

POLYCOPIÉ IMMUNO

DOCUMENTS EXTRAITS DE

Cellular and molecular immunology, 4^{ème} édition, Abbas HK et col., Saunders Ed.
Immunobiology, 5^{ème} édition, C. Janeway and col, Garland Ed.
Immunology, 6^{ème} édition, Roitt, and col., Mosby Ed.

LA RÉPONSE ANTICORPS LE 8.03.04

I-GÉNÉRALITÉS

II-ACTIVATION ET DIFFÉRENCIATION DES LB PAR ANTIGÈNES

THYMODEPENDANTS

- 1- Premières étapes de l'activation B :
 - 1^{er} signal
 - Aprêtement de l'antigène
- 2-La réaction folliculaire, le rôle de CD40 :
 - centre germinatif
 - commutation isotypique
 - maturation d'affinité

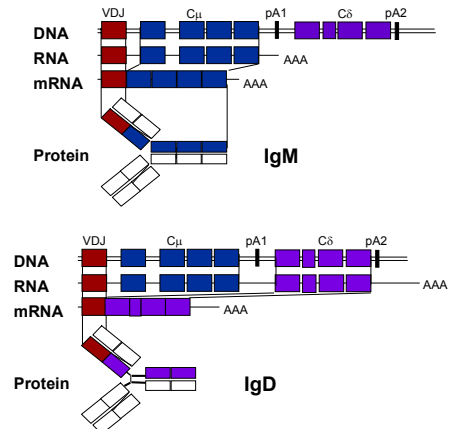
II-RÉPONSES VIS À VIS DES ANTIGÈNES THYMO-INDÉPENDANTS

- 1- Antigènes de Type 1, récepteurs Toll
- 2- Antigènes de Type 2
- 3-La réaction extrafolliculaire, le rôle de BLys et April

III-RÉGULATION DE L'ACTIVATION DES LB

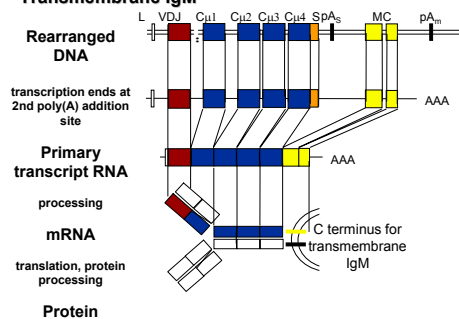
- 1- CD19
- 2- CD21
- 3- Récepteurs Fc gamma de type 2.

A common mRNA primary transcript for IgM and IgD.

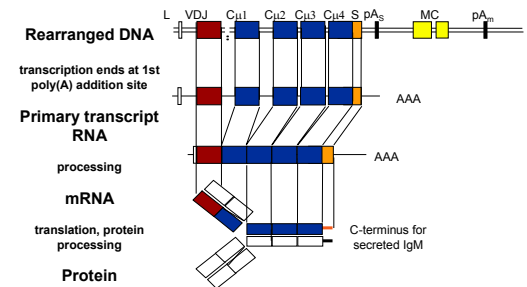


Transmembrane and secreted forms of Ig are derived from the same gene by alternative RNA processing.

