIAL MIGRATION | 115 | -1.2408518 | 0.2623022 |
| NCI\_RET\_PATHWAY | 37 | -1.2397954 | 0.2633621 |
| NCI\_PRLSIGNALINGEVENTSPATHWAY | 23 | -1.2380109 | 0.2653970 |
| WIP\_HS\_ANGIOGENESIS | 23 | -1.2349426 | 0.2686876 |
| NCI\_CDC42\_REG\_PATHWAY | 30 | -1.2344885 | 0.2687826 |
| REACT\_TRANSCRIPTION-COUPLED NER (TC-NER) | 44 | -1.234969 | 0.2691583 |
| BIOC\_EIF4PATHWAY | 21 | -1.2320868 | 0.2718391 |
| KEGG\_FOCAL ADHESION | 199 | -1.2293628 | 0.2747164 |
| WIP\_HS\_INTEGRATED\_CANCER\_PATHWAY | 35 | -1.2296927 | 0.2747228 |
| KEGG\_SPHINGOLIPID METABOLISM | 40 | -1.2261158 | 0.2788078 |
| KEGG\_ACUTE MYELOID LEUKEMIA | 57 | -1.2247385 | 0.2802997 |
| NCI\_ER\_NONGENOMIC\_PATHWAY | 39 | -1.2239668 | 0.2803895 |
| WIP\_HS\_MEMBRANE\_TRAFFICKING | 22 | -1.22405 | 0.280817 |
| REACT\_VIRAL DSRNA\_TLR3\_TRIF COMPLEX ACTIVATES RIP1 | 25 | -1.222413 | 0.2818011 |
| REACT\_ADP SIGNALLING THROUGH P2Y PURINOCEPTOR 1 | 25 | -1.2224867 | 0.2821839 |
| REACT\_SIGNALLING BY NGF | 222 | -1.2177656 | 0.2882803 |
| REACT\_RECYCLING PATHWAY OF L1 | 41 | -1.2172657 | 0.2885398 |
| NCI\_IL2\_1PATHWAY | 55 | -1.2167658 | 0.2887096 |
| WIP\_HS\_INTRINSIC\_PATHWAY\_FOR\_APOPTOSIS | 20 | -1.2153898 | 0.2902742 |
| REACT\_RECRUITMENT OF NUMA TO MITOTIC CENTROSOMES | 22 | -1.2114348 | 0.2949428 |
| REACT\_MRNA CAPPING | 28 | -1.2117019 | 0.2951309 |
| BIOC\_CHREBPPATHWAY | 16 | -1.2109141 | 0.2952332 |
| REACT\_RESOLUTION OF ABASIC SITES (AP SITES) | 19 | -1.2095128 | 0.2962846 |
| KEGG\_P53 SIGNALING PATHWAY | 68 | -1.2095569 | 0.2967491 |
| REACT\_TAK1 ACTIVATES NFKB BY PHOSPHORYLATION AND ACTIVATION OF IKKS COMPLEX | 22 | -1.2086968 | 0.2969782 |
| REACT\_BASE EXCISION REPAIR | 19 | -1.2073846 | 0.2984938 |
| REACT\_METABOLISM OF LIPIDS AND LIPOPROTEINS | 276 | -1.205254 | 0.3009996 |
| REACT\_ACTIVATION OF CHAPERONES BY IRE1ALPHA | 46 | -1.2047526 | 0.3012350 |
| WIP\_HS\_INTERFERON\_TYPE\_I | 28 | -1.2035234 | 0.3019158 |
| PPARA\_TARGETS | 172 | -1.2038692 | 0.3019794 |
| REACT\_FORMATION OF FIBRIN CLOT (CLOTTING CASCADE) | 28 | -1.2014215 | 0.3025313 |
| REACT\_RNA POLYMERASE I, RNA POLYMERASE III, AND MITOCHONDRIAL TRANSCRIPTION | 54 | -1.2016861 | 0.3026732 |
| REACT\_FORMATION OF HIV-1 ELONGATION COMPLEX CONTAINING HIV-1 TAT | 40 | -1.2022799 | 0.3027725 |
| WIP\_HS\_APOPTOSIS\_MODULATION\_BY\_HSP70 | 18 | -1.2024478 | 0.3030206 |
| NCI\_IGF1\_PATHWAY | 28 | -1.2016871 | 0.3032021 |
| KEGG\_PROGESTERONE-MEDIATED OOCYTE MATURATION | 86 | -1.2000884 | 0.3040107 |
| NCI\_ERBB1\_RECEPTOR\_PROXIMAL\_PATHWAY | 33 | -1.1989247 | 0.3052481 |
| NCI\_S1P\_S1P3\_PATHWAY | 29 | -1.1973002 | 0.3073320 |
| BIOC\_STRESSPATHWAY | 25 | -1.1962055 | 0.3074706 |
| KEGG\_TERPENOID BACKBONE BIOSYNTHESIS | 15 | -1.1965572 | 0.3074731 |
| NCI\_ATF2\_PATHWAY | 57 | -1.1967555 | 0.3076862 |
| REACT\_TRANSCRIPTION OF THE HIV GENOME | 59 | -1.1940465 | 0.3088505 |
| REACT\_MITOCHONDRIAL TRNA AMINOACYLATION | 21 | -1.1943372 | 0.3088950 |
| WIP\_HS\_SEROTONIN\_RECEPTOR\_4-6-7\_AND\_NR3C\_SIGNALING | 19 | -1.194934 | 0.3089101 |
| REACT\_RNA POLYMERASE II PRE-TRANSCRIPTION EVENTS | 57 | -1.1944547 | 0.3092226 |
| REACT\_RNA POLYMERASE II TRANSCRIPTION ELONGATION | 41 | -1.1923382 | 0.3104869 |
| NCI\_ECADHERIN\_KERATINOCYTE\_PATHWAY | 19 | -1.1924669 | 0.3108180 |
| KEGG\_BASAL TRANSCRIPTION FACTORS | 41 | -1.1904657 | 0.3124838 |
| REACT\_LAGGING STRAND SYNTHESIS | 19 | -1.1906805 | 0.3126562 |
| NCI\_PTP1BPATHWAY | 51 | -1.1889098 | 0.3128209 |
| REACT\_FORMATION OF HIV-1 ELONGATION COMPLEX IN THE ABSENCE OF HIV-1 TAT | 41 | -1.1885456 | 0.3128901 |
| KEGG\_PARKINSON'S DISEASE | 115 | -1.1889935 | 0.3132378 |
| REACT\_UNFOLDED PROTEIN RESPONSE | 61 | -1.1892027 | 0.3133857 |
| REACT\_FORMATION OF RNA POL II ELONGATION COMPLEX | 41 | -1.1892203 | 0.3138923 |
| KEGG\_LYSOSOME | 121 | -1.1865491 | 0.3143864 |
| REACT\_ADP SIGNALLING THROUGH P2Y PURINOCEPTOR 12 | 21 | -1.1867883 | 0.3145539 |
| BIOC\_TELPATHWAY | 16 | -1.186887 | 0.3149677 |
| WIP\_HS\_SELENIUM\_PATHWAY | 80 | -1.1858068 | 0.3150366 |
| REACT\_TAT-MEDIATED ELONGATION OF THE HIV-1 TRANSCRIPT | 40 | -1.1843268 | 0.3158310 |
| NCI\_MTOR\_4PATHWAY | 68 | -1.1850244 | 0.3158469 |
| BIOC\_ERKPATHWAY | 29 | -1.1839496 | 0.3159287 |
| NCI\_BETACATENIN\_NUC\_PATHWAY | 78 | -1.1825507 | 0.3159633 |
| REACT\_PURINE METABOLISM | 31 | -1.1835393 | 0.3160475 |
| NCI\_ANTHRAXPATHWAY | 20 | -1.1845016 | 0.3161015 |
| WIP\_HS\_ENDOCHONDRAL\_OSSIFICATION | 62 | -1.1826534 | 0.3163313 |
| REACT\_G-PROTEIN ACTIVATION | 27 | -1.1829549 | 0.3164653 |
| REACT\_PHASE II CONJUGATION | 64 | -1.1807891 | 0.3182307 |
| REACT\_HIV-1 TRANSCRIPTION ELONGATION | 40 | -1.1786054 | 0.3205703 |
| KEGG\_VALINE, LEUCINE AND ISOLEUCINE DEGRADATION | 43 | -1.1788588 | 0.3207490 |
| REACT\_SIGNALLING TO ERKS | 35 | -1.1764473 | 0.3234652 |
| REACT\_THROMBOXANE SIGNALLING THROUGH TP RECEPTOR | 23 | -1.1748832 | 0.3253241 |
| WIP\_HS\_FORMATION\_OF\_FIBRIN\_CLOT\_(CLOTTING\_CASCADE) | 21 | -1.1729139 | 0.3277327 |
| NCI\_HES\_HEYPATHWAY | 48 | -1.1699417 | 0.3318618 |
| WIP\_HS\_FATTY\_ACID,\_TRIACYLGLYCEROL,\_AND\_KETONE\_BODY\_METABOLISM | 32 | -1.1674975 | 0.3352641 |
| REACT\_PI3K CASCADE | 68 | -1.1664783 | 0.3357469 |
| NCI\_ERBB4\_PATHWAY | 35 | -1.1667119 | 0.3359764 |
| WIP\_HS\_RANKL-RANK\_SIGNALING\_PATHWAY | 55 | -1.1652207 | 0.3360719 |
| REACT\_NCAM SIGNALING FOR NEURITE OUT-GROWTH | 70 | -1.1653349 | 0.3364747 |
| REACT\_CELL SURFACE INTERACTIONS AT THE VASCULAR WALL | 90 | -1.1655504 | 0.3366648 |
| BIOC\_IL2PATHWAY | 22 | -1.1644671 | 0.3367821 |
| REACT\_NEF-MEDIATES DOWN MODULATION OF CELL SURFACE RECEPTORS BY RECRUITING THEM TO CLATHRIN ADAPTERS | 21 | -1.1610311 | 0.341833 |
| NCI\_AURORA\_A\_PATHWAY | 30 | -1.158175 | 0.3460427 |
| REACT\_RNA POLYMERASE II TRANSCRIPTION | 98 | -1.1559927 | 0.3493017 |
| REACT\_AXON GUIDANCE | 278 | -1.1532263 | 0.3518443 |
| NCI\_RXR\_VDR\_PATHWAY | 21 | -1.154236 | 0.3518490 |
| BIOC\_TOB1PATHWAY | 16 | -1.1533709 | 0.3521667 |
| BIOC\_BADPATHWAY | 22 | -1.153421 | 0.3526511 |
| REACT\_RNA POLYMERASE III TRANSCRIPTION INITIATION FROM TYPE 1 PROMOTER | 21 | -1.151031 | 0.3552248 |
| KEGG\_NON-SMALL CELL LUNG CANCER | 54 | -1.1496383 | 0.3570388 |
