

GeDiPNet Cluster 42 -- 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: 2026-10-10 03:30:08. · Rows: 15 · Generated: 2026-10-10 03:18:32

Pathway	Source	Overlap Genes	Overlap Gene Names	Pathway Gene Count	Cluster Gene Count	Fold Enrichment	P-value	FDR Q-value
Ras signaling pathway	KEGG	22	PTPN11, SOS1, SYNGAP1, HRAS, KRAS, MAP2K1, MAP2K2, NRAS, RAF1, SHOC2, SOS2, ANGPT2	237	106	10.52	8.353e-17	3.715e-14
Proteoglycans in cancer	KEGG	19	PTPN11, SOS1, BRAF, HRAS, KRAS, MAP2K1, MAP2K2, NRAS, RAF1, SOS2, FZD6, ROCK2	204	106	10.55	1.241e-14	3.719e-12
Endometrial cancer	KEGG	12	SOS1, BRAF, HRAS, KRAS, MAP2K1, MAP2K2, NRAS, RAF1, SOS2, PTEN, MAPK1, PIK3CA	59	106	23.04	9.366e-14	2.394e-11
Chronic myeloid leukemia	KEGG	13	PTPN11, SOS1, BRAF, HRAS, KRAS, MAP2K1, MAP2K2, NRAS, RAF1, SOS2, CBL, MAPK1	77	106	19.13	1.067e-13	2.701e-11
EGFR tyrosine kinase inhibitor resistance	KEGG	13	SOS1, BRAF, HRAS, KRAS, MAP2K1, MAP2K2, NRAS, RAF1, SOS2, NF1, PTEN, MAPK1	80	106	18.41	1.790e-13	4.345e-11
Renal cell carcinoma	KEGG	12	PTPN11, SOS1, BRAF, HRAS, KRAS, MAP2K1, MAP2K2, NRAS, RAF1, SOS2, MAPK1, PIK3CA	70	106	19.42	8.216e-13	1.795e-10
MAPK signaling pathway	KEGG	20	SOS1, BRAF, HRAS, KRAS, MAP2K1, MAP2K2, NRAS, RAF1, SOS2, DUSP4, ANGPT2, FLT4	299	106	7.58	1.254e-12	2.650e-10
Glioma	KEGG	12	SOS1, BRAF, HRAS, KRAS, MAP2K1, MAP2K2, NRAS, RAF1, SOS2, PTEN, MAPK1, PIK3CA	76	106	17.89	2.294e-12	4.654e-10
RAS signaling downstream of NF1 loss-of-function variants	Reactome	6	HRAS, KRAS, NRAS, SPRED1, NF1, SPRED2	7	106	97.12	2.848e-12	5.664e-10
ErbB signaling pathway	KEGG	12	SOS1, BRAF, HRAS, KRAS, MAP2K1, MAP2K2, NRAS, RAF1, SOS2, CBL, MAPK1, PIK3CA	86	106	15.81	1.051e-11	1.900e-9
Acute myeloid leukemia	KEGG	11	SOS1, BRAF, HRAS, KRAS, MAP2K1, MAP2K2, NRAS, RAF1, SOS2, MAPK1, PIK3CA	68	106	18.33	1.504e-11	2.613e-9
Non-small cell lung cancer	KEGG	11	SOS1, BRAF, HRAS, KRAS, MAP2K1, MAP2K2, NRAS, RAF1, SOS2, MAPK1, PIK3CA	73	106	17.07	3.367e-11	5.472e-9
Breast cancer	KEGG	14	SOS1, BRAF, HRAS, KRAS, MAP2K1, MAP2K2, NRAS, RAF1, SOS2, FLT4, FZD6, PTEN	148	106	10.72	4.005e-11	6.398e-9
Phospholipase D signaling pathway	KEGG	14	PTPN11, SOS1, HRAS, KRAS, MAP2K1, MAP2K2, NRAS, RAF1, SOS2, RRAS, MRAS, RRAS2	149	106	10.65	4.389e-11	6.950e-9
Prostate cancer	KEGG	12	SOS1, BRAF, HRAS, KRAS, MAP2K1, MAP2K2, NRAS, RAF1, SOS2, PTEN, MAPK1, PIK3CA	98	106	13.87	5.117e-11	7.946e-9