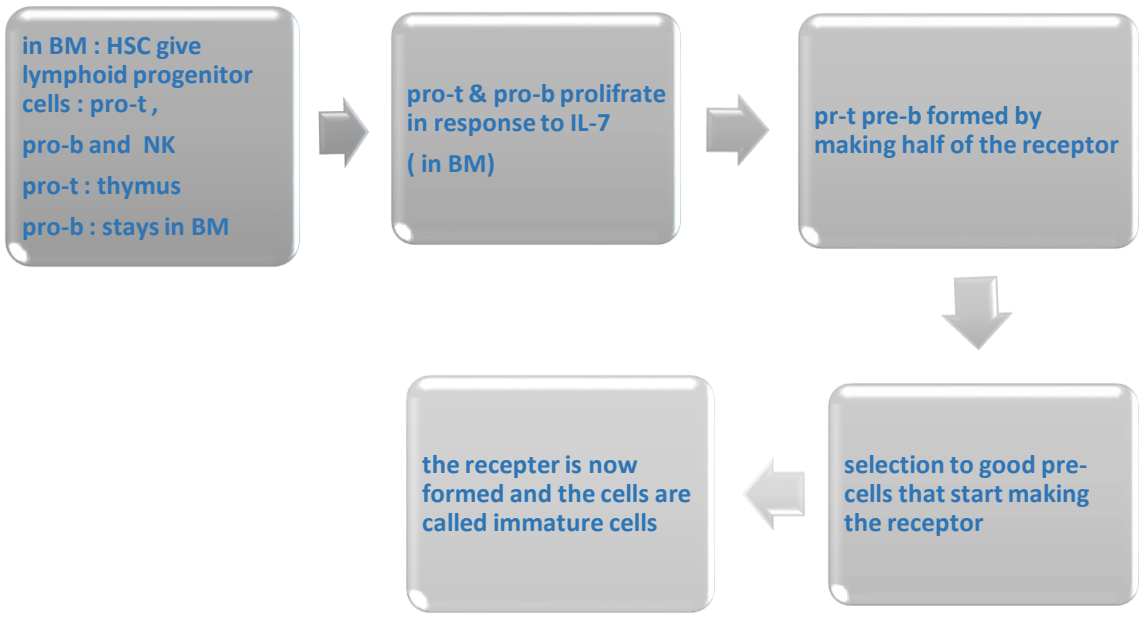
Lymphocyte develoption and migration

Steps of lymphocytes development



Regarding the last step: *another selection point to the immature cells*

- Select functional *antigen receptor proteins* and eliminate *potentially dangerous cells that strongly recognize self-antigens*, cells that remain after selection called **mature cells**
- Then: differentiation of **T cells develop into CD4+ (Th) and CD8+ (Tc)** αβ T lymphocytes in **thymus**
- Then to **peripheral lymph nodes** where they're activated by **macrophages**

Aß TCR

Structure	
Two chains :	*Alpha & beta*
Each has 1 constant	*And 1 variable*
Hyper variable regions	*At 3 sites*
Also hinge region	*Transmembrane*
And cytoplasmic tail	*With single Ag binding site*
It must be processed and presented	*By MHC molecules*
MHC 1 for TC / CD8+	*MHC2 for TH / CD4+*

Lower affinity	*Than AB*

B cell Receptor

It is a transmembrane antibody molecule ***(2 heavy and 2 light chains)*** associated with two signaling chains called *Igα and Igβ*

Constant of light chain is either both **kappa or lambda** protein type

Constant of heavy chain (there are 5 constant regions (**CϒforIGG**, **Cδ for IGD**,

Cε for IGE, **Cμ for IGM** and **Cα for IGA**), For BCR the constant is Cμ for IGM
