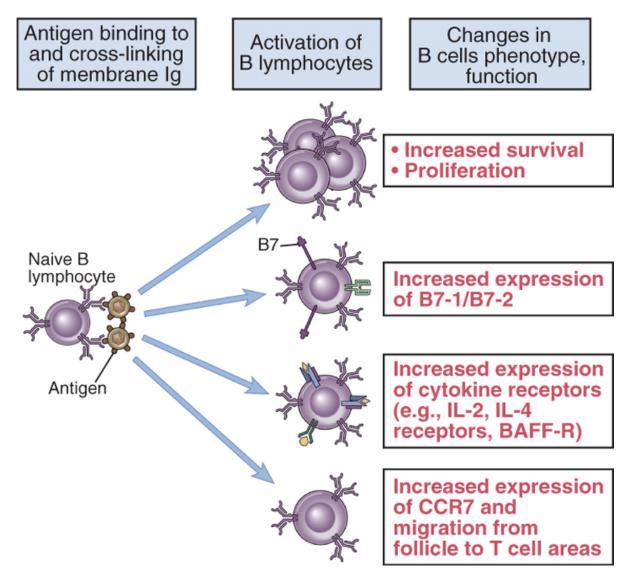
BMI5732

T CELL DEPENDENT B CELL ACTIVATION

- Quick review T dependent and independent B cell activation
- Dynamics
- The role of CD40/CD40L
- Organization of the immunoglobulin locus and constant regions
- Isotype switching
- Affinity maturation

Ana Paula Lepique

B lymphocyte activation

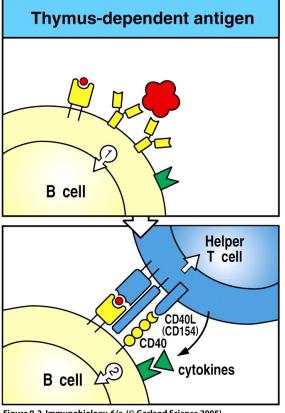


- Quick review T dependent and independent B cell activation

T independent
Antigens have varied chemical structure or composition
Production of IgM>IgG

T dependent
Protein antigens (haptens)
Antigen presentation to T cells
More potent, isotype switching, affinity maturation
IgG, IgE, IgA

Quick review T dependent and independent B cell activation – still need to signals....



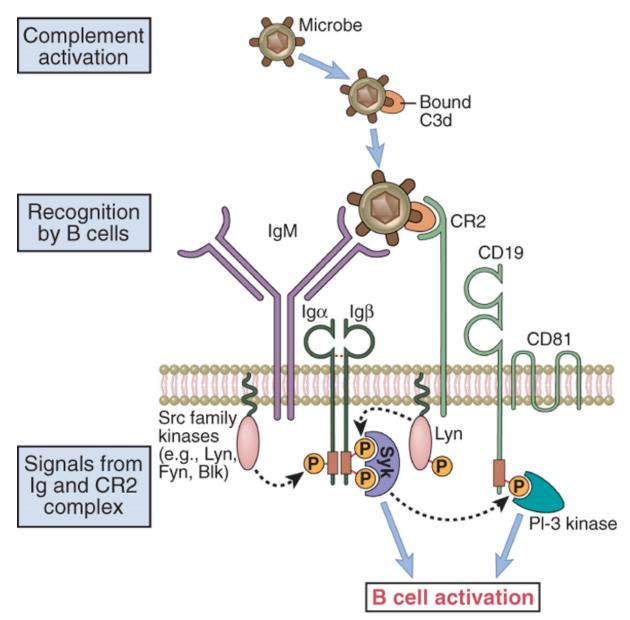
Thymus-independent antigen B cell

Figure 9-2 Immunobiology, 6/e. (© Garland Science 2005)