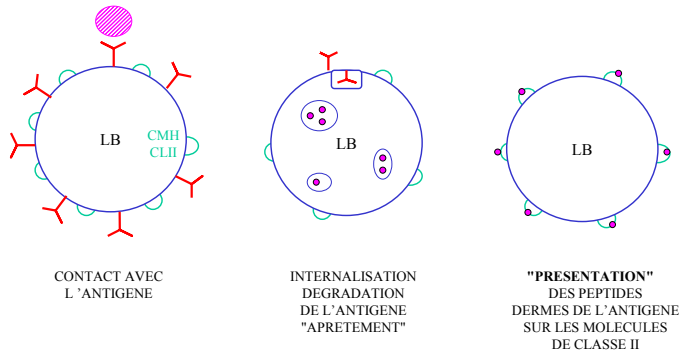
Transmembrane IgM



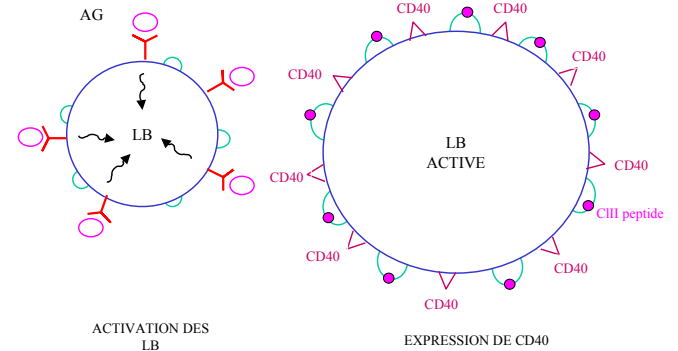
Secreted IgM



APRETEMENT DE L'ANTIGENE



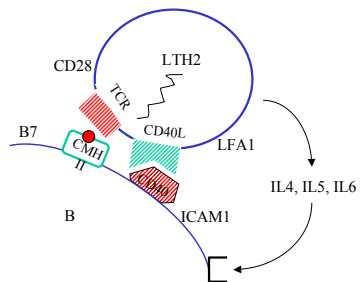
AUGMENTATION DE L'EXPRESSION DE CD40, B7, ICAM1, SUR LES LB



ACTIVATION DES LT PAR LB

- LTH2 (IL4, IL5, IL6)

