

Top 10 canonical pathways representing differentially expressed genes between ShCtr and ShHuR under hypoxia, as identified by Ingenuity Pathway Analysis

Ingenuity Canonical Pathways	-log(p-value)	Ratio	Molecules
Hepatic Fibrosis / Hepatic Stellate Cell Activation	10.2	0.257	COL8A2,RELA,IGFBP4,IL1A,TGFB1,CTGF,SMAD3,COL4A3,COL8A1,MMP13,COL4A2,NFKB1,BCL2,COL1A2,COL5A1,CXCL3,COL6A1,TIMP1,TGFB2,IGF1R,VEGFD,SMAD4,COL18A1,TNFRSF1B,COL27A1,IL1RAP,MMP1,PDGFRB,EGFR,COL5A2,COL6A2,EDNRB,TNFRSF1A,COL12A1,Flt1,IL6R,IL1R1,MYL9,COL1A1,COL5A3,ACTA2,TGFB3,TGFA,COL11A1,MMP9,COL3A1,COL7A1
Molecular Mechanisms of Cancer	8.48	0.19	MAP2K4,BMP4,TGFB1,SMAD3,SOS2,HRAS,RHOG,RHOB,CCND3,BIRC3,SMAD1,PIK3C2B,RALB,CDK6,ITGA5,RALBP1,DAXX,RHOQ,RND3,PTPN11,PRKCD,IRS1,TGFB3,PRKACA,LEF1,CFLAR,ARHGFE10,CDK2,RELA,TCF4,PIK3CA,BMP2,BMP3,LRP6,RHOT2,FZD1,NFKB1,MAPK11,CDKN2B,BCL2,CDC25B,NFKBIA,FANCD2,TGFB2,E2F5,PRKAR1B,BID,AKT3,SMAD4,CTNNB1,CASP8,ADCY8,BMP1,ADCY2,NRAS,ADCY3,ITGA2,GNAQ,MAPK8,GNAI1,MAPK9,PLCB4,PRKCI,PRKAR2B,RASGRP1,RBPJ,PIK3CB,CDKN1B,CASP7,BCL2L11,FZD7
Role of Osteoblasts, Osteoclasts and Chondrocytes in Rheumatoid Arthritis	7.54	0.211	MAP2K4,BMP4,MMP3,NFATC3,MMP13,BIRC3,SMAD1,IL1RAP,ADAMTS5,ADAMTS4,SFRP4,PIK3C2B,ITGA5,PTPN11,IL1RN,IRS1,LEF1,RELA,PIK3CA,ADAM17,IL1A,TCF4,Calm1 (includes others),PTK2B,BMP3,BMP2,LRP6,FZD1,NFKB1,BCL2,NFKBIA,DKK3,AKT3,SMAD4,CTNNB1,TNFRSF1B,MMP1,BMP1,TNFRSF1A,ITGA2,MAPK8,MAPK9,IKBKE,IL1R1,COL1A1,PIK3CB,CSF2,FZD7,IL11
ILK Signaling	7.2	0.219	MAP2K4,RELA,PIK3CA,SNAI2,BMP2,RHOT2,ITGB8,NFKB1,TGFB11,RHOG,RHOB,CFL2,FLNA,PPM1L,VEGFD,AKT3,PPP2R2C,CTNNB1,TMSB10/TMSB4X,DSP,ITGB5,PIK3C2B,PXN,PARVA,TNFRSF1A,ACTB,CREB3,MAPK8,MAPK9,VIM,MYL9,RHOQ,ACTA2,RND3,PTPN11,LIMS1,FLNC,IRS1,SH2B2,LEF1,PIK3CB,ACTN4,MMP9
