

B - Lymphocytes

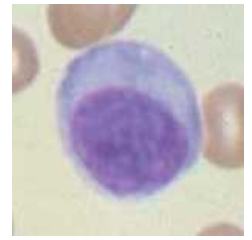
B-lymphocytes represent the basic cells of antibody immunity.

They are formed in bone marrow, where they also mature. There is no selection during their development (as with T-ly. Their maturation takes place after encountering antigen in secondary lymphatic organs. The final differentiation stage of B-lymphocytes is "plasma cells" producing antibodies to protein and glycoprotein antigen and toxins.

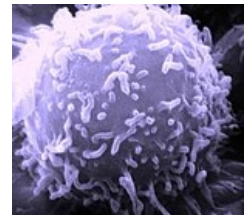
Development line

Pluripotent stem cell → lymphoid progenitor → B-lymphocytes → plasma cells (plasma cells) producing immunoglobulins and memory cells.

The B-cell receptor is '*BcR*' (B-cellular receptor). It consists of its own surface immunoglobulin (IgM, IgD) and associated signaling molecules.^[1] The IgM monomer is anchored to the membrane by its "Fc fragment", which is different from normal Fc (it is longer, it contains a component that holds it in the membrane). Other antigenic structures are CD-19, CD-20 (typical of mature B-lymphocytes), CD-10 (only at some stage of immature cells, in some leukemic lines). Some B-lymphocytes change into "memory B-ly" upon encounter with antigen and clonal proliferation. These are part of the '*immune memory*'. They are responsible for significantly accelerating the "secondary immune response" upon repeated encounters with antigen (important for vaccination).



Plasma cell



Lymphocyte in ELMI

Links

Related Articles

- Hematopoiesis (histology)
- T-lymphocytes
- Immunocompetent cells
- Specific immunity
- Autoimmune diseases
- Inflammation
- Acute lymphoblastic leukemia
- Chronic lymphocytic leukemia

Reference

1. HOŘEJŠÍ, Václav and Jiřina BARTŮŇKOVÁ, et al. Fundamentals of Immunology. 4th edition. Prague : Triton, 2009. 0 p. p. 61. ISBN 978-80-7387-280-9.

Used literature

- HOŘEJŠÍ, Václav and Jiřina BARTŮŇKOVÁ, et al. Fundamentals of Immunology. 4th edition. Prague : Triton, 2009. 0 p. p. 61. ISBN 978-80-7387-280-9.
- WIKIPEDIE. B-lymphocyte [online]. ©2008. Last revised 2009, [cited 2010-01-12]. <<https://cs.wikipedia.org/wiki/B-lymfocyt>>.