

GeDiPNet Cluster 249 -- 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: 2026-10-09 03:30:08. · Rows: 15 · Generated: 2026-10-09 00:04:44

Pathway	Source	Overlap Genes	Overlap Gene Names	Pathway Gene Count	Cluster Gene Count	Fold Enrichment	P-value	FDR Q-value
Synaptic vesicle cycle	KEGG	4	STXBP1, ATP6V1A, CACNA1A, SNAP25	79	22	27.64	1.159e-5	3.674e-4
MECP2 regulates neuronal receptors and channels	Reactome	2	MECP2, PTPN1	4	22	272.95	1.918e-5	5.637e-4
GABA synthesis, release, reuptake and degradation	Reactome	2	STXBP1, SNAP25	13	22	83.99	2.468e-4	4.498e-3
Acetylcholine Neurotransmitter Release Cycle	Reactome	2	STXBP1, SNAP25	17	22	64.22	4.284e-4	6.990e-3
Serotonin Neurotransmitter Release Cycle	Reactome	2	STXBP1, SNAP25	18	22	60.66	4.815e-4	7.653e-3
Norepinephrine Neurotransmitter Release Cycle	Reactome	2	STXBP1, SNAP25	18	22	60.66	4.815e-4	7.653e-3
GABAergic synapse	KEGG	3	GABBR2, CACNA1A, GPHN	89	22	18.40	5.471e-4	8.436e-3
Dopamine Neurotransmitter Release Cycle	Reactome	2	STXBP1, SNAP25	23	22	47.47	7.917e-4	1.123e-2
Glutamate Neurotransmitter Release Cycle	Reactome	2	STXBP1, SNAP25	24	22	45.49	8.628e-4	1.192e-2
Loss of MECP2 binding ability to 5hmC-DNA	Reactome	1	MECP2	1	22	545.91	1.832e-3	2.138e-2
GABA B receptor activation	Reactome	1	GABBR2	2	22	272.95	3.660e-3	3.527e-2
Toxicity of botulinum toxin type C (BoNT/C)	Reactome	1	SNAP25	3	22	181.97	5.486e-3	4.653e-2
Loss of MECP2 binding ability to 5mC-DNA	Reactome	1	MECP2	3	22	181.97	5.486e-3	4.653e-2
PTK6 Down-Regulation	Reactome	1	PTPN1	3	22	181.97	5.486e-3	4.653e-2
Toxicity of botulinum toxin type E (BoNT/E)	Reactome	1	SNAP25	3	22	181.97	5.486e-3	4.653e-2