| REACT\_RNA POL II CTD PHOSPHORYLATION AND INTERACTION WITH CE | 26 | -1.1489408 | 0.3570822 |
| REACT\_JNK (C-JUN KINASES) PHOSPHORYLATION AND ACTIVATION MEDIATED BY ACTIVATED HUMAN TAK1 | 20 | -1.1491205 | 0.3573180 |
| WIP\_HS\_G\_PROTEIN\_SIGNALING\_PATHWAYS | 91 | -1.1465681 | 0.3604578 |
| WIP\_HS\_FOCAL\_ADHESION | 184 | -1.1460705 | 0.3607558 |
| REACT\_NGF SIGNALLING VIA TRKA FROM THE PLASMA MEMBRANE | 137 | -1.1434408 | 0.3617117 |
| REACT\_DEADENYLATION OF MRNA | 20 | -1.1435597 | 0.3620899 |
| REACT\_G-PROTEIN BETA\_GAMMA SIGNALLING | 27 | -1.1437994 | 0.3622625 |
| WIP\_HS\_G13\_SIGNALING\_PATHWAY | 37 | -1.1427729 | 0.3622746 |
| REACT\_G BETA\_GAMMA SIGNALLING THROUGH PI3KGAMMA | 24 | -1.144504 | 0.3627473 |
| REACT\_PI3K\_AKT ACTIVATION | 36 | -1.1438041 | 0.3628215 |
| NCI\_IL12\_2PATHWAY | 62 | -1.1440977 | 0.3629124 |
| KEGG\_ASCORBATE AND ALDARATE METABOLISM | 21 | -1.1397812 | 0.3662957 |
| REACT\_RNA POL II CTD PHOSPHORYLATION AND INTERACTION WITH CE\_1 | 26 | -1.1400172 | 0.3664963 |
| KEGG\_OOCYTE MEIOSIS | 110 | -1.1392779 | 0.3666176 |
| REACT\_TRNA AMINOACYLATION | 42 | -1.1359854 | 0.3710684 |
| WIP\_HS\_HYPERTROPHY\_MODEL | 20 | -1.136159 | 0.3713018 |
| NCI\_DELTANP63PATHWAY | 44 | -1.1346986 | 0.3729316 |
| WIP\_HS\_ALPHA\_6\_BETA\_4\_SIGNALING\_PATHWAY | 33 | -1.133712 | 0.3740118 |
| KEGG\_AMOEBIASIS | 105 | -1.1316121 | 0.3766435 |
| NCI\_CDC42\_PATHWAY | 70 | -1.1316507 | 0.3771491 |
| REACT\_MAPK TARGETS\_ NUCLEAR EVENTS MEDIATED BY MAP KINASES | 30 | -1.1286731 | 0.3814924 |
| KEGG\_PENTOSE AND GLUCURONATE INTERCONVERSIONS | 27 | -1.1271927 | 0.3822110 |
| REACT\_FATTY ACID, TRIACYLGLYCEROL, AND KETONE BODY METABOLISM | 108 | -1.1272473 | 0.3826998 |
| NCI\_EPHRINBREVPATHWAY | 30 | -1.127295 | 0.3832147 |
| WIP\_HS\_EICOSANOID\_SYNTHESIS | 19 | -1.1261666 | 0.3834458 |
| KEGG\_PHENYLALANINE METABOLISM | 16 | -1.1257396 | 0.3836392 |
| KEGG\_BASE EXCISION REPAIR | 33 | -1.1251622 | 0.3841673 |
| REACT\_MICRORNA (MIRNA) BIOGENESIS | 23 | -1.1214602 | 0.3898777 |
| REACT\_REGULATION OF INSULIN-LIKE GROWTH FACTOR (IGF) ACTIVITY BY INSULIN-LIKE GROWTH FACTOR BINDING PROTEINS (IGFBPS) | 17 | -1.1216866 | 0.3900818 |
| WIP\_HS\_GLUCURONIDATION | 20 | -1.1208928 | 0.3902785 |
| NCI\_RHOA\_PATHWAY | 44 | -1.1189615 | 0.3933892 |
| KEGG\_PURINE METABOLISM | 159 | -1.1177949 | 0.3950003 |
| WIP\_HS\_MRNA\_PROCESSING | 123 | -1.116602 | 0.3965522 |
| REACT\_OPIOID SIGNALLING | 81 | -1.1157668 | 0.3975134 |
| KEGG\_SMALL CELL LUNG CANCER | 85 | -1.1154026 | 0.3975729 |
| NCI\_ECADHERIN\_STABILIZATION\_PATHWAY | 39 | -1.113678 | 0.3995806 |
| KEGG\_PATHWAYS IN CANCER | 325 | -1.1137317 | 0.4001129 |
| WIP\_HS\_MYOMETRIAL\_RELAXATION\_AND\_CONTRACTION\_PATHWAYS | 155 | -1.1127608 | 0.4007217 |
| REACT\_DUAL INCISION REACTION IN TC-NER | 28 | -1.1118741 | 0.4017118 |
| REACT\_FORMATION OF TRANSCRIPTION-COUPLED NER (TC-NER) REPAIR COMPLEX | 28 | -1.1114707 | 0.4018314 |
| REACT\_REGULATORY RNA PATHWAYS | 23 | -1.1102321 | 0.4035323 |
| BIOC\_CARM\_ERPATHWAY | 25 | -1.1067901 | 0.4095336 |
| REACT\_PLATELET SENSITIZATION BY LDL | 15 | -1.1044533 | 0.4134576 |
| WIP\_HS\_SELENIUM\_METABOLISM\_AND\_SELENOPROTEINS | 41 | -1.1029727 | 0.4155566 |
| BIOC\_DCPATHWAY | 21 | -1.1004986 | 0.4196368 |
| REACT\_SIGNALLING TO RAS | 27 | -1.0972522 | 0.4251355 |
| KEGG\_ADHERENS JUNCTION | 73 | -1.0967757 | 0.4254482 |
| KEGG\_NUCLEOTIDE EXCISION REPAIR | 44 | -1.0959593 | 0.4262845 |
| NCI\_S1P\_META\_PATHWAY | 21 | -1.0917956 | 0.4304623 |
| REACT\_ENERGY DEPENDENT REGULATION OF MTOR BY LKB1-AMPK | 16 | -1.0927286 | 0.4305520 |
| WIP\_HS\_CIRCADIAN\_CLOCK | 17 | -1.0919967 | 0.4307381 |
| NCI\_TCPTP\_PATHWAY | 40 | -1.0933038 | 0.4307389 |
| WIP\_HS\_CHOLESTEROL\_BIOSYNTHESIS | 16 | -1.0928088 | 0.4310272 |
| WIP\_HS\_TAMOXIFEN\_METABOLISM | 19 | -1.0921417 | 0.4311018 |
| KEGG\_PEROXISOME | 77 | -1.0907109 | 0.431888 |
| BIOC\_STEMPATHWAY | 15 | -1.0898123 | 0.4330383 |
| NCI\_CXCR3PATHWAY | 43 | -1.0891895 | 0.4336353 |
| WIP\_HS\_ELECTRON\_TRANSPORT\_CHAIN | 89 | -1.0873026 | 0.4367735 |
| REACT\_L1CAM INTERACTIONS | 106 | -1.0864962 | 0.4377017 |
| REACT\_POST-CHAPERONIN TUBULIN FOLDING PATHWAY | 16 | -1.0848854 | 0.4402991 |
| WIP\_HS\_PROSTAGLANDIN\_SYNTHESIS\_AND\_REGULATION | 30 | -1.0844036 | 0.4406135 |
| NCI\_GLYPICAN\_1PATHWAY | 27 | -1.0816249 | 0.4446246 |
| REACT\_TRANS-GOLGI NETWORK VESICLE BUDDING | 59 | -1.0818797 | 0.4447490 |
| REACT\_ACTIVATION OF THE PRE-REPLICATIVE COMPLEX | 29 | -1.0804181 | 0.4463298 |
| REACT\_CLATHRIN DERIVED VESICLE BUDDING | 59 | -1.0795294 | 0.4467367 |
| WIP\_HS\_METAPATHWAY\_BIOTRANSFORMATION | 168 | -1.0798193 | 0.4468657 |
| REACT\_PHOSPHORYLATION OF THE APC\_C | 17 | -1.0787203 | 0.4477276 |
| KEGG\_RNA DEGRADATION | 68 | -1.0767039 | 0.4511184 |
| NCI\_IL8CXCR1\_PATHWAY | 27 | -1.0761107 | 0.4517222 |
| KEGG\_CYTOKINE-CYTOKINE RECEPTOR INTERACTION | 257 | -1.0748552 | 0.4529468 |
| NCI\_P38ALPHABETAPATHWAY | 30 | -1.0749508 | 0.4534287 |
| REACT\_DESTABILIZATION OF MRNA BY KSRP | 17 | -1.0734288 | 0.4543805 |
| WIP\_HS\_VITAMIN\_B12\_METABOLISM | 51 | -1.073658 | 0.4545914 |
| KEGG\_METABOLISM OF XENOBIOTICS BY CYTOCHROME P450 | 74 | -1.0718924 | 0.4561530 |
| NCI\_HDAC\_CLASSI\_PATHWAY | 65 | -1.0722183 | 0.4561747 |
| BIOC\_FMLPPATHWAY | 36 | -1.0664932 | 0.4664857 |
| NCI\_CD40\_PATHWAY | 30 | -1.0659223 | 0.4669673 |
| KEGG\_FAT DIGESTION AND ABSORPTION | 45 | -1.0647516 | 0.4687610 |
| NCI\_HIF1APATHWAY | 18 | -1.0642604 | 0.4690925 |
| NCI\_HIF2PATHWAY | 34 | -1.0636703 | 0.4696657 |
| BIOC\_TH1TH2PATHWAY | 17 | -1.0619328 | 0.4716679 |
| WIP\_HS\_SEROTONIN\_RECEPTOR\_2\_AND\_ELK-SRF-GATA4\_SIGNALING | 17 | -1.0615835 | 0.4716996 |
| KEGG\_PROPANOATE METABOLISM | 32 | -1.0619805 | 0.4722559 |
| NCI\_KITPATHWAY | 52 | -1.0603358 | 0.4737182 |
| REACT\_GLUCONEOGENESIS | 30 | -1.0594604 | 0.4748622 |
| KEGG\_OTHER TYPES OF O-GLYCAN BIOSYNTHESIS | 40 | -1.0581259 | 0.4770779 |
| KEGG\_GLYCOSAMINOGLYCAN BIOSYNTHESIS - KERATAN SULFATE | 15 | -1.0571784 | 0.4784247 |
| WIP\_HS\_SIGNAL\_TRANSDUCTION\_OF\_S1P\_RECEPTOR | 24 | -1.0556065 | 0.4810128 |
| WIP\_HS\_ERBB\_SIGNALING\_PATHWAY | 53 | -1.0495405 | 0.492872 |
| NCI\_EPHA\_FWDPATHWAY | 34 | -1.0477834 | 0.4951236 |