- proteins
- Lymph nodels
- •estímulo de maturação
- ·estímulo de troca de Ig

- Multivalent antigens
- Different chemical compounds
- •spleen

T independent activation

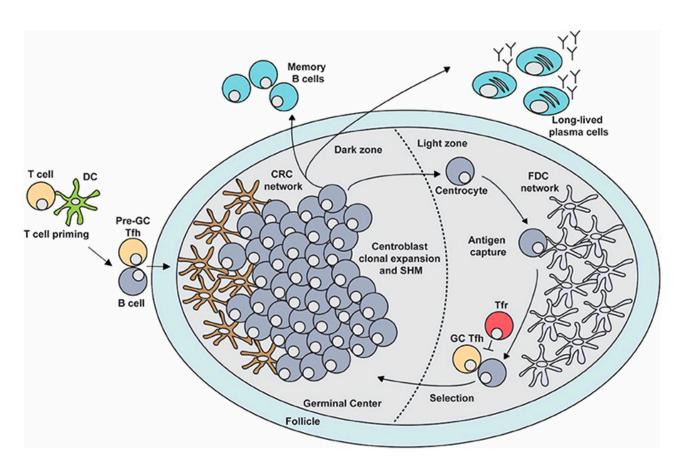


- Dynamics of T dependent activation

Activation and B cell Germinal center T:B cell migration of differentiation: reaction: affinity Ť and B interaction Ig secretion, maturation, lymphocytes isotype switching memory B cells Lymph node Primary Germinal follicle center FDC APC'

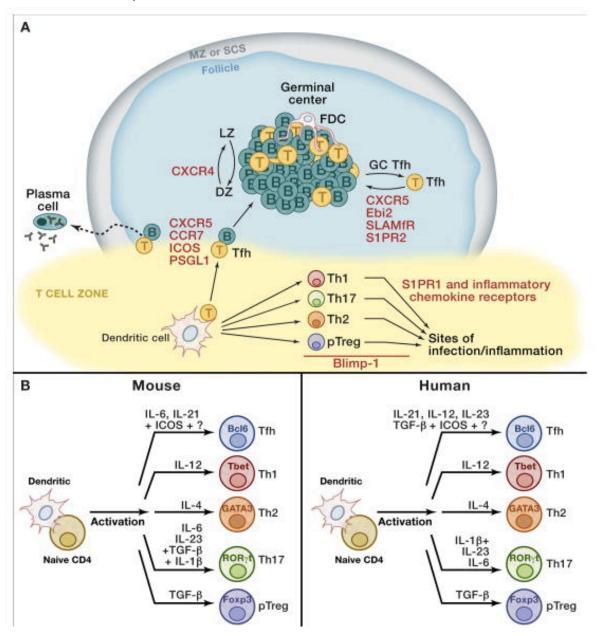
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- Dynamics of T dependent activation