Death Receptor Signaling	6.84	0.283	MAP2K4,RELA,HSPB2,NFKB1,BCL2,NFKBIA,TIPARP,BID,TNFSF15,CASP8,TNFRSF1B,BIRC3,TNFRSF21,PARP16,TNFRSF1A,ACTB,MAPK8,ZC3HAV1,PARP8,IKBKE,ARHGDI1,DAXX,ACTA2,HSPB7,CFLAR,CASP7
Colorectal Cancer Metastasis Signaling	6.66	0.198	MAP2K4,RELA,TCF4,PIK3CA,TGFB1,MMP3,SMAD3,LRP6,RHOT2,SOS2,HRAS,MMP13,FZD1,NFKB1,MLH1,RHOG,RHOB,TGFB2,PRKAR1B,VEGFD,SMAD4,AKT3,CTNNB1,ADCY8,MMP12,MMP1,PTGER4,EGFR,PIK3C2B,ADCY2,NRAS,TNFRSF1A,ADCY3,IL6R,MAPK8,MMP10,MAPK9,RHOQ,PRKAR2B,RND3,PTPN11,IRS1,TLR6,TGFB3,PRKACA,PIK3CB,LEF1,MMP9,FZD7
Acute Phase Response Signaling	6.27	0.219	MAP2K4,RELA,SOCS3,TCF4,IL1A,PIK3CA,SOS2,HRAS,SERPINA3,NFKB1,NR3C1,RBP1,MAPK11,HMOX1,NFKBIA,F8,CFB,AKT3,OSMR,TNFRSF1B,IL1RAP,HPX,C3,NRAS,TNFRSF1A,C1S,IL6R,MAPK8,MAPK9,IKBKE,IL1R1,PTPN11,ORM1,IL1RN,C4BPA,PIK3CB,SOCS5
Role of Macrophages, Fibroblasts and Endothelial Cells in Rheumatoid Arthritis	6.15	0.181	MAP2K4,SOCS3,MMP3,NFATC3,CXCL12,HRAS,MMP13,CEBPG,TRAF4,VEGFD,LTBR,IL1RAP,ADAMTS4,SFRP4,PIK3C2B,IL6R,CREB3,PTPN11,IL1RN,PRKCD,IRS1,LEF1,RELA,PIK3CA,IL1A,TCF4,Calm1 (includes others),LRP6,FZD1,IL17RA,NFKB1,ROR2,NFKBIA,F2RL1,DKK3,CEBPA,AKT3,CTNNB1,TNFRSF1B,MAPKAPK2,PLCD4,MMP1,TRAF1,NRAS,TNFRSF1A,GNAQ,MAPK9,IKBKE,IL1R1,IRAK3,PLCB4,PRKCI,TLR6,PIK3CB,CSF2,FZD7
Axonal Guidance Signaling	5.86	0.162	BMP4,ITSN1,MMP3,NFATC3,UNC5B,SOS2,CXCL12,HRAS,MMP13,SEMA6D,CFL2,ECE2,BAIAP2,VEGFD,ADAM23,ADAMTS5,ADAMTS4,EPHA7,PIK3C2B,PAPPA,ADAMTS1,TUBB2A,ITGA5,MYL9,SRGAP3,PTPN11,PRKCD,IRS1,PRKACA,MME,PIK3CA,ADAMTS7,ADAM17,RND1,BMP2,BMP3,SEMA6A,FZD1,PLXNA2,ROBO1,EPHB6,EFNB2,SDC2,EFNB1,NTRK1,PRKAR1B,AKT3,ARPC3,PLCD4,ACE,BMP1,PLXNA1,PXN,NRAS,NRP2,ADAM15,CXCR4,ITGA2,GNAQ,GNAI1,MMP10,PLXND1,GIT1,EFNA1,PLCB4,PRKCI,PRKAR2B,TUBB6,PIK3CB,SEMA4B,MMP9,FZD7,SEMA7A
Role of IL-17A in Arthritis	5.82	0.299	MAP2K4,RELA,PIK3C2B,PIK3CA,MAPK8,CCL20,MAPK9,MMP13,NFKB1,IL17RA,MAPK11,CXCL6,CXCL3,NFKBIA,PTPN11,IRS1,PIK3CB,RPS6KA1,MAPKAPK2,MMP1