

SUMMARY: PRINCIPLE CYTOKINES in HD

Key Cytokines	Main Cell source	Major functions
Interferon- γ	Th1, NK, NKT cells	M/M* activation, inhibits development of Th2
Interleukin 1	Epithelial cells and few other cells (minor) M/M (Monocytes & Macrophages)	Pro-inflammatory
Interleukin 2	Th1 cells	T cell proliferation, Treg survival
Interleukin 4	Th2 cells	Antibody immunity, class switching, inhibits development of Th1
Interleukin 5	T cells, mast cells, Innate lymphoid cell type 2	Eosinophil growth and differentiation
Interleukin 6	M/M, epithelial cells and few other cells (minor)	Innate immunity, B cell growth, induction Th17
Interleukin 7	Stromal cells from bone marrow and thymus, keratinocytes, DC and other cells	Growth factor for lymphoid cells and lymphoid progenitor cells
Interleukin 8	M/M, other cells	Pro-inflammatory, major neutrophil chemokine
Interleukin 10	DC, M/M, Th2, Tfh, Tregs	Suppression of some inflammatory pathways (IL-1, IL-12, TNF α); inhibits Th1 development; drives B cell differentiation and isotype switching.
Interleukin 12	M/M, DC	Induction of Th1 development
Interleukin 13	Th2	Class switching
Interleukin 15	Intraepithelial cells	Dendritic and T cell activation
Interleukin 17	Th17	Inflammation
Interleukin 18	M/M, DC	Stabilize Th1 development
Interleukin 21	Tfh, Th17 also Th1, Th2	Proliferation of B, Th1, Th2 & Th17
Interleukin 22	Th17	Proliferation of epithelial cells
Interleukin 23	DC, M/M	Th17 expansion and stabilization
TNF- α	DC, M/M	Pro-inflammatory
TGF- β	Many cells	Induction of Tregs and Th17
BAFF	Follicular dendritic cells Epithelial cells	B cell survival and differentiation
APRIL	Follicular dendritic cells Epithelial cells	B cell survival and differentiation