II- Cellules de l'immunité adaptative

Lymphocytes T

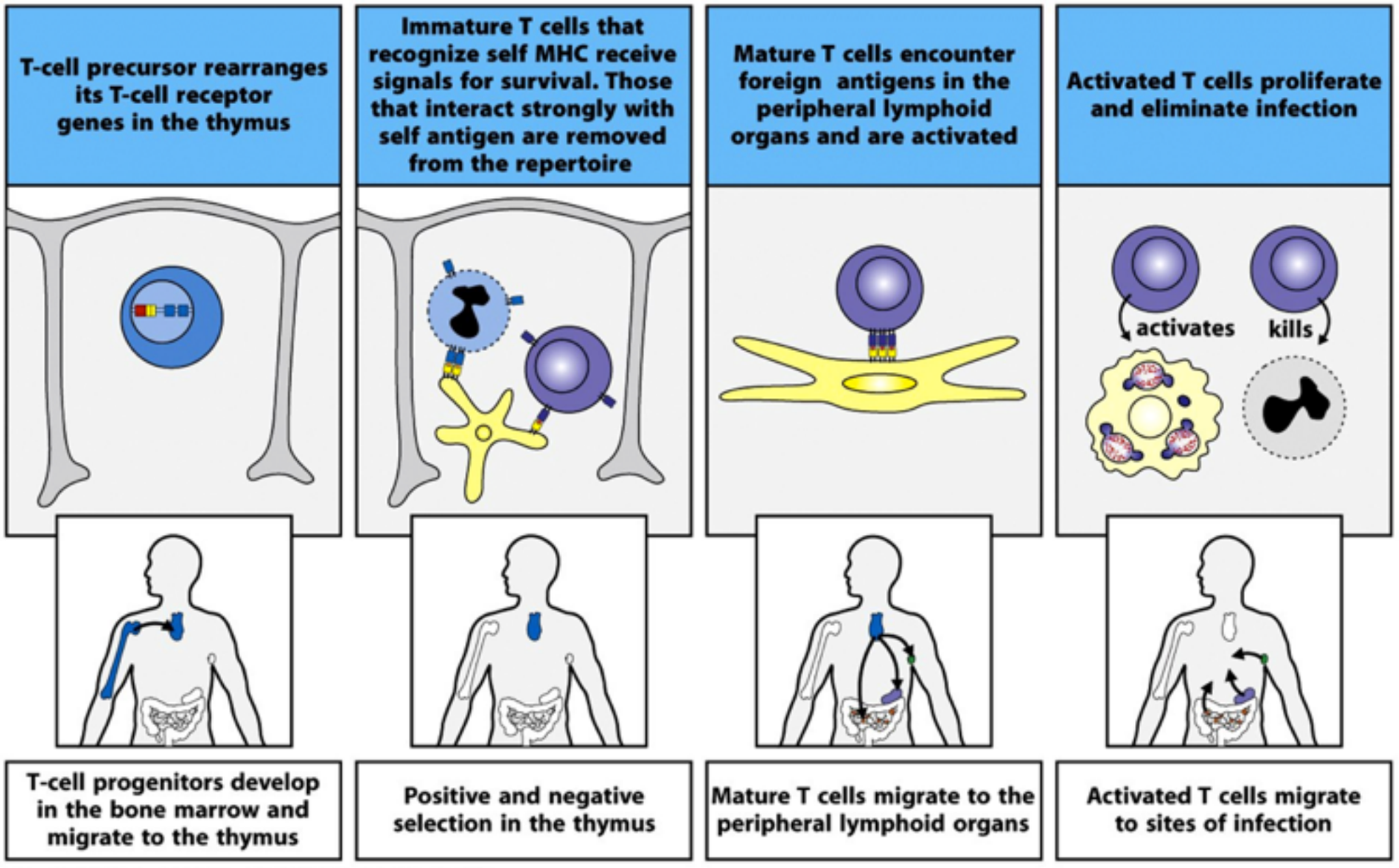


Figure 7-14 Immunobiology, 7ed. (© Garland Science 2008)

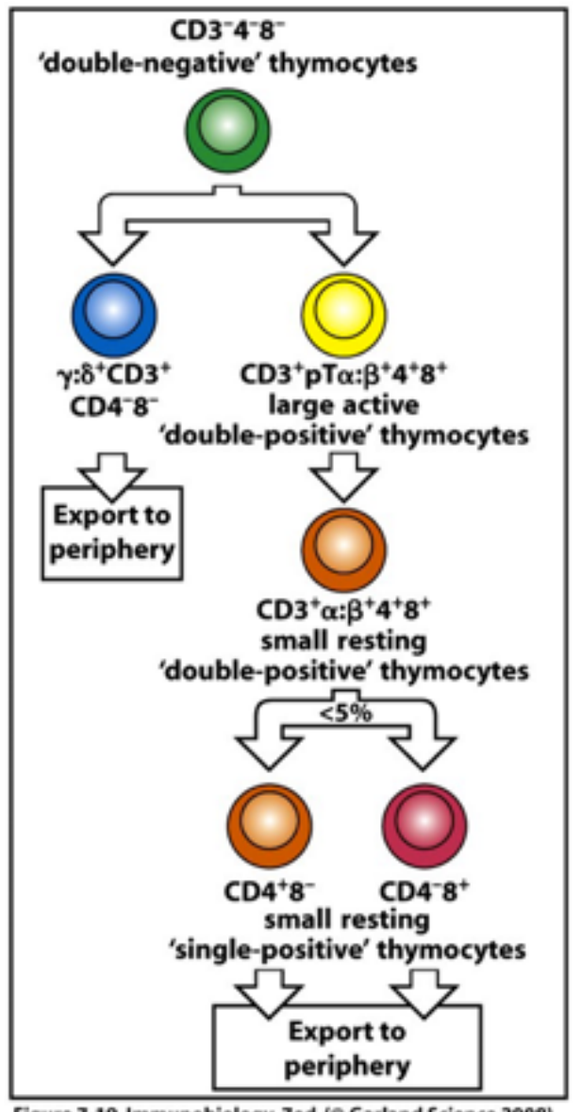


Figure 7-19 Immunobiology, 7ed. (© Garland Science 2008)

II- Cellules de l'immunité adaptative

Lymphocytes Tγδ

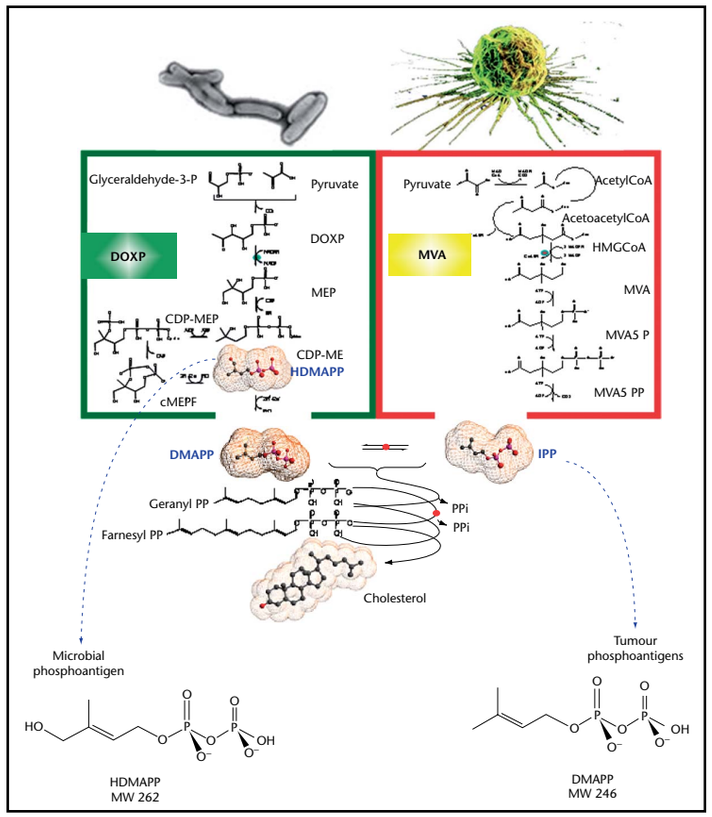
Sous population lymphocytaire T minoritaire

Sous population lymphocytaire T non conventionnelle: expression d'un récepteur T non conventionnel

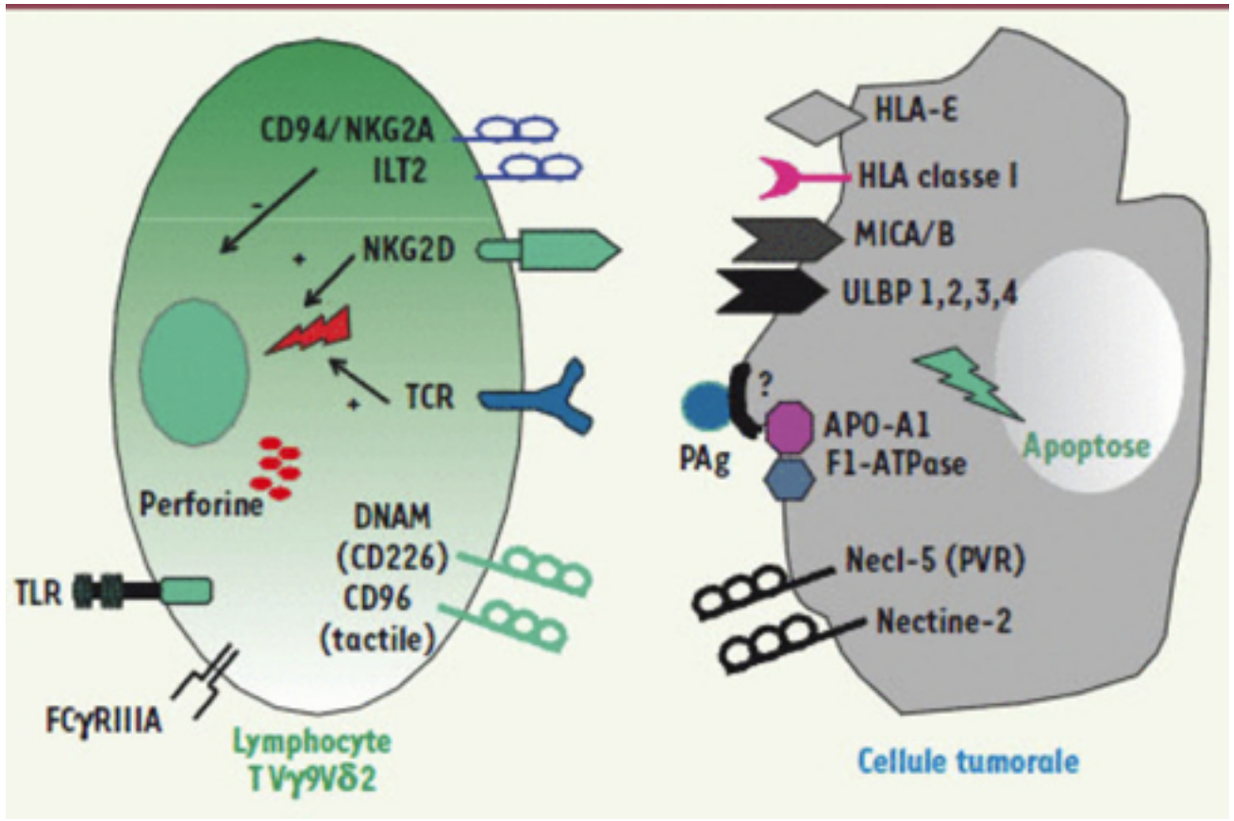
Reconnaissance des phospho-antigenes de façon CMH indépendante

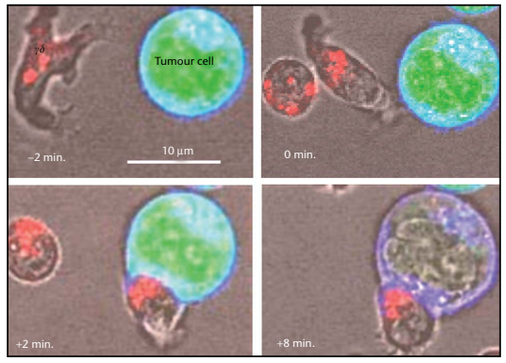
Localisation au niveau épithélial et muqueuses

