Lymphocytes, whatever the hematopoietic lineage, express the CD20 molecule, which is present on all B-lymphocyte ontogeny and is lost upon pre-B lymphocyte development, persists in plasma cell differentiation (2, 3). The expression of CD20 is restricted to B-lymphocytes. The CD20 molecule is a nonglycosylated, monomeric, membrane-embedded protein. It also exists on the cell surface as a homodimer. CD20 is a member of the immunoglobulin superfamily and consists of a long extracellular domain, a transmembrane region, and a hydrophobic cytoplasmic tail (1, 2). The extracellular domain of CD20 is characterized by a series of variable domain-like regions that are interspersed with constant domains (2). The long N- and C-terminal ends of the molecule are located within the membrane. The level of phosphorylation of the cytoplasmic tail is responsible for the heterogeneity of the molecular weight ranging from 33 to 37 kDa (1). CD20 may also exist on the surface of resting T lymphocytes (4, 5). However, CD20 is not expressed on a subset of resting T lymphocytes (1). The B9E9 (HRC20) monoclonal antibody has been assigned to the CD20 cluster of differentiation at the 5th HLDA Workshop on Human Leucocyte Differentiation Antigens in Boston, USA, in 1993 (2).

SPECIFICITY
The CD20 molecule is a nonglycosylated membrane-embedded protein which exhibits an hydrophobic region spanning four times the membrane. The long N- and C-terminal ends of the molecule are located within the cytoplasm. The level of phosphorylation of the cytoplasmic tail is responsible for the heterogeneity of the molecular weight ranging from 33 to 37 kDa (1). CD20 may also exist on the cell surface as a homodimer. The expression of CD20 is restricted to B-lineage cells. Its expression occurs early in pre-B lymphocyte development, persists in B-lymphocyte ontogeny and is lost upon ultimate plasma cell differentiation (2, 3). The CD20 molecule is present on all B lymphocytes whatever the hematopoietic tissue where they are found (peripheral blood, lymph nodes, spleen, tonsil, or bone marrow). The CD20 antigen may be weakly expressed on a subset of resting T lymphocytes (4, 5). However, CD20 is not expressed on other leucocyte subsets including NK cells, monocytes and granulocytes.

REAGENT CONTENTS

PRECAUTIONS
1. This reagent contains 0.1% sodium azide. Sodium azide under acid conditions yields hydrazoic acid, an extremely toxic compound. Azide compounds should be flushed with running water while being discarded.

2. Specimens, samples and all material coming in contact with them should be considered potentially infectious and disposed of with proper precautions.

3. Never pipet by mouth and avoid contact of samples with skin and mucous membranes.

4. Do not use antibody beyond the expiration date on the label.

5. Do not expose reagents to strong light conditions yields hydrazoic acid, an extremely toxic compound. Azide

6. Avoid microbial contamination of membranes.

7. Use good laboratory practices when handling this reagent.

8. Any change in the physical appearance of the reagents may indicate deterioration and the reagent should not be used.

STORAGE AND HANDLING CONDITIONS AND STABILITY
This reagent is stable up to the expiration date when stored at 2 – 8°C. Do not freeze. No reconstitution is necessary. This monoclonal antibody may be used directly from the vial. Bring reagent to 18 – 25°C prior to use.

SELECTED RESEARCH REFERENCES


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