

GeDiPNet Cluster 154 -- 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: 2026-10-08 03:30:07. · Rows: 15 · Generated: 2026-10-07 23:52:16

Pathway	Source	Overlap Genes	Overlap Gene Names	Pathway Gene Count	Cluster Gene Count	Fold Enrichment	P-value	FDR Q-value
Glucagon signaling pathway	KEGG	16	PGAM2, G6PC1, GYS1, GYS2, PFKM, PHKA1, PHKA2, PHKG2, PRKAG2, PYGL, PYGM, SLC2A2	107	37	48.54	5.417e-24	7.706e-21
Glycogen breakdown (glycogenolysis)	Reactome	10	AGL, GAA, GYG1, PHKA1, PHKA2, PHKG2, PYGL, PYGM, PHKB, PHKG1	16	37	202.87	1.607e-22	1.839e-19
Starch and sucrose metabolism	KEGG	10	AGL, G6PC1, GAA, GBE1, GYG1, GYS1, GYS2, PYGL, PYGM, PGM1	36	37	90.17	4.897e-18	2.528e-15
Insulin signaling pathway	KEGG	12	G6PC1, GYS1, GYS2, PHKA1, PHKA2, PHKG2, PRKAG2, PYGL, PYGM, PHKB, PHKG1, PIK3CA	138	37	28.23	4.728e-15	1.465e-12
Glycolysis / Gluconeogenesis	KEGG	9	PGAM2, G6PC1, PFKM, ALDOA, LDHB, LDHA, ENO3, PGK1, PGM1	67	37	43.60	3.296e-13	7.285e-11
Glycogen synthesis	Reactome	5	GBE1, GYG1, GYS1, GYS2, PGM1	16	37	101.44	8.930e-10	9.677e-8
Insulin resistance	KEGG	8	G6PC1, GYS1, GYS2, PRKAG2, PYGL, PYGM, SLC2A2, PIK3CA	109	37	23.82	1.102e-9	1.172e-7
Glycolysis	Reactome	5	PGAM2, PFKM, ALDOA, ENO3, PGK1	28	37	57.96	1.956e-8	1.537e-6
Metabolic pathways	KEGG	19	PGAM2, AGL, G6PC1, GAA, GBE1, GYG1, GYS1, GYS2, PFKM, PYGL, PYGM, ALDOA	1563	37	3.95	2.304e-8	1.784e-6
HIF-1 signaling pathway	KEGG	7	PFKM, ALDOA, LDHB, LDHA, ENO3, PGK1, PIK3CA	110	37	20.66	3.661e-8	2.687e-6
Gluconeogenesis	Reactome	5	PGAM2, SLC37A4, ALDOA, ENO3, PGK1	34	37	47.73	5.466e-8	3.836e-6
Central carbon metabolism in cancer	KEGG	6	PGAM2, PFKM, SLC2A2, LDHB, LDHA, PIK3CA	71	37	27.43	6.925e-8	4.749e-6
Biosynthesis of amino acids	KEGG	6	PGAM2, PFKM, ALDOA, ENO3, PGK1, ASS1	75	37	25.97	9.650e-8	6.337e-6
AMPK signaling pathway	KEGG	6	G6PC1, GYS1, GYS2, PFKM, PRKAG2, PIK3CA	122	37	15.96	1.745e-6	7.884e-5
Galactose metabolism	KEGG	4	G6PC1, GAA, PFKM, PGM1	32	37	40.57	2.577e-6	1.107e-4