

## Human T Helper Cell Differentiation PCR Array

**Cytokines & Receptors:** CCL5 (RANTES), CCL7 (MCP-3), CCR3, CCR4, CCR5, CCR6, IL12B, IL12RB2, IL13, IL13RA1, IL17A, IL17RE, IL18, IL18R1, IL18RAP, IL1R1, IL1R2, IL1RL1, IL2, IL21, IL2RA, IL4, IL4R, IL5, IL9, TNF.

**T Helper 1 Subtype Markers:** CCR5, HAVCR2, IGSF6, IL12B, IL18, IRF1, SOCS1, SOCS5, TLR4, TLR6, TNF.

**T Helper 2 Subtype Markers:** CCL5 (RANTES), CCL7 (MCP-3), CCR3, CCR4, CEBPB, GFI1, GPR44, ICOS, IL13RA1, IL4R, JAK1, NFATC1, NFATC2.

**Transcription Factors:** CEBPB, FOSL (FRA-1)1, FOXP3, GATA3, GATA4, HOXA10, HOXA3, ID2, IRF4, IRF8, MAF, NFATC1, NFATC2, NR4A1, NR4A3, POU2F2, REL, RELB, RORA, RORC, RUNX1 (AML1), RUNX3, STAT1, STAT4, STAT6, TOX, ZBTB7B.

### Epigenetically Regulated Genes:

Th1 Cells: EOMES, IFNG, IL12RB2, IL18R1, IL18RAP, FASLG (TNFSF6), TBX21.

Th2 Cells: ASB2, GATA3, IL13, IL1RL1, IL4, IL5, PPARG.

Th17 Cells: IL17A, IL17RE, IL1R1, IL21, RORA, RORC.

Inducible and Natural Regulatory T (iTreg and nTreg) Cells: CCR6, FOSL1 (FRA-1), FOXP3, IKZF2, IL9, IRF4, IRF8, MYB, NR4A1, NR4A3, POU2F2, REL, RELB, TGIF1, TNFSF11.

Conventional Versus Regulatory T Cells: CACNA1F, CHD7, FOXP3, GATA4, HOPX, HOXA10, HOXA3, ID2, IKZF2, IL1R2, IL2RA, KIF2C, LRRC32, PERP, PKD2, TNFRSF9, TP53INP1, UTS2.