

GeDiPNet Cluster 32 -- 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 23:53:02

Pathway	Source	Overlap Genes	Overlap Gene Names	Pathway Gene Count	Cluster Gene Count	Fold Enrichment	P-value	FDR Q-value
Maturity onset diabetes of the young	KEGG	14	GCK, HNF4A, HNF1B, INS, MNX1, NEUROG3, PDX1, SLC2A2, PAX4, HNF1A, NEUROD1, RFX6	26	205	31.55	9.203e-19	5.346e-16
Insulin resistance	KEGG	17	AGT, INS, SLC2A2, STAT3, IL6, INSR, IRS2, NOS3, PRKCB, IRS1, PTPRF	109	205	9.14	3.743e-12	6.888e-10
Type II diabetes mellitus	KEGG	12	KCNJ11, ABCC8, GCK, INS, PDX1, SLC2A2, ADIPOQ, INSR, IRS2, IRS1, TNF, CACNA1C	47	205	14.96	1.371e-11	2.275e-9
Interleukin-4 and Interleukin-13 signaling	Reactome	15	CCL2, FASLG, HMOX1, MMP1, MMP2, MMP9, TP53, STAT3, IL13, CCL11, IL6, ITGAM	108	205	8.14	3.951e-10	4.664e-8
Lipid and atherosclerosis	KEGG	19	CCL2, CD14, FASLG, MMP1, MMP9, PPARG, SOD2, TLR4, TP53, STAT3, AGER, CD40	216	205	5.15	4.842e-9	4.426e-7
AGE-RAGE signaling pathway in diabetic complications	KEGG	13	AGT, AGTR1, CCL2, MMP2, STAT3, AGER, COL3A1, IL6, NOS3, PRKCB, TNF, AKT2	101	205	7.54	1.558e-8	1.252e-6
Adipocytokine signaling pathway	KEGG	11	STAT3, ADIPOQ, IRS2, LEP, LEPR, IRS1, TNF, AKT2, G6PC1, PPARA, APPL1	70	205	9.21	2.459e-8	1.891e-6
Hormone signaling	KEGG	17	AGT, AGTR1, GNB3, PRL, INS, STAT3, ADIPOQ, GCG, INSR, IRS2, LEP, LEPR	219	205	4.55	2.014e-7	1.209e-5
Longevity regulating pathway	KEGG	11	PPARG, SOD2, TP53, INS, ADIPOQ, INSR, IRS2, IRS1, AKT2, APPL1, SIRT1	90	205	7.16	3.510e-7	1.964e-5
IRS activation	Reactome	4	INS, INSR, IRS2, IRS1	5	205	46.87	4.068e-7	2.235e-5
Non-alcoholic fatty liver disease	KEGG	14	FASLG, PPARG, INS, ADIPOQ, IL6, INSR, IRS2, LEP, LEPR, IRS1, TNF, AKT2	157	205	5.22	4.676e-7	2.521e-5
AMPK signaling pathway	KEGG	12	PPARG, HNF4A, INS, ADIPOQ, INSR, IRS2, LEP, LEPR, IRS1, AKT2, G6PC1, SIRT1	122	205	5.76	1.111e-6	5.331e-5
Diabetic cardiomyopathy	KEGG	15	AGT, AGTR1, MMP2, MMP9, INS, AGER, COL3A1, INSR, NOS3, PRKCB, SP1, IRS1	205	205	4.29	2.265e-6	9.899e-5
HIF-1 signaling pathway	KEGG	11	HMOX1, TLR4, INS, STAT3, LDHA, IL6, INSR, NOS3, PRKCB, TF, AKT2	110	205	5.86	2.671e-6	1.141e-4
Pathways in cancer	KEGG	25	AGT, AGTR1, FASLG, GNB3, GSTP1, HMOX1, MMP1, MMP2, MMP9, PPARG, TP53, STAT3	533	205	2.75	4.260e-6	1.700e-4