

GeDiPNet Cluster 24 -- 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](https://gedipnet.bicnirrh.res.in/scripts/build_cluster_enrichment.php) on gedipnet.bicnirrh.res.in. Data as of: 2026-10-07 03:30:09. · Rows: 15 · Generated: 2026-10-07 09:37:16

Pathway	Source	Overlap Genes	Overlap Gene Names	Pathway Gene Count	Cluster Gene Count	Fold Enrichment	P-value	FDR Q-value
Pathways in cancer	KEGG	26	AGT, CDK6, EPO, EPOR, IFNA2, IGF2, IL2, IL3, ITGA3, JAK2, KRAS, NRAS	533	140	4.18	4.232e-10	5.240e-8
Scavenging of heme from plasma	Reactome	5	HBA1, HBA2, APOL1, HBB, HP	13	140	32.99	2.392e-7	1.398e-5
JAK-STAT signaling pathway	KEGG	12	CSF2, CSF3, EPO, EPOR, GH1, IFNA2, IL2, IL3, JAK2, PRL, EGFR, OSM	168	140	6.13	5.866e-7	3.069e-5
PI3K-Akt signaling pathway	KEGG	17	CDK6, CSF3, EPO, EPOR, GH1, IFNA2, IGF2, IL2, IL3, ITGA3, JAK2, KRAS	361	140	4.04	9.827e-7	4.800e-5
Erythrocytes take up oxygen and release carbon dioxide	Reactome	4	HBA1, HBA2, HBB, SLC4A1	9	140	38.13	2.130e-6	9.273e-5
African trypanosomiasis	KEGG	6	HBA1, HBA2, APOL1, HBB, TNF, FAS	37	140	13.91	3.891e-6	1.549e-4
Hepatocellular carcinoma	KEGG	11	CDK6, IGF2, KRAS, NRAS, TCF7L2, EGFR, GADD45A, GSTM1, GSTM3, SMARCB1, GSTP1	170	140	5.55	4.631e-6	1.786e-4
Cytokine-cytokine receptor interaction	KEGG	14	CSF2, CSF3, EPO, EPOR, GH1, IFNA2, IL2, IL3, PRL, TNF, TNFRSF10A, CX3CR1	298	140	4.03	9.720e-6	3.278e-4
Erythrocytes take up carbon dioxide and release oxygen	Reactome	4	HBA1, HBA2, HBB, SLC4A1	13	140	26.40	1.166e-5	3.806e-4
RAF/MAP kinase cascade	Reactome	9	CSF2, IL2, IL3, JAK2, KRAS, NRAS, SPTA1, SPTB, EGFR	124	140	6.23	1.401e-5	4.436e-4
Factors involved in megakaryocyte development and platelet production	Reactome	8	GATA1, GATA2, HBB, IFNA2, JAK2, HBD, HBG1, SH2B3	99	140	6.93	1.956e-5	5.880e-4
Malaria	KEGG	6	HBA1, HBA2, CSF3, HBB, TNF, ITGB2	50	140	10.29	2.349e-5	6.810e-4
Platinum drug resistance	KEGG	7	ATP7A, ERCC1, CYCS, GSTM1, GSTM3, FAS, GSTP1	75	140	8.01	2.579e-5	7.341e-4
Apoptosis	KEGG	9	IL3, KRAS, NRAS, PARP1, TNF, TNFRSF10A, CYCS, GADD45A, FAS	137	140	5.64	3.112e-5	8.605e-4
HIF-1 signaling pathway	KEGG	8	EPO, HK1, TF, EGLN1, EPAS1, VHL, CDKN1B, EGFR	110	140	6.24	4.205e-5	1.111e-3