|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **ID** | **Description** | **pvalue** | **qvalue** | **Gene** | **Count** |
| hsa04668 | TNF signaling pathway | 1.29E-11 | 6.93E-10 | TNFAIP3/LIF/ICAM1/IL1B/TNF/PTGS2/CSF1/IL6 | 8 |
| hsa05323 | Rheumatoid arthritis | 2.32E-10 | 6.21E-09 | ICAM1/VEGFA/IL1B/TNF/CSF1/TLR2/IL6 | 7 |
| hsa04064 | NF-kappa B signaling pathway | 5.14E-10 | 9.19E-09 | TNFAIP3/ICAM1/IL1B/TNF/BCL2A1/BCL2L1/PTGS2 | 7 |
| hsa05144 | Malaria | 3.14E-08 | 4.22E-07 | ICAM1/IL1B/TNF/TLR2/IL6 | 5 |
| hsa05134 | Legionellosis | 6.16E-08 | 6.61E-07 | C3/IL1B/TNF/TLR2/IL6 | 5 |
| hsa05140 | Leishmaniasis | 2.84E-07 | 2.54E-06 | C3/IL1B/TNF/PTGS2/TLR2 | 5 |
| hsa05143 | African trypanosomiasis | 6.64E-07 | 5.09E-06 | ICAM1/IL1B/TNF/IL6 | 4 |
| hsa04657 | IL-17 signaling pathway | 7.74E-07 | 5.19E-06 | TNFAIP3/IL1B/TNF/PTGS2/IL6 | 5 |
| hsa05167 | Kaposi sarcoma-associated herpesvirus infection | 1.03E-06 | 5.66E-06 | C3/ICAM1/VEGFA/PTGS2/MYC/IL6 | 6 |
| hsa04933 | AGE-RAGE signaling pathway in diabetic complications | 1.05E-06 | 5.66E-06 | ICAM1/VEGFA/IL1B/TNF/IL6 | 5 |
| hsa05142 | Chagas disease (American trypanosomiasis) | 1.16E-06 | 5.68E-06 | C3/IL1B/TNF/TLR2/IL6 | 5 |
| hsa05169 | Epstein-Barr virus infection | 1.47E-06 | 6.58E-06 | TNFAIP3/ICAM1/TNF/MYC/TLR2/IL6 | 6 |
| hsa05163 | Human cytomegalovirus infection | 2.84E-06 | 1.17E-05 | VEGFA/IL1B/TNF/PTGS2/MYC/IL6 | 6 |
| hsa05162 | Measles | 5.20E-06 | 1.99E-05 | TNFAIP3/IL1B/BCL2L1/TLR2/IL6 | 5 |
| hsa05321 | Inflammatory bowel disease (IBD) | 6.58E-06 | 2.36E-05 | IL1B/TNF/TLR2/IL6 | 4 |
| hsa05133 | Pertussis | 1.23E-05 | 4.13E-05 | C3/IL1B/TNF/IL6 | 4 |
| hsa05152 | Tuberculosis | 1.90E-05 | 5.82E-05 | C3/IL1B/TNF/TLR2/IL6 | 5 |
| hsa04621 | NOD-like receptor signaling pathway | 1.95E-05 | 5.82E-05 | TNFAIP3/IL1B/TNF/BCL2L1/IL6 | 5 |
| hsa01523 | Antifolate resistance | 2.81E-05 | 7.94E-05 | IL1B/TNF/IL6 | 3 |
| hsa04640 | Hematopoietic cell lineage | 3.51E-05 | 9.04E-05 | IL1B/TNF/CSF1/IL6 | 4 |
| hsa05205 | Proteoglycans in cancer | 3.56E-05 | 9.04E-05 | VEGFA/TNF/PLAUR/MYC/TLR2 | 5 |
| hsa04151 | PI3K-Akt signaling pathway | 3.84E-05 | 9.04E-05 | VEGFA/BCL2L1/MYC/CSF1/TLR2/IL6 | 6 |
| hsa05146 | Amoebiasis | 3.95E-05 | 9.04E-05 | IL1B/TNF/TLR2/IL6 | 4 |
| hsa04620 | Toll-like receptor signaling pathway | 4.26E-05 | 9.04E-05 | IL1B/TNF/TLR2/IL6 | 4 |
