

cytokines from APC to Naive T cell CD4 CD8

IL-4 → Th2

IL-12 + IFN-gamma → Th1

IL-6 + TGF-β → Th17

IL-12 + IFN-γ → CD8 activation

IL-4 }
IFN-γ } → عكس يعني واحد بيوقف الثاني

او انما يجمعون Th1

IL-10 + TGF-β → Treg

cytokines from Th2

IL-4 → B cell activation and Proliferation

IL-5 → activation eosinophils + differentiation of B-cell → Plasma and

IL-10 → x macrophages Producers Ab

From Th1

IL-2 + IFN-γ → activate CD8 + macrophages + NK

IL-12

From Th17

IL-17 → recruit neutrophils and macrophages to site of infection

From Treg

IL-10 + TGF-β → Immunosuppressive

↳ inhibits T cell + macrophages

↳ inhibition the production of IL-12

+ inhibit the expression of MHC-II

يعني بيوقف CD8 + Th1 + macroph...

Produced by Innate response	Produced by adaptive response	Stimulate hematopoiesis
IL-1 and TNF	IL-2	Colony stimulating factor (CSF)
IL-12	IL-4	Stem cell factor
Chemokines	IL-5	IL-3 and IL-7
Type 1 interferon	IL-13	
IL-6 and IL-10	IFN-gamma	
	TGF-beta	
	Lymphotoxin	

↳ for both Innate + adaptive

Pro-inflammatory cytokines :- IL-1, TNFα, TNFβ (Lymphotoxin) LT, IL-6

- ↑ synthesis of adhesion factor

recruitment

APP

- ↑ prostaglandin synthesis

- ↑ production Acute phase proteins from liver

* IL-12 - ↑ production IFN- γ

⇒ IFN- α + IFN- β

- help in differenti... CD4 → Th1
- help in activation CD8
- activation NK
- ↑ production IFN- γ

mother

⇒ IL-2 - growth factor