| REACT\_G BETA\_GAMMA SIGNALLING THROUGH PLC BETA | 20 | -1.0471216 | 0.4951516 |
| REACT\_TELOMERE C-STRAND (LAGGING STRAND) SYNTHESIS | 21 | -1.0479959 | 0.4953902 |
| REACT\_GENERIC TRANSCRIPTION PATHWAY | 243 | -1.0471222 | 0.4958422 |
| NCI\_ERBB2ERBB3PATHWAY | 43 | -1.0444653 | 0.4993060 |
| KEGG\_FANCONI ANEMIA PATHWAY | 48 | -1.044707 | 0.4995232 |
| REACT\_POST NMDA RECEPTOR ACTIVATION EVENTS | 33 | -1.0418003 | 0.5043648 |
| NCI\_GMCSF\_PATHWAY | 36 | -1.0413449 | 0.5046405 |
| WIP\_HS\_ACE\_INHIBITOR\_PATHWAY | 17 | -1.0394061 | 0.5066426 |
| NCI\_AJDISS\_2PATHWAY | 48 | -1.0388907 | 0.5070866 |
| BIOC\_KERATINOCYTEPATHWAY | 43 | -1.0394531 | 0.5072159 |
| NCI\_IL4\_2PATHWAY | 60 | -1.0395741 | 0.5076711 |
| REACT\_PROSTACYCLIN SIGNALLING THROUGH PROSTACYCLIN RECEPTOR | 19 | -1.037678 | 0.5090102 |
| NCI\_ARF6\_PATHWAY | 35 | -1.037315 | 0.5090667 |
| WIP\_HS\_KIT\_RECEPTOR\_SIGNALING\_PATHWAY | 56 | -1.0326024 | 0.5185433 |
| REACT\_LIPOPROTEIN METABOLISM | 23 | -1.0254031 | 0.5307801 |
| REACT\_PRESYNAPTIC FUNCTION OF KAINATE RECEPTORS | 21 | -1.0266272 | 0.5310705 |
| REACT\_CELL-EXTRACELLULAR MATRIX INTERACTIONS | 18 | -1.0255195 | 0.5312199 |
| KEGG\_RENAL CELL CARCINOMA | 70 | -1.0261557 | 0.5312817 |
| REACT\_INACTIVATION OF APC\_C VIA DIRECT INHIBITION OF THE APC\_C COMPLEX | 18 | -1.0243765 | 0.5316155 |
| REACT\_DOUBLE-STRAND BREAK REPAIR | 21 | -1.0256572 | 0.5316219 |
| WIP\_HS\_SIGNALLING\_BY\_NGF | 15 | -1.0245752 | 0.5318661 |
| REACT\_METABOLISM OF CARBOHYDRATES | 122 | -1.0230976 | 0.5336986 |
| REACT\_RESPIRATORY ELECTRON TRANSPORT, ATP SYNTHESIS BY CHEMIOSMOTIC COUPLING, AND HEAT PRODUCTION BY UNCOUPLING PROTEINS. | 80 | -1.0205276 | 0.5387708 |
| REACT\_INHIBITION OF THE PROTEOLYTIC ACTIVITY OF APC\_C REQUIRED FOR THE ONSET OF ANAPHASE BY MITOTIC SPINDLE CHECKPOINT COMPONENTS | 18 | -1.0188605 | 0.541591 |
| WIP\_HS\_INTERLEUKIN-3,\_5\_AND\_GM-CSF\_SIGNALING | 18 | -1.0172715 | 0.5435096 |
| WIP\_HS\_ENERGY\_METABOLISM | 46 | -1.0174196 | 0.5439116 |
| NCI\_DNAPK\_PATHWAY | 16 | -1.0157595 | 0.5454204 |
| KEGG\_AXON GUIDANCE | 127 | -1.0157797 | 0.5461131 |
| BIOC\_TALL1PATHWAY | 15 | -1.0138776 | 0.5480701 |
| BIOC\_CHEMICALPATHWAY | 20 | -1.0140172 | 0.5484752 |
| KEGG\_INOSITOL PHOSPHATE METABOLISM | 57 | -1.0094415 | 0.5570121 |
| NCI\_ALK1PATHWAY | 25 | -1.0088829 | 0.5575648 |
| NCI\_NFAT\_3PATHWAY | 53 | -1.0075295 | 0.5598621 |
| REACT\_RNA POLYMERASE III ABORTIVE AND RETRACTIVE INITIATION | 29 | -1.0068792 | 0.5606174 |
| REACT\_INFLAMMASOMES | 17 | -1.0057809 | 0.5622642 |
| REACT\_METABOLISM OF NON-CODING RNA | 21 | -1.0053879 | 0.5623383 |
| REACT\_ERK\_MAPK TARGETS | 21 | -1.0038711 | 0.5650579 |
| BIOC\_INFLAMPATHWAY | 29 | -1.0033842 | 0.5653714 |
| REACT\_INTERLEUKIN-2 SIGNALING | 39 | -1.0025696 | 0.5664243 |
| BIOC\_GLEEVECPATHWAY | 22 | -1.0018519 | 0.5671978 |
| WIP\_HS\_DOUBLE-STRAND\_BREAK\_REPAIR | 18 | -1.0010748 | 0.5682143 |
| REACT\_RNA POLYMERASE III TRANSCRIPTION | 29 | -1.0003012 | 0.5692510 |
| REACT\_RNA POLYMERASE III TRANSCRIPTION INITIATION FROM TYPE 2 PROMOTER | 20 | -0.9994156 | 0.5705240 |
| REACT\_CHOLESTEROL BIOSYNTHESIS | 21 | -0.998922 | 0.5709100 |
| REACT\_CA-DEPENDENT EVENTS | 30 | -0.9984702 | 0.5711868 |
| WIP\_HS\_REGULATION\_OF\_TOLL-LIKE\_RECEPTOR\_SIGNALING\_PATHWAY | 141 | -0.9980307 | 0.5714487 |
| WIP\_HS\_TP53\_NETWORK | 19 | -0.9961861 | 0.5747766 |
| REACT\_EXTENSION OF TELOMERES | 23 | -0.9951481 | 0.5748344 |
| KEGG\_DRUG METABOLISM - CYTOCHROME P450 | 65 | 0.99576634 | 0.5749763 |
| REACT\_NCAM1 INTERACTIONS | 44 | 0.99520373 | 0.5754751 |
| REACT\_RNA POLYMERASE III TRANSCRIPTION INITIATION | 29 | 0.99409086 | 0.5764553 |
| KEGG\_AMINOACYL-TRNA BIOSYNTHESIS | 42 | -0.9909718 | 0.5827489 |
| REACT\_SNRNP ASSEMBLY | 21 | -0.9897804 | 0.5847349 |
| REACT\_MITOTIC SPINDLE CHECKPOINT | 19 | 0.98875296 | 0.5861694 |
| NCI\_CD8TCRDOWNSTREAMPATHWAY | 67 | -0.9882207 | 0.5865054 |
| KEGG\_ADIPOCYTOKINE SIGNALING PATHWAY | 67 | -0.9874724 | 0.5866647 |
| NCI\_CIRCADIANPATHWAY | 16 | -0.9875828 | 0.5872019 |
| REACT\_G-PROTEIN MEDIATED EVENTS | 45 | -0.9862004 | 0.5888951 |
| REACT\_CYTOSOLIC TRNA AMINOACYLATION | 24 | 0.98160416 | 0.5988859 |
| KEGG\_PROTEIN DIGESTION AND ABSORPTION | 78 | -0.9785165 | 0.6052846 |
| BIOC\_CK1PATHWAY | 17 | 0.97801805 | 0.6055983 |
| KEGG\_ERBB SIGNALING PATHWAY | 86 | 0.97630626 | 0.6080720 |
| REACT\_GLOBAL GENOMIC NER (GG-NER) | 32 | -0.9764872 | 0.6084103 |
| REACT\_RESPIRATORY ELECTRON TRANSPORT | 64 | 0.97502995 | 0.6102273 |
| KEGG\_STEROID HORMONE BIOSYNTHESIS | 49 | -0.9726972 | 0.614005 |
| REACT\_REPAIR SYNTHESIS FOR GAP-FILLING BY DNA POLYMERASE IN TC-NER | 15 | 0.97297066 | 0.6141838 |
| NCI\_EPOPATHWAY | 33 | 0.97087073 | 0.6173435 |
| KEGG\_MELANOMA | 70 | -0.9702598 | 0.6179619 |
| KEGG\_PORPHYRIN AND CHLOROPHYLL METABOLISM | 37 | 0.96831733 | 0.6216705 |
| BIOC\_HSP27PATHWAY | 15 | -0.9657806 | 0.6261108 |
| BIOC\_IL6PATHWAY | 21 | -0.9660407 | 0.6262628 |
| WIP\_HS\_REGULATION\_OF\_BETA-CELL\_DEVELOPMENT | 19 | 0.96499604 | 0.6272074 |
| WIP\_HS\_IL-4\_SIGNALING\_PATHWAY | 46 | -0.9644362 | 0.6277271 |
| KEGG\_PENTOSE PHOSPHATE PATHWAY | 28 | -0.9625097 | 0.630572 |
| WIP\_HS\_PROCESSING\_OF\_CAPPED\_INTRON-CONTAINING\_PRE-MRNA | 49 | -0.9625747 | 0.6312514 |
| REACT\_GAP-FILLING DNA REPAIR SYNTHESIS AND LIGATION IN GG-NER | 16 | -0.9611758 | 0.6328276 |
| REACT\_POST-ELONGATION PROCESSING OF THE TRANSCRIPT | 41 | -0.960778 | 0.6328763 |
| REACT\_CLEAVAGE OF GROWING TRANSCRIPT IN THE TERMINATION REGION | 41 | 0.95932335 | 0.6354333 |
| KEGG\_CIRCADIAN RHYTHM - MAMMAL | 22 | -0.9573629 | 0.6390574 |
| REACT\_RNA POLYMERASE II TRANSCRIPTION TERMINATION | 41 | 0.95692456 | 0.6393086 |
| REACT\_REPAIR SYNTHESIS OF PATCH ~27-30 BASES LONG BY DNA POLYMERASE | 15 | -0.9542839 | 0.6447667 |
| REACT\_METABOLISM OF VITAMINS AND COFACTORS | 57 | -0.9533662 | 0.6460013 |
| REACT\_PIP3 ACTIVATES AKT SIGNALING | 27 | 0.95289123 | 0.6462543 |
| BIOC\_GCRPATHWAY | 17 | 0.94962674 | 0.6523403 |
| WIP\_HS\_FATTY\_ACID\_BIOSYNTHESIS | 22 | -0.9491634 | 0.6526686 |
| BIOC\_TOLLPATHWAY | 32 | -0.9498497 | 0.6526742 |
| REACT\_SIGNAL TRANSDUCTION BY L1 | 35 | -0.9472829 | 0.6561063 |
| WIP\_HS\_EPO\_RECEPTOR\_SIGNALING | 26 | -0.9463516 | 0.6575358 |