Maturation intra et extra-thymique



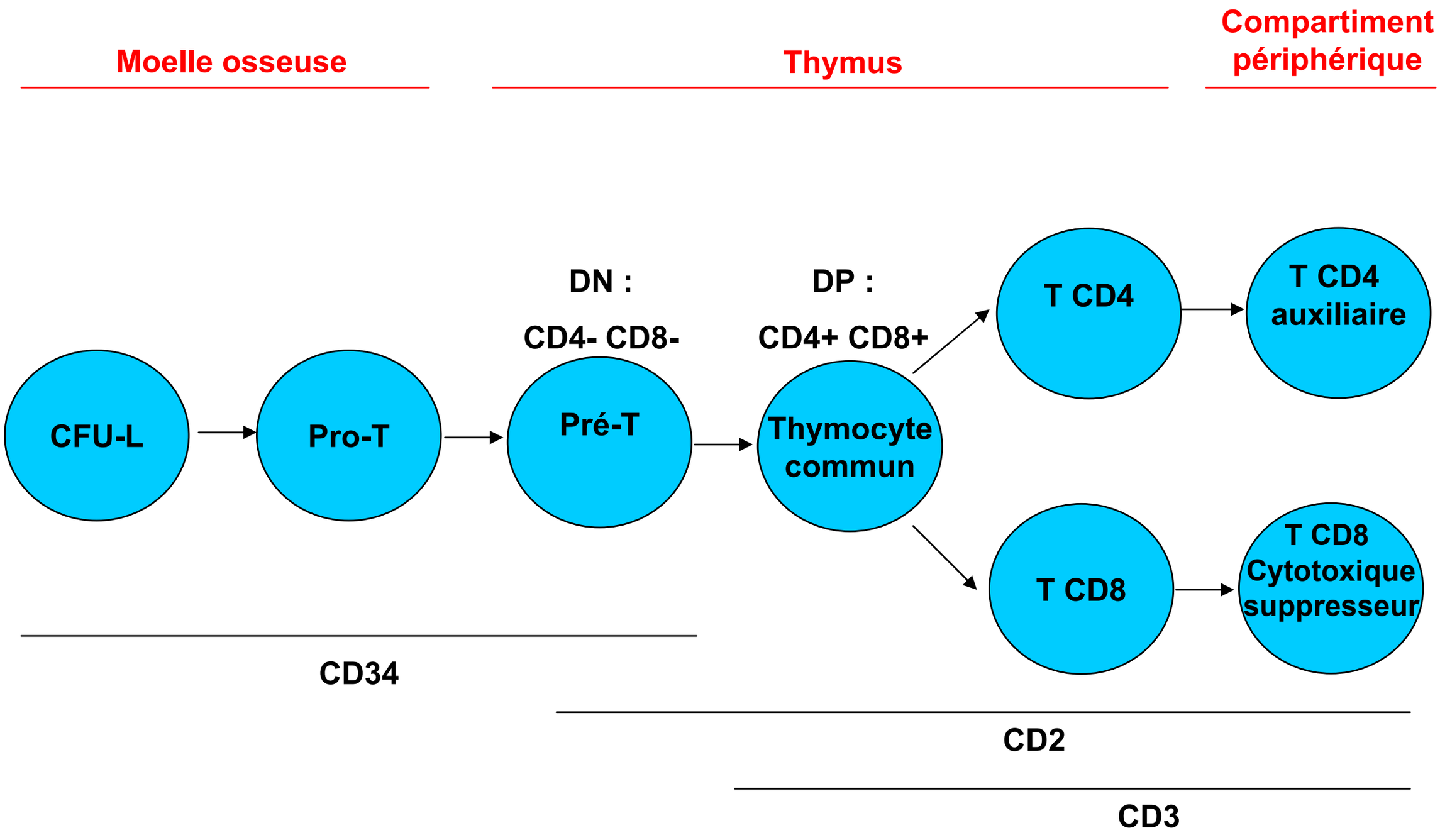
voies de synthèse des phospho-antigenes





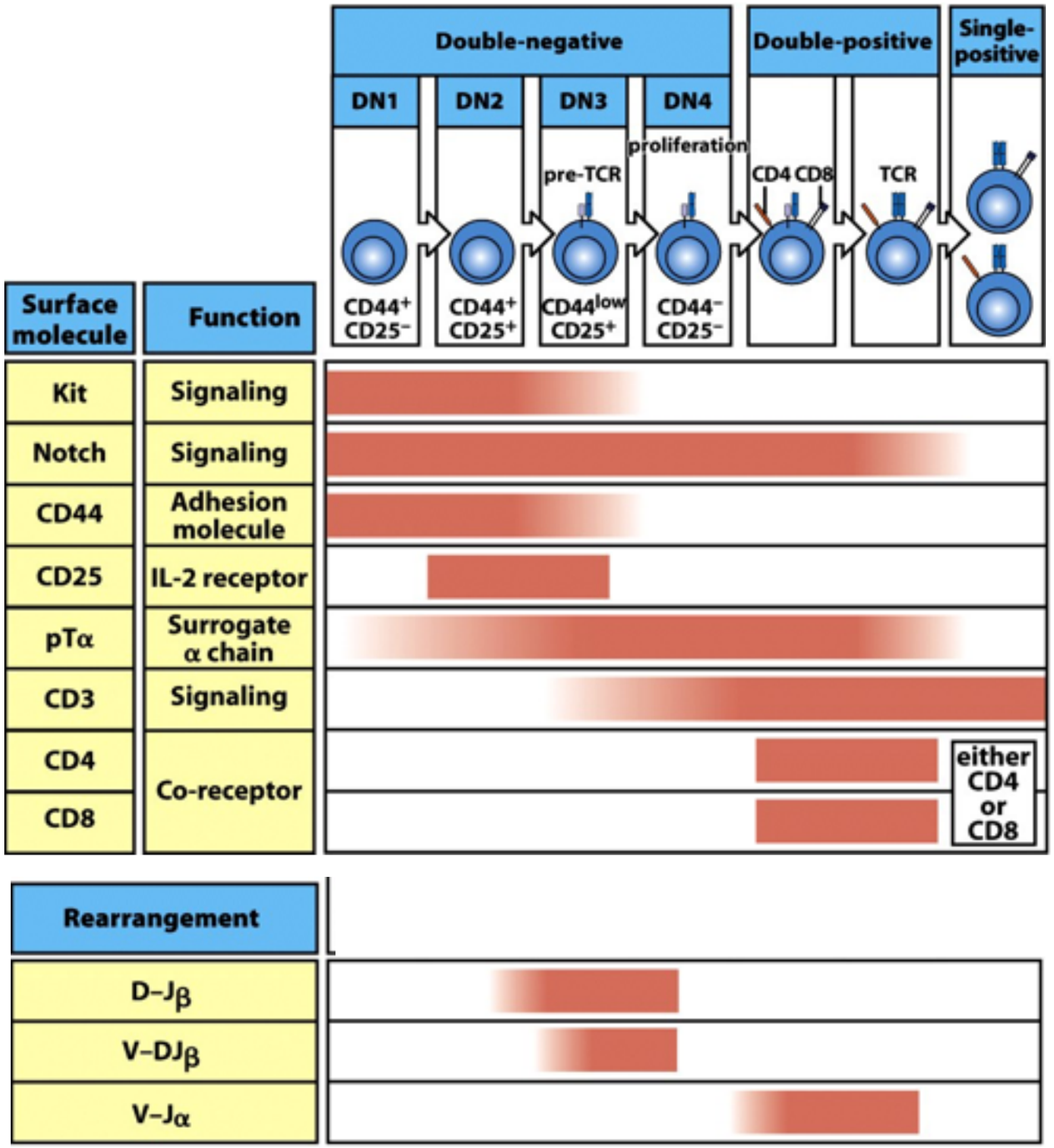
II- Cellules de l'immunité adaptative

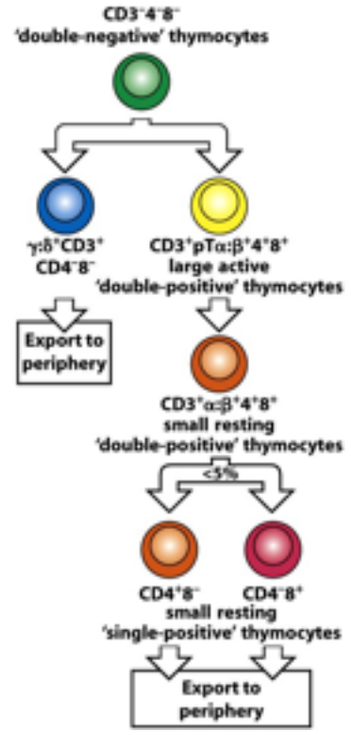
Lymphocytes T$\alpha\beta$

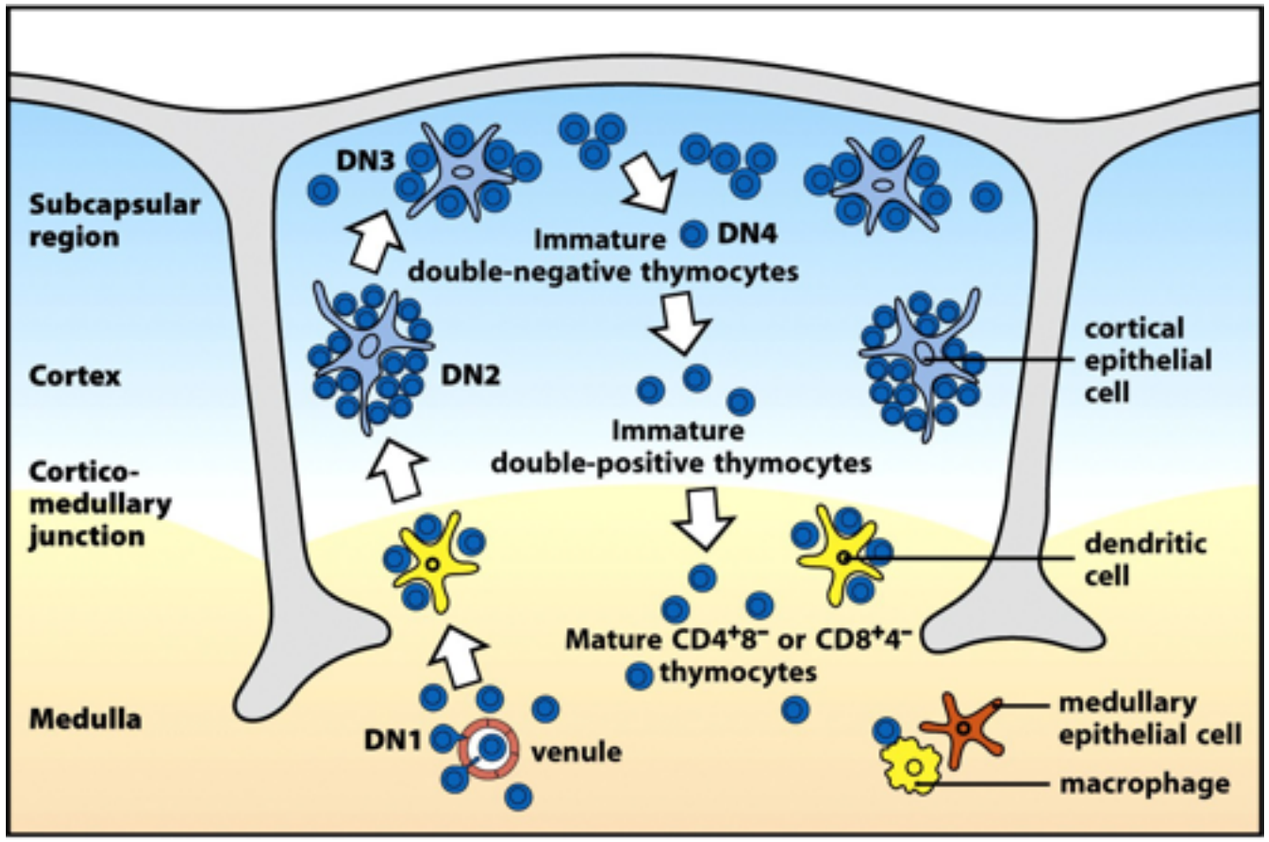


II- Cellules de l'immunité adaptative

Lymphocytes T$\alpha\beta$



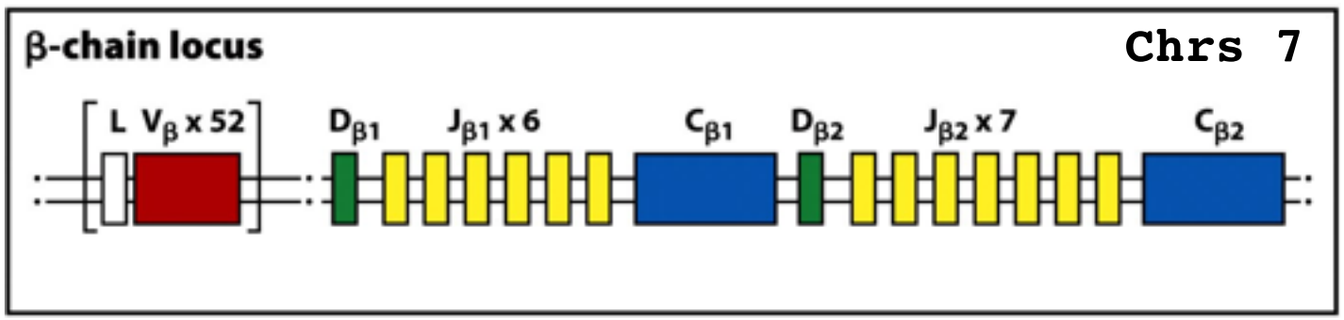


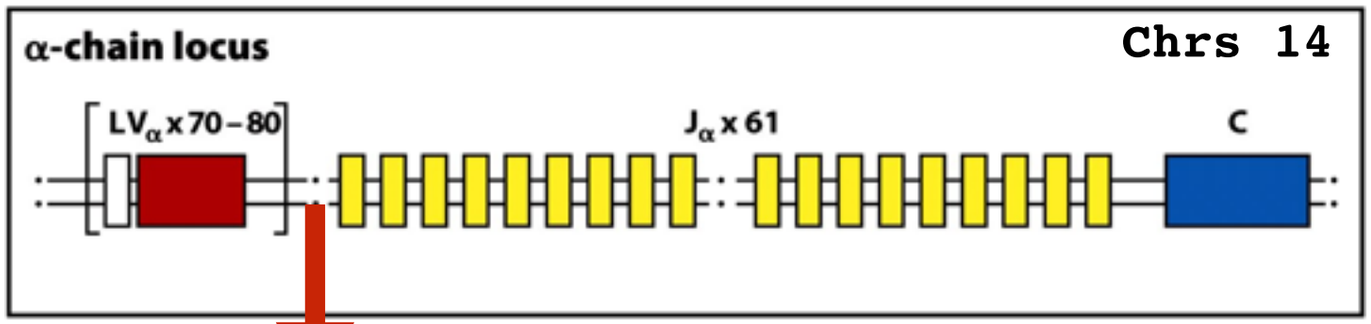


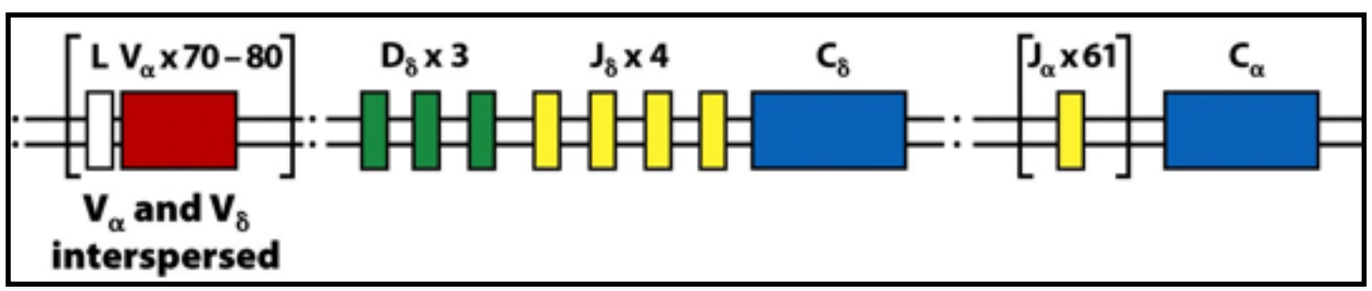
II- Cellules de l'immunité adaptative

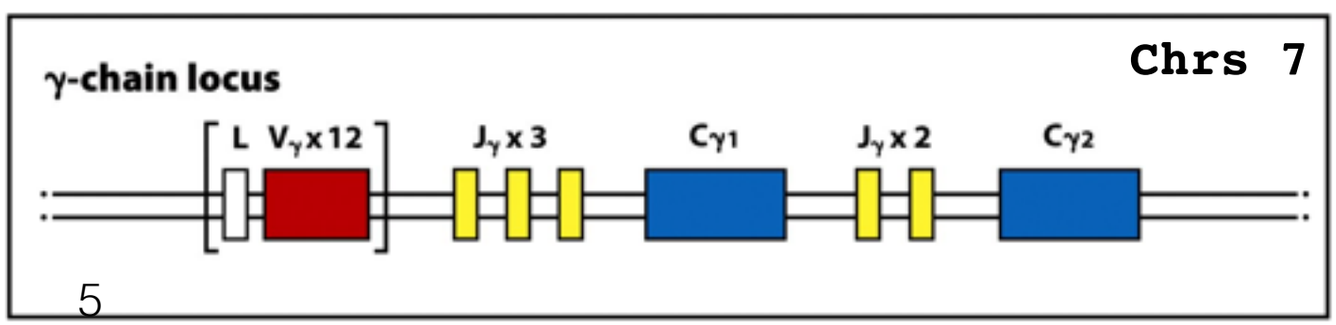