- SONT ACTIVES PAR 2 SIGNAUX B : CMH/pep + CD40

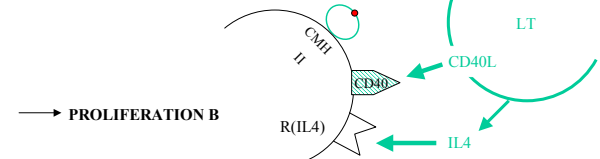


- PRODUISENT IL4, IL5, IL6 EN REPONSE A CETTE ACTIVATION

REPONSES DES LB A ACTIVATION LTh2

- PROLIFERENT EN REPONSE AUX DEUX SIGNAUX T

IL4 et CD40L

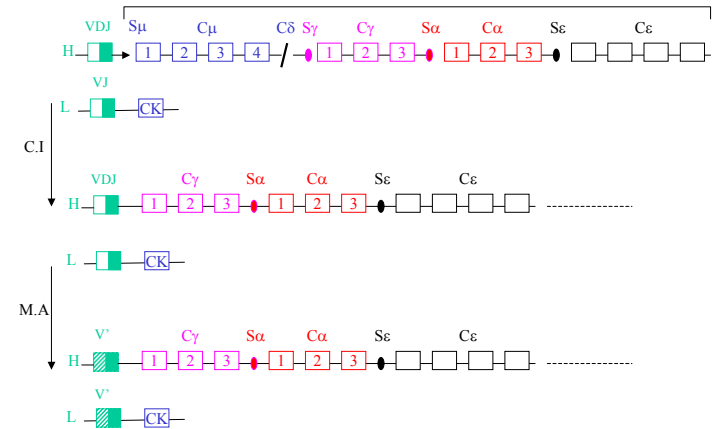


- SE DIFFERENCIENT EN REPONSE A IL5/IL6 PRODUITE PAR LES T

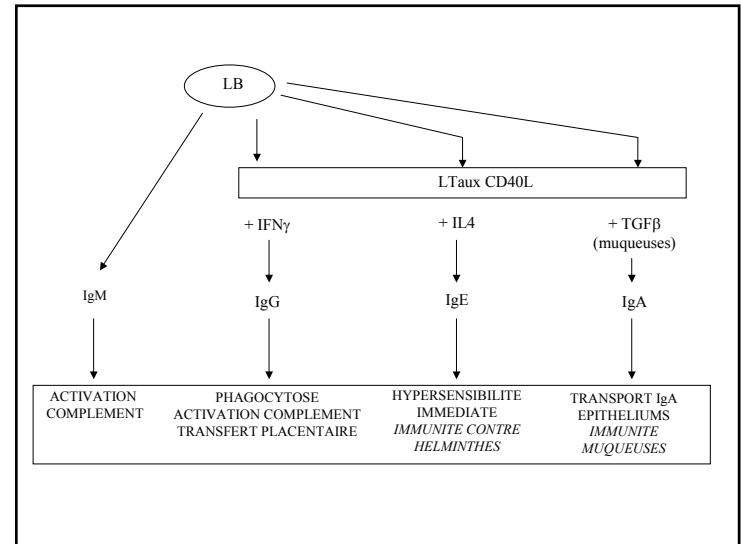
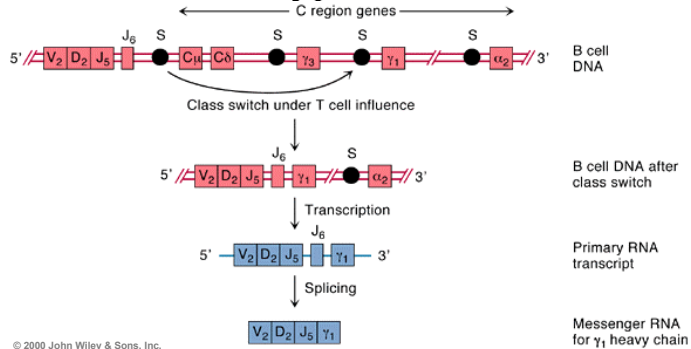
CARACTÉRISTIQUES DES PLASMOCYTES