| REACT\_GAP-FILLING DNA REPAIR SYNTHESIS AND LIGATION IN TC-NER | 16 | -0.9455937 | 0.6585299 |
| WIP\_HS\_TGF\_BETA\_SIGNALING\_PATHWAY | 55 | -0.9364627 | 0.6785626 |
| NCI\_UPA\_UPAR\_PATHWAY | 42 | -0.9354067 | 0.6792871 |
| BIOC\_MCALPAINPATHWAY | 24 | -0.9348675 | 0.6795960 |
| KEGG\_TIGHT JUNCTION | 130 | 0.93564105 | 0.6796141 |
| BIOC\_P53PATHWAY | 16 | -0.9340747 | 0.6805784 |
| REACT\_INTERFERON ALPHA\_BETA SIGNALING | 64 | 0.93145776 | 0.6858013 |
| WIP\_HS\_GENERIC\_TRANSCRIPTION\_PATHWAY | 16 | 0.93060046 | 0.6868856 |
| NCI\_INSULIN\_PATHWAY | 43 | -0.9282279 | 0.6916646 |
| KEGG\_STARCH AND SUCROSE METABOLISM | 45 | -0.9276817 | 0.6920965 |
| REACT\_PLC BETA MEDIATED EVENTS | 44 | -0.9266722 | 0.6927256 |
| REACT\_NETRIN-1 SIGNALING | 42 | 0.92702234 | 0.6927410 |
| REACT\_G ALPHA (Z) SIGNALLING EVENTS | 37 | -0.925827 | 0.6937205 |
| BIOC\_PTDINSPATHWAY | 22 | -0.9245498 | 0.695792 |
| BIOC\_IGF1RPATHWAY | 15 | 0.92403924 | 0.6960752 |
| REACT\_GOLGI ASSOCIATED VESICLE BIOGENESIS | 52 | 0.91987485 | 0.7048601 |
| KEGG\_GALACTOSE METABOLISM | 28 | 0.91506976 | 0.7097515 |
| WIP\_HS\_TRYPTOPHAN\_METABOLISM | 47 | -0.9171771 | 0.7101081 |
| BIOC\_NGFPATHWAY | 18 | -0.9151182 | 0.7105057 |
| WIP\_HS\_NOD\_PATHWAY | 39 | -0.9151941 | 0.7112098 |
| NCI\_NCADHERINPATHWAY | 36 | -0.9158952 | 0.7112192 |
| BIOC\_WNTPATHWAY | 23 | -0.9161363 | 0.7115004 |
| REACT\_BRANCHED-CHAIN AMINO ACID CATABOLISM | 17 | -0.915325 | 0.7117393 |
| BIOC\_NOS1PATHWAY | 21 | -0.9134768 | 0.7124894 |
| WIP\_HS\_CELL\_JUNCTION\_ORGANIZATION | 26 | 0.91042954 | 0.7186667 |
| NCI\_IL23PATHWAY | 37 | 0.90932655 | 0.7203009 |
| KEGG\_NEUROTROPHIN SIGNALING PATHWAY | 126 | 0.90710235 | 0.7244915 |
| KEGG\_INSULIN SIGNALING PATHWAY | 136 | -0.9050833 | 0.7279874 |
| REACT\_PEPTIDE LIGAND-BINDING RECEPTORS | 184 | 0.90383565 | 0.7299183 |
| NCI\_HDAC\_CLASSIII\_PATHWAY | 36 | -0.9012463 | 0.7312049 |
| WIP\_HS\_MAPK\_SIGNALING\_PATHWAY | 160 | -0.9007611 | 0.7313977 |
| KEGG\_ECM-RECEPTOR INTERACTION | 83 | -0.9013136 | 0.7319573 |
| WIP\_HS\_SEROTONIN\_HTR1\_GROUP\_AND\_FOS\_PATHWAY | 33 | 0.90149766 | 0.7323985 |
| REACT\_GLUCOSE TRANSPORT | 39 | 0.90171146 | 0.7328670 |
| BIOC\_IL2RBPATHWAY | 34 | -0.9020221 | 0.7330941 |
| WIP\_HS\_ANGIOGENESIS\_OVERVIEW | 50 | 0.89931273 | 0.7338213 |
| NCI\_PDGFRAPATHWAY | 21 | 0.89809215 | 0.7346689 |
| REACT\_PYRUVATE METABOLISM | 18 | 0.89756227 | 0.7350105 |
| REACT\_REMOVAL OF DNA PATCH CONTAINING ABASIC RESIDUE | 17 | 0.89812005 | 0.7354981 |
| REACT\_RESOLUTION OF AP SITES VIA THE MULTIPLE-NUCLEOTIDE PATCH REPLACEMENT PATHWAY | 17 | 0.89687616 | 0.7356 |
| BIOC\_VEGFPATHWAY | 25 | -0.8953424 | 0.7372117 |
| NCI\_WNT\_NONCANONICAL\_PATHWAY | 32 | 0.89534295 | 0.7380830 |
| NCI\_INTEGRIN5\_PATHWAY | 17 | -0.8918409 | 0.7436387 |
| KEGG\_VITAMIN DIGESTION AND ABSORPTION | 24 | -0.8905032 | 0.7448848 |
| KEGG\_GAP JUNCTION | 86 | 0.89080095 | 0.7451338 |
| REACT\_HEXOSE TRANSPORT | 41 | 0.88920677 | 0.7468114 |
| KEGG\_GLIOMA | 65 | 0.88786685 | 0.7488093 |
| NCI\_ALPHASYNUCLEIN\_PATHWAY | 32 | 0.88514316 | 0.7537041 |
| KEGG\_HOMOLOGOUS RECOMBINATION | 28 | -0.884061 | 0.7551042 |
| WIP\_HS\_MAPK\_CASCADE | 29 | -0.8811681 | 0.7604634 |
| REACT\_FATTY ACYL-COA BIOSYNTHESIS | 18 | -0.8799855 | 0.7620569 |
| REACT\_CELL JUNCTION ORGANIZATION | 104 | 0.87812805 | 0.7642203 |
| REACT\_METABOLISM OF POLYAMINES | 15 | -0.8781843 | 0.7649898 |
| KEGG\_MRNA SURVEILLANCE PATHWAY | 76 | -0.8730582 | 0.7739979 |
| BIOC\_ERK5PATHWAY | 16 | -0.8702459 | 0.7788603 |
| REACT\_ZINC TRANSPORTERS | 17 | -0.8661484 | 0.7863609 |
| REACT\_BIOLOGICAL OXIDATIONS | 130 | 0.86308736 | 0.7910284 |
| REACT\_METABOLISM OF WATER-SOLUBLE VITAMINS AND COFACTORS | 50 | -0.8631158 | 0.7918907 |
| WIP\_HS\_SIGNALING\_OF\_HEPATOCYTE\_GROWTH\_FACTOR\_RECEPTOR | 33 | -0.8596673 | 0.7970446 |
| BIOC\_ETSPATHWAY | 18 | -0.8580558 | 0.7994297 |
| WIP\_HS\_METABOLISM\_OF\_STEROID\_HORMONES\_AND\_VITAMINS\_A\_AND\_D | 23 | 0.85365623 | 0.8071736 |
| BIOC\_BCRPATHWAY | 34 | -0.8492702 | 0.8147417 |
| NCI\_LYSOPHOSPHOLIPID\_PATHWAY | 65 | -0.8485551 | 0.8151789 |
| NCI\_NEPHRIN\_NEPH1\_PATHWAY | 31 | -0.8467952 | 0.8159051 |
| BIOC\_AT1RPATHWAY | 32 | -0.8476118 | 0.8161478 |
| NCI\_SYNDECAN\_1\_PATHWAY | 46 | 0.84703606 | 0.8163805 |
| REACT\_PKA ACTIVATION | 16 | -0.8460003 | 0.8164723 |
| BIOC\_CCR3PATHWAY | 21 | -0.845212 | 0.8170885 |
| REACT\_ACTIVATION OF NMDA RECEPTOR UPON GLUTAMATE BINDING AND POSTSYNAPTIC EVENTS | 37 | -0.8419923 | 0.8222327 |
| REACT\_NUCLEOTIDE-BINDING DOMAIN, LEUCINE RICH REPEAT CONTAINING RECEPTOR (NLR) SIGNALING PATHWAYS | 51 | 0.83682084 | 0.8310486 |
| KEGG\_AMYOTROPHIC LATERAL SCLEROSIS (ALS) | 49 | -0.8314925 | 0.8401267 |
| REACT\_PKA ACTIVATION IN GLUCAGON SIGNALLING | 17 | -0.8299707 | 0.8420607 |
| REACT\_METABOLISM OF NUCLEOTIDES | 74 | 0.82930523 | 0.8423021 |
| BIOC\_METPATHWAY | 35 | -0.828613 | 0.8426401 |
| WIP\_HS\_INSULIN\_SIGNALING | 160 | -0.8261368 | 0.8460808 |
| REACT\_TRANSPORT OF MATURE TRANSCRIPT TO CYTOPLASM | 26 | -0.823922 | 0.8490976 |
| KEGG\_EPITHELIAL CELL SIGNALING IN HELICOBACTER PYLORI INFECTION | 68 | -0.8221706 | 0.8513806 |
| WIP\_HS\_SEMAPHORIN\_INTERACTIONS | 17 | -0.8202771 | 0.8536621 |
| BIOC\_UCALPAINPATHWAY | 16 | -0.8149295 | 0.8620171 |
| WIP\_HS\_OSTEOCLAST\_SIGNALING | 19 | -0.8126178 | 0.8651304 |
| NCI\_NFKAPPABCANONICALPATHWAY | 23 | -0.8097632 | 0.8670020 |
| NCI\_IL27PATHWAY | 26 | 0.81018037 | 0.8673084 |
| REACT\_SIGNALING BY NOTCH | 16 | -0.8103754 | 0.8679806 |
| REACT\_RNA POLYMERASE III TRANSCRIPTION INITIATION FROM TYPE 3 PROMOTER | 22 | -0.8018073 | 0.8792684 |
| REACT\_DOWNSTREAM SIGNALING OF ACTIVATED FGFR | 70 | -0.7966314 | 0.8817597 |
| BIOC\_NKTPATHWAY | 28 | 0.79971075 | 0.8818069 |
| BIOC\_HCMVPATHWAY | 16 | -0.795747 | 0.8821559 |
| REACT\_CALMODULIN INDUCED EVENTS | 28 | -0.7967826 | 0.8825042 |
| REACT\_CONVERSION FROM APC\_C\_CDC20 TO APC\_C\_CDH1 IN LATE ANAPHASE | 17 | -0.7970208 | 0.8831534 |
| NCI\_RHOA\_REG\_PATHWAY | 43 | -0.7982806 | 0.8831602 |
| REACT\_STEROID HORMONES | 25 | -0.7973093 | 0.8837033 |
| REACT\_METAL ION SLC TRANSPORTERS | 25 | -0.7901889 | 0.8899369 |
| REACT\_CAM PATHWAY | 28 | -0.7889887 | 0.8907378 |