Lymphocytes T$\alpha\beta$

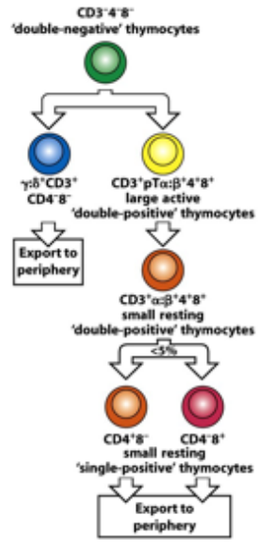
les segments géniques codants les TCRs











II- Cellules de l'immunité adaptative

Lymphocytes T$\alpha\beta$

Processus de réarrangement génique

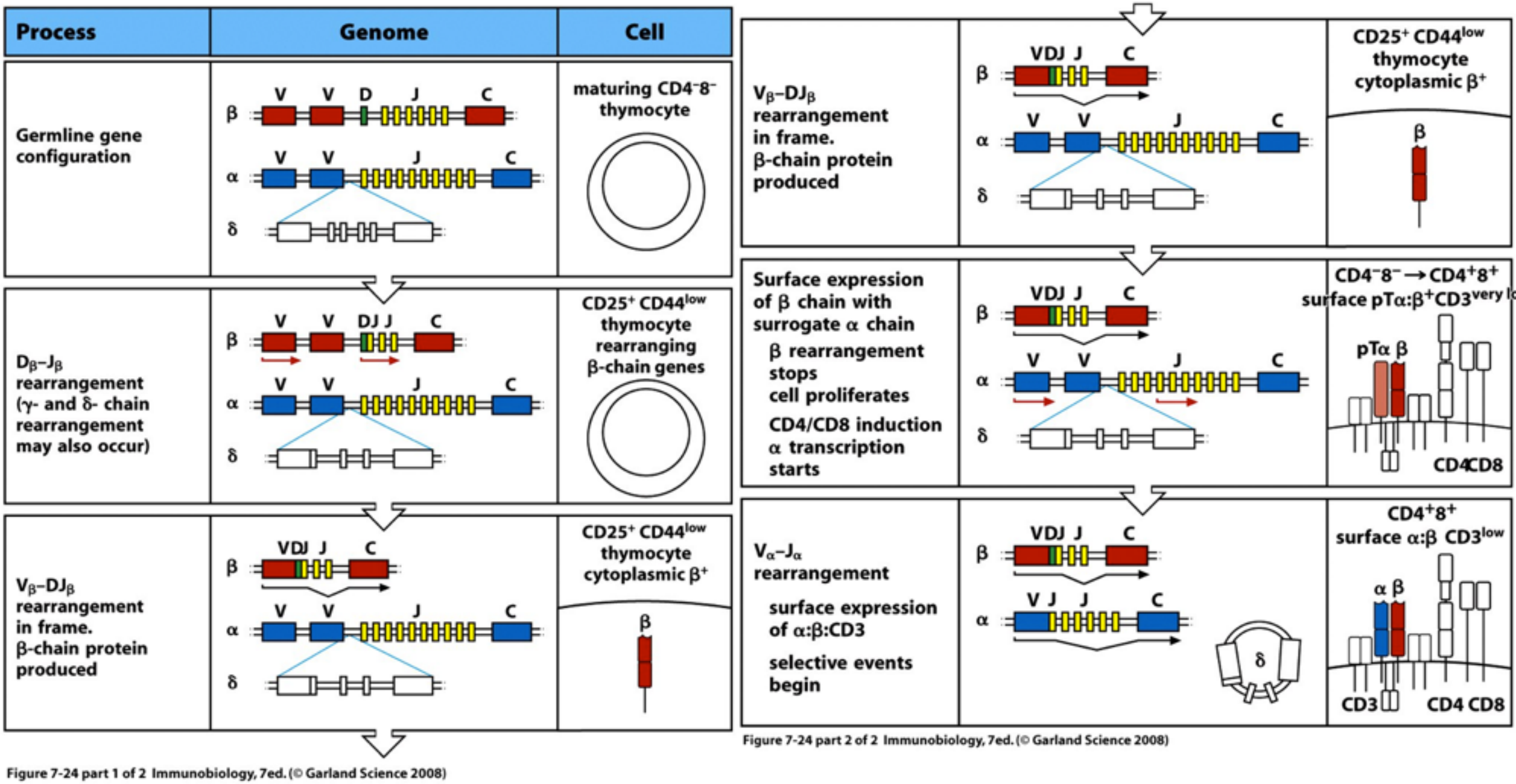


Figure 7-24 part 1 of 2 Immunobiology, 7ed. (© Garland Science 2008)

Figure 7-24 part 2 of 2 Immunobiology, 7ed. (© Garland Science 2008)

II- Cellules de l'immunité adaptative

Lymphocytes T$\alpha\beta$

Processus de réarrangement génique

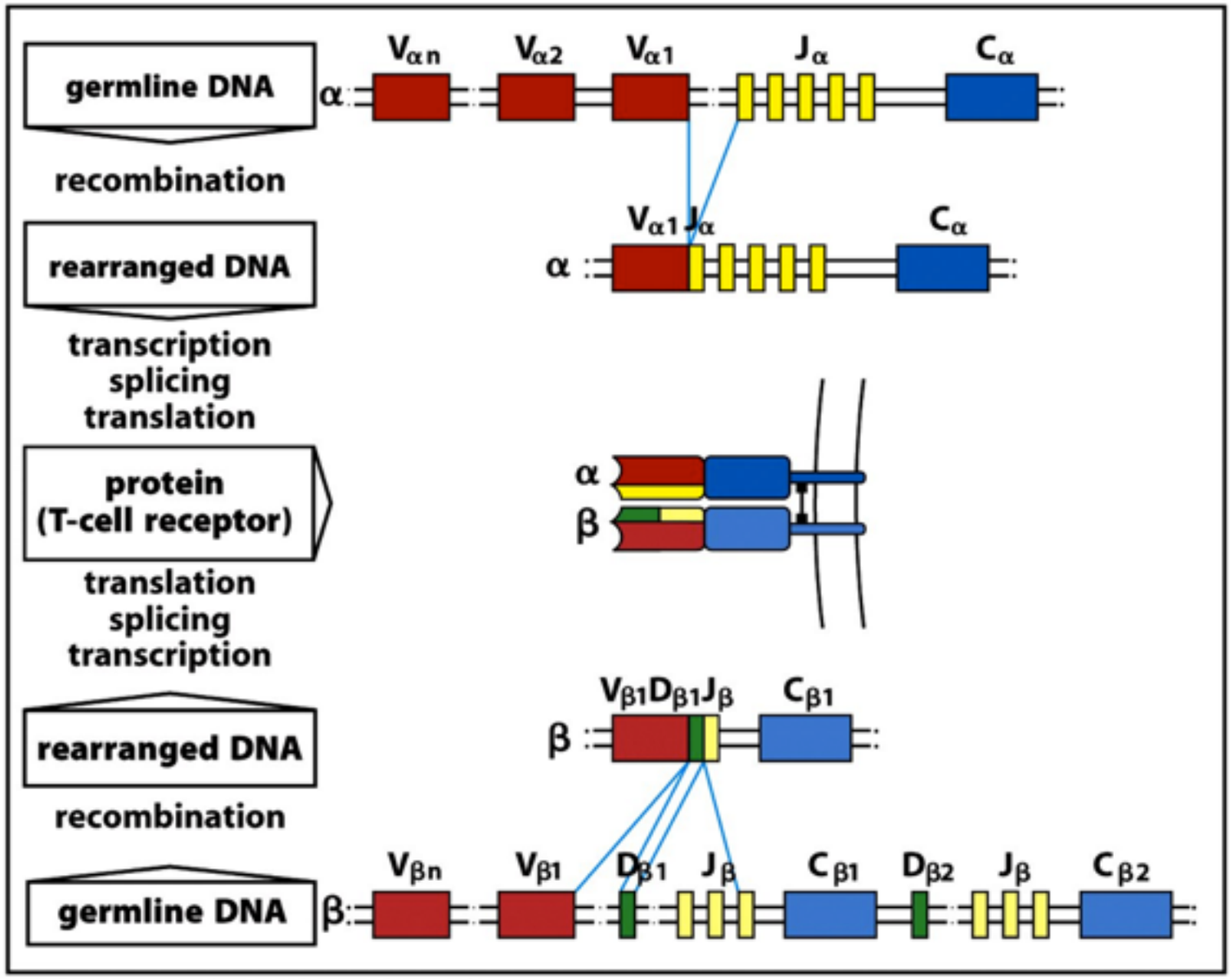


Figure 4-10 Immunobiology, 7ed. (© Garland Science 2008)