| hsa04625 | C-type lectin receptor signaling pathway | 4.26E-05 | 9.04E-05 | IL1B/TNF/PTGS2/IL6 | 4 |
| hsa05132 | Salmonella infection | 4.38E-05 | 9.04E-05 | IL1B/TNF/MYC/TLR2/IL6 | 5 |
| hsa05166 | Human T-cell leukemia virus 1 infection | 4.89E-05 | 9.73E-05 | ICAM1/TNF/BCL2L1/MYC/IL6 | 5 |
| hsa05332 | Graft-versus-host disease | 6.58E-05 | 1.26E-04 | IL1B/TNF/IL6 | 3 |
| hsa05418 | Fluid shear stress and atherosclerosis | 1.32E-04 | 2.45E-04 | ICAM1/VEGFA/IL1B/TNF | 4 |
| hsa04010 | MAPK signaling pathway | 1.98E-04 | 3.43E-04 | VEGFA/IL1B/TNF/MYC/CSF1 | 5 |
| hsa04060 | Cytokine-cytokine receptor interaction | 1.98E-04 | 3.43E-04 | LIF/IL1B/TNF/CSF1/IL6 | 5 |
| hsa05168 | Herpes simplex virus 1 infection | 2.38E-04 | 3.78E-04 | C3/IL1B/TNF/BCL2L1/TLR2/IL6 | 6 |
| hsa04630 | JAK-STAT signaling pathway | 2.39E-04 | 3.78E-04 | LIF/BCL2L1/MYC/IL6 | 4 |
| hsa05161 | Hepatitis B | 2.39E-04 | 3.78E-04 | TNF/MYC/TLR2/IL6 | 4 |
| hsa05164 | Influenza A | 2.88E-04 | 4.41E-04 | ICAM1/IL1B/TNF/IL6 | 4 |
| hsa05202 | Transcriptional misregulation in cancer | 4.06E-04 | 6.05E-04 | BCL2A1/BCL2L1/MYC/IL6 | 4 |
| hsa01521 | EGFR tyrosine kinase inhibitor resistance | 4.66E-04 | 6.76E-04 | VEGFA/BCL2L1/IL6 | 3 |
| hsa05010 | Alzheimer disease | 5.69E-04 | 8.03E-04 | IL1B/TNF/PTGS2/CSF1/IL6 | 5 |
| hsa05222 | Small cell lung cancer | 7.29E-04 | 1.00E-03 | BCL2L1/PTGS2/MYC | 3 |
| hsa04061 | Viral protein interaction with cytokine and cytokine receptor | 9.29E-04 | 1.25E-03 | TNF/CSF1/IL6 | 3 |
| hsa05131 | Shigellosis | 1.04E-03 | 1.37E-03 | C3/IL1B/TNF/BCL2L1 | 4 |
| hsa05145 | Toxoplasmosis | 1.29E-03 | 1.65E-03 | TNF/BCL2L1/TLR2 | 3 |
| hsa05135 | Yersinia infection | 1.58E-03 | 1.97E-03 | IL1B/TNF/IL6 | 3 |
| hsa04380 | Osteoclast differentiation | 1.90E-03 | 2.31E-03 | IL1B/TNF/CSF1 | 3 |
| hsa05020 | Prion diseases | 2.13E-03 | 2.54E-03 | IL1B/IL6 | 2 |
| hsa04210 | Apoptosis | 2.26E-03 | 2.63E-03 | TNF/BCL2A1/BCL2L1 | 3 |
| hsa05219 | Bladder cancer | 2.91E-03 | 3.27E-03 | VEGFA/MYC | 2 |
| hsa04932 | Non-alcoholic fatty liver disease (NAFLD) | 2.93E-03 | 3.27E-03 | IL1B/TNF/IL6 | 3 |
| hsa04940 | Type I diabetes mellitus | 3.20E-03 | 3.50E-03 | IL1B/TNF | 2 |
| hsa04217 | Necroptosis | 3.52E-03 | 3.77E-03 | TNFAIP3/IL1B/TNF | 3 |

**Table S2** The KEGG pathway enriched by genes from module one.