

GeDiPNet Cluster 26 -- 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: 2026-10-07 03:30:09. · Rows: 15 · Generated: 2026-10-07 03:37:06

Pathway	Source	Overlap Genes	Overlap Gene Names	Pathway Gene Count	Cluster Gene Count	Fold Enrichment	P-value	FDR Q-value
Prion disease	KEGG	24	SLC25A4, ATP6, ATP8, NOTCH1, IL1A, IL1B, SOD1, COX1, COX2, COX3, ND1, ND2	275	139	7.54	8.004e-15	2.562e-12
Chemical carcinogenesis - reactive oxygen species	KEGG	20	SLC25A4, ATP6, ATP8, SOD1, SOD2, COX1, COX2, COX3, ND1, ND2, ND3, ND4	227	139	7.61	1.426e-12	3.045e-10
Diabetic cardiomyopathy	KEGG	18	SLC25A4, ATP6, ATP8, COX1, COX2, COX3, ND1, ND2, ND3, ND4, ND4L, ND5	205	139	7.59	2.169e-11	3.597e-9
Oxidative phosphorylation	KEGG	15	ATP6, ATP8, COX1, COX2, COX3, ND1, ND2, ND3, ND4, ND4L, ND5, CYTB	137	139	9.46	4.871e-11	7.514e-9
Huntington disease	KEGG	21	SLC25A4, ATP6, ATP8, SOD1, SOD2, COX1, COX2, COX3, ND1, ND2, ND3, ND4	308	139	5.89	5.144e-11	7.891e-9
Respiratory electron transport	Reactome	12	COX1, COX2, COX3, ND1, ND2, ND3, ND4, ND5, CYTB, NDUFS2, ND6, NDUFS1	83	139	12.49	1.718e-10	2.369e-8
Parkinson disease	KEGG	19	SLC25A4, ATP6, ATP8, SOD1, COX1, COX2, COX3, ND1, ND2, ND3, ND4, ND4L	268	139	6.13	2.389e-10	3.157e-8
Alzheimer disease	KEGG	22	SLC25A4, ATP6, ATP8, IL1A, IL1B, COX1, COX2, COX3, ND1, ND2, ND3, ND4	388	139	4.90	5.959e-10	7.047e-8
Amyotrophic lateral sclerosis	KEGG	21	ATP6, ATP8, SOD1, COX1, COX2, COX3, ND1, ND2, ND3, ND4, ND4L, ND5	368	139	4.93	1.363e-9	1.462e-7
Pathways of neurodegeneration - multiple diseases	KEGG	23	SLC25A4, ATP6, ATP8, IL1A, IL1B, SOD1, COX1, COX2, COX3, ND1, ND2, ND3	480	139	4.14	6.024e-9	5.638e-7
Complex I biogenesis	Reactome	9	ND1, ND2, ND3, ND4, ND5, NDUFS2, ND6, NDUFAF5, NDUFS1	55	139	14.14	1.163e-8	9.916e-7
Thermogenesis	KEGG	16	ATP6, ATP8, COX1, COX2, COX3, ND1, ND2, ND3, ND4, ND4L, ND5, CYTB	234	139	5.91	1.166e-8	9.938e-7
Retrograde endocannabinoid signaling	KEGG	10	ND1, ND2, ND3, ND4, ND4L, ND5, GNAO1, NDUFS2, ND6, NDUFS1	149	139	5.80	8.673e-6	2.983e-4
Non-alcoholic fatty liver disease	KEGG	10	IL1A, IL1B, COX1, COX2, COX3, CYTB, NDUFS2, NDUFS1, IL6, TNF	157	139	5.50	1.375e-5	4.367e-4
The canonical retinoid cycle in rods (twilight vision)	Reactome	4	LRAT, RDH12, RPE65, RHO	20	139	17.28	7.209e-5	1.715e-3