

GeDiPNet Cluster 296 -- 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 23:58:14

Pathway	Source	Overlap Genes	Overlap Gene Names	Pathway Gene Count	Cluster Gene Count	Fold Enrichment	P-value	FDR Q-value
Cushing syndrome	KEGG	12	BRAF, USP8, CACNA1D, CACNA1H, CRH, CYP11B1, GNAS, POMC, PRKACB, CDKN1A, AIP, GNAI2	155	87	10.69	1.073e-9	1.148e-7
Aldosterone synthesis and secretion	KEGG	9	ATP1A1, ATP2B3, CACNA1D, CACNA1H, CYP11B2, GNAS, KCNJ5, POMC, PRKACB	98	87	12.68	3.351e-8	2.486e-6
Cortisol synthesis and secretion	KEGG	6	CACNA1D, CACNA1H, CYP11B1, GNAS, POMC, PRKACB	65	87	12.74	7.120e-6	2.587e-4
cAMP signaling pathway	KEGG	9	BRAF, ATP1A1, ATP2B3, CACNA1D, CRH, GNAS, POMC, PRKACB, GNAI2	226	87	5.50	3.621e-5	9.911e-4
Glucocorticoid biosynthesis	Reactome	3	CYP11B1, CYP11B2, POMC	10	87	41.41	4.247e-5	1.137e-3
Circadian entrainment	KEGG	6	CACNA1D, CACNA1H, GNAS, KCNJ5, PRKACB, GNAI2	97	87	8.54	7.080e-5	1.711e-3
Thyroid cancer	KEGG	4	BRAF, TP53, CDKN1A, PPARG	37	87	14.92	1.414e-4	2.996e-3
Serotonergic synapse	KEGG	6	BRAF, CACNA1D, GNAS, KCNJ5, PRKACB, GNAI2	115	87	7.20	1.817e-4	3.663e-3
Glutamatergic synapse	KEGG	6	CACNA1D, GNAS, PRKACB, GRM8, GRIK1, GNAI2	116	87	7.14	1.905e-4	3.811e-3
Bladder cancer	KEGG	4	BRAF, TP53, CDKN1A, MMP1	41	87	13.47	2.120e-4	4.120e-3
PKA activation in glucagon signalling	Reactome	3	GNAS, PRKACB, PRKAR1A	17	87	24.36	2.320e-4	4.436e-3
Transcriptional activation of cell cycle inhibitor p21	Reactome	2	TP53, CDKN1A	4	87	69.02	3.083e-4	5.561e-3
ADORA2B mediated anti-inflammatory cytokines production	Reactome	6	CRH, GNAS, POMC, PRKACB, PRKAR1A, RXFP2	128	87	6.47	3.250e-4	5.798e-3
Endocrine and other factor-regulated calcium reabsorption	KEGG	4	ATP1A1, ATP2B3, GNAS, PRKACB	53	87	10.42	5.739e-4	9.048e-3
Endocrine resistance	KEGG	5	BRAF, TP53, GNAS, PRKACB, CDKN1A	99	87	6.97	7.446e-4	1.111e-2