

S6 Table. Canonical pathways differentially regulated in HEK293T^{PARP1-/-} cells relative to HEK293^{EV} cells (IPA)

Canonical pathway	Genes
Antigen Presentation	<i>HLA-DMA, HA-DOA, HLA-DPA1, HLA-DPB1, HLA-DQA1, HLA-DRA, PSMB8, PSMB9</i>
B cell Development	<i>CD19, CD79B, HLA-DMA, HLA-DOA, HLA-DQA1, HLA-DQB1, HLA-DRA, SPN</i>
T cell Helper Differentiation	<i>HLA-DMA, HLA-DOA, HLA-DQA1, HLA-DQB1, HLA-DRA, IL17F, IL21R, IL6R, NGFR, TBX21, TGFB1, TNFRSF11B, TNFRSF1B</i>
Complement System	<i>C3, C1R, C5AR1, CFD, CFI, CR2, ITGB2, MASP1, SERPING1</i>
Coagulation System	<i>A2M, BDKRB1, BDKRB2, F10, F12, FGB, PLAT, PLAU, SERPINC1, SERPINE1, SERPINF2, TFPI, THBD, VWF</i>
Granulocyte Adhesion and Diapedesis	<i>C5AR1, CCL2, CCL26, CLDN1, CLDN6, CLDN7, CLDN23, CXCL6, CXCL8, CXCL16, CXCL17, HRH1, HRH4, HSPB1, IL1R2, ITGA5, ITGB2, ITGB3, MMP2, MMP11, MMP12, MMP13, MMP19, MMP23B, NGFR, PF4, SDC1, SELL, SELPLG, TNFRSF11B, TNFRSF1B</i>
PI3K Signaling in B Lymphocytes	<i>ATF3, BLK, BLNK, BTK, C3, CAMK2B, CD19, CD79B, CR2, CAPP1, INPP5D, NOTUM, PI3KAP1, PLEKHA2, PLEKHA4, PRKCB, RRAS, SYK</i>
Hepatic Stellate Activation	<i>A2M, ACTA2, AGT, CCL2, CCR7, COL11A1, COL12A1, COL15A1, COL16A1, COL20A1, COL21A1, COL3A1, COL4A3, COL4A4, COL5A3, COL6A2, COL6A3, COL6A5, COL6A6, COL8A1, COL9A3, CSCL8, EDNRA, EDNRB, EGF, FNI, HGF, IGFBP3, IGFBP4, IL1R2, IL6R, MMP2, MMP13, MYL1, NGFR, PDGFB, PDGFD, SERPINE1, TGFB1, TIMP2, TNFRSF11B, TNFRSF1B</i>
Atherosclerosis Signaling	<i>ALOX5, ALOX15, ALOX15B, ALOXE3, APOA1, APOD, APOE, CCL2, CD36, CLU, COL3A1, COL5A3, CXCL8, ITGB2, LPL, MMP13, MSRI, PDGFB, PDGFD, PLA2G3, PLA2G16, PLA2G4C, SELPLG, TGFB1, TNFRSF12A</i>
FXR/RXR Activation	<i>ABCB4, ABCG5, AGT, AHSG, APOA1, APOD, APOE, C3, CLU, CYP19A1, FABP6, FGF19, FOXA2, FOXA3, LPL, MTP, PCK2, PPARGC1A, SDC1, SERPINF1, SERPINF2, SULT2A1, VLDLR</i>
Agranulocyte Adhesion and Diapedesis	<i>ACTA2, C5AR1, CCL2, CCL26, CD34, CLDN1, CLDN6, CLDN7, CLDN23, CXCL6, CXCL8, CXCL16, CXCL17, FNI, HRH1, ITGA5, ITGB2, MADCAM1, MMP2, MMP11, MMP12, MMP13, MMP19, MMP23B, MYL1, PF4, SELL, SELPLG</i>
LPS/IL-1 Mediated Inhibition of RXR Function	<i>ABCA1, ABCG5, ACSBG1, ALDH1A1, ALDH1A3, APOE, CHST1, CHST4, CHST5, CHST13, CYP2C8, CYP3A4, FABP6, FMO3, FMO4, GSTO2, HS3ST5, HS3ST6, IL1R2, MAOA, MAOB, MGST1, NGFR, PPARGC1A, SLC27A6, SULT1C4, SULT2A1, SULT2B1, TNFRSF11B, TNFRSF1B</i>
Role of Macrophages, Fibroblasts and Endothelial Cells in Rheumatoid Arthritis	<i>ADAMTS4, C5AR1, CAMK2B, CCL2, CCND1, CXCL8, DKK1, DKK3, DKK1, FNI, FRZB, IL32, IL17RC, IL1R2, IL6R, LRP1, LTB, MMP13, NGFR, NOTUM, OSM, PDGFB, PDGFD, PIK3R5, PRKCB, PRKCH, ROR2, RRAS, SFRP4, SFRP5, SOCS3, TGFB1, TNFRSF11B, TNFRSF1B, WIF1, WNT2, WNT6, WNT11, WNT3A</i>
LXR/RXR Activation	<i>ABCA1, ABCG5, AGT, AHSG, APOA1, APOD, APOE, C3, CCL2, CD36, CLU, IL1R2, LPL, MSRI, NGFR, SERPINF1, SERPINF2, TNFRSF11B, TNFRSF1B</i>
Role of Osteoblasts, Osteoclasts and Chondrocytes in Rheumatoid Arthritis	<i>ADAMTS4, ADAMTS5, ALPL, BIRC3, BMP5, CALCR, DKK1, DKK3, DKK1, FRZB, GSN, IL11, IL1R2, ITGA5, ITGB3, LRP1, MMP13, NGFR, PIK3R5, SFRP4, SFRP5, SPPI, TGFB1, TNFRSF11B, TNFRSF1B, WIF1, WNT2, WNT6, WNT11, WNT3A</i>
Acute Phase Response Signaling	<i>A2M, AGT, AHSG, APOA1, C3, C1R, CRABP2, FGB, FNI, IL6R, NGFR, OSM, RRAS, SERPINE1, SERPINF1, SERPINF2, SERPING1, SOCS3, TNFRSF11B, TNFRSF1B, VWF</i>
VDR/RXR Activation	<i>CALB1, CDKN1A, CYP24A1, GADD45A, IGFBP3, IGFBP6, PRKCB, PRKCH, SPPI, SULT2A1, THBD</i>