

GeDiPNet Cluster 223 -- 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 12:16:41

Pathway	Source	Overlap Genes	Overlap Gene Names	Pathway Gene Count	Cluster Gene Count	Fold Enrichment	P-value	FDR Q-value
Nicotine addiction	KEGG	9	CACNA1A, GABRA1, GABRA4, GABRA6, GABRB3, GABRG2, GABRD, GABRA5, GABRB2	41	45	58.59	1.993e-14	5.448e-12
GABA receptor activation	Reactome	7	GABRA1, GABRA4, GABRA6, GABRB3, GABRG2, GABRA5, GABRB2	16	45	116.76	7.093e-14	1.785e-11
GABAergic synapse	KEGG	10	CACNA1A, GABRA1, GABRA4, GABRA6, GABRB3, GABRG2, GABRD, SLC12A5, GABRA5, GABRB2	89	45	29.99	7.670e-13	1.603e-10
Morphine addiction	KEGG	9	CACNA1A, GABRA1, GABRA4, GABRA6, GABRB3, GABRG2, GABRD, GABRA5, GABRB2	91	45	26.40	3.894e-11	5.823e-9
Retrograde endocannabinoid signaling	KEGG	9	CACNA1A, GABRA1, GABRA4, GABRA6, GABRB3, GABRG2, GABRD, GABRA5, GABRB2	149	45	16.12	3.309e-9	3.165e-7
Presynaptic depolarization and calcium channel opening	Reactome	4	CACNA1A, CACNA2D2, CACNB4, CACNA2D3	12	45	88.96	8.328e-8	5.594e-6
HCN channels	Reactome	3	HCN1, HCN2, HCN4	4	45	200.17	1.961e-7	1.181e-5
Phase 0 - rapid depolarisation	Reactome	5	CACNA2D2, CACNB4, SCN8A, SCN1B, CACNA2D3	44	45	30.33	5.722e-7	2.996e-5
Taste transduction	KEGG	6	CACNA1A, GABRA1, GABRA4, GABRA6, HCN4, GABRA5	86	45	18.62	7.359e-7	3.720e-5
Neuroactive ligand-receptor interaction	KEGG	9	GABRA1, GABRA4, GABRA6, GABRB3, GABRG2, NPY, GABRD, GABRA5, GABRB2	370	45	6.49	7.529e-6	2.713e-4
Regulation of insulin secretion	Reactome	3	CACNA1A, CACNA2D2, SLC2A1	16	45	50.04	2.661e-5	7.708e-4
Phase 2 - plateau phase	Reactome	3	CACNA2D2, CACNB4, CACNA2D3	25	45	32.03	1.067e-4	2.390e-3
Arrhythmogenic right ventricular cardiomyopathy	KEGG	4	CACNA2D2, CACNB4, DMD, CACNA2D3	86	45	12.41	2.919e-4	5.325e-3
Hypertrophic cardiomyopathy	KEGG	4	CACNA2D2, CACNB4, DMD, CACNA2D3	99	45	10.78	4.995e-4	8.122e-3
Dilated cardiomyopathy	KEGG	4	CACNA2D2, CACNB4, DMD, CACNA2D3	105	45	10.17	6.240e-4	9.670e-3