

GeDiPNet Cluster 579 -- 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: 2026-10-20 03:30:09. · Rows: 15 · Generated: 2026-10-20 00:03:01

Pathway	Source	Overlap Genes	Overlap Gene Names	Pathway Gene Count	Cluster Gene Count	Fold Enrichment	P-value	FDR Q-value
Neuroactive ligand-receptor interaction	KEGG	16	GRID2, GRM1, BDKRB1, BDKRB2, CNR1, GRM2, GRM3, GRM4, GRM5, NPY, NPY2R, P2RX4	370	34	15.28	6.354e-16	2.297e-13
G alpha (i) signalling events	Reactome	10	BDKRB1, BDKRB2, CNR1, GRM2, GRM3, GRM4, NPY, NPY2R, PDYN, GAL	249	34	14.19	1.038e-9	9.615e-8
Class C/3 (Metabotropic glutamate/pheromone receptors)	Reactome	5	GRM1, GRM2, GRM3, GRM4, GRM5	38	34	46.48	6.281e-8	3.728e-6
Calcium signaling pathway	KEGG	8	GRM1, BDKRB1, BDKRB2, GRM5, KDR, P2RX4, P2RX7, VEGFA	254	34	11.13	4.044e-7	1.897e-5
Peptide ligand-binding receptors	Reactome	6	BDKRB1, BDKRB2, NPY, NPY2R, PDYN, GAL	106	34	19.99	4.510e-7	2.090e-5
Glutamatergic synapse	KEGG	6	GRM1, GRM2, GRM3, GRM4, GRM5, SLC1A1	116	34	18.27	7.689e-7	3.313e-5
Phospholipase D signaling pathway	KEGG	5	GRM1, GRM2, GRM3, GRM4, GRM5	149	34	11.85	5.721e-5	1.214e-3
Cation-coupled Chloride cotransporters	Reactome	2	SLC12A2, SLC12A5	7	34	100.92	1.619e-4	2.779e-3
VEGF binds to VEGFR leading to receptor dimerization	Reactome	2	KDR, VEGFA	8	34	88.31	2.155e-4	3.482e-3
Platelet homeostasis	Reactome	2	P2RX4, P2RX7	8	34	88.31	2.155e-4	3.482e-3
Cocaine addiction	KEGG	3	GRM2, GRM3, PDYN	49	34	21.63	3.494e-4	5.064e-3
Elevation of cytosolic Ca2+ levels	Reactome	2	P2RX4, P2RX7	13	34	54.34	5.950e-4	7.638e-3
VEGFR2 mediated cell proliferation	Reactome	2	KDR, VEGFA	14	34	50.46	6.930e-4	8.580e-3
G alpha (q) signalling events	Reactome	4	GRM1, BDKRB1, BDKRB2, GRM5	172	34	8.21	1.347e-3	1.420e-2
Purinergic signaling in leishmaniasis infection	Reactome	2	P2RX4, P2RX7	24	34	29.44	2.065e-3	1.947e-2