

GeDiPNet Cluster 13 -- 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 10:55:11

Pathway	Source	Overlap Genes	Overlap Gene Names	Pathway Gene Count	Cluster Gene Count	Fold Enrichment	P-value	FDR Q-value
Amyotrophic lateral sclerosis	KEGG	46	VAPB, ALS2, ANG, ANXA11, ATXN2, CCS, CHCHD10, CHMP2B, DCTN1, ERBB4, FIG4, FUS	368	492	3.05	1.069e-11	1.899e-9
Pathways of neurodegeneration - multiple diseases	KEGG	43	VAPB, ALS2, ATXN1, ATXN2, ATXN3, CCS, CHMP2B, DCTN1, FIG4, FUS, GSK3B, ITPR2	480	492	2.19	1.093e-6	5.274e-5
Cytosolic tRNA aminoacylation	Reactome	7	GARS1, AARS1, MARS1, HARS1, YARS1, KARS1, WARS1	24	492	7.12	3.497e-5	9.503e-4
EGR2 and SOX10-mediated initiation of Schwann cell myelination	Reactome	6	SMARCA4, MPZ, EGR2, PMP22, PRX, SOX10	20	492	7.32	1.087e-4	2.403e-3
Apoptosis	KEGG	16	ITPR2, MAPK1, TP53, TUBA4A, BCL2L1, CTSD, FOS, TNF, XIAP, LMNA, AIFM1, ITPR3	137	492	2.85	1.503e-4	3.115e-3
Detoxification of Reactive Oxygen Species	Reactome	7	CCS, GSR, GSTP1, SOD1, SOD2, TXNRD1, PRDX3	34	492	5.03	3.809e-4	6.456e-3
Shigellosis	KEGG	22	ACTR3B, ARHGEF2, DOCK1, GSK3A, GSK3B, ITPR2, MAPK1, PFN1, SQSTM1, TBK1, TNIP1, TP53	250	492	2.15	6.145e-4	9.368e-3
Chylomicron clearance	Reactome	3	APOE, LIPC, LDLR	5	492	14.65	6.424e-4	9.696e-3
Transcriptional activation of mitochondrial biogenesis	Reactome	8	ESRRA, NRF1, PPARGC1A, PPARGC1B, SOD2, TFAM, CREBBP, RXRA	51	492	3.83	1.010e-3	1.365e-2
Synthesis of 5-eicosatetraenoic acids	Reactome	3	PON1, PON2, PON3	6	492	12.21	1.246e-3	1.600e-2
TRKA activation by NGF	Reactome	2	NGF, NTRK1	2	492	24.41	1.675e-3	2.005e-2
phospho-PLA2 pathway	Reactome	2	MAPK1, PLA2G4A	2	492	24.41	1.675e-3	2.005e-2
Highly sodium permeable postsynaptic acetylcholine nicotinic receptors	Reactome	3	CHRNA3, CHRNA4, CHRNB4	7	492	10.46	2.114e-3	2.376e-2
Cell adhesion molecules	KEGG	15	CADM1, CD40LG, GLG1, HLA-DQB1, NRXN3, PTPRF, SELL, SELPLG, MPZ, CADM3, CNTNAP1, CNTNAP2	160	492	2.29	2.372e-3	2.587e-2
Cholinergic synapse	KEGG	12	CACNA1A, CHRNA3, CHRNA4, CHRNB4, CREB5, ITPR2, MAPK1, FOS, GNB4, ITPR3, SLC5A7, GNG3	115	492	2.55	2.611e-3	2.787e-2