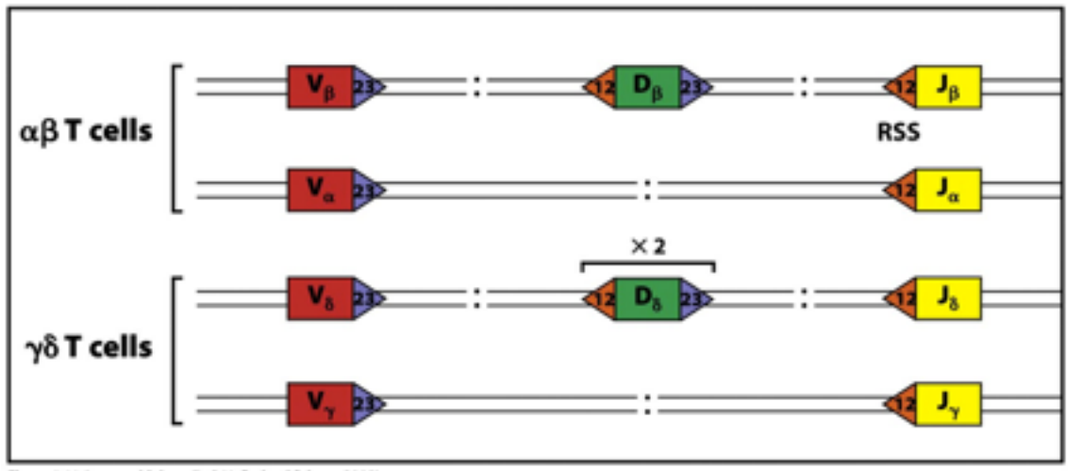


Figure 4-11 Immunobiology, 7ed. (© Garland Science 2008)

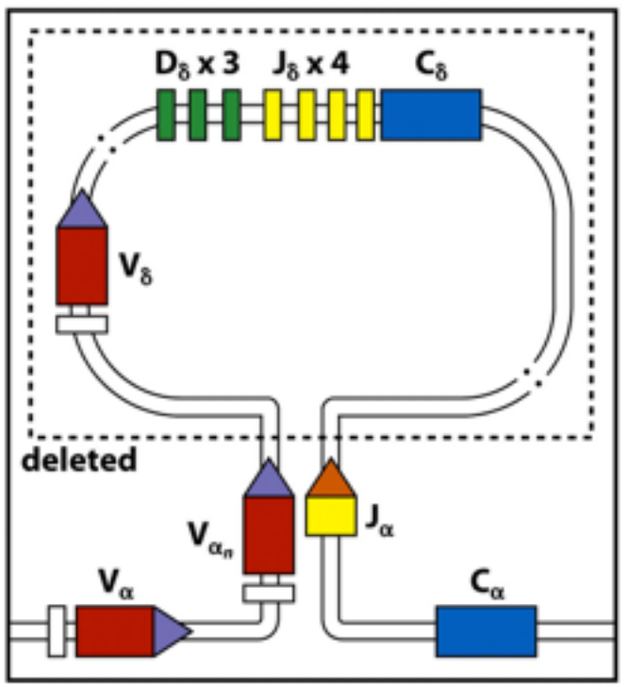


Figure 4-15 Immunobiology, 7ed. (© Garland Science 2008)

II- Cellules de l'immunité adaptative

Lymphocytes T$\alpha\beta$

Processus de réarrangement génique

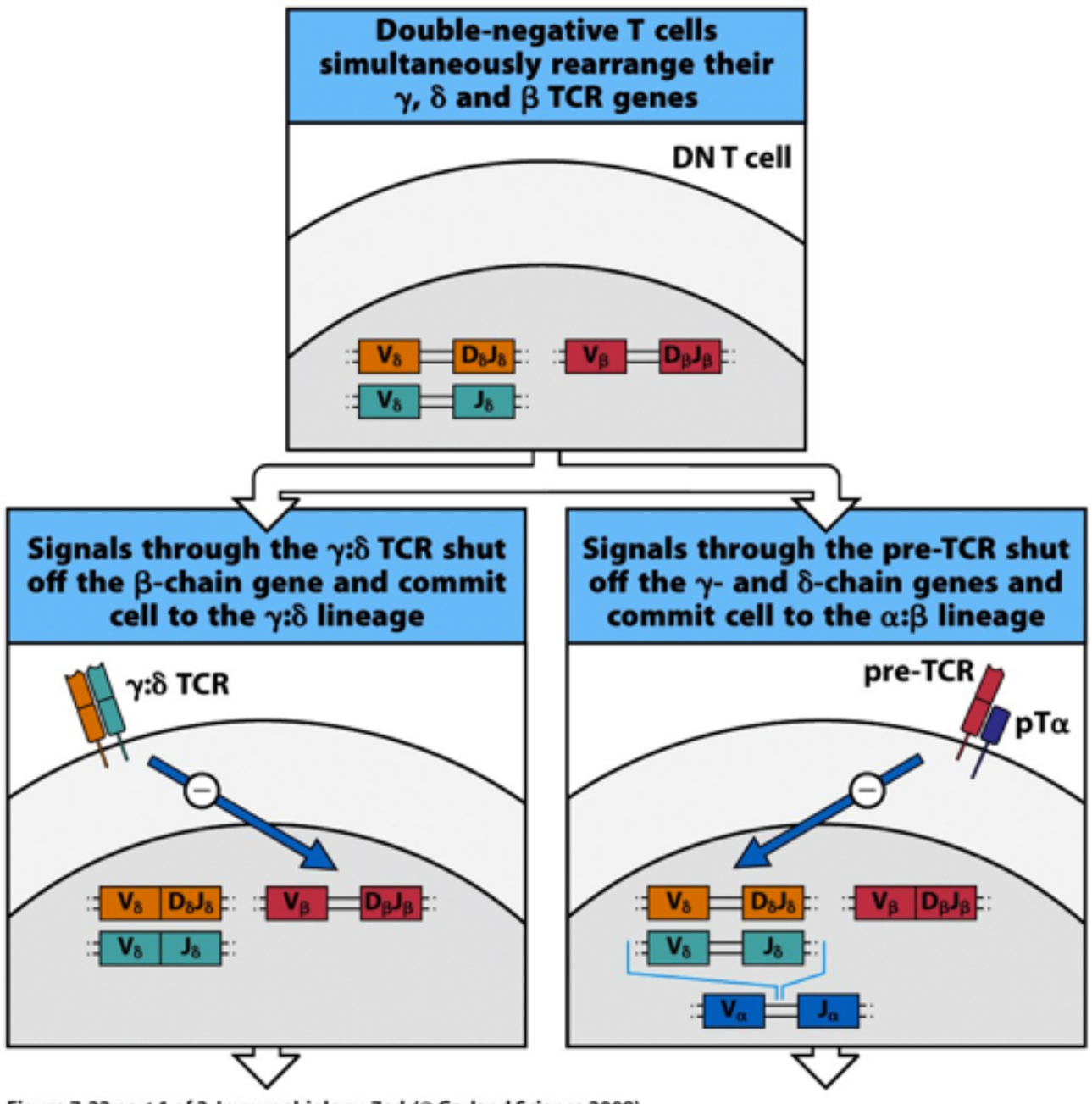


Figure 7-22 part 1 of 2 Immunobiology, 7ed. (© Garland Science 2008)

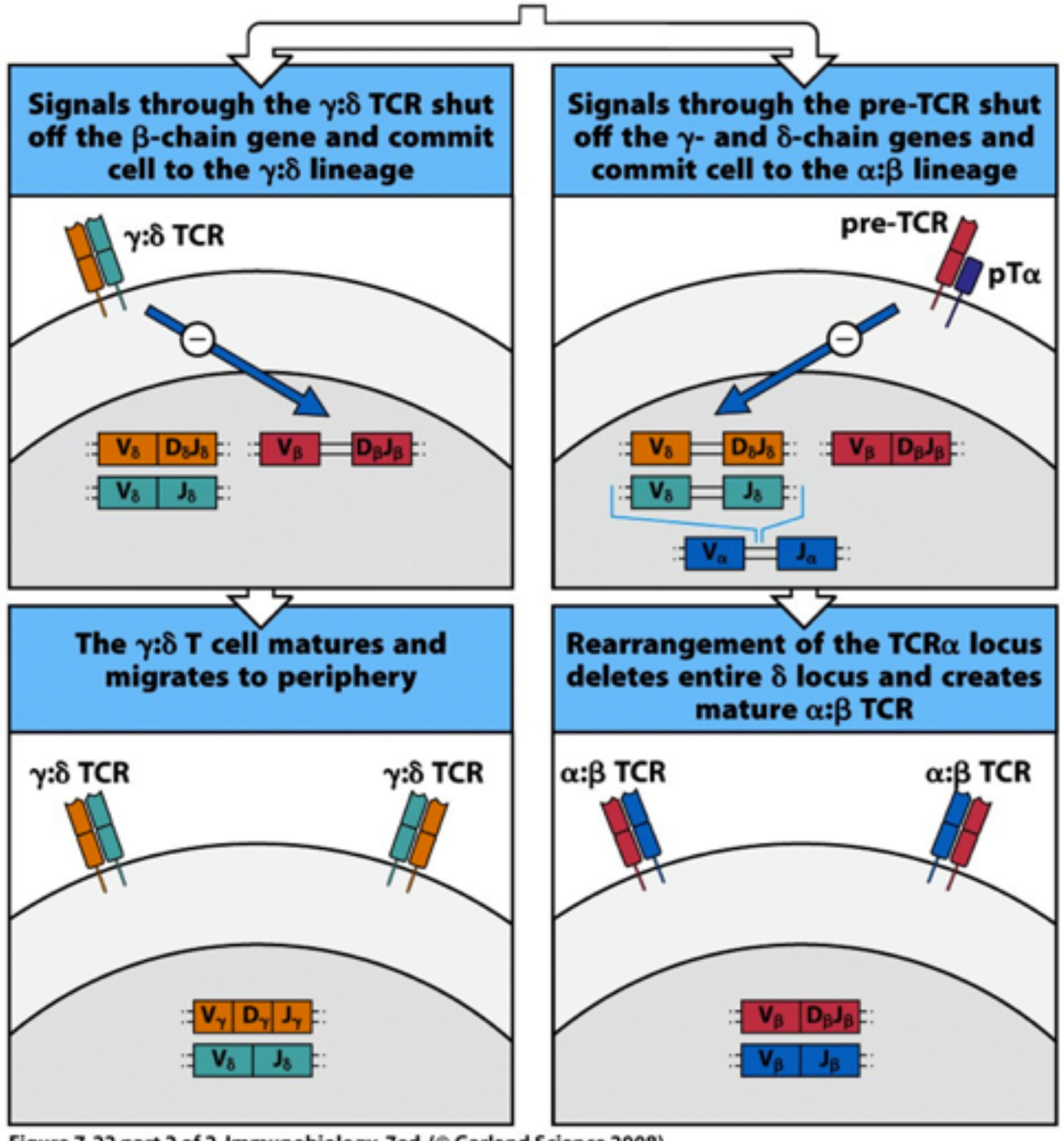
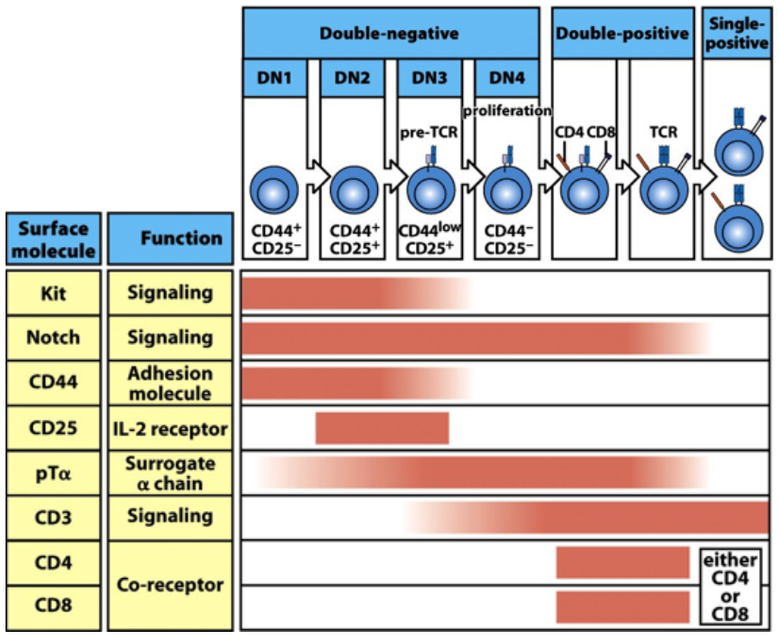