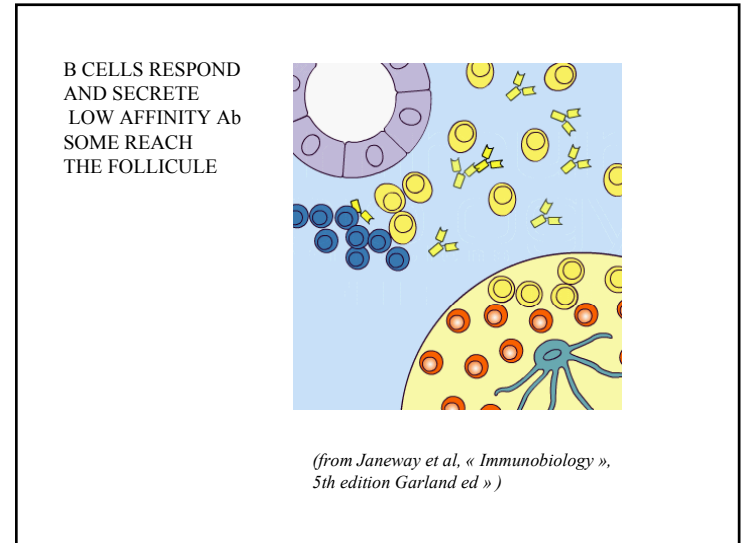
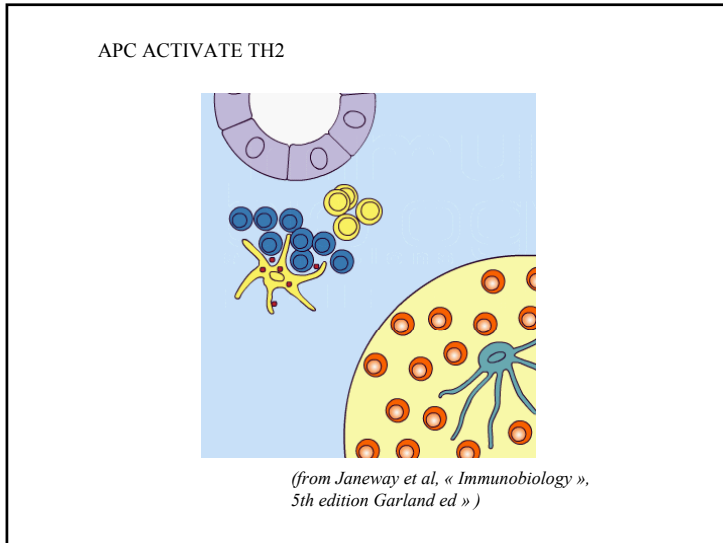
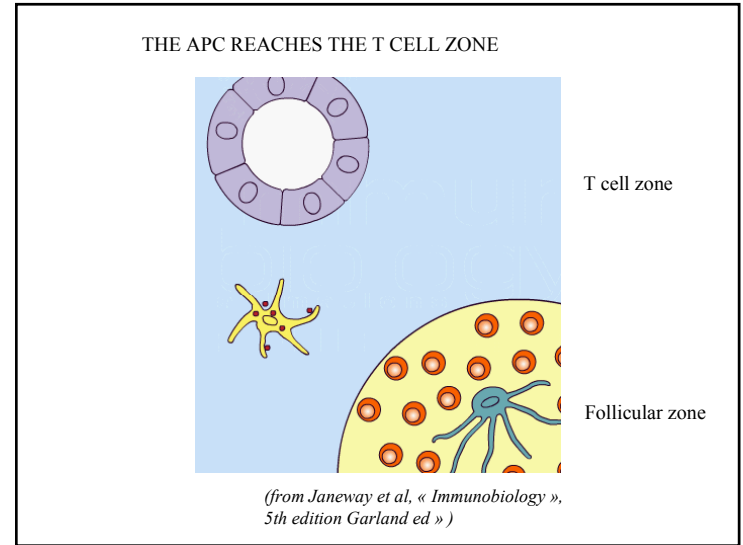
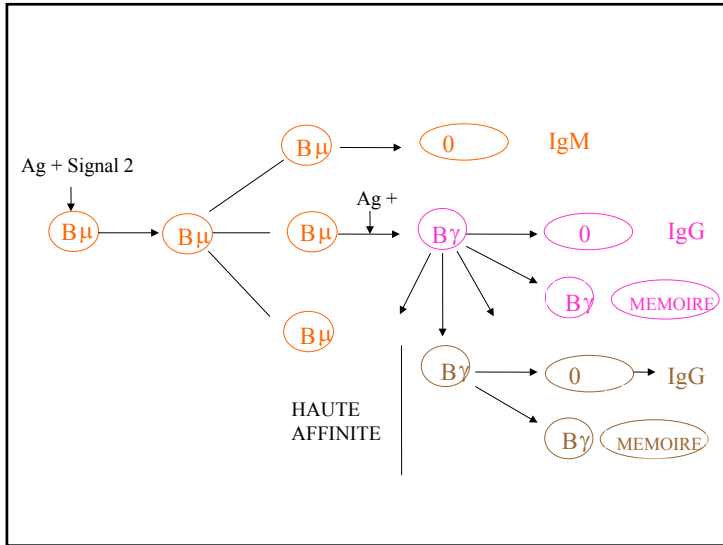
- SÉCRÈTENT LES ANTICORPS
- EXPRIMENT Ig MEMBRANE
- RICHES EN RÉTICULUM ENDOPLASMIQUE
- CMH NÉGATIFS
- CERTAINS ONT UNE TRÈS LONGUE DURÉE DE VIE
(6 MOIS / MOELLE OSSEUSE)

DANS LES CELLULES B MATURES : COMMUTATION ISOTYPIQUE ET MATURATION D'AFFINITÉ

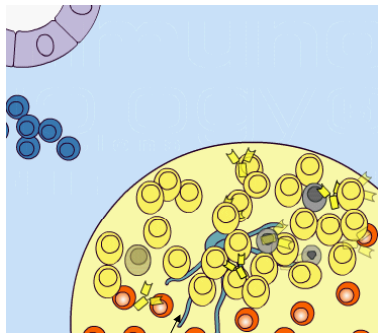


Isotypic switch





THEY PROLIFERATE, FORM A GERMINAL CENTER
WHERE SOMATIC MUTATION AND ISOTYPE SWITCH CAN OCCUR



Follicular dendritic cells (from Janeway et al, « Immunobiology », 5th edition Garland ed »)

