

GeDiPNet Cluster 537 -- 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](scripts/build_cluster_enrichment.php) on gedipnet.bicnirrh.res.in. Data as of: 2026-10-20 03:30:09. · Rows: 15 · Generated: 2026-10-19 23:21:22

Pathway	Source	Overlap Genes	Overlap Gene Names	Pathway Gene Count	Cluster Gene Count	Fold Enrichment	P-value	FDR Q-value
Hormone signaling	KEGG	11	AGT, CRH, DRD2, DRD3, EPO, IGF2, LEPR, OXTR, SMAD4, VIP, INS	219	74	8.15	8.801e-8	4.987e-6
Serotonergic synapse	KEGG	7	APP, HTR2A, MAOA, PTGS2, SLC6A4, CACNA1C, CYP2D6	115	74	9.88	6.510e-6	2.042e-4
PI3K-Akt signaling pathway	KEGG	11	EPO, GSK3B, IGF2, LAMB2, MET, TSC1, VEGFA, BDNF, CSF3, FGF2, INS	361	74	4.95	1.190e-5	3.364e-4
Cocaine addiction	KEGG	5	CDK5R1, DRD2, FOSB, MAOA, BDNF	49	74	16.56	1.196e-5	3.375e-4
Alzheimer disease	KEGG	11	APOE, APP, CAPN2, CDK5R1, EIF2S1, GSK3B, MAPT, PSEN1, PTGS2, CACNA1C, INS	388	74	4.60	2.330e-5	5.911e-4
Regulation of gene expression by Hypoxia-inducible Factor	Reactome	3	EPO, HIF1A, VEGFA	11	74	44.26	3.576e-5	8.359e-4
Enzymatic degradation of Dopamine by monoamine oxidase	Reactome	2	COMT, MAOA	2	74	162.30	3.745e-5	8.669e-4
Metabolism of serotonin	Reactome	2	MAOA, ALDH2	2	74	162.30	3.745e-5	8.669e-4
Pathways in cancer	KEGG	12	AGT, EPO, GSK3B, IGF2, LAMB2, MET, PTGS2, SMAD4, HIF1A, VEGFA, FGF2, PPARG	533	74	3.65	9.144e-5	1.771e-3
Enzymatic degradation of dopamine by COMT	Reactome	2	COMT, MAOA	3	74	108.20	1.119e-4	2.077e-3
Metallothioneins bind metals	Reactome	2	MT1A, MT2A	3	74	108.20	1.119e-4	2.077e-3
Deregulated CDK5 triggers multiple neurodegenerative pathways in Alzheimer's disease models	Reactome	3	APP, CAPN2, CDK5R1	16	74	30.43	1.187e-4	2.167e-3
Dopaminergic synapse	KEGG	6	COMT, DRD2, DRD3, GSK3B, MAOA, CACNA1C	132	74	7.38	1.580e-4	2.726e-3
Pathways of neurodegeneration - multiple diseases	KEGG	11	APP, CAPN2, CDK5R1, EIF2S1, GSK3B, MAPT, PINK1, PSEN1, PTGS2, CACNA1C, BDNF	480	74	3.72	1.585e-4	2.734e-3
Bile secretion	KEGG	5	SLC10A2, SLC51B, ABCC4, NR0B2, SLC51A	90	74	9.02	2.265e-4	3.625e-3