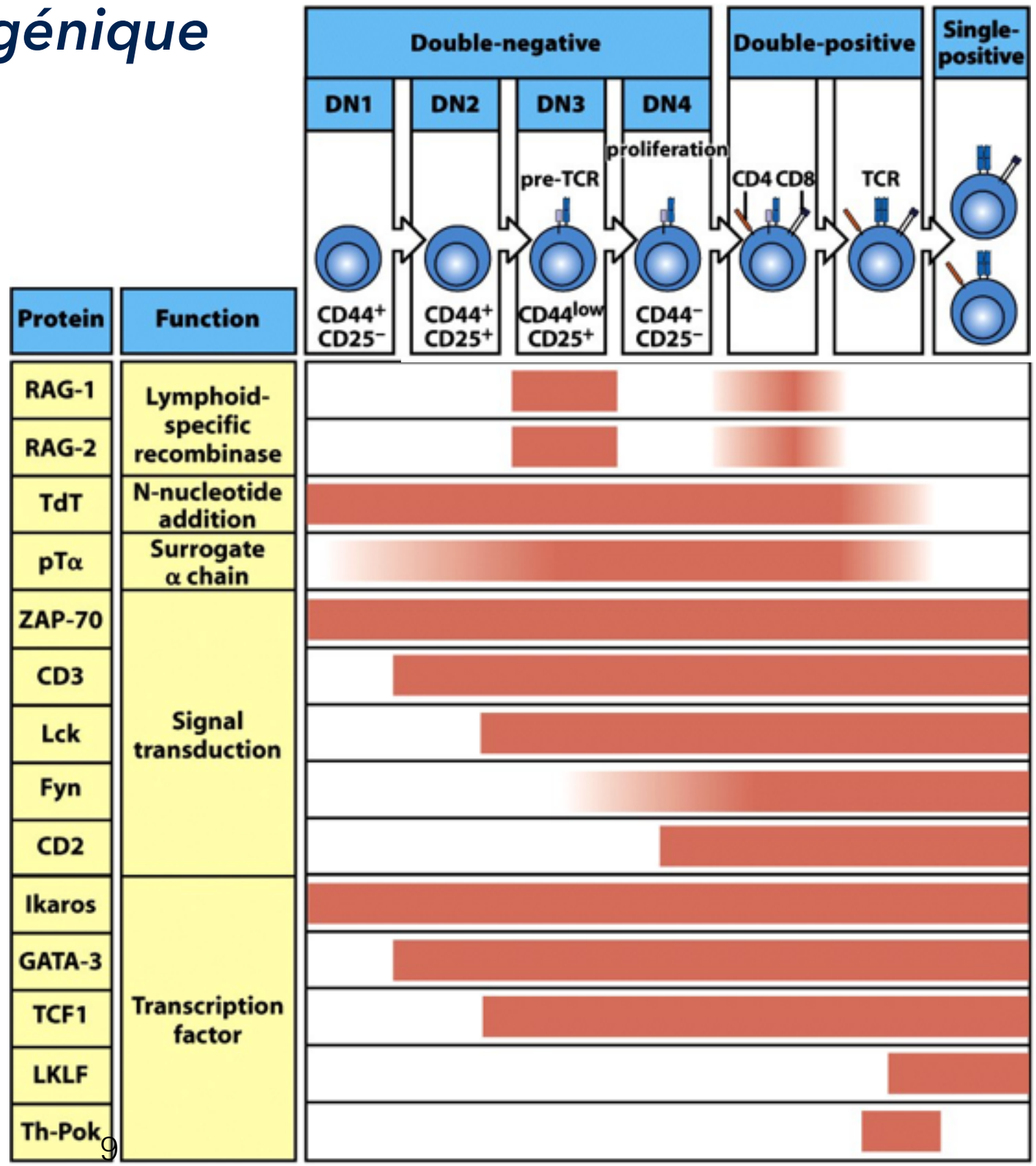
Figure 7-22 part 2 of 2 Immunobiology, 7ed. (© Garland Science 2008)