AG	EXEMPLE	Type Cellule	REPOSE B		MECANISME	LIEU
			AC	B m. immature		
T11	LPS	B2	IgM IgG3 Anti Bact.: les Fable Affinit.:	non	Postage BCR/TLR4	ORGANES LYMPHOIDES
T12	Polysaccharides	B1 CD5+ CR2+ IgM++	[IgM] [IgG3] [IgA] Anti Self Anti Bact.: les Fable Affinit.:	non	Postage BCR	PERITOINE MUQUEUSE LB ZONE MARGINALE RATE

Nature Reviews Immunology 2: 465-475 (2002); doi:10.1038/nri044
BAFF: A FUNDAMENTAL SURVIVAL FACTOR FOR B CELLS

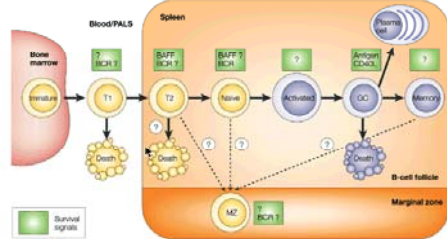


Figure 2 | Survival signals during B-cell maturation. During maturation, immature B cells that are formed in the bone marrow enter the spleen, where they pass through two intermediate stages of maturation, T1 and T2, before reaching maturity. Peripheral immature B cells (T1 and, potentially, T2 B cells) are vulnerable to strong antigenic signals through their B-cell receptor (BCR), which trigger cell death. In addition, newly formed B cells (T2 and, possibly, mature B cells) that are potentially self-reactive, such as B cells that bear two BCRs, might differentiate into marginal-zone (MZ) B cells, whereas non-self-reactive B cells might

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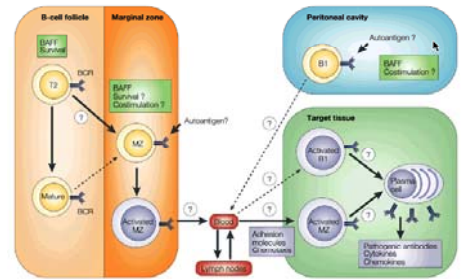


Figure 3 | BAFF-mediated B-cell maturation: possible mechanisms. a | T1 B cells do not

Kurosaki, Nature rev imm, 2, 354, 2002

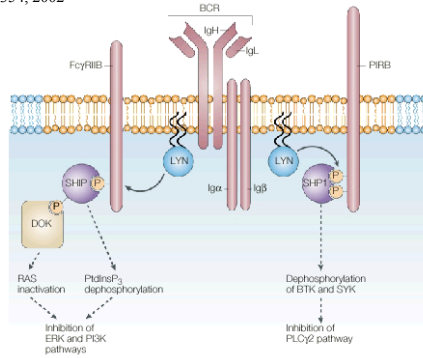


Figure 6 | Negative-regulatory loops mediated by inhibitory receptors on B cells. Once the immunoreceptor tyrosine-based inhibitory motif (ITIM) of FcγRIIB is phosphorylated, SHC-homology-2 (SH-2)-domain-containing inositol 5-phosphatase (SHIP) and the associated docking protein (DOK) are recruited, which, in turn, have negative influences on phosphoinositide 3-kinase (PI3K) and extracellular signal-regulated kinase (ERK; mitogen-activated protein kinase 1) pathways. By contrast, tyrosine phosphorylation of paired immunoglobulin-like receptor B (PIRB) recruits SH-2-domain-containing protein tyrosine phosphatase 1 (SHIP1), which, in turn, dephosphorylates various protein-tyrosine kinases, including SYK and Bruton's tyrosine kinase (BTK). BCR, B-cell receptor; IgH, immunoglobulin heavy chain; IgL, immunoglobulin light chain; PLCγ2, phospholipase Cγ2; PtdInsP₃, phosphatidylinositol-3,4,5-trisphosphate.