

GeDiPNet Cluster 191 -- 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 09:35:49

Pathway	Source	Overlap Genes	Overlap Gene Names	Pathway Gene Count	Cluster Gene Count	Fold Enrichment	P-value	FDR Q-value
Lysosome	KEGG	8	CTSF, PPT1, CLN5, CTSD, TPP1, CLN3, SMPD1, MFSD8	133	54	13.38	1.241e-7	7.893e-6
Signal attenuation	Reactome	3	MAPK1, MAPK3, INS	10	54	66.72	1.008e-5	3.377e-4
Insulin signaling pathway	KEGG	6	PPARGC1A, RPS6KB1, GSK3B, MAPK1, MAPK3, INS	138	54	9.67	3.388e-5	9.263e-4
Apelin signaling pathway	KEGG	6	PPARGC1A, RPS6KB1, TFAM, MAPK1, MAPK3, RYR2	140	54	9.53	3.674e-5	9.891e-4
Longevity regulating pathway	KEGG	5	PPARGC1A, RPS6KB1, SIRT1, SOD2, INS	90	54	12.36	5.003e-5	1.279e-3
Transcriptional activation of mitochondrial biogenesis	Reactome	4	PPARGC1A, TFAM, SOD2, NCOR1	51	54	17.44	7.799e-5	1.831e-3
Longevity regulating pathway - multiple species	KEGG	4	RPS6KB1, SIRT1, SOD2, INS	62	54	14.35	1.678e-4	3.405e-3
Thyroid hormone signaling pathway	KEGG	5	ATP2A2, GSK3B, MAPK1, MAPK3, NCOR1	122	54	9.12	2.116e-4	4.084e-3
Regulation of HSF1-mediated heat shock response	Reactome	4	SIRT1, GSK3B, MAPK1, MAPK3	69	54	12.89	2.541e-4	4.704e-3
Prolactin signaling pathway	KEGG	4	GSK3B, MAPK1, MAPK3, INS	71	54	12.53	2.837e-4	5.143e-3
Negative feedback regulation of MAPK pathway	Reactome	2	MAPK1, MAPK3	6	54	74.14	2.942e-4	5.276e-3
Diabetic cardiomyopathy	KEGG	6	ATP2A2, PARP1, CTSD, GSK3B, INS, RYR2	205	54	6.51	3.000e-4	5.364e-3
FoxO signaling pathway	KEGG	5	SIRT1, MAPK1, MAPK3, SOD2, INS	133	54	8.36	3.161e-4	5.588e-3
Apoptosis	KEGG	5	CTSF, PARP1, CTSD, MAPK1, MAPK3	137	54	8.12	3.625e-4	6.211e-3
Suppression of apoptosis	Reactome	2	MAPK1, MAPK3	7	54	63.54	4.107e-4	6.845e-3