II- Cellules de l'immunité adaptative

Lymphocytes T$\alpha\beta$

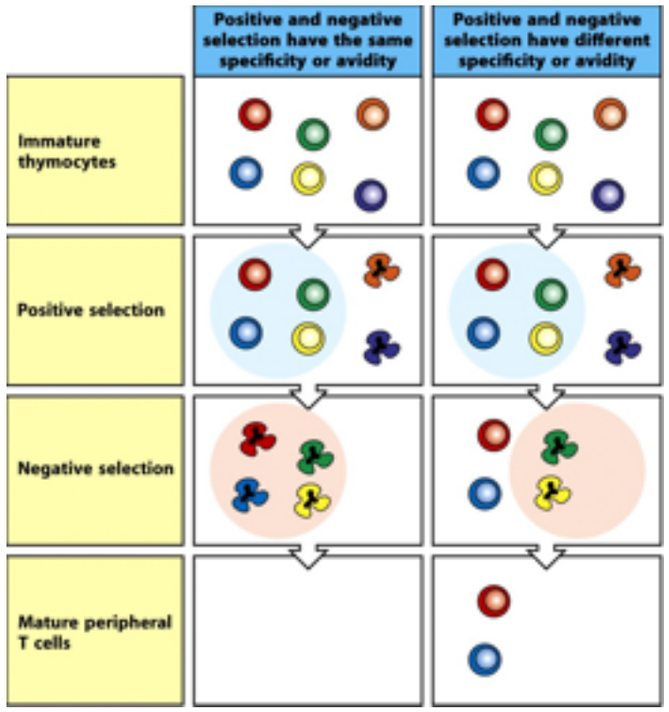
Processus de réarrangement génique

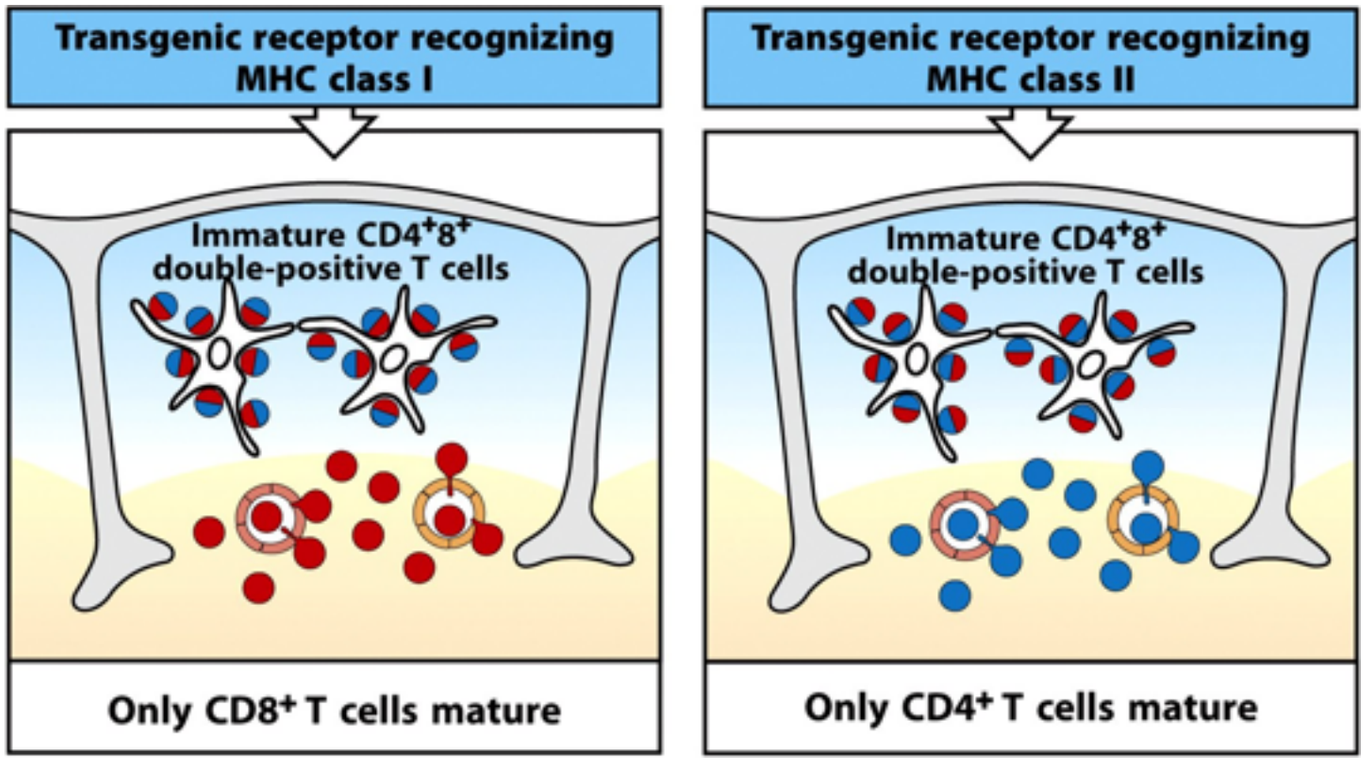


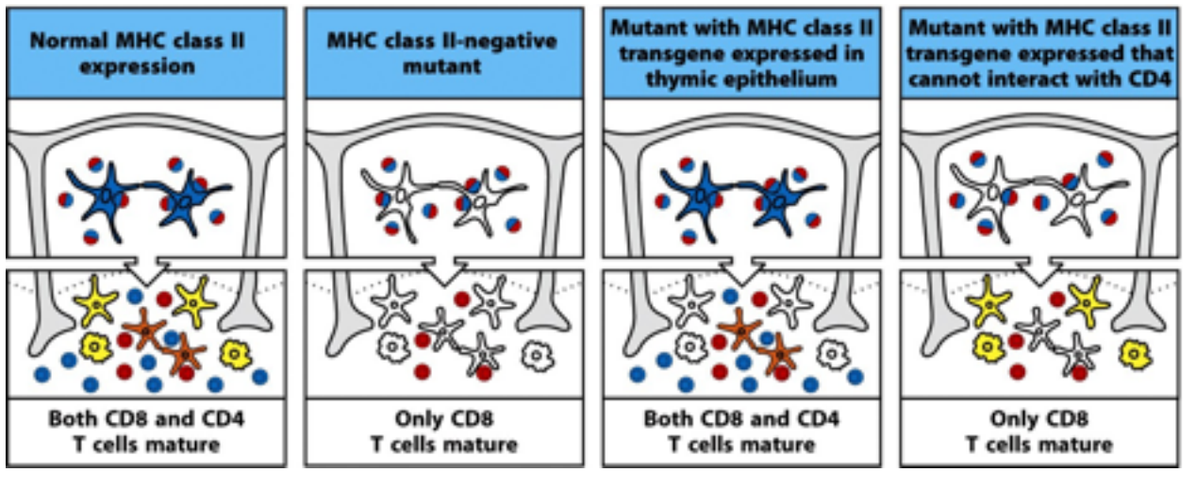


II- Cellules de l'immunité adaptative

Lymphocytes T$\alpha\beta$: *sélections positive et négative*

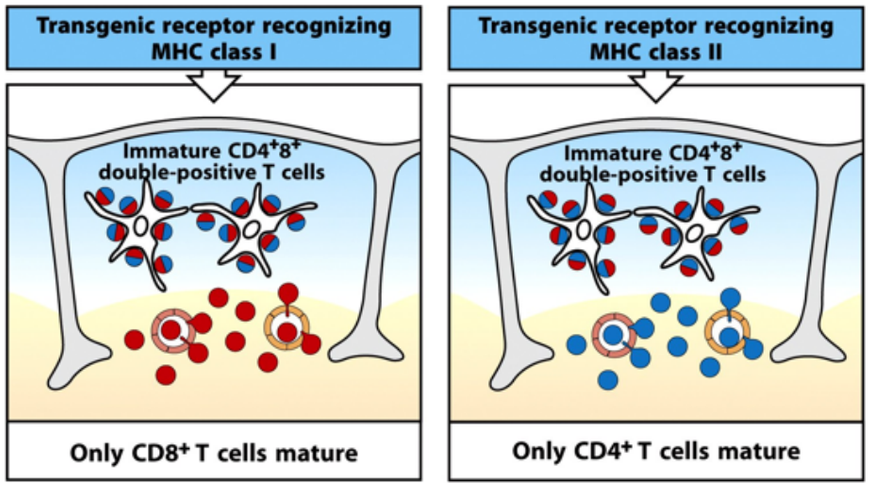


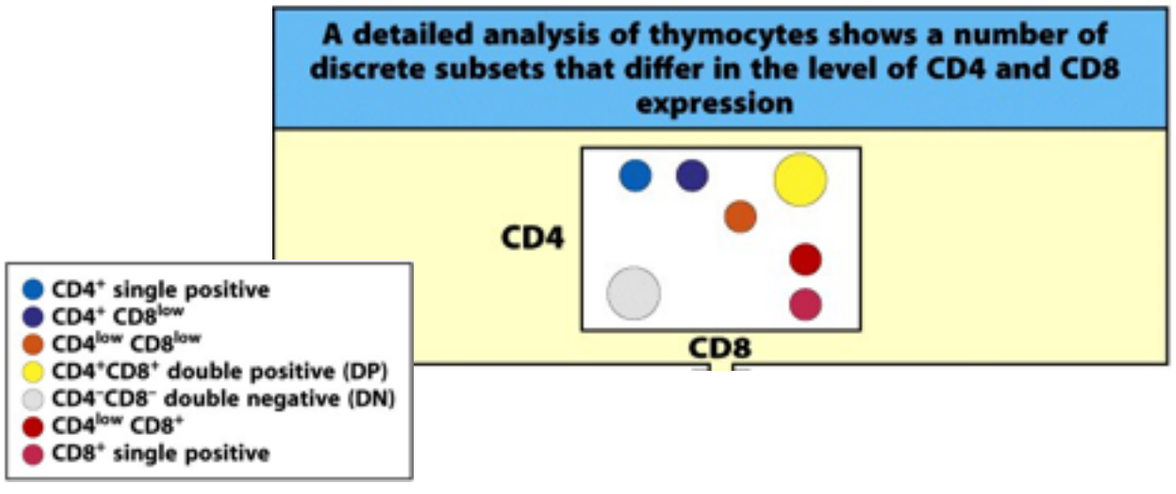


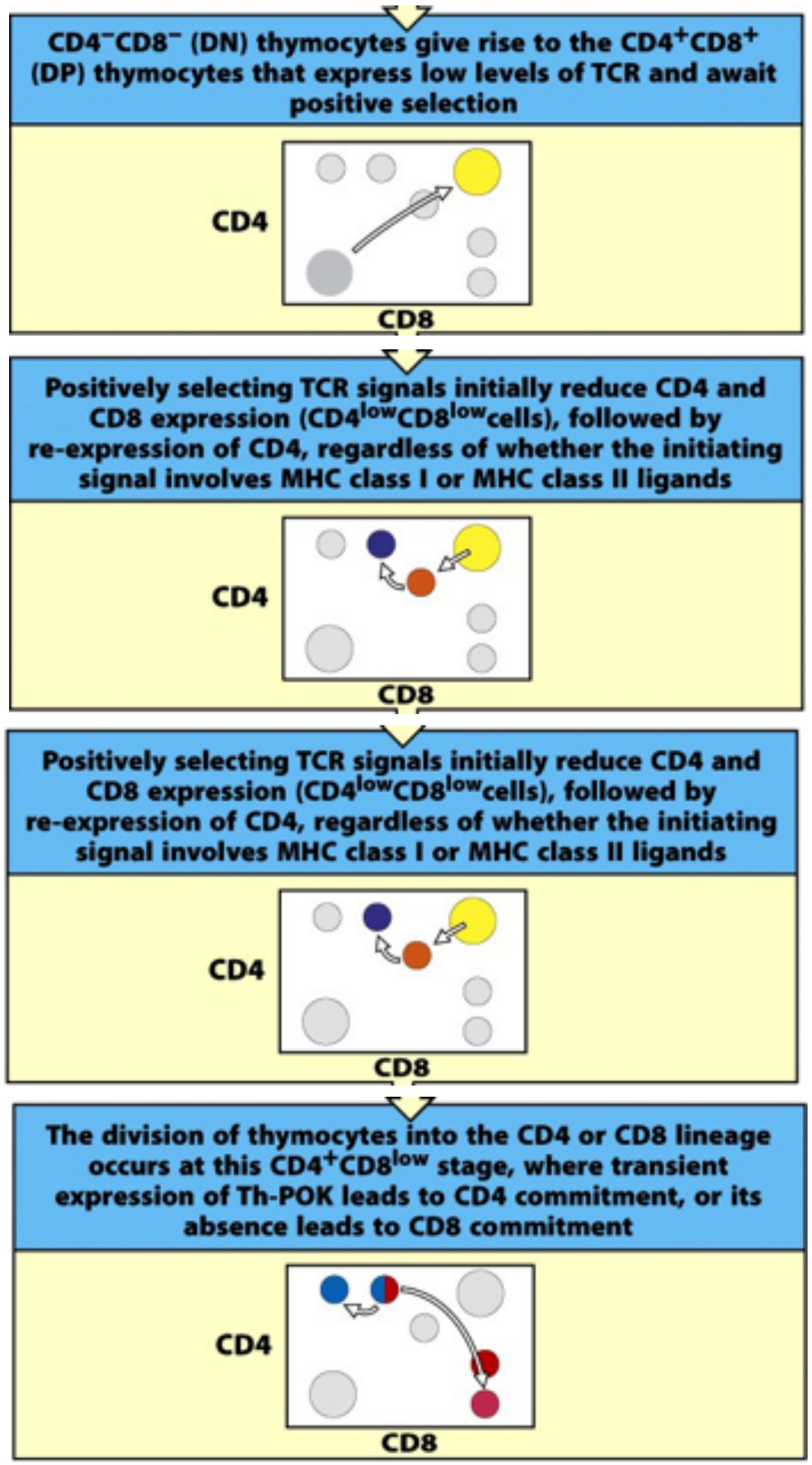


II- Cellules de l'immunité adaptative

Lymphocytes T$\alpha\beta$: *sélections positive et négative*







II- Cellules de l'immunité adaptative

Diversité TCR & BCR

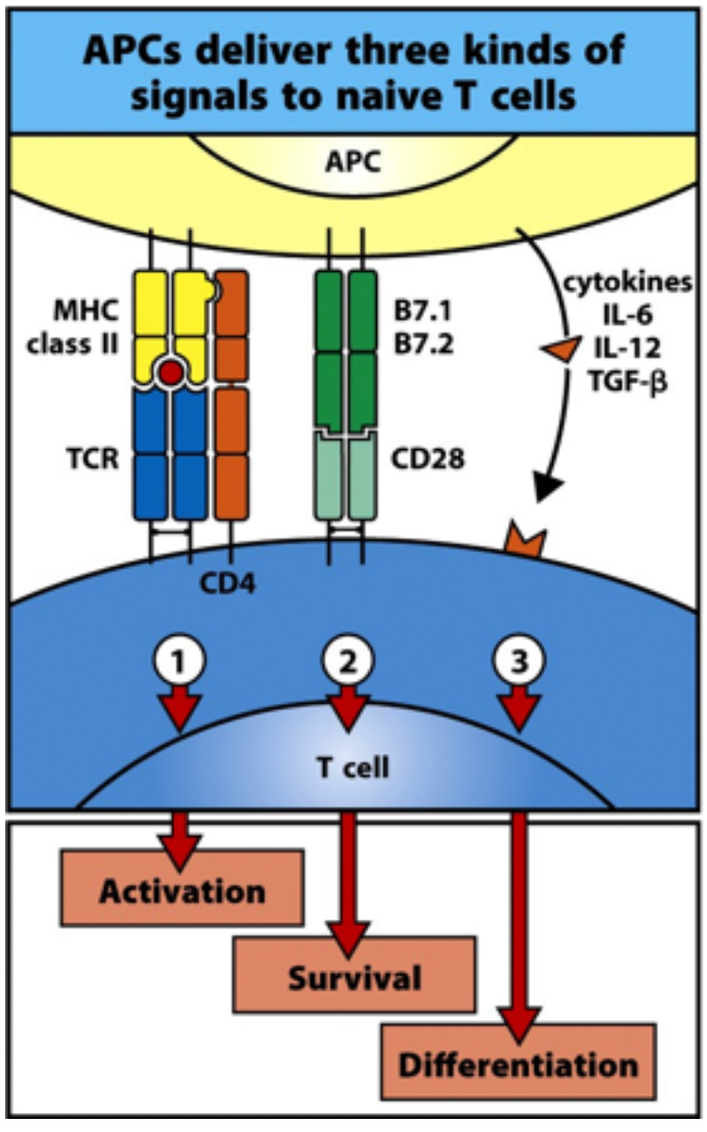
Element	Immunoglobulin		α:β T-cell receptors	
	H	κ+λ	β	α
Variable segments (V)	40	70	52	~70
Diversity segments (D)	25	0	2	0
D segments read in three frames	rarely	–	often	–
Joining segments (J)	6	5(κ) 4(λ)	13	61
Joints with N- and P-nucleotides	2	50% of joints	2	1
Number of V gene pairs	1.9×10^6		5.8×10^6	
Junctional diversity	$\sim 3 \times 10^7$		$\sim 2 \times 10^{11}$	
Total diversity	$\sim 5 \times 10^{13}$		$\sim 10^{18}$	

Event	Process	Nature of change	Process occurs in:	
			B cells	T cells
V-region assembly	Somatic recombination of DNA	Irreversible	Yes	Yes
Junctional diversity	Imprecise joining, N-sequence insertion in DNA	Irreversible	Yes	Yes
Transcriptional activation	Activation of promoter by proximity to the enhancer	Irreversible but regulated	Yes	Yes
Switch recombination	Somatic recombination of DNA	Irreversible	Yes	No
Somatic hypermutation	DNA point mutation	Irreversible	Yes	No
IgM, IgD expression on surface	Differential splicing of RNA	Reversible, regulated	Yes	No
Membrane vs secreted form	Differential splicing of RNA	Reversible, regulated	Yes	No

