

Human Toll-Like Receptor Signaling Pathway PCR Array

Toll-Like Receptors:CD180 (LY64), SIGIRR, TLR1, TLR2, TLR3, TLR4, TLR5, TLR6, TLR7, TLR8, TLR9, TLR10.

Pathogen-Specific Responses:

Bacterial: CCL2 (MCP-1), CD14, CD180 (LY64), FOS, HRAS, IL10, IL12A, IL1B, IL6, IL8, IRAK1, HMGB1, HSPA1A (HSP70 1A), JUN, LTA (TNFB), LY86 (MD-1), LY96, NFKBIA (IKBA/MAD3), PTGS2 (COX2), REL, RIPK2, TLR2, TLR4, TLR6, TNFRSF1A, TICAM1 (TRIF).

Viral: EIF2AK2 (PRKR), IFNB1, IFNG, IL12A, IL6, IRF3, PRKRA, REL, TBK1, TLR3, TLR7, TLR8, TNF, TICAM1 (TRIF).

Fungal/Parasitic: CLEC4E, HRAS, HSPA1A (HSP70 1A), IL8, TLR2, TIRAP.

TLR Signaling:

Negative Regulation:SARM1, SIGIRR, TOLLIP.

TICAM1 (TRIF)-Dependent (MYD88-Independent): IRF3, MAP3K7 (TAK1), TAB1, NR2C2, PELI1, TBK1, TICAM2, TLR3, TLR4, TRAF6, TICAM1 (TRIF).

MYD88-Dependent: IRAK1, IRAK2, MAP3K7 (TAK1), TAB1, MYD88, NR2C2, TIRAP, TLR1, TLR10, TLR2, TLR4, TLR5, TLR6, TLR7, TLR8, TLR9, TRAF6.

Downstream Pathways and Target Genes:

NF κ B Pathway:BTK, CASP8, CHUK (IKK α), ECSIT (SITPEC), FADD, IKBKB, IL10, IL1B, IRAK1, IRAK2, IRF3, LY96, MAP3K1 (MEKK), MAP3K7, MAP4K4, NFKB1, NFKB2, NFKBIA (IKBA/MAD3), NFKBIL1, NFRKB, PPARA, REL, REL, TNF, TNFRSF1A, UBE2N.

JNK/p38 Pathway:ELK1, FOS, IL1B, JUN, MAP2K3 (MEK3), MAP2K4 (JNKK1), MAP3K1 (MEKK), MAP3K7, MAPK8 (JNK1), MAPK8IP3, TNF.

JAK/STAT Pathway: CCL2 (MCP-1), CSF2 (GM-CSF), IFNG, IL12A, IL2, IL6.

Interferon Regulatory Factor (IRF) Pathway:CXCL10 (INP10), IFNA1, IFNB1, IFNG, IRF1, IRF3, TBK1.

Cytokine-Mediated Signaling Pathway: CCL2 (MCP-1), CSF3 (GCSF), IL1A, IL1B, IL6, IRAK1, IRAK2, REL, SIGIRR, TNF, TNFRSF1A.

Regulation of Adaptive Immunity:CD80, CD86, HSPD1, IFNG, IL10, IL12A, IL1B, IL2, MAP3K7, TRAF6.

Adaptors & TLR Interacting Proteins:BTK, CD14, HMGB1, HRAS, HSPA1A (HSP70 1A), HSPD1, LY86 (MD-1), LY96 (MD-2), MAPK8IP3, MYD88, PELI1, RIPK2, SARM1, TICAM1 (TRIF), TICAM2 (TRAM), TIRAP, TOLLIP.

Effectors:CASP8 (FLICE), EIF2AK2 (PRKR), FADD, IRAK1, IRAK2, IRAK4, MAP3K7 (TAK1), TAB1, NR2C2, PPARA, PRKRA, ECSIT (SITPEC), TRAF6, UBE2N.