

GeDiPNet Cluster 2 -- 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: 2026-10-07 23:32:14

Pathway	Source	Overlap Genes	Overlap Gene Names	Pathway Gene Count	Cluster Gene Count	Fold Enrichment	P-value	FDR Q-value
Unblocking of NMDA receptors, glutamate binding and activation	Reactome	22	DLG2, GRIA1, GRIN2B, GRIN2C, CALM1, CAMK2D, ACTN2, CAMK2G, GRIA4, GRIN2A, DLG4, CAMK2A	22	10739	1.12	8.517e-2	2.305e-1
Uptake and function of anthrax toxins	Reactome	13	ANTXR1, MAP2K3, CALM1, FURIN, MAP2K1, ANTXR2, CALM2, MAP2K4, MAP2K7, MAP2K2, CALM3, MAP2K6	13	10739	1.12	2.334e-1	4.016e-1
Physiological factors	Reactome	12	GATA4, TBX5, CORIN, NKX2-5, NPPA, KAT2B, HIPK2, NPR1, NPR2, NPPC, HIPK1, WWTR1	12	10739	1.12	2.611e-1	4.284e-1
Synthesis of Prostaglandins (PG) and Thromboxanes (TX)	Reactome	12	CYP8B1, PTGES3, TBXAS1, AKR1C3, CBR1, PTGES, PTGES2, PTGIS, PTGS1, PTGS2, HPGDS, PTGDS	12	10739	1.12	2.611e-1	4.284e-1
Highly calcium permeable postsynaptic nicotinic acetylcholine receptors	Reactome	12	CHRNA2, CHRNA6, CHRNA7, CHRN2, CHRNA5, CHRNA4, CHRNA3, CHRN3, CHRNA1, CHRFAM7A, CHRN4, CHRNA9	12	10739	1.12	2.611e-1	4.284e-1
Activation of Ca-permeable Kainate Receptor	Reactome	12	GRIK1, GRIK2, GRIK3, CALM1, GRIK4, DLG4, CALM2, DLG3, GRIK5, NCALD, CALM3, DLG1	12	10739	1.12	2.611e-1	4.284e-1
Serotonin receptors	Reactome	12	HTR1A, HTR1E, HTR7, HTR6, HTR1B, HTR4, HTR1D, HTR2A, HTR5A, HTR2C, HTR2B, HTR1F	12	10739	1.12	2.611e-1	4.284e-1
Glutamate Neurotransmitter Release Cycle	Reactome	23	RIMS1, PPFIA4, SYT1, SLC1A1, STXBP1, SLC1A3, STX1A, CPLX1, SLC17A7, SLC1A2, SLC1A6, SNAP25	24	10739	1.07	2.618e-1	4.291e-1
Apoptotic cleavage of cell adhesion proteins	Reactome	11	DSG2, TJP1, CASP3, CTNNB1, TJP2, DSP, OCLN, DSG1, CDH1, PKP1, DSG3	11	10739	1.12	2.920e-1	4.583e-1
cGMP effects	Reactome	11	PDE10A, PDE1A, PDE9A, PRKG1, PRKG2, PDE11A, IRAG1, ITPR1, PDE5A, PDE2A, PDE1B	11	10739	1.12	2.920e-1	4.583e-1
Signaling by ERBB4	Reactome	11	EGFR, ERBB3, ERBB4, HBEGF, EREG, NRG3, NRG2, EGF, NRG1, BTC, NRG4	11	10739	1.12	2.920e-1	4.583e-1
Tryptophan catabolism	Reactome	11	SLC3A2, SLC7A5, TDO2, IDO2, IDO1, AADAT, KMO, HAAO, SLC36A4, KYAT1, KYNU	11	10739	1.12	2.920e-1	4.583e-1
CYP2E1 reactions	Reactome	11	CYP2F1, CYP2D6, CYP2C19, CYP2A13, CYP2A7, CYP2B6, CYP2C8, CYP2C9, CYP2S1, CYP2A6, CYP2E1	11	10739	1.12	2.920e-1	4.583e-1
DCC mediated attractive signaling	Reactome	11	DCC, DOCK1, RAC1, SRC, FYN, PTK2, CDC42, NTN1, TRIO, WASL, NCK1	11	10739	1.12	2.920e-1	4.583e-1
Signaling by activated point mutants of FGFR1	Reactome	11	FGF5, FGF8, FGFR1, FGF17, FGF20, FGF9, FGF2, FGF23, FGF6, FGF1, FGF4	11	10739	1.12	2.920e-1	4.583e-1