| WIP\_HS\_MIRNA\_REGULATION\_OF\_DNA\_DAMAGE\_RESPONSE | 89 | 0.78643394 | 0.8936930 |
| REACT\_SIGNALING BY FGFR | 70 | 0.78406286 | 0.8941071 |
| KEGG\_BETA-ALANINE METABOLISM | 27 | -0.7845672 | 0.8944195 |
| KEGG\_GLYCINE, SERINE AND THREONINE METABOLISM | 32 | 0.78477067 | 0.8951333 |
| BIOC\_CYTOKINEPATHWAY | 20 | 0.77803314 | 0.8999173 |
| NCI\_A6B1\_A6B4\_INTEGRIN\_PATHWAY | 44 | -0.7792586 | 0.9001755 |
| REACT\_PKA-MEDIATED PHOSPHORYLATION OF CREB | 17 | 0.77817994 | 0.9006619 |
| KEGG\_DORSO-VENTRAL AXIS FORMATION | 24 | -0.7766805 | 0.9007728 |
| BIOC\_MAPKPATHWAY | 84 | -0.7745526 | 0.9027595 |
| REACT\_PI-3K CASCADE | 66 | -0.7723086 | 0.9029402 |
| REACT\_SMOOTH MUSCLE CONTRACTION | 24 | 0.77364033 | 0.9030376 |
| KEGG\_FATTY ACID ELONGATION | 23 | -0.7711343 | 0.9034797 |
| NCI\_P38\_MK2PATHWAY | 21 | -0.7724975 | 0.9037162 |
| KEGG\_BIOSYNTHESIS OF UNSATURATED FATTY ACIDS | 21 | -0.7619343 | 0.912829 |
| NCI\_HNF3APATHWAY | 43 | -0.7626154 | 0.9129743 |
| REACT\_ACTIVATION OF KAINATE RECEPTORS UPON GLUTAMATE BINDING | 32 | 0.76327676 | 0.9131956 |
| BIOC\_GATA3PATHWAY | 16 | -0.7606111 | 0.9134269 |
| BIOC\_NDKDYNAMINPATHWAY | 19 | -0.756727 | 0.9161836 |
| REACT\_N-GLYCAN ANTENNAE ELONGATION | 15 | -0.7549772 | 0.9164024 |
| REACT\_ADHERENS JUNCTIONS INTERACTIONS | 31 | -0.7569826 | 0.9168719 |
| NCI\_HEDGEHOG\_GLIPATHWAY | 48 | 0.75498337 | 0.9173988 |
| BIOC\_PYK2PATHWAY | 28 | -0.7503465 | 0.9201485 |
| REACT\_NOD1\_2 SIGNALING PATHWAY | 35 | 0.75072646 | 0.9207153 |
| REACT\_GAP JUNCTION TRAFFICKING | 39 | -0.7466855 | 0.9234460 |
| KEGG\_NICOTINATE AND NICOTINAMIDE METABOLISM | 24 | -0.7425853 | 0.9261938 |
| BIOC\_SPRYPATHWAY | 18 | -0.7427007 | 0.9270629 |
| WIP\_HS\_MITOTIC\_M-M-G1\_PHASES | 15 | -0.7384641 | 0.9288564 |
| BIOC\_IL3PATHWAY | 15 | -0.7386477 | 0.9296769 |
| REACT\_POST-TRANSLATIONAL MODIFICATION\_ GAMMA CARBOXYLATION AND HYPUSINE FORMATION | 15 | -0.7323286 | 0.9345433 |
| NCI\_NFKAPPABATYPICALPATHWAY | 17 | -0.7274237 | 0.9385574 |
| KEGG\_TRYPTOPHAN METABOLISM | 40 | -0.7256416 | 0.9393175 |
| REACT\_SPHINGOLIPID METABOLISM | 31 | -0.7153597 | 0.9472715 |
| REACT\_GAP JUNCTION TRAFFICKING AND REGULATION | 41 | -0.7154497 | 0.9481961 |
| REACT\_GABA SYNTHESIS, RELEASE, REUPTAKE AND DEGRADATION | 19 | 0.71246576 | 0.9488617 |
| WIP\_HS\_HEART\_DEVELOPMENT | 44 | 0.70704293 | 0.9496096 |
| WIP\_HS\_AMPK\_SIGNALING | 66 | 0.70452833 | 0.949719 |
| BIOC\_IGF1PATHWAY | 20 | -0.7079056 | 0.9498262 |
| REACT\_N-GLYCAN ANTENNAE ELONGATION IN THE MEDIAL\_TRANS-GOLGI | 20 | -0.7100817 | 0.9499297 |
| WIP\_HS\_ESTROGEN\_METABOLISM | 16 | -0.7055037 | 0.9499713 |
| BIOC\_41BBPATHWAY | 18 | 0.70817626 | 0.9505989 |
| BIOC\_RARRXRPATHWAY | 15 | -0.6924148 | 0.9584788 |
| BIOC\_PGC1APATHWAY | 22 | 0.68200547 | 0.9631021 |
| KEGG\_HISTIDINE METABOLISM | 29 | 0.67940694 | 0.9638645 |
| REACT\_SIGNALING BY ROBO RECEPTOR | 32 | -0.6823117 | 0.9639034 |
| WIP\_HS\_WNT\_SIGNALING\_PATHWAY | 60 | 0.67633235 | 0.9639281 |
| KEGG\_LYSINE DEGRADATION | 47 | 0.67734045 | 0.9642917 |
| WIP\_HS\_BASE\_EXCISION\_REPAIR | 15 | -0.6824995 | 0.9647999 |
| KEGG\_MISMATCH REPAIR | 23 | -0.6664287 | 0.9693279 |
| NCI\_TRAIL\_PATHWAY | 28 | -0.6626917 | 0.9695377 |
| NCI\_HNF3BPATHWAY | 43 | -0.6632251 | 0.9702339 |
| REACT\_NUCLEAR RECEPTOR TRANSCRIPTION PATHWAY | 51 | -0.656018 | 0.9713401 |
| NCI\_IL3\_PATHWAY | 25 | -0.6523559 | 0.9713856 |
| KEGG\_MUCIN TYPE O-GLYCAN BIOSYNTHESIS | 30 | -0.657575 | 0.9715169 |
| NCI\_ARF6\_TRAFFICKINGPATHWAY | 49 | -0.6527536 | 0.9722038 |
| KEGG\_CYSTEINE AND METHIONINE METABOLISM | 35 | -0.6422549 | 0.975335 |
| REACT\_CREB PHOSPHORYLATION THROUGH THE ACTIVATION OF RAS | 27 | 0.61938006 | 0.9829939 |
| REACT\_HOMOLOGOUS RECOMBINATION REPAIR OF REPLICATION-INDEPENDENT DOUBLE-STRAND BREAKS | 15 | -0.6197484 | 0.9838832 |
| WIP\_HS\_SMALL\_LIGAND\_GPCRS | 18 | -0.607247 | 0.9864036 |
| WIP\_HS\_INTEGRATION\_OF\_ENERGY\_METABOLISM | 26 | -0.5997811 | 0.9867714 |
| REACT\_HOMOLOGOUS RECOMBINATION REPAIR | 15 | 0.60167795 | 0.9871361 |
| WIP\_HS\_TRANSPORT\_OF\_VITAMINS\_NUCLEOSIDES\_AND\_RELATED\_MOLECULES | 20 | 0.57370377 | 0.9913699 |
| REACT\_INTERLEUKIN RECEPTOR SHC SIGNALING | 29 | -0.5681103 | 0.9914886 |
| KEGG\_PYRUVATE METABOLISM | 39 | 0.57572895 | 0.9920063 |
| REACT\_FGFR2 LIGAND BINDING AND ACTIVATION | 16 | -0.5567184 | 0.9926215 |
| WIP\_HS\_TRNA\_AMINOACYLATION | 20 | -0.4618352 | 0.9988715 |
| NCI\_INSULIN\_GLUCOSE\_PATHWAY | 29 | -0.4717992 | 0.9995886 |

**Gene sets that are upregulated by plant stanol esters in the jejunum**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| NAME | SIZE | | NES | | FDR q-val |
| KEGG\_OLFACTORY TRANSDUCTION | | 362 | 2.3280613 | 1.95E-04 | |
| REACT\_OLFACTORY SIGNALING PATHWAY | | 325 | 2.3781514 | 3.90E-04 | |
| REACT\_ION CHANNEL TRANSPORT | | 59 | 2.1343064 | 0.002347893 | |
| REACT\_LIGAND-GATED ION CHANNEL TRANSPORT | | 24 | 1.8905195 | 0.05297323 | |
| REACT\_TRANSPORT OF INORGANIC CATIONS\_ANIONS AND AMINO ACIDS\_OLIGOPEPTIDES | | 92 | 1.8233756 | 0.090502754 | |
| REACT\_ION TRANSPORT BY P-TYPE ATPASES | | 35 | 1.7631223 | 0.14142492 | |
| KEGG\_CARDIAC MUSCLE CONTRACTION | | 71 | 1.6746185 | 0.2502898 | |
| REACT\_REGULATION OF IFNA SIGNALING | | 25 | 1.6846 | 0.25967035 | |
| KEGG\_PANCREATIC SECRETION | | 98 | 1.6259054 | 0.2822409 | |
| KEGG\_MINERAL ABSORPTION | | 51 | 1.6303751 | 0.2987091 | |
| KEGG\_TASTE TRANSDUCTION | | 49 | 1.6386399 | 0.30953538 | |
| KEGG\_NEUROACTIVE LIGAND-RECEPTOR INTERACTION | | 270 | 1.5889496 | 0.32348642 | |
| REACT\_TRANSMEMBRANE TRANSPORT OF SMALL MOLECULES | | 396 | 1.5936722 | 0.3384422 | |
| KEGG\_GASTRIC ACID SECRETION | | 74 | 1.571733 | 0.3470738 | |
| WIP\_HS\_TFS\_REGULATE\_MIRNAS\_RELATED\_TO\_CARDIAC\_HYPERTROPHY | | 15 | 1.5453153 | 0.3974594 | |
| REACT\_NA+\_CL- DEPENDENT NEUROTRANSMITTER TRANSPORTERS | | 18 | 1.5269281 | 0.40202862 | |
| REACT\_SLC-MEDIATED TRANSMEMBRANE TRANSPORT | | 247 | 1.5307983 | 0.41476434 | |
| WIP\_HS\_OSTEOBLAST\_SIGNALING | | 16 | 1.5016801 | 0.4579728 | |
| REACT\_TRANSPORT OF GLUCOSE AND OTHER SUGARS, BILE SALTS AND ORGANIC ACIDS, METAL IONS AND AMINE COMPOUNDS | | 96 | 1.4607865 | 0.52757335 | |
| REACT\_GABA RECEPTOR ACTIVATION | | 52 | 1.4750197 | 0.5284764 | |
