

GeDiPNet Cluster 601 -- 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: 2026-10-20 00:02:45

Pathway	Source	Overlap Genes	Overlap Gene Names	Pathway Gene Count	Cluster Gene Count	Fold Enrichment	P-value	FDR Q-value
Cocaine addiction	KEGG	5	BDNF, GRIN2A, GRIN2B, MAOA, MAOB	49	63	19.45	5.395e-6	1.750e-4
Biogenic amines are oxidatively deaminated to aldehydes by MAOA and MAOB	Reactome	2	MAOA, MAOB	2	63	190.63	2.708e-5	6.686e-4
Amphetamine addiction	KEGG	5	GRIN2A, GRIN2B, MAOA, MAOB, SIRT1	69	63	13.81	2.934e-5	7.116e-4
Alcoholism	KEGG	7	BDNF, GRIN2A, GRIN2B, MAOA, MAOB, NPY, SLC29A1	188	63	7.10	5.435e-5	1.164e-3
Huntington disease	KEGG	8	BDNF, GRIN2B, HAP1, HTT, MAP3K5, NRF1, PPARGC1A, TFAM	308	63	4.95	1.941e-4	3.205e-3
Assembly and cell surface presentation of NMDA receptors	Reactome	2	GRIN2A, GRIN2B	6	63	63.54	4.008e-4	5.629e-3
Pathways of neurodegeneration - multiple diseases	KEGG	9	BDNF, GRIN2A, GRIN2B, HAP1, HTT, IL6, MAP3K5, PRNP, PSEN2	480	63	3.57	8.361e-4	9.876e-3
Alcoholic liver disease	KEGG	5	IL6, MAP3K5, PPARGC1A, PRKAA1, SIRT1	144	63	6.62	9.293e-4	1.073e-2
MAPK1 (ERK2) activation	Reactome	2	IL6, IL6R	9	63	42.36	9.521e-4	1.092e-2
MAPK3 (ERK1) activation	Reactome	2	IL6, IL6R	10	63	38.13	1.186e-3	1.290e-2
Longevity regulating pathway	KEGG	4	IGF1, PPARGC1A, PRKAA1, SIRT1	90	63	8.47	1.254e-3	1.347e-2
Interleukin-6 signaling	Reactome	2	IL6, IL6R	11	63	34.66	1.445e-3	1.497e-2
Transcriptional activation of mitochondrial biogenesis	Reactome	3	NRF1, PPARGC1A, TFAM	51	63	11.21	2.394e-3	2.173e-2
Phenylalanine metabolism	KEGG	2	MAOA, MAOB	16	63	23.83	3.099e-3	2.607e-2
Glutamatergic synapse	KEGG	4	GLUL, GRIK2, GRIN2A, GRIN2B	116	63	6.57	3.174e-3	2.650e-2