

GeDiPNet Cluster 103 -- 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 08:18:05

Pathway	Source	Overlap Genes	Overlap Gene Names	Pathway Gene Count	Cluster Gene Count	Fold Enrichment	P-value	FDR Q-value
Amyotrophic lateral sclerosis	KEGG	19	ANG, CHMP2B, DCTN1, ERBB4, FUS, HNRNPA2B1, NDUFS1, OPTN, SEM1, SETX, TARDBP, TUBB4A	368	69	8.99	1.250e-13	2.996e-11
Pathways of neurodegeneration - multiple diseases	KEGG	17	CHMP2B, DCTN1, FUS, LRRK2, MAPT, NDUFS1, OPTN, PSEN1, SEM1, TARDBP, TUBB4A, SQSTM1	480	69	6.16	1.115e-9	1.179e-7
Regulation of PLK1 Activity at G2/M Transition	Reactome	5	CEP131, DCTN1, OPTN, TUBB4A, TUBA4A	88	69	9.89	1.464e-4	3.077e-3
Nuclear signaling by ERBB4	Reactome	3	APOE, ERBB4, PSEN1	24	69	21.76	3.369e-4	5.969e-3
Highly sodium permeable postsynaptic acetylcholine nicotinic receptors	Reactome	2	CHRNA4, CHRNB4	7	69	49.73	6.706e-4	1.021e-2
Loss of Nlp from mitotic centrosomes	Reactome	4	CEP131, DCTN1, TUBB4A, TUBA4A	70	69	9.95	6.877e-4	1.044e-2
Loss of proteins required for interphase microtubule organization from the centrosome	Reactome	4	CEP131, DCTN1, TUBB4A, TUBA4A	70	69	9.95	6.877e-4	1.044e-2
Sealing of the nuclear envelope (NE) by ESCRT-III	Reactome	3	CHMP2B, TUBB4A, TUBA4A	31	69	16.84	7.270e-4	1.089e-2
AURKA Activation by TPX2	Reactome	4	CEP131, DCTN1, TUBB4A, TUBA4A	73	69	9.54	8.059e-4	1.181e-2
Parkinson disease	KEGG	7	LRRK2, MAPT, NDUFS1, SEM1, TUBB4A, KIF5A, TUBA4A	268	69	4.55	8.442e-4	1.221e-2
Highly calcium permeable nicotinic acetylcholine receptors	Reactome	2	CHRNA4, CHRNB4	9	69	38.68	1.141e-3	1.536e-2
Recruitment of mitotic centrosome proteins and complexes	Reactome	4	CEP131, DCTN1, TUBB4A, TUBA4A	82	69	8.49	1.246e-3	1.644e-2
Alzheimer disease	KEGG	8	APOE, MAPT, NDUFS1, PSEN1, SEM1, TUBB4A, KIF5A, TUBA4A	388	69	3.59	1.649e-3	2.028e-2
Recruitment of NuMA to mitotic centrosomes	Reactome	4	CEP131, DCTN1, TUBB4A, TUBA4A	94	69	7.41	2.063e-3	2.382e-2
Highly calcium permeable postsynaptic nicotinic acetylcholine receptors	Reactome	2	CHRNA4, CHRNB4	12	69	29.01	2.069e-3	2.387e-2