| NCI\_CONE\_PATHWAY | | 23 | 1.4479475 | 0.5497028 | |
| REACT\_POTASSIUM CHANNELS | | 97 | 1.4612981 | 0.55185753 | |
| KEGG\_GLUTAMATERGIC SYNAPSE | | 122 | 1.4338851 | 0.5784915 | |
| KEGG\_GLYCEROLIPID METABOLISM | | 49 | 1.4014783 | 0.5883371 | |
| REACT\_SYNAPTIC TRANSMISSION | | 264 | 1.4219567 | 0.5997454 | |
| REACT\_AMINO ACID TRANSPORT ACROSS THE PLASMA MEMBRANE | | 30 | 1.4024258 | 0.60628027 | |
| REACT\_AMINO ACID AND OLIGOPEPTIDE SLC TRANSPORTERS | | 46 | 1.4080598 | 0.6067749 | |
| KEGG\_GABAERGIC SYNAPSE | | 88 | 1.4121631 | 0.61434567 | |
| REACT\_CLASS C\_3 (METABOTROPIC GLUTAMATE\_PHEROMONE RECEPTORS) | | 15 | 1.3622637 | 0.6190614 | |
| KEGG\_SALIVARY SECRETION | | 85 | 1.351947 | 0.62371844 | |
| REACT\_G PROTEIN GATED POTASSIUM CHANNELS | | 25 | 1.3459978 | 0.6293795 | |
| KEGG\_ARRHYTHMOGENIC RIGHT VENTRICULAR CARDIOMYOPATHY (ARVC) | | 74 | 1.3161974 | 0.632186 | |
| REACT\_INHIBITION OF VOLTAGE GATED CA2+ CHANNELS VIA GBETA\_GAMMA SUBUNITS | | 25 | 1.3628614 | 0.63539207 | |
| REACT\_ACTIVATION OF G PROTEIN GATED POTASSIUM CHANNELS | | 25 | 1.3528802 | 0.6379243 | |
| NCI\_BETACATENIN\_DEG\_PATHWAY | | 18 | 1.3105533 | 0.6386244 | |
| WIP\_HS\_GPCRS,\_CLASS\_C\_METABOTROPIC\_GLUTAMATE,\_PHEROMONE | | 15 | 1.3026708 | 0.640504 | |
| REACT\_TRANSMISSION ACROSS CHEMICAL SYNAPSES | | 187 | 1.3178422 | 0.64062077 | |
| WIP\_HS\_TRIACYLGLYCERIDE\_SYNTHESIS | | 23 | 1.3058114 | 0.64220047 | |
| KEGG\_DILATED CARDIOMYOPATHY | | 90 | 1.2839742 | 0.644396 | |
| REACT\_UNBLOCKING OF NMDA RECEPTOR, GLUTAMATE BINDING AND ACTIVATION | | 15 | 1.3656054 | 0.64492065 | |
| WIP\_HS\_FATTY\_ACID\_OMEGA\_OXIDATION | | 15 | 1.2630296 | 0.64993817 | |
| WIP\_HS\_GPCRS,\_OTHER | | 88 | 1.3192008 | 0.6505888 | |
| REACT\_G ALPHA (S) SIGNALLING EVENTS | | 117 | 1.3360361 | 0.6508106 | |
| REACT\_XENOBIOTICS | | 15 | 1.2750522 | 0.65219915 | |
| REACT\_TRAFFICKING OF AMPA RECEPTORS | | 29 | 1.2852781 | 0.65233874 | |
| BIOC\_PAR1PATHWAY | | 19 | 1.2592106 | 0.65235376 | |
| KEGG\_GNRH SIGNALING PATHWAY | | 100 | 1.3223215 | 0.65420896 | |
| KEGG\_REGULATION OF AUTOPHAGY | | 32 | 1.271149 | 0.65508926 | |
| REACT\_INWARDLY RECTIFYING K+ CHANNELS | | 30 | 1.3733119 | 0.6562923 | |
| WIP\_HS\_BILE\_ACID\_AND\_BILE\_SALT\_METABOLISM | | 27 | 1.2675186 | 0.65645653 | |
| REACT\_NEURORANSMITTER RECEPTOR BINDING AND DOWNSTREAM TRANSMISSION IN THE POSTSYNAPTIC CELL | | 134 | 1.2630562 | 0.66127217 | |
| KEGG\_TYPE II DIABETES MELLITUS | | 47 | 1.2897214 | 0.6615297 | |
| BIOC\_EDG1PATHWAY | | 22 | 1.2932019 | 0.6624008 | |
| WIP\_HS\_FLUOROPYRIMIDINE\_ACTIVITY | | 32 | 1.2532291 | 0.6624445 | |
| KEGG\_PHOTOTRANSDUCTION | | 28 | 1.3243477 | 0.6627811 | |
| WIP\_HS\_NUCLEAR\_RECEPTORS\_IN\_LIPID\_METABOLISM\_AND\_TOXICITY | | 36 | 1.3662657 | 0.66308326 | |
| REACT\_BILE ACID AND BILE SALT METABOLISM | | 27 | 1.2754076 | 0.6631946 | |
| KEGG\_GLYCEROPHOSPHOLIPID METABOLISM | | 78 | 1.2855353 | 0.6643742 | |
| NCI\_RHODOPSIN\_PATHWAY | | 23 | 1.3757523 | 0.6684122 | |
| REACT\_GLUTAMATE BINDING, ACTIVATION OF AMPA RECEPTORS AND SYNAPTIC PLASTICITY | | 29 | 1.3255919 | 0.6747508 | |
| NCI\_LPA4\_PATHWAY | | 15 | 1.2360673 | 0.6928032 | |
| NCI\_IFNGPATHWAY | | 42 | 1.2399867 | 0.7005461 | |
| KEGG\_ALPHA-LINOLENIC ACID METABOLISM | | 19 | 1.236789 | 0.70149237 | |
| NCI\_INTEGRIN\_CS\_PATHWAY | | 26 | 1.227596 | 0.70275396 | |
| KEGG\_GLYCOSYLPHOSPHATIDYLINOSITOL(GPI)-ANCHOR BIOSYNTHESIS | | 25 | 1.2277641 | 0.7129491 | |
| KEGG\_GLYCOSPHINGOLIPID BIOSYNTHESIS - GANGLIO SERIES | | 15 | 1.1935407 | 0.82558876 | |
| REACT\_INTERACTION BETWEEN L1 AND ANKYRINS | | 28 | 1.1840253 | 0.82819223 | |
| KEGG\_ABC TRANSPORTERS | | 44 | 1.1865935 | 0.82955027 | |
| REACT\_TIGHT JUNCTION INTERACTIONS | | 30 | 1.1792822 | 0.8357536 | |
| WIP\_HS\_TRANSPORT\_OF\_GLUCOSE\_AND\_OTHER\_SUGARS,\_BILE\_SALTS\_AND\_ORGANIC\_ACIDS,\_METAL\_IONS\_AND\_AMINE\_COMPOUNDS | | 51 | 1.1876602 | 0.8377143 | |
| KEGG\_CYTOSOLIC DNA-SENSING PATHWAY | | 59 | 1.1289632 | 0.85682285 | |
| KEGG\_HYPERTROPHIC CARDIOMYOPATHY (HCM) | | 82 | 1.1257042 | 0.85984933 | |
| REACT\_CDO IN MYOGENESIS | | 29 | 1.1564013 | 0.860337 | |
| REACT\_TRAFFICKING OF GLUR2-CONTAINING AMPA RECEPTORS | | 15 | 1.1587692 | 0.8618602 | |
| REACT\_G ALPHA (Q) SIGNALLING EVENTS | | 177 | 1.1531581 | 0.86290646 | |
| WIP\_HS\_PEPTIDE\_GPCRS | | 71 | 1.1425297 | 0.86310226 | |
| REACT\_GRB2\_SOS PROVIDES LINKAGE TO MAPK SIGNALING FOR INTERGRINS | | 15 | 1.1669389 | 0.86398596 | |
| REACT\_MYOGENESIS | | 29 | 1.1695365 | 0.86498576 | |
| REACT\_PLATELET AGGREGATION (PLUG FORMATION) | | 34 | 1.1317967 | 0.8653091 | |
| REACT\_P130CAS LINKAGE TO MAPK SIGNALING FOR INTEGRINS | | 15 | 1.1496253 | 0.8659913 | |
| KEGG\_CARBOHYDRATE DIGESTION AND ABSORPTION | | 38 | 1.1290185 | 0.86659545 | |
| REACT\_ACTIVATION OF GABAB RECEPTORS | | 38 | 1.1388625 | 0.8675648 | |
| REACT\_VOLTAGE GATED POTASSIUM CHANNELS | | 42 | 1.1438161 | 0.86852264 | |
| NCI\_IL1PATHWAY | | 32 | 1.1205733 | 0.87020755 | |
| WIP\_HS\_GPCRS,\_CLASS\_A\_RHODOPSIN-LIKE | | 250 | 1.1590542 | 0.8724038 | |
| KEGG\_JAK-STAT SIGNALING PATHWAY | | 153 | 1.1321497 | 0.8743002 | |
| BIOC\_NTHIPATHWAY | | 22 | 1.1170655 | 0.87433696 | |
| REACT\_GABA B RECEPTOR ACTIVATION | | 38 | 1.1344424 | 0.875058 | |
| WIP\_HS\_GPCRS,\_CLASS\_B\_SECRETIN-LIKE | | 23 | 1.14409 | 0.87844455 | |
| REACT\_BASIGIN INTERACTIONS | | 25 | 1.1594805 | 0.8824376 | |
| KEGG\_LONG-TERM POTENTIATION | | 68 | 1.0983292 | 0.882733 | |
| KEGG\_AFRICAN TRYPANOSOMIASIS | | 34 | 1.1126044 | 0.8828324 | |
| KEGG\_CALCIUM SIGNALING PATHWAY | | 175 | 1.1063366 | 0.8882275 | |
| KEGG\_BILE SECRETION | | 69 | 1.0992432 | 0.88831943 | |
| REACT\_INTEGRIN ALPHAIIB BETA3 SIGNALING | | 27 | 1.1038389 | 0.88890344 | |
| REACT\_AMINE COMPOUND SLC TRANSPORTERS | | 29 | 1.1082432 | 0.890305 | |
| WIP\_HS\_TOR\_SIGNALING | | 33 | 1.0841755 | 0.89290625 | |
| REACT\_AMINE LIGAND-BINDING RECEPTORS | | 40 | 1.090673 | 0.89476115 | |
| KEGG\_LINOLEIC ACID METABOLISM | | 29 | 1.0791284 | 0.89500475 | |
| REACT\_BIOSYNTHESIS OF AMINE AND PEPTIDE HORMONES | | 19 | 1.0882626 | 0.8950607 | |
| KEGG\_GLYCOSAMINOGLYCAN BIOSYNTHESIS - CHONDROITIN SULFATE | | 22 | 1.0857244 | 0.8956798 | |
