Biology of T cell & TCR

TCell Function
- Allograft Rejection
- Tumor immun Response

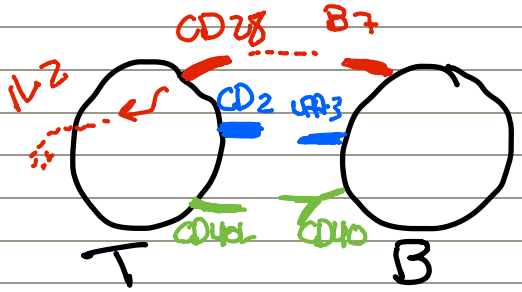
Ig superfamily :-
TCR, BCR, MHC
CD3, CD4/CD8 → most Fc Receptor
CD28, B7 ← Adhesion

Complete TCR
zeta ε α β CD3 → signaling (zeta)

TCell Activation
3 signal

TCR (Ag, MHC) | Co-stimulatory (CD28) | Cytokine (IL-2)

if one of these signal absent → Anergy & Tolerence.



IL-4 (From B, DC)
[IL12/IFNX) From DC

PRR
low level of MHC
low adhesion Moleeules.
→ immature DC

migrate to L.N
- lose phago-activity
- ↑ MHC
- ↑ adhesion Molecul

secrete Chemo-Feator attract naive TCell
→ mature DC

Viral & Allergen & Bacteria Ag

Thelper 1
1. Activate CD8 (Cell Mediate immunity)
1. = IFN-γ → Activate Macrophage & NK
1. → neutrophil Activation
1. → B: activate B to secrete (opsonization Ab) IGG1, IGG3
- IL12 → Proliferate to h1
- IFNγ → ↑ h1, ↓ h2, ↓ h17
- high density of ligand, strong bond → ↑ IL-12, IFN-γ

Thelper 2
2 → B: secrete IL4
→ Activation + IL-6
IgE production

2 = IL5 → Activate Eo: IgA (worm)

2 = IL10 → Suppress Macrophage

2 → B OR APC (Allergen, worm)

IL-4 → Th2, ✗ IFN-γ

- low level / small Ag or toxin or worms
- bind Receptor less tightly (IL-4 ¶ IL-5)

Th17 → IL-17
Ag:- Extracellular Fungi & bacteria

DC: TGFB, IL-6

CD8+
From infected DC, Cancer
IL-12, IFN-γ