

GeDiPNet Cluster 144 -- 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: 2026-10-08 00:48:57

Pathway	Source	Overlap Genes	Overlap Gene Names	Pathway Gene Count	Cluster Gene Count	Fold Enrichment	P-value	FDR Q-value
Lysosome	KEGG	9	CTSF, PPT1, CLN5, CTSD, TPP1, CLN3, SMPD1, MFSD8, IGF2R	133	65	12.50	3.610e-8	2.655e-6
Longevity regulating pathway	KEGG	6	PPARGC1A, RPS6KB1, SIRT1, IGF1, INS, SOD2	90	65	12.32	8.668e-6	3.055e-4
Apelin signaling pathway	KEGG	7	PPARGC1A, RPS6KB1, TFAM, MAPK1, MAPK3, RYR2, SPP1	140	65	9.24	9.968e-6	3.407e-4
Diabetic cardiomyopathy	KEGG	8	ATP2A2, PARP1, CTSD, GSK3B, AGT, INS, RYR2, SLC25A4	205	65	7.21	1.378e-5	4.450e-4
Signal attenuation	Reactome	3	MAPK1, MAPK3, INS	10	65	55.43	1.767e-5	5.488e-4
Longevity regulating pathway - multiple species	KEGG	5	RPS6KB1, SIRT1, IGF1, INS, SOD2	62	65	14.90	2.026e-5	6.169e-4
mTOR signaling pathway	KEGG	7	RPS6KB1, GSK3B, MAPK1, MAPK3, IGF1, INS, TNF	158	65	8.19	2.192e-5	6.565e-4
Insulin resistance	KEGG	6	PPARGC1A, RPS6KB1, GSK3B, AGT, INS, TNF	109	65	10.17	2.602e-5	7.583e-4
AMPK signaling pathway	KEGG	6	PPARGC1A, RPS6KB1, SIRT1, IGF1, INS, LEPR	122	65	9.09	4.918e-5	1.276e-3
Aldosterone-regulated sodium reabsorption	KEGG	4	MAPK1, MAPK3, IGF1, INS	38	65	19.45	5.023e-5	1.300e-3
EGFR tyrosine kinase inhibitor resistance	KEGG	5	RPS6KB1, GSK3B, MAPK1, MAPK3, IGF1	80	65	11.55	6.983e-5	1.692e-3
FoxO signaling pathway	KEGG	6	SIRT1, MAPK1, MAPK3, IGF1, INS, SOD2	133	65	8.34	7.964e-5	1.883e-3
Apoptosis	KEGG	6	CTSF, PARP1, CTSD, MAPK1, MAPK3, TNF	137	65	8.09	9.386e-5	2.157e-3
Insulin signaling pathway	KEGG	6	PPARGC1A, RPS6KB1, GSK3B, MAPK1, MAPK3, INS	138	65	8.03	9.772e-5	2.229e-3
Type II diabetes mellitus	KEGG	4	MAPK1, MAPK3, INS, TNF	47	65	15.73	1.170e-4	2.569e-3