| REACT\_METABOLISM OF HORMONES | | 19 | 1.0766292 | 0.8959364 | |
| WIP\_HS\_CALCIUM\_REGULATION\_IN\_THE\_CARDIAC\_CELL | | 148 | 1.0992897 | 0.8975144 | |
| BIOC\_CXCR4PATHWAY | | 23 | 1.0920053 | 0.89855504 | |
| NCI\_HEDGEHOG\_2PATHWAY | | 22 | 1.0730418 | 0.90091753 | |
| REACT\_REGULATION OF INSULIN SECRETION BY GLUCAGON-LIKE PEPTIDE-1 | | 43 | 1.079274 | 0.90313375 | |
| WIP\_HS\_SULFATION\_BIOTRANSFORMATION\_REACTION | | 15 | 1.065541 | 0.92105424 | |
| REACT\_CREB PHOSPHORYLATION THROUGH THE ACTIVATION OF CAMKII | | 15 | 1.0613939 | 0.9287514 | |
| KEGG\_FRUCTOSE AND MANNOSE METABOLISM | | 35 | 1.0079699 | 0.9542106 | |
| BIOC\_G2PATHWAY | | 22 | 1.0153129 | 0.95717996 | |
| KEGG\_BASAL CELL CARCINOMA | | 55 | 1.045174 | 0.9577573 | |
| REACT\_SYNTHESIS OF GLYCOSYLPHOSPHATIDYLINOSITOL (GPI) | | 16 | 1.0514511 | 0.9588592 | |
| KEGG\_LONG-TERM DEPRESSION | | 68 | 1.0086995 | 0.95890313 | |
| REACT\_SYNTHESIS OF BILE ACIDS AND BILE SALTS | | 19 | 1.0024151 | 0.9594753 | |
| BIOC\_MEF2DPATHWAY | | 18 | 1.0463912 | 0.9616576 | |
| KEGG\_PANTOTHENATE AND COA BIOSYNTHESIS | | 17 | 1.0159534 | 0.96253663 | |
| WIP\_HS\_TRANSPORT\_OF\_INORGANIC\_CATIONS-ANIONS\_AND\_AMINO\_ACIDS-OLIGOPEPTIDES | | 34 | 1.0093117 | 0.9643736 | |
| REACT\_EFFECTS OF PIP2 HYDROLYSIS | | 24 | 1.0476389 | 0.96516716 | |
| KEGG\_GLYCOLYSIS \_ GLUCONEOGENESIS | | 61 | 0.9925266 | 0.9659791 | |
| WIP\_HS\_GPCR\_LIGAND\_BINDING | | 121 | 1.0025984 | 0.96618724 | |
| REACT\_INTEGRATION OF ENERGY METABOLISM | | 113 | 1.0104357 | 0.9677731 | |
| KEGG\_ENDOCRINE AND OTHER FACTOR-REGULATED CALCIUM REABSORPTION | | 49 | 1.0310131 | 0.9695011 | |
| REACT\_TRIGLYCERIDE BIOSYNTHESIS | | 33 | 0.9973985 | 0.970131 | |
| WIP\_HS\_UREA\_CYCLE\_AND\_METABOLISM\_OF\_AMINO\_GROUPS | | 19 | 0.9893043 | 0.9701791 | |
| WIP\_HS\_OXIDATIVE\_STRESS | | 28 | 1.0159863 | 0.9702008 | |
| REACT\_CYTOCHROME P450 - ARRANGED BY SUBSTRATE TYPE | | 49 | 1.028515 | 0.9708363 | |
| REACT\_PLC-GAMMA1 SIGNALLING | | 36 | 0.9929922 | 0.9713043 | |
| REACT\_TRAF6 MEDIATED IRF7 ACTIVATION | | 31 | 0.99503917 | 0.9713492 | |
| WIP\_HS\_GLYCOGEN\_METABOLISM | | 36 | 1.032122 | 0.9738016 | |
| REACT\_GPCR LIGAND BINDING | | 397 | 1.0229669 | 0.9757657 | |
| KEGG\_TYROSINE METABOLISM | | 40 | 1.0160124 | 0.97798 | |
| KEGG\_AMINO SUGAR AND NUCLEOTIDE SUGAR METABOLISM | | 48 | 1.0324553 | 0.9809559 | |
| WIP\_HS\_TOLL-LIKE\_RECEPTOR\_SIGNALING\_PATHWAY | | 100 | 0.9837879 | 0.98228705 | |
| REACT\_REGULATION OF INSULIN SECRETION | | 86 | 1.0232114 | 0.9831151 | |
| KEGG\_TOLL-LIKE RECEPTOR SIGNALING PATHWAY | | 100 | 0.96759075 | 0.9835106 | |
| KEGG\_ALZHEIMER'S DISEASE | | 156 | 1.0164585 | 0.9842981 | |
| KEGG\_SYNAPTIC VESICLE CYCLE | | 64 | 0.8151387 | 0.984369 | |
| KEGG\_GLYCOSAMINOGLYCAN BIOSYNTHESIS - HEPARAN SULFATE | | 26 | 0.8170652 | 0.9848297 | |
| NCI\_WNT\_SIGNALING\_PATHWAY | | 28 | 0.9711296 | 0.9849432 | |
| KEGG\_RETINOL METABOLISM | | 58 | 0.9730184 | 0.985236 | |
| WIP\_HS\_PHASE\_1\_-\_FUNCTIONALIZATION\_OF\_COMPOUNDS | | 52 | 1.0182103 | 0.9857316 | |
| WIP\_HS\_PHYSIOLOGICAL\_AND\_PATHOLOGICAL\_HYPERTROPHY\_OF\_THE\_HEART | | 24 | 0.8181888 | 0.986962 | |
| WIP\_HS\_HEDGEHOG\_SIGNALING\_PATHWAY | | 18 | 0.98035485 | 0.9874177 | |
| KEGG\_GLYCOSPHINGOLIPID BIOSYNTHESIS - LACTO AND NEOLACTO SERIES | | 25 | 0.9743701 | 0.9874604 | |
| REACT\_CELL-CELL JUNCTION ORGANIZATION | | 61 | 0.978282 | 0.9876784 | |
| BIOC\_IL12PATHWAY | | 20 | 0.9682149 | 0.9882522 | |
| REACT\_RAS ACTIVATION UOPN CA2+ INFUX THROUGH NMDA RECEPTOR | | 17 | 1.032582 | 0.9890717 | |
| REACT\_STRIATED MUSCLE CONTRACTION | | 31 | 0.81929654 | 0.9891898 | |
| KEGG\_ARACHIDONIC ACID METABOLISM | | 54 | 0.96393704 | 0.98945004 | |
| REACT\_INTERLEUKIN-1 SIGNALING | | 43 | 0.93626064 | 0.9903381 | |
| WIP\_HS\_BIOGENIC\_AMINE\_SYNTHESIS | | 15 | 0.9515112 | 0.9913835 | |
| BIOC\_ERYTHPATHWAY | | 15 | 0.7691538 | 0.99274534 | |
| BIOC\_CCR5PATHWAY | | 17 | 0.9747132 | 0.9932184 | |
| REACT\_METABOLISM OF AMINO ACIDS AND DERIVATIVES | | 195 | 0.81938344 | 0.9935252 | |
| BIOC\_BIOPEPTIDESPATHWAY | | 37 | 0.939071 | 0.99383557 | |
| REACT\_CLASS B\_2 (SECRETIN FAMILY RECEPTORS) | | 87 | 0.9371077 | 0.9938591 | |
| NCI\_EPHBFWDPATHWAY | | 37 | 0.85295564 | 0.9939116 | |
| REACT\_NEUROTRANSMITTER RELEASE CYCLE | | 36 | 0.9331392 | 0.9939675 | |
| REACT\_AQUAPORIN-MEDIATED TRANSPORT | | 47 | 0.94091177 | 0.99420214 | |
| BIOC\_CREBPATHWAY | | 26 | 1.0334721 | 0.99427396 | |
| WIP\_HS\_WNT\_SIGNALING\_PATHWAY\_AND\_PLURIPOTENCY | | 97 | 0.8568442 | 0.994327 | |
| NCI\_NECTIN\_PATHWAY | | 28 | 0.9447538 | 0.9943946 | |
| REACT\_CLASS A\_1 (RHODOPSIN-LIKE RECEPTORS) | | 295 | 0.95248884 | 0.99469894 | |
| REACT\_CGMP EFFECTS | | 21 | 0.9601408 | 0.99544555 | |
| WIP\_HS\_MIRNAS\_INVOLVED\_IN\_DDR | | 46 | 0.85822785 | 0.9958498 | |
| KEGG\_NOTCH SIGNALING PATHWAY | | 46 | 0.82021946 | 0.9963889 | |
| REACT\_POST-ELONGATION PROCESSING OF INTRON-CONTAINING PRE-MRNA | | 32 | 0.7692329 | 0.9967857 | |
| REACT\_TRANSPORT OF MATURE MRNA DERIVED FROM AN INTRON-CONTAINING TRANSCRIPT | | 22 | 0.84546643 | 0.99697745 | |
| BIOC\_INTRINSICPATHWAY | | 22 | 0.8533013 | 0.99797374 | |
| REACT\_ACTIVATED TAK1 MEDIATES P38 MAPK ACTIVATION | | 21 | 0.84084797 | 0.9981459 | |
| WIP\_HS\_MATRIX\_METALLOPROTEINASES | | 29 | 0.9415834 | 0.99831367 | |
| REACT\_PLATELET HOMEOSTASIS | | 79 | 0.8031232 | 0.9985553 | |
| NCI\_P75NTRPATHWAY | | 66 | 0.77070206 | 0.9987174 | |
| BIOC\_INSULINPATHWAY | | 21 | 0.43681145 | 0.9992635 | |
| WIP\_HS\_MICRORNAS\_IN\_CARDIOMYOCYTE\_HYPERTROPHY | | 100 | 0.85860324 | 0.9998535 | |
| BIOC\_TPOPATHWAY | | 22 | 0.7726191 | 0.9999735 | |
| KEGG\_MAPK SIGNALING PATHWAY | | 263 | 0.9567435 | 1 | |
| REACT\_GLUCAGON-TYPE LIGAND RECEPTORS | | 33 | 0.9537076 | 1 | |
| NCI\_MAPKTRKPATHWAY | | 34 | 0.9528506 | 1 | |
| NCI\_P38\_MKK3\_6PATHWAY | | 29 | 0.94558376 | 1 | |
| WIP\_HS\_NOTCH\_SIGNALING\_PATHWAY | | 45 | 0.94481647 | 1 | |
| REACT\_PHASE 1 - FUNCTIONALIZATION OF COMPOUNDS | | 67 | 0.9250854 | 1 | |
| WIP\_HS\_INTEGRIN-MEDIATED\_CELL\_ADHESION | | 99 | 0.92315894 | 1 | |
| KEGG\_MELANOGENESIS | | 100 | 0.91852725 | 1 | |
| REACT\_PLATELET CALCIUM HOMEOSTASIS | | 19 | 0.9163849 | 1 | |
