

GeDiPNet Cluster 21 -- 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: 2026-10-07 03:30:09. · Rows: 15 · Generated: 2026-10-07 18:49:48

Pathway	Source	Overlap Genes	Overlap Gene Names	Pathway Gene Count	Cluster Gene Count	Fold Enrichment	P-value	FDR Q-value
Endometrial cancer	KEGG	36	AXIN1, CTNNB1, CDH1, TP53, AKT1, CCND1, CDKN1A, CTNNA1, CTNNA2, CTNNA3, EGFR, KRAS	59	3697	1.98	1.489e-6	6.883e-5
Resolution of D-loop Structures through Synthesis-Dependent Strand Annealing (SDSA)	Reactome	19	RAD51B, BARD1, BRCA1, BRCA2, EXO1, PALB2, RBBP8, RTEL1, ATM, BRIP1, BLM, RMI2	26	3697	2.37	1.093e-5	3.615e-4
Homologous recombination	KEGG	26	BABAM2, RAD51B, BABAM1, BARD1, BRCA1, BRCA2, PALB2, RBBP8, ATM, RAD52, SEM1, BRIP1	41	3697	2.06	1.606e-5	4.978e-4
Homologous DNA Pairing and Strand Exchange	Reactome	18	RAD51B, BARD1, BRCA1, BRCA2, EXO1, PALB2, RBBP8, ATM, BRIP1, BLM, RMI2, RAD51	25	3697	2.34	2.626e-5	7.466e-4
EGFR tyrosine kinase inhibitor resistance	KEGG	42	BCL2, FGFR3, PDGFA, PRKCA, FGFR2, AKT1, BCL2L11, EGFR, GAB1, KRAS, P3R3URF-PIK3R3, PIK3CA	80	3697	1.71	4.064e-5	1.080e-3
Prostate cancer	KEGG	49	AR, BCL2, CTNNB1, PDGFA, SRD5A2, TP53, FGFR2, AKT1, CCND1, CCNE1, CDKN1A, CREB5	98	3697	1.62	5.163e-5	1.314e-3
MET activates PTK2 signaling	Reactome	20	COL24A1, LAMC3, LAMC1, COL1A1, COL1A2, COL5A2, LAMB2, HGF, ITGB1, MET, PTK2, LAMA5	30	3697	2.17	5.445e-5	1.370e-3
Bladder cancer	KEGG	25	FGFR3, CDH1, TP53, CCND1, CDKN1A, EGFR, KRAS, CDKN2A, MMP9, CXCL8, HRAS, MAPK1	41	3697	1.98	6.097e-5	1.499e-3
p53-Dependent G1 DNA Damage Response	Reactome	7	CCNE1, CDKN1A, CDKN1B, CCNA1, CCNA2, CCNE2, CDK2	7	3697	3.25	2.609e-4	4.807e-3
Melanoma	KEGG	37	FGF5, PDGFA, CDH1, TP53, AKT1, CCND1, CDKN1A, EGFR, FGF10, KRAS, P3R3URF-PIK3R3, PIK3CA	73	3697	1.65	2.919e-4	5.247e-3
Non-small cell lung cancer	KEGG	37	PRKCA, TP53, AKT1, CCND1, CDKN1A, EGFR, KIF5C, KRAS, P3R3URF-PIK3R3, PIK3CA, PIK3R1, BAD	73	3697	1.65	2.919e-4	5.247e-3
Colorectal cancer	KEGG	42	AREG, AXIN1, BCL2, CTNNB1, SMAD3, TGFB1, TP53, AKT1, BCL2L11, CCND1, CDKN1A, EGFR	87	3697	1.57	4.535e-4	7.388e-3
RUNX3 regulates p14-ARF	Reactome	8	CBFB, HDAC4, RUNX1, RUNX3, TGFB1, CCND1, KRAS, EP300	9	3697	2.89	5.246e-4	8.262e-3
Gastric cancer	KEGG	65	AXIN1, BCL2, CTNNB1, FGF5, JUP, LRP6, SMAD3, TGFB1, WNT10A, WNT3, WNT6, WNT7B	150	3697	1.41	7.410e-4	1.084e-2
Pancreatic cancer	KEGG	37	SMAD3, TGFB1, TP53, AKT1, BRCA2, CCND1, CDKN1A, EGFR, KRAS, MAPK10, P3R3URF-PIK3R3, PIK3CA	77	3697	1.56	1.078e-3	1.436e-2