|  |  |  |  |
| --- | --- | --- | --- |
| pathway | p-value | q-value | Souce |
| Interferon gamma signaling | 7.66E-06 | 0.000310036 | Reactome |
| Cytokine Signaling in Immune system | 1.03E-05 | 0.000310036 | Reactome |
| Pancreatic cancer - Homo sapiens (human) | 2.34E-05 | 0.000433527 | KEGG |
| Interferon Signaling | 2.89E-05 | 0.000433527 | Reactome |
| Influenza A - Homo sapiens (human) | 5.08E-05 | 0.000609941 | KEGG |
| PI3K/AKT Signaling in Cancer | 8.42E-05 | 0.000742013 | Reactome |
| MAPK signaling pathway - Homo sapiens (human) | 8.92E-05 | 0.000742013 | KEGG |
| PI5P, PP2A and IER3 Regulate PI3K/AKT Signaling | 0.000100349 | 0.000742013 | Reactome |
| Intracellular signaling by second messengers | 0.000111302 | 0.000742013 | Reactome |
| Negative regulation of the PI3K/AKT network | 0.000147566 | 0.000885395 | Reactome |
| Constitutive Signaling by Aberrant PI3K in Cancer | 0.000185814 | 0.000990125 | Reactome |
| Immune System | 0.000198025 | 0.000990125 | Reactome |
| PIP3 activates AKT signaling | 0.000241312 | 0.001113748 | Reactome |
| PI3K-Akt signaling pathway - Homo sapiens (human) | 0.000381247 | 0.001633917 | KEGG |
| Hepatitis C - Homo sapiens (human) | 0.001240084 | 0.004960335 | KEGG |
| Cytokine-cytokine receptor interaction - Homo sapiens (human) | 0.001921435 | 0.007205383 | KEGG |
| Diseases of signal transduction | 0.003010506 | 0.010625316 | Reactome |
| Measles - Homo sapiens (human) | 0.00338295 | 0.011276501 | KEGG |
| Fluid shear stress and atherosclerosis - Homo sapiens (human) | 0.004355862 | 0.013755353 | KEGG |
| Human papillomavirus infection - Homo sapiens (human) | 0.004588008 | 0.013764024 | KEGG |
| Phospholipase D signaling pathway - Homo sapiens (human) | 0.005206064 | 0.01433623 | KEGG |
| Signaling by Receptor Tyrosine Kinases | 0.005256618 | 0.01433623 | Reactome |
| Breast cancer - Homo sapiens (human) | 0.005513892 | 0.014384067 | KEGG |
| Gastric cancer - Homo sapiens (human) | 0.005834389 | 0.014585973 | KEGG |
| Human T-cell leukemia virus 1 infection - Homo sapiens (human) | 0.006858577 | 0.016460585 | kEGG |
| Pathways in cancer - Homo sapiens (human) | 0.007184638 | 0.016579934 | KEGG |
| Developmental Biology | 0.007933976 | 0.017631057 | Reactome |
| JAK-STAT signaling pathway - Homo sapiens (human) | 0.008244865 | 0.017667568 | KEGG |
| Ras signaling pathway - Homo sapiens (human) | 0.008989096 | 0.018598129 | KEGG |

Supplementary Table 1 Pathways associated with the top 1000 genes that stratify the subjects into the 6 clusters.