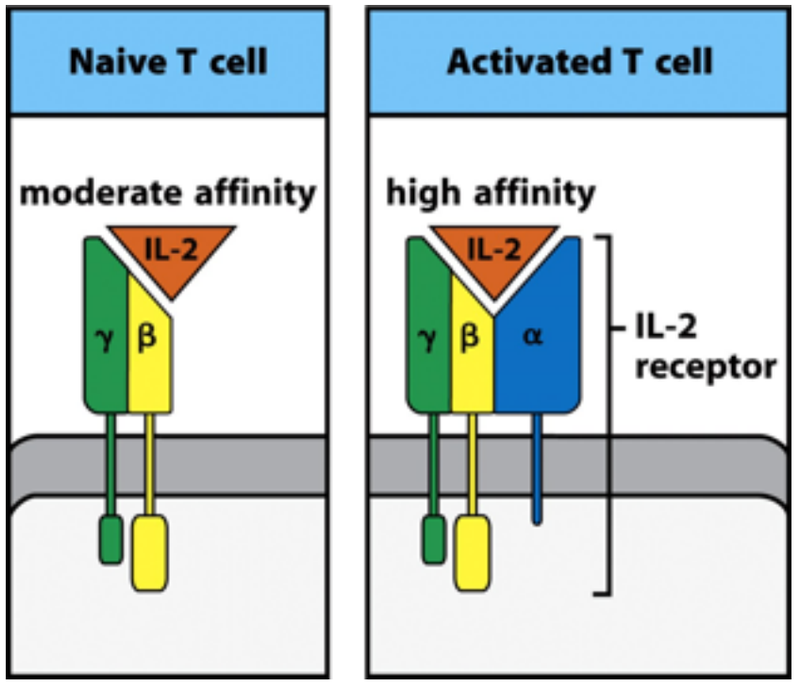
II- Cellules de l'immunité adaptative

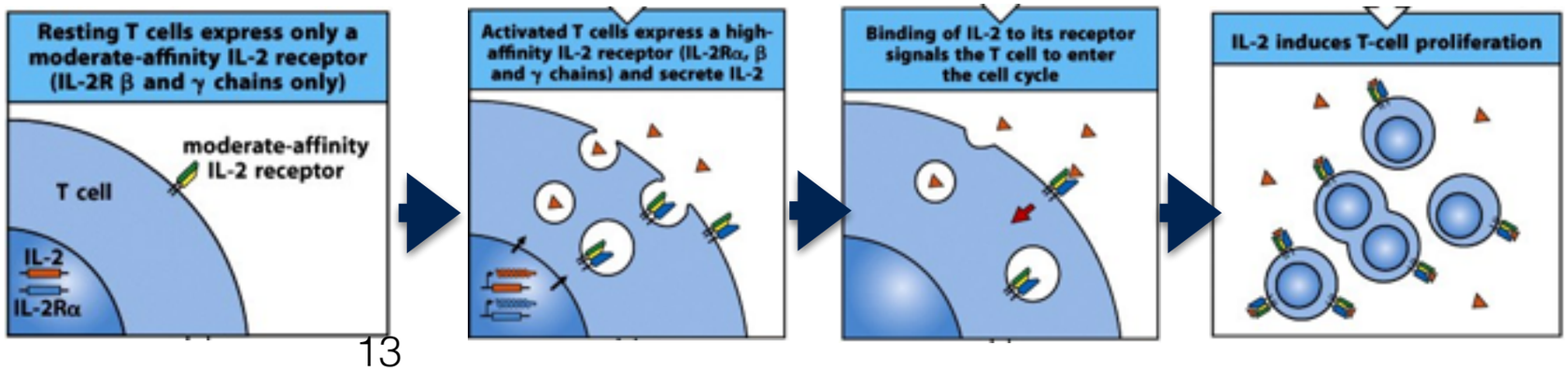
Lymphocytes T$\alpha\beta$: processus moléculaire de l'activation lymphocytaire

L'interaction entre les lymphocytes T et les cellules présentatrices de l'antigène induit un cascade de signalisation intracellulaire au niveau des lymphocytes.



Induction de l'expression du récepteur à l'IL-2 de haute affinité

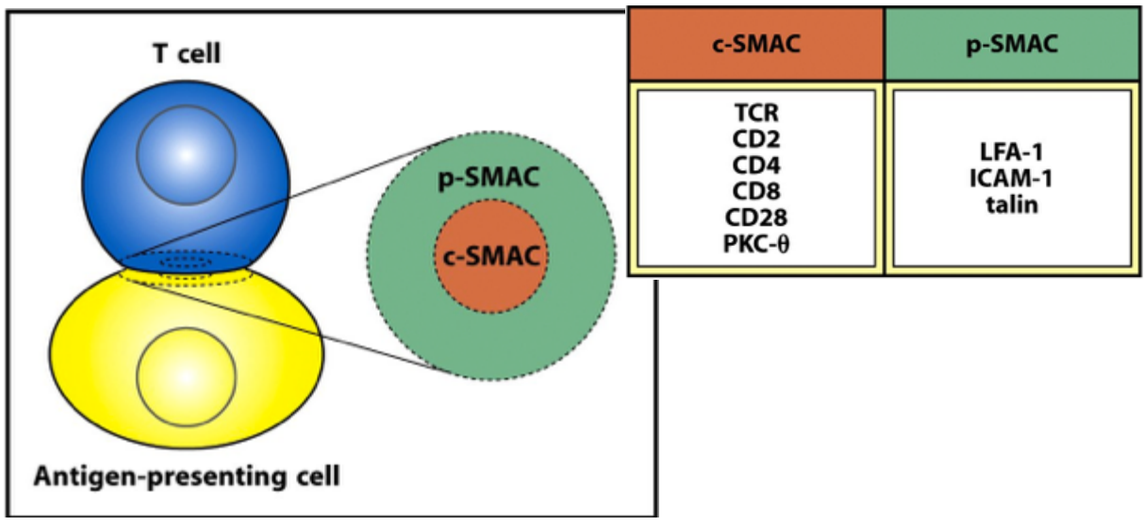




II- Cellules de l'immunité adaptative

Lymphocytes T$\alpha\beta$: processus moléculaire de l'activation lymphocytaire

Processus d'activation séquentielle



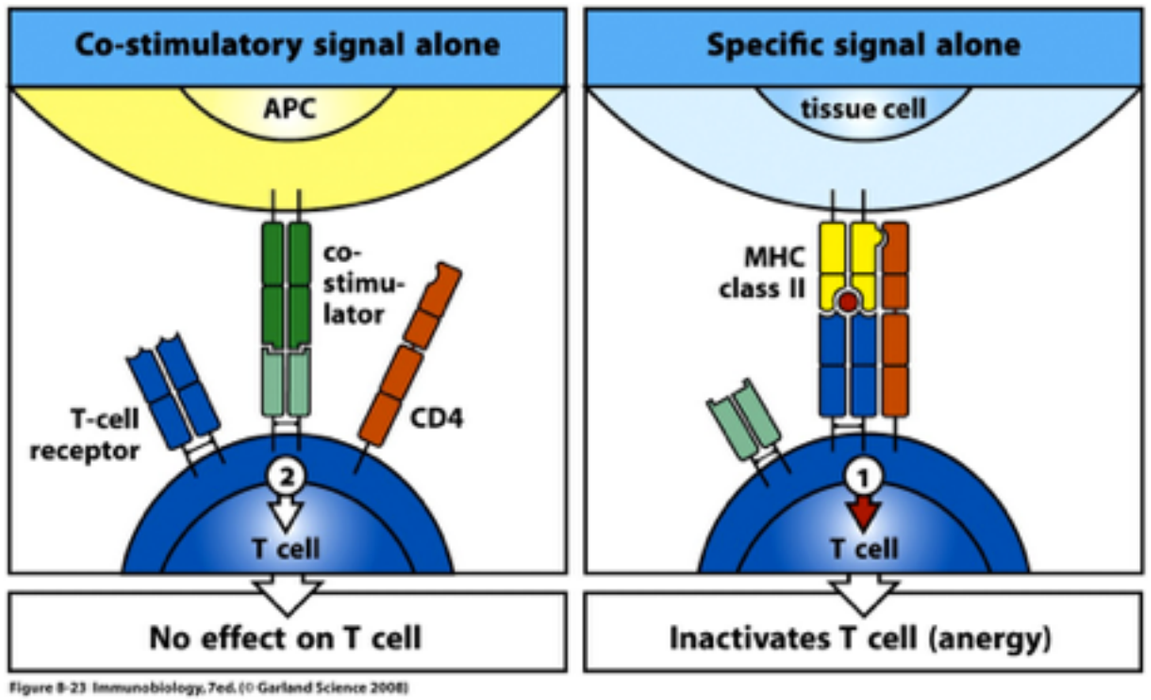
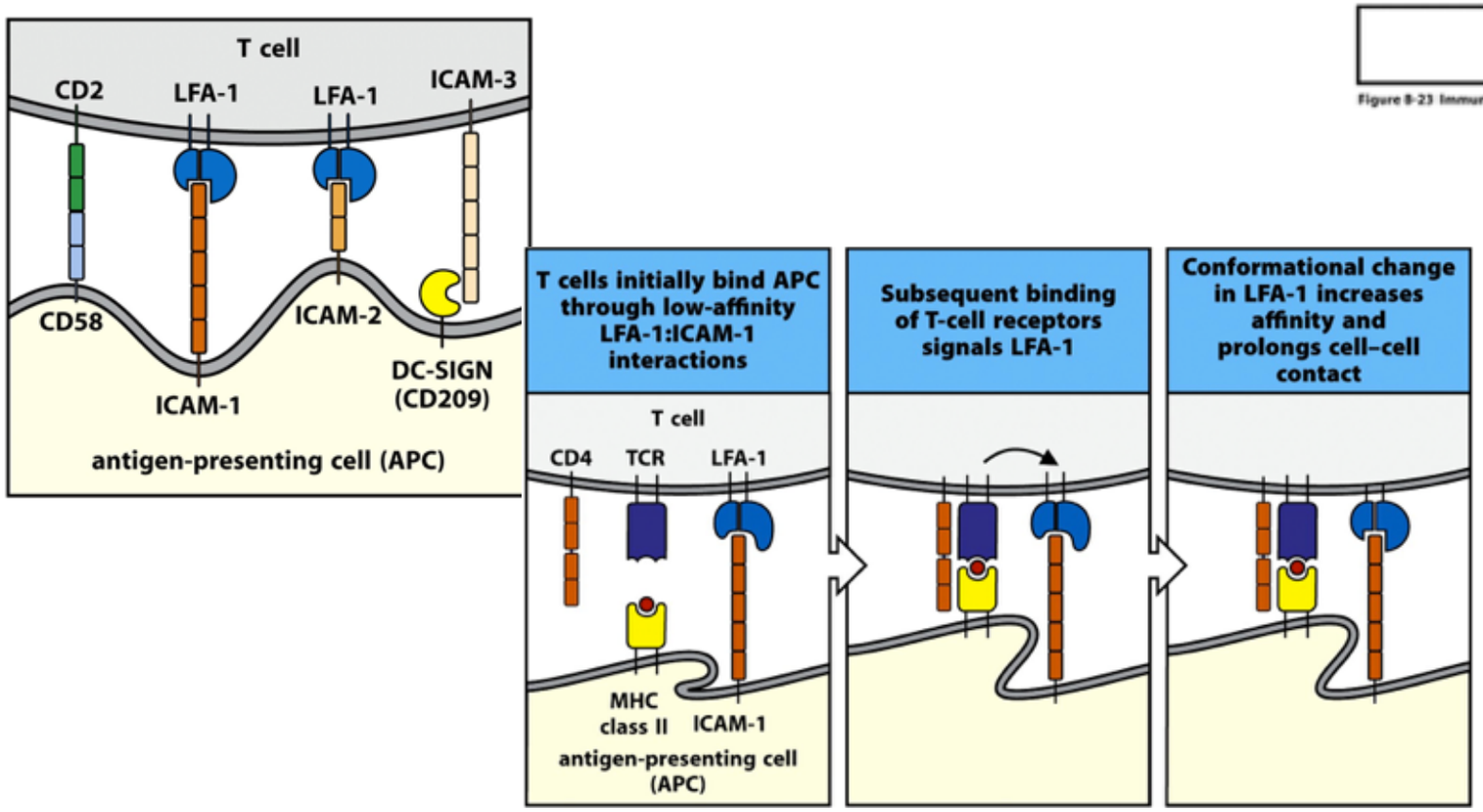


Figure 8-23 Immunobiology, 7ed. (© Garland Science 2008)



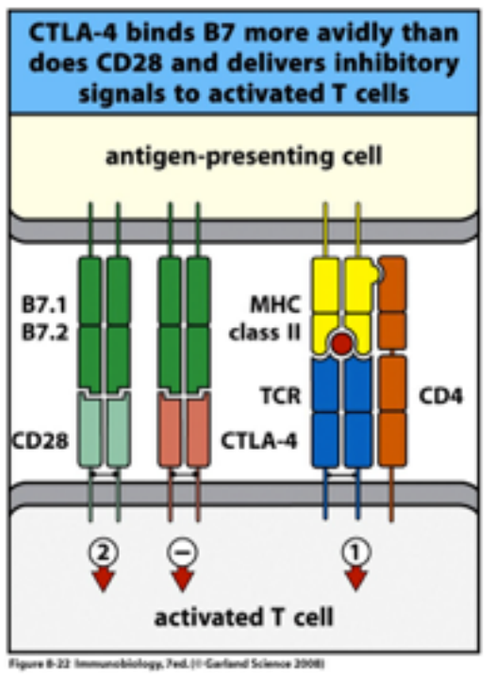


Figure 8-22 Immunobiology, 7ed. (© Garland Science 2008)

