

## GeDiPNet Cluster 225 -- Enriched Pathways

Pathway enrichment: KEGG + Reactome, upper-tail hypergeometric test, Benjamini-Hochberg FDR-corrected. Fold enrichment = (overlap / cluster gene count) / (pathway gene count / universe size). Top 15 pathways per cluster by q-value. See [scripts/build\\_cluster\\_enrichment.php](#) on [gedipnet.bicnirrh.res.in](#). Data as of: 2026-10-10 03:30:08. · Rows: 15 · Generated: 2026-10-10 06:23:56

| Pathway                                                                      | Source   | Overlap Genes | Overlap Gene Names                                                                            | Pathway Gene Count | Cluster Gene Count | Fold Enrichment | P-value  | FDR Q-value |
|------------------------------------------------------------------------------|----------|---------------|-----------------------------------------------------------------------------------------------|--------------------|--------------------|-----------------|----------|-------------|
| Interleukin-4 and Interleukin-13 signaling                                   | Reactome | 15            | BCL2, IRF4, OPRM1, RHOU, GATA3, IL13, IL6, PTGS2, TP53, BCL2L1, CCL2, CCND1                   | 108                | 337                | 4.95            | 3.179e-7 | 1.921e-5    |
| Kaposi sarcoma-associated herpesvirus infection                              | KEGG     | 20            | BAK1, CASP8, FAS, LEF1, MAP1LC3B2, MAP2K2, CD86, ITPR2, MAPK3, MICA, IL6, PLCG2               | 196                | 337                | 3.64            | 6.180e-7 | 3.416e-5    |
| Human T-cell leukemia virus 1 infection                                      | KEGG     | 21            | BUB1B, ETS1, HLA-DOB, HLA-DQA1, HLA-DQB1, HLA-DRB1, MAP2K2, SMAD3, TERT, HLA-DRA, MAPK3, TCF3 | 224                | 337                | 3.34            | 1.311e-6 | 6.618e-5    |
| Apoptosis                                                                    | KEGG     | 16            | BAK1, BCL2, BCL2L11, CASP10, CASP8, CFLAR, FAS, MAP2K2, ITPR2, MAPK3, ATM, PMAIP1             | 137                | 337                | 4.16            | 1.410e-6 | 7.073e-5    |
| BH3-only proteins associate with and inactivate anti-apoptotic BCL-2 members | Reactome | 5             | BCL2, BCL2L11, BMF, PMAIP1, BCL2L1                                                            | 9                  | 337                | 19.80           | 1.940e-6 | 9.232e-5    |
| EGFR tyrosine kinase inhibitor resistance                                    | KEGG     | 12            | BCL2, BCL2L11, MAP2K2, RPS6KB1, MAPK3, PDGFD, IL6, PLCG2, BCL2L1, FGFR3, HGF, PDGFB           | 80                 | 337                | 5.35            | 2.127e-6 | 9.994e-5    |
| Graft-versus-host disease                                                    | KEGG     | 9             | FAS, HLA-DOB, HLA-DQA1, HLA-DQB1, HLA-DRB1, CD86, HLA-DRA, IL6, HLA-A                         | 45                 | 337                | 7.13            | 3.522e-6 | 1.529e-4    |
| Hepatocellular carcinoma                                                     | KEGG     | 17            | BAK1, LEF1, MAP2K2, RPS6KB1, SMAD3, TERT, LRP5, MAPK3, PLCG2, TP53, BCL2L1, CCND1             | 170                | 337                | 3.56            | 5.720e-6 | 2.254e-4    |
| Pathways in cancer                                                           | KEGG     | 34            | BAK1, BCL2, BCL2L11, CAMK2D, CASP8, ETS1, FAS, LEF1, MAP2K2, RPS6KB1, SMAD3, TERT             | 533                | 337                | 2.27            | 6.484e-6 | 2.489e-4    |
| Platinum drug resistance                                                     | KEGG     | 11            | BAK1, BCL2, CASP8, FAS, MAPK3, ATM, PMAIP1, TP53, BCL2L1, CDKN2A, GSTT1                       | 75                 | 337                | 5.23            | 7.095e-6 | 2.691e-4    |
| Intestinal immune network for IgA production                                 | KEGG     | 9             | HLA-DOB, HLA-DQA1, HLA-DQB1, HLA-DRB1, CD86, HLA-DRA, IL6, ITGA4, TNFRSF13B                   | 50                 | 337                | 6.41            | 8.799e-6 | 3.203e-4    |
| Allograft rejection                                                          | KEGG     | 8             | FAS, HLA-DOB, HLA-DQA1, HLA-DQB1, HLA-DRB1, CD86, HLA-DRA, HLA-A                              | 39                 | 337                | 7.31            | 1.018e-5 | 3.606e-4    |
| Bladder cancer                                                               | KEGG     | 8             | MAP2K2, MAPK3, RPS6KA5, TP53, CCND1, CDKN2A, DAPK1, FGFR3                                     | 41                 | 337                | 6.95            | 1.505e-5 | 4.978e-4    |
| Autoimmune thyroid disease                                                   | KEGG     | 9             | FAS, HLA-DOB, HLA-DQA1, HLA-DQB1, HLA-DRB1, CD86, HLA-DRA, HLA-A, IFNA2                       | 54                 | 337                | 5.94            | 1.692e-5 | 5.481e-4    |
| Viral myocarditis                                                            | KEGG     | 10            | CASP8, HLA-DOB, HLA-DQA1, HLA-DQB1, HLA-DRB1, CD86, HLA-DRA, CCND1, EIF4G1, HLA-A             | 70                 | 337                | 5.09            | 2.354e-5 | 7.232e-4    |