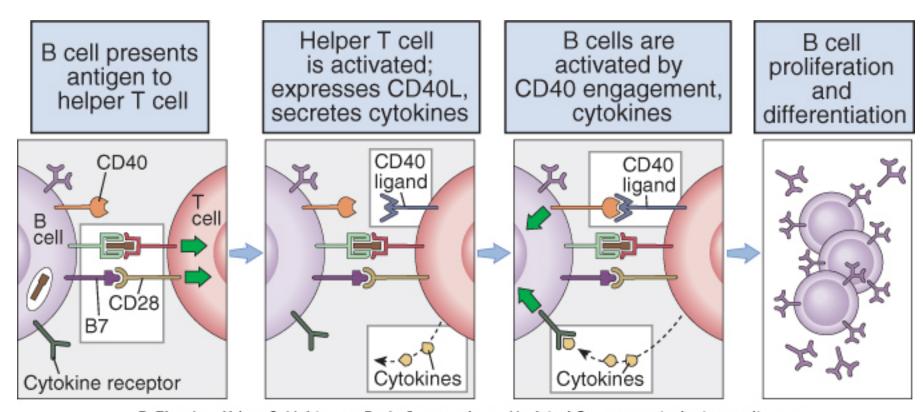


2ary lymphoid organ

- Thf T cells – follicular helper T cells

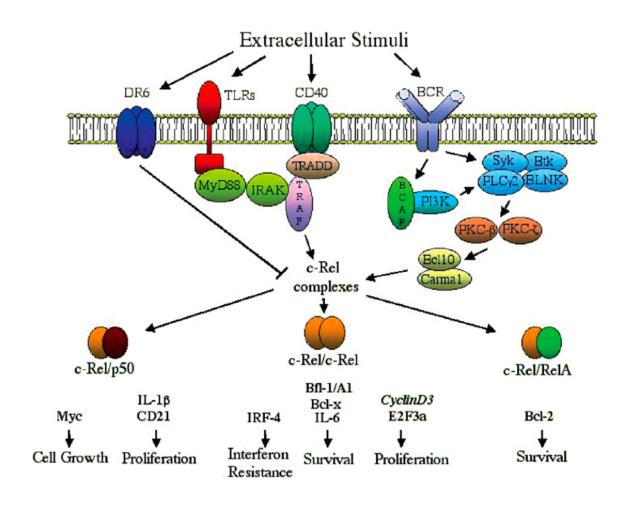


- The role of CD40/CD40L

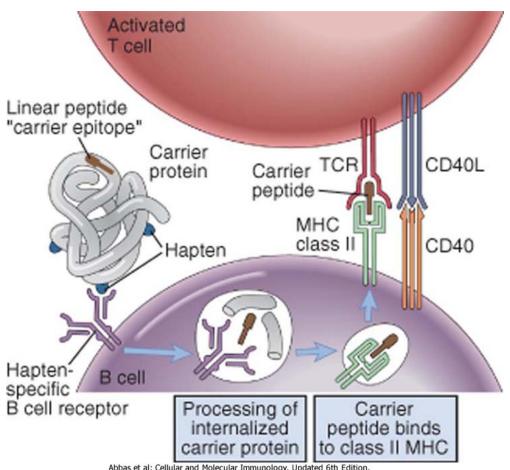


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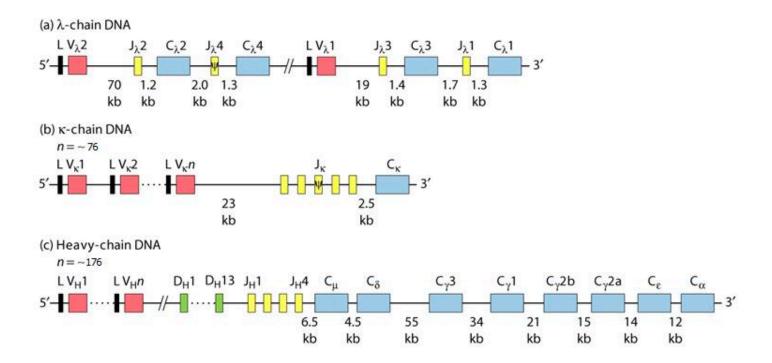
- The role of CD40/CD40L

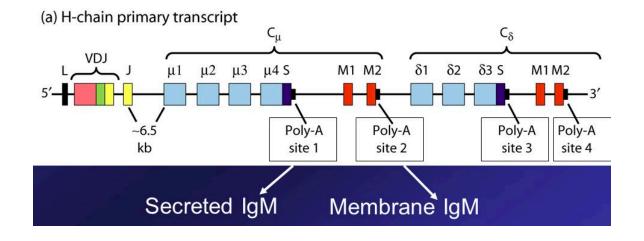


Haptens

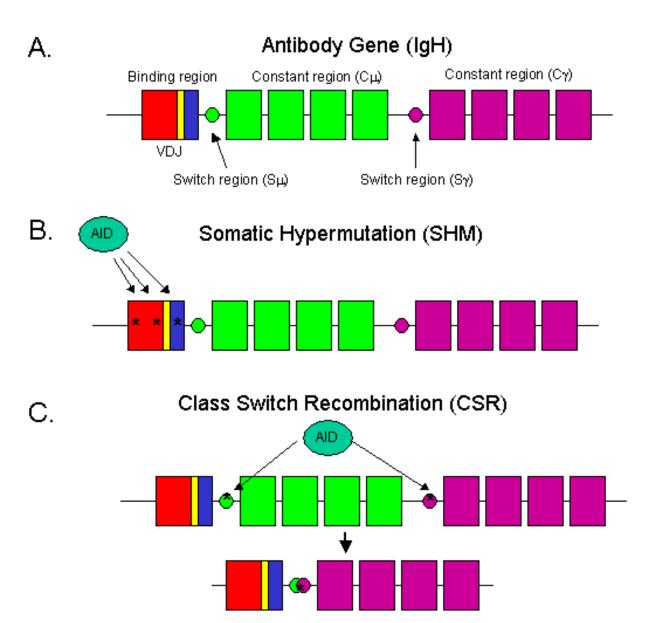


Abbas et al: Cellular and Molecular Immunology, Updated 6th Edition. Copyright © 2009 by Saunders, an imprint of Elsevier, Inc. All rights reserved. - Organization of the immunoglobulin locus and constant regions