| WIP\_HS\_NICOTINE\_ACTIVITY\_ON\_DOPAMINERGIC\_NEURONS | | 21 | 0.9163613 | 1 | |
| WIP\_HS\_MONOAMINE\_GPCRS | | 33 | 0.915043 | 1 | |
| NCI\_INTEGRIN3\_PATHWAY | | 43 | 0.9138711 | 1 | |
| BIOC\_IL1RPATHWAY | | 31 | 0.9116028 | 1 | |
| REACT\_NITRIC OXIDE STIMULATES GUANYLATE CYCLASE | | 27 | 0.91136587 | 1 | |
| NCI\_WNT\_CANONICAL\_PATHWAY | | 20 | 0.9081814 | 1 | |
| WIP\_HS\_OVARIAN\_INFERTILITY\_GENES | | 29 | 0.9041741 | 1 | |
| BIOC\_GPCRPATHWAY | | 34 | 0.90331495 | 1 | |
| REACT\_INSULIN RECEPTOR RECYCLING | | 25 | 0.9009934 | 1 | |
| REACT\_INHIBITION OF INSULIN SECRETION BY ADRENALINE\_NORADRENALINE | | 29 | 0.8967504 | 1 | |
| REACT\_IRON UPTAKE AND TRANSPORT | | 37 | 0.8967258 | 1 | |
| REACT\_G ALPHA (I) SIGNALLING EVENTS | | 181 | 0.8933077 | 1 | |
| REACT\_POST-TRANSLATIONAL MODIFICATION\_ SYNTHESIS OF GPI-ANCHORED PROTEINS | | 25 | 0.89035803 | 1 | |
| BIOC\_GHPATHWAY | | 26 | 0.88845915 | 1 | |
| KEGG\_CHOLINERGIC SYNAPSE | | 112 | 0.88806945 | 1 | |
| BIOC\_MPRPATHWAY | | 22 | 0.8874505 | 1 | |
| KEGG\_PROXIMAL TUBULE BICARBONATE RECLAMATION | | 23 | 0.8855271 | 1 | |
| WIP\_HS\_CYTOCHROME\_P450 | | 64 | 0.88456535 | 1 | |
| REACT\_TRANSFERRIN ENDOCYTOSIS AND RECYCLING | | 27 | 0.884428 | 1 | |
| KEGG\_OXIDATIVE PHOSPHORYLATION | | 117 | 0.88095075 | 1 | |
| REACT\_GLYCOGEN BREAKDOWN (GLYCOGENOLYSIS) | | 16 | 0.87995714 | 1 | |
| REACT\_GLYCOLYSIS | | 24 | 0.8774981 | 1 | |
| KEGG\_NITROGEN METABOLISM | | 23 | 0.8752821 | 1 | |
| WIP\_HS\_HYPOTHETICAL\_NETWORK\_FOR\_DRUG\_ADDICTION | | 32 | 0.87518364 | 1 | |
| KEGG\_ONE CARBON POOL BY FOLATE | | 17 | 0.8711991 | 1 | |
| KEGG\_FC EPSILON RI SIGNALING PATHWAY | | 78 | 0.8702845 | 1 | |
| KEGG\_VASCULAR SMOOTH MUSCLE CONTRACTION | | 115 | 0.8654344 | 1 | |
| REACT\_RNA POLYMERASE I CHAIN ELONGATION | | 18 | 0.8647338 | 1 | |
| KEGG\_ALDOSTERONE-REGULATED SODIUM REABSORPTION | | 42 | 0.8629489 | 1 | |
| WIP\_HS\_ONE\_CARBON\_METABOLISM | | 26 | 0.86255527 | 1 | |
| KEGG\_ETHER LIPID METABOLISM | | 34 | 0.86010104 | 1 | |
| REACT\_RNA POLYMERASE I PROMOTER ESCAPE | | 19 | 0.8590755 | 1 | |
| REACT\_METABOLISM OF STEROID HORMONES AND VITAMINS A AND D | | 32 | 0.8469671 | 1 | |
| REACT\_RNA POLYMERASE I TRANSCRIPTION INITIATION | | 20 | 0.8460231 | 1 | |
| NCI\_PS1PATHWAY | | 46 | 0.84172046 | 1 | |
| KEGG\_COLLECTING DUCT ACID SECRETION | | 27 | 0.8367927 | 1 | |
| REACT\_RAP1 SIGNALLING | | 16 | 0.8341255 | 1 | |
| REACT\_RNA POLYMERASE I PROMOTER CLEARANCE | | 21 | 0.8333693 | 1 | |
| KEGG\_PRIMARY BILE ACID BIOSYNTHESIS | | 16 | 0.82772815 | 1 | |
| NCI\_TAP63PATHWAY | | 51 | 0.82329947 | 1 | |
| REACT\_RNA POLYMERASE I TRANSCRIPTION TERMINATION | | 20 | 0.8228351 | 1 | |
| KEGG\_GLYCOSAMINOGLYCAN DEGRADATION | | 19 | 0.8226955 | 1 | |
| WIP\_HS\_VITAMIN\_A\_AND\_CAROTENOID\_METABOLISM | | 42 | 0.8207659 | 1 | |
| KEGG\_HEDGEHOG SIGNALING PATHWAY | | 56 | 0.82044315 | 1 | |
| NCI\_FASPATHWAY | | 38 | 0.8045888 | 1 | |
| REACT\_GLUCOSE METABOLISM | | 62 | 0.79969656 | 1 | |
| NCI\_TCRCALCIUMPATHWAY | | 30 | 0.7938574 | 1 | |
| REACT\_SYNTHESIS OF BILE ACIDS AND BILE SALTS VIA 7ALPHA-HYDROXYCHOLESTEROL | | 15 | 0.79384637 | 1 | |
| WIP\_HS\_SIDS\_SUSCEPTIBILITY\_PATHWAYS | | 63 | 0.79148674 | 1 | |
| REACT\_INTEGRIN CELL SURFACE INTERACTIONS | | 83 | 0.79011655 | 1 | |
| BIOC\_SPPAPATHWAY | | 21 | 0.7855258 | 1 | |
| NCI\_IL6\_7PATHWAY | | 45 | 0.7833572 | 1 | |
| REACT\_RNA POLYMERASE I TRANSCRIPTION | | 23 | 0.78251946 | 1 | |
| KEGG\_VEGF SIGNALING PATHWAY | | 73 | 0.77350044 | 1 | |
| REACT\_MRNA 3-END PROCESSING | | 32 | 0.7729633 | 1 | |
| WIP\_HS\_ESTROGEN\_SIGNALING\_PATHWAY | | 20 | 0.7726666 | 1 | |
| NCI\_TRKRPATHWAY | | 61 | 0.76015526 | 1 | |
| REACT\_GLUTAMATE NEUROTRANSMITTER RELEASE CYCLE | | 15 | 0.7532356 | 1 | |
| WIP\_HS\_METABOLISM\_OF\_AMINO\_ACIDS\_AND\_DERIVATIVES | | 33 | 0.7498582 | 1 | |
| KEGG\_WNT SIGNALING PATHWAY | | 148 | 0.74282044 | 1 | |
| KEGG\_OTHER GLYCAN DEGRADATION | | 17 | 0.7358895 | 1 | |
| KEGG\_HEPATITIS C | | 132 | 0.7339564 | 1 | |
| REACT\_PEROXISOMAL LIPID METABOLISM | | 20 | 0.73094183 | 1 | |
| WIP\_HS\_KEAP1-NRF2\_PATHWAY | | 15 | 0.7304177 | 1 | |
| REACT\_DUAL INCISION REACTION IN GG-NER | | 19 | 0.71649396 | 1 | |
| WIP\_HS\_GLYCOLYSIS\_AND\_GLUCONEOGENESIS | | 44 | 0.715366 | 1 | |
| REACT\_TIE2 SIGNALING | | 18 | 0.7138979 | 1 | |
| REACT\_PYRIMIDINE METABOLISM | | 24 | 0.70207435 | 1 | |
| REACT\_FORMATION OF INCISION COMPLEX IN GG-NER | | 19 | 0.7012391 | 1 | |
| REACT\_SYNTHESIS AND INTERCONVERSION OF NUCLEOTIDE DI- AND TRIPHOSPHATES | | 16 | 0.7006054 | 1 | |
| WIP\_HS\_TYPE\_II\_DIABETES\_MELLITUS | | 20 | 0.69052535 | 1 | |
| WIP\_HS\_TYPE\_II\_INTERFERON\_SIGNALING\_(IFNG) | | 36 | 0.68242544 | 1 | |
| BIOC\_HDACPATHWAY | | 29 | 0.67865586 | 1 | |
| WIP\_HS\_STRIATED\_MUSCLE\_CONTRACTION | | 38 | 0.6784512 | 1 | |
| BIOC\_P38MAPKPATHWAY | | 38 | 0.67628044 | 1 | |
| WIP\_HS\_P38\_MAPK\_SIGNALING\_PATHWAY | | 34 | 0.6731949 | 1 | |
| REACT\_FRS2-MEDIATED CASCADE | | 27 | 0.66253823 | 1 | |
| KEGG\_ALANINE, ASPARTATE AND GLUTAMATE METABOLISM | | 32 | 0.6594752 | 1 | |
| BIOC\_P53HYPOXIAPATHWAY | | 20 | 0.65915805 | 1 | |
| KEGG\_ARGININE AND PROLINE METABOLISM | | 52 | 0.6588522 | 1 | |
| KEGG\_FATTY ACID METABOLISM | | 43 | 0.6411653 | 1 | |
| WIP\_HS\_PROTEINS\_AND\_DNA\_SEQUENCES\_IN\_CARDICAC\_STRUCTURES | | 27 | 0.64050627 | 1 | |
| BIOC\_CALCINEURINPATHWAY | | 18 | 0.63127834 | 1 | |
| REACT\_GAP JUNCTION ASSEMBLY | | 28 | 0.61730725 | 1 | |
| KEGG\_PHOSPHATIDYLINOSITOL SIGNALING SYSTEM | | 78 | 0.61252046 | 1 | |
| WIP\_HS\_NUCLEAR\_RECEPTORS | | 38 | 0.60411125 | 1 | |
| KEGG\_MATURITY ONSET DIABETES OF THE YOUNG | | 25 | 0.5907314 | 1 | |
| REACT\_FGFR LIGAND BINDING AND ACTIVATION | | 20 | 0.5753167 | 1 | |
| REACT\_TRANSPORT OF VITAMINS, NUCLEOSIDES, AND RELATED MOLECULES | | 31 | 0.56073564 | 1 | |
| WIP\_HS\_MONOAMINE\_TRANSPORT | | 32 | 0.55883074 | 1 | |
| REACT\_PHOSPHOLIPASE C-MEDIATED CASCADE | | 23 | 0.5421979 | 1 | |
| REACT\_MUSCLE CONTRACTION | | 51 | 0.5115657 | 1 | |
| BIOC\_PDGFPATHWAY | | 26 | 0.5096681 | 1 | |
| REACT\_SHC-MEDIATED CASCADE | | 20 | 0.47978002 | 1 | |
| BIOC\_EPOPATHWAY | | 19 | 0.4778372 | 1 | |
| BIOC\_EGFPATHWAY | | 26 | 0.4585628 | 1 | |