

GeDiPNet Cluster 251 -- 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 08:03:27

Pathway	Source	Overlap Genes	Overlap Gene Names	Pathway Gene Count	Cluster Gene Count	Fold Enrichment	P-value	FDR Q-value
cAMP signaling pathway	KEGG	12	ATP1A3, CACNA1C, CRH, CRHR1, CRHR2, DRD2, HTR1A, KCNK2, MAPK1, VIP, ADORA2A, PDE4B	226	68	9.38	4.236e-9	3.901e-7
Hormone signaling	KEGG	11	CRH, CRHR1, CRHR2, DRD2, MC4R, OPRK1, VIP, ADORA2A, CCKBR, INS, SMAD1	219	68	8.87	3.553e-8	2.539e-6
Neuroactive ligand-receptor interaction	KEGG	12	CRH, CRHR1, CRHR2, DRD2, HTR1A, MC4R, OPRK1, VIP, ADORA2A, ADORA2A, CCKBR, GRM7	370	68	5.73	9.397e-7	4.447e-5
G alpha (s) signalling events	Reactome	7	CRH, CRHR1, CRHR2, MC4R, ARRB1, VIP, ADORA2A	140	68	8.83	1.348e-5	4.186e-4
Enzymatic degradation of Dopamine by monoamine oxidase	Reactome	2	COMT, MAOA	2	68	176.62	3.159e-5	8.515e-4
Serotonergic synapse	KEGG	6	CACNA1C, HTR1A, MAPK1, SLC6A4, MAOA, TPH2	115	68	9.21	4.564e-5	1.151e-3
ADORA2B mediated anti-inflammatory cytokines production	Reactome	6	CRH, CRHR1, CRHR2, MC4R, VIP, ADORA2A	128	68	8.28	8.306e-5	1.878e-3
Alcoholism	KEGG	7	CRH, DRD2, MAPK1, SLC6A3, MAOA, NTRK2, ADORA2A	188	68	6.58	8.917e-5	1.989e-3
Enzymatic degradation of dopamine by COMT	Reactome	2	COMT, MAOA	3	68	117.75	9.442e-5	2.083e-3
Dopaminergic synapse	KEGG	6	CACNA1C, COMT, DRD2, SLC6A3, ARRB1, MAOA	132	68	8.03	9.851e-5	2.161e-3
Class B/2 (Secretin family receptors)	Reactome	3	CRH, CRHR1, CRHR2	18	68	29.44	1.333e-4	2.751e-3
Cushing syndrome	KEGG	6	CACNA1C, CRH, CRHR1, CRHR2, KCNK2, MAPK1	155	68	6.84	2.373e-4	4.360e-3
Glutamatergic synapse	KEGG	5	CACNA1C, MAPK1, SLC17A7, SLC1A3, GRM7	116	68	7.61	4.948e-4	7.818e-3
Synaptic vesicle cycle	KEGG	4	SLC17A7, SLC1A3, SLC6A3, SLC6A4	79	68	8.94	1.026e-3	1.368e-2
Gastrin-CREB signalling pathway via PKC and MAPK	Reactome	2	MAPK1, CCKBR	9	68	39.25	1.108e-3	1.453e-2