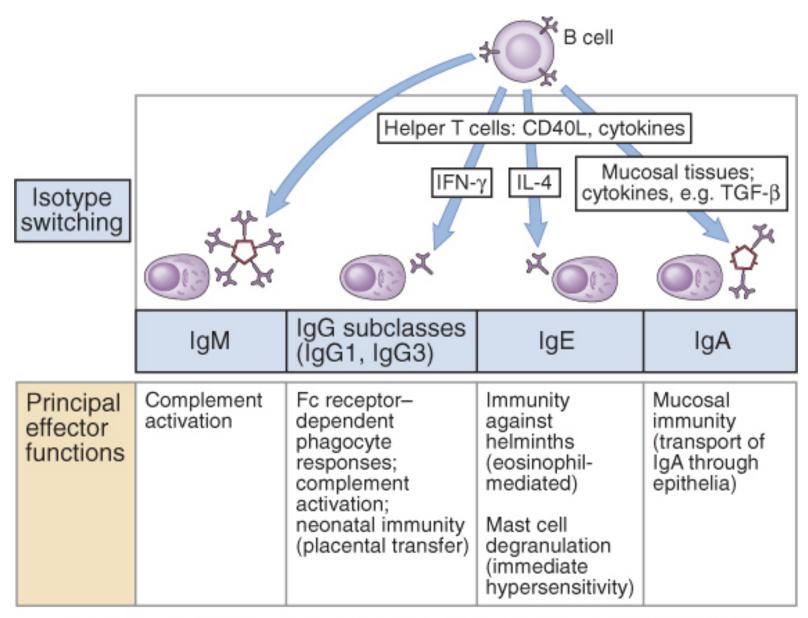


Isotype switching



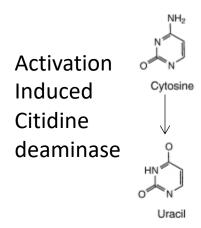
https://www.youtube.com/watch?v=gyTHXjVUPWw

Isotype switching – the role of cytokines

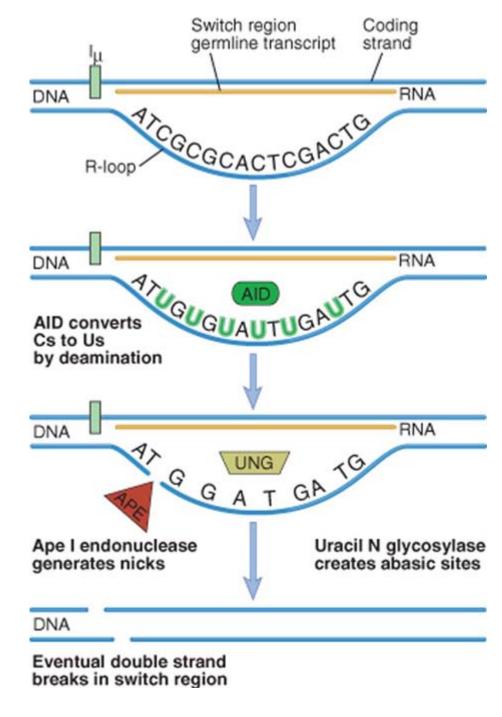


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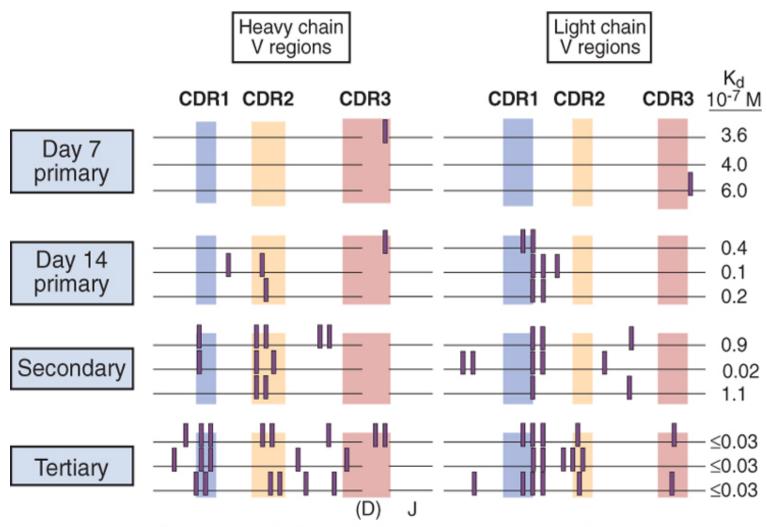
Affinity maturation



https://www.youtube.com/watch?v=qGsyBw DVnTU&list=PLS_8RsEvYc3XEoHlXgrhg3uEY6W Fc9DtL&index=3



Affinity maturation



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