

GeDiPNet Cluster 224 -- 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 10:41:56

Pathway	Source	Overlap Genes	Overlap Gene Names	Pathway Gene Count	Cluster Gene Count	Fold Enrichment	P-value	FDR Q-value
Nicotine addiction	KEGG	8	GABRA1, GABRG2, GRIN1, GRIN2A, SLC32A1, GABRD, CACNA1A, GABRB3	41	79	29.66	1.956e-10	2.487e-8
Phase 0 - rapid depolarisation	Reactome	6	SCN1A, SCN1B, SCN2A, SCN9A, SCN8A, FGF13	44	79	20.73	3.865e-7	2.142e-5
Synaptic vesicle cycle	KEGG	7	STXBP1, SLC6A1, STX1B, UNC13A, SLC32A1, CACNA1A, DNMT1	79	79	13.47	8.060e-7	4.018e-5
GABAergic synapse	KEGG	7	GABRA1, GABRG2, SLC6A1, SLC32A1, GABRD, CACNA1A, GABRB3	89	79	11.96	1.818e-6	8.166e-5
Retrograde endocannabinoid signaling	KEGG	8	GABRA1, GABRG2, PLCB1, SLC32A1, GABRD, CACNA1A, GABRB3, MAPK10	149	79	8.16	5.763e-6	2.171e-4
Morphine addiction	KEGG	6	GABRA1, GABRG2, SLC32A1, GABRD, CACNA1A, GABRB3	91	79	10.02	2.857e-5	8.169e-4
GABA receptor activation	Reactome	3	GABRA1, GABRG2, GABRB3	16	79	28.50	1.442e-4	3.042e-3
Taste transduction	KEGG	5	GABRA1, SCN2A, SCN9A, PLCB1, CACNA1A	86	79	8.84	2.489e-4	4.691e-3
HCN channels	Reactome	2	HCN1, HCN2	4	79	76.01	2.542e-4	4.764e-3
Spinocerebellar ataxia	KEGG	6	GRIN1, GRIN2A, PLCB1, RELN, CACNA1A, MAPK10	144	79	6.33	3.625e-4	6.332e-3
Assembly and cell surface presentation of NMDA receptors	Reactome	2	GRIN1, GRIN2A	6	79	50.68	6.300e-4	9.738e-3
Cholinergic synapse	KEGG	5	KCNQ3, PLCB1, CHAT, CACNA1A, CHRNA4	115	79	6.61	9.460e-4	1.334e-2
Dopaminergic synapse	KEGG	5	SCN1A, GRIN2A, PLCB1, CACNA1A, MAPK10	132	79	5.76	1.748e-3	2.112e-2
GABA synthesis, release, reuptake and degradation	Reactome	2	STXBP1, SLC32A1	13	79	23.39	3.179e-3	3.249e-2
Regulation of insulin secretion	Reactome	2	SLC2A1, CACNA1A	16	79	19.00	4.829e-3	4.350e-2