

GeDiPNet Cluster 419 -- 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 20:40:51

Pathway	Source	Overlap Genes	Overlap Gene Names	Pathway Gene Count	Cluster Gene Count	Fold Enrichment	P-value	FDR Q-value
Cellular senescence	KEGG	5	CDK2, CDK4, CDK6, CXCL8, KRAS	157	17	22.50	1.952e-6	8.604e-5
Pancreatic cancer	KEGG	4	CDK4, CDK6, KRAS, RAD51	77	17	36.70	3.489e-6	1.408e-4
Pathways in cancer	KEGG	7	CDK2, CDK4, CDK6, CXCL8, KRAS, LRP6, RAD51	533	17	9.28	4.299e-6	1.677e-4
Evasion of Oncogene Induced Senescence Due to Defective p16INK4A binding to CDK4 and CDK6	Reactome	2	CDK4, CDK6	3	17	470.98	5.653e-6	2.097e-4
Evasion of Oxidative Stress Induced Senescence Due to Defective p16INK4A binding to CDK4 and CDK6	Reactome	2	CDK4, CDK6	3	17	470.98	5.653e-6	2.097e-4
AGE-RAGE signaling pathway in diabetic complications	KEGG	4	CCL2, CDK4, CXCL8, KRAS	101	17	27.98	1.031e-5	3.440e-4
Human cytomegalovirus infection	KEGG	5	CCL2, CDK4, CDK6, CXCL8, KRAS	226	17	15.63	1.161e-5	3.796e-4
Senescence-Associated Secretory Phenotype (SASP)	Reactome	4	CDK2, CDK4, CDK6, CXCL8	111	17	25.46	1.499e-5	4.706e-4
Bladder cancer	KEGG	3	CDK4, CXCL8, KRAS	41	17	51.69	2.429e-5	7.005e-4
PTK6 Regulates Cell Cycle	Reactome	2	CDK2, CDK4	6	17	235.49	2.819e-5	7.913e-4
Measles	KEGG	4	CDK2, CDK4, CDK6, TLR9	139	17	20.33	3.638e-5	9.807e-4
Malaria	KEGG	3	CCL2, CXCL8, TLR9	50	17	42.39	4.431e-5	1.156e-3
Breast cancer	KEGG	4	CDK4, CDK6, KRAS, LRP6	148	17	19.09	4.652e-5	1.203e-3
Cell cycle	KEGG	4	CDK2, CDK4, CDK6, CDT1	158	17	17.89	6.005e-5	1.482e-3
Hepatitis C	KEGG	4	CDK2, CDK4, CDK6, KRAS	159	17	17.77	6.155e-5	1.511e-3