II- Cellules de l'immunité adaptative

Lymphocytes T$\alpha\beta$: processus moléculaire de l'activation lymphocytaire

Les molécules CD4 & CD8

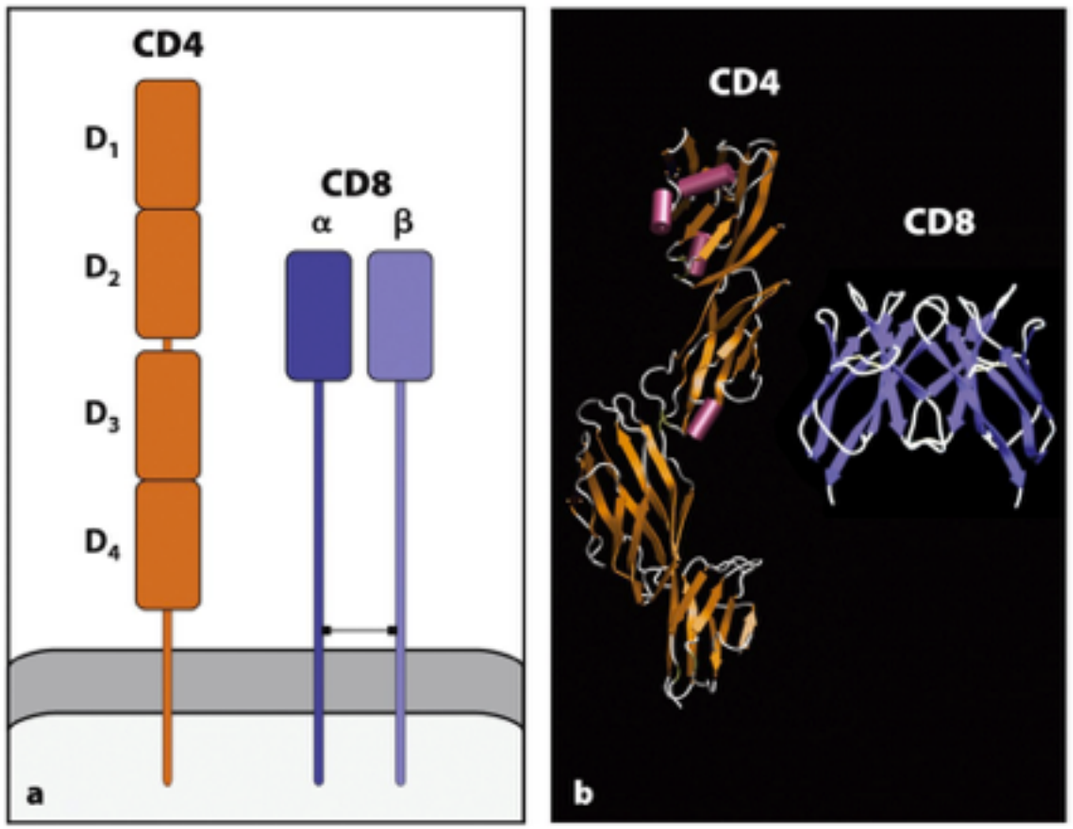


Figure 3-24 Immunobiology, 7ed. (© Garland Science 2008)

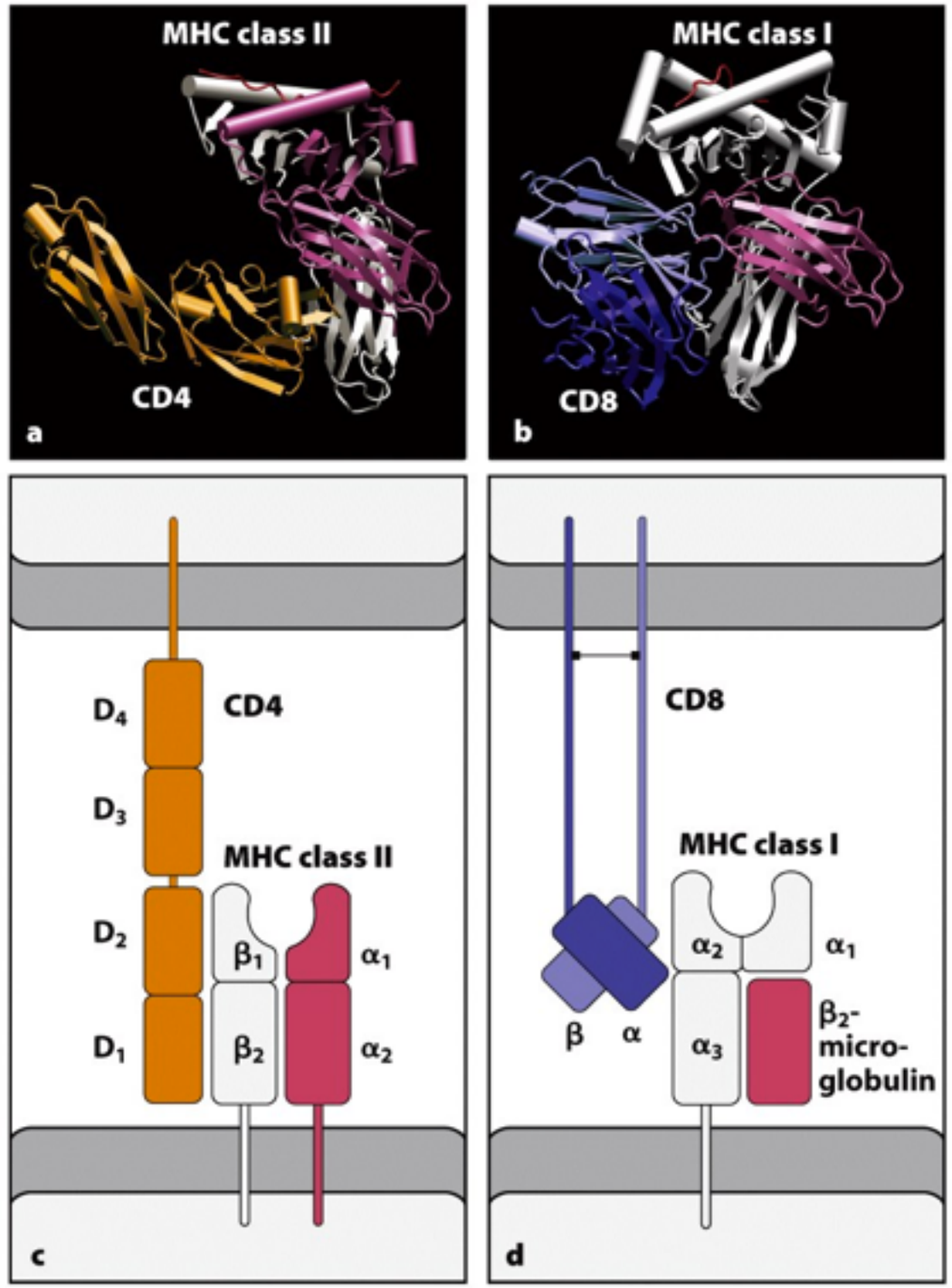


Figure 3-25 Immunobiology, 7ed. (© Garland Science 2008)

II- Cellules de l'immunité adaptative

Lymphocytes T$\alpha\beta$: processus moléculaire de l'activation lymphocytaire

Interaction TCR-CMH et notion de restriction CMH

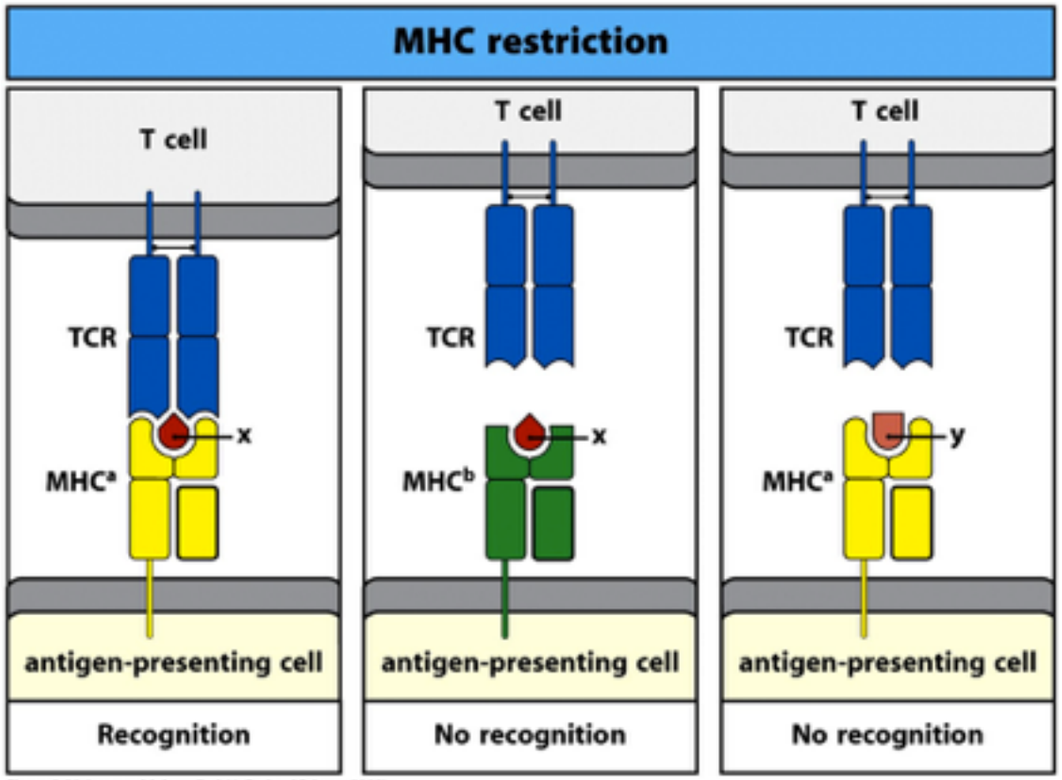


Figure 5-20 Immunobiology, 7ed. (© Garland Science 2008)

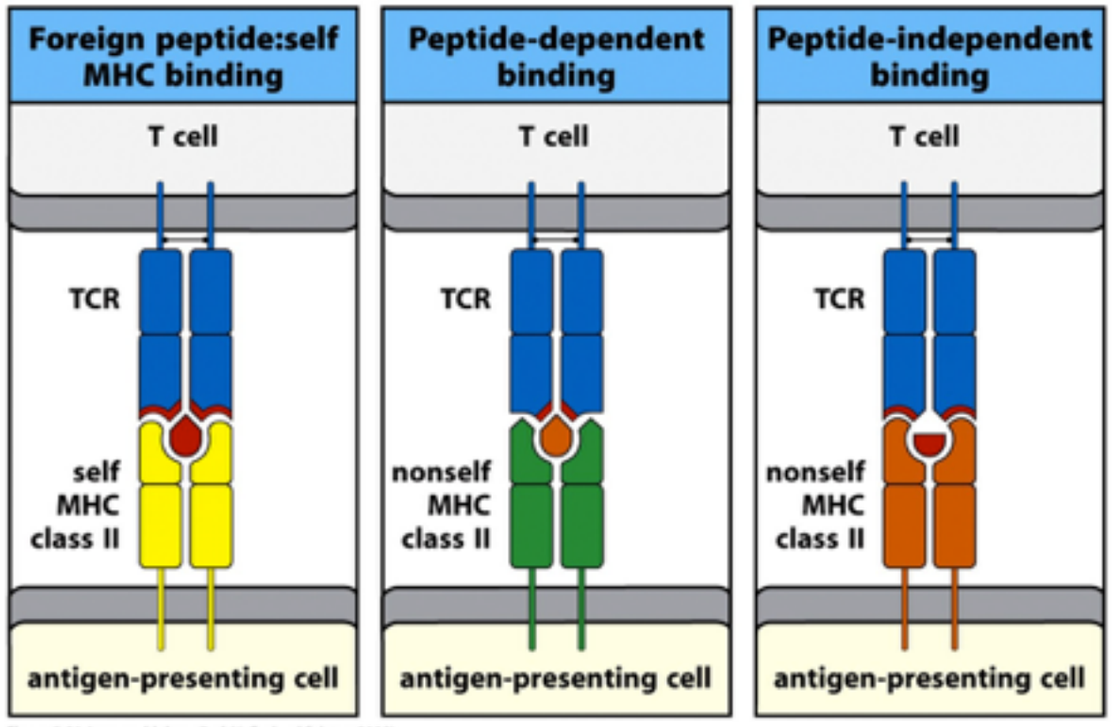


Figure 5-21 Immunobiology, 7ed. (© Garland Science 2008)