

Monoclonal Antibody CD20 Purified

PN IM1456 – 1 mg – Liquid - Clone B9E9 (HRC20)

For Research Use Only. Not for use in diagnostic procedures.

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). The CD20 may also exist on the cell surface as a homo-oligomeric complex forming with other molecules a multimeric receptor complex (2). The expression of CD20 is heavy on to B-lineage cells. It appears early in pre-B lymphocyte development, persists throughout B-lymphocyte ontogeny and is lost upon plasma cell differentiation (2, 3). Thus, 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). Apart from B cells, 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.

The B9E9 (HRC20) monoclonal antibody has been assigned to the CD20 cluster of differentiation at the 5th International Workshop on Human Leucocyte Differentiation Antigens in Boston, USA, in 1993 (2).

REAGENT

Monoclonal Antibody CD20
PN IM1456 – Liquid – 1 mg - Purified

Clone	B9E9 (HRC20)
Isotype	IgG2a (mouse)
Immunogen	B cells
Hybridoma	Myeloma X63 Ag.8.653
Source	Ascites fluid
Purification	Ion exchange or affinity chromatography

REAGENT CONTENTS

This antibody is provided in phosphate-buffered saline pH 7.4, containing 0.1% sodium azide and 2 mg/mL bovine serum albumin.

APPLICATION

Flow cytometry.

STATEMENTS OF WARNING

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. These precautions are recommended to avoid deposits in metal piping in which explosive conditions can develop. If skin or eye contact occurs, wash excessively with water.
2. Specimens, samples and all material coming in contact with them should be handled as if capable of transmitting infection 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 during storage or incubation.
6. Avoid microbial contamination of reagents or incorrect results might occur.
7. Use good laboratory practices when handling this reagent.

STORAGE CONDITIONS AND STABILITY

This reagent is stable up to the expiration date when stored at 2 – 8°C. Do not freeze.

REAGENT PREPARATION

No reconstitution is necessary. This monoclonal antibody may be used directly from the vial. Bring reagent to 18 – 25°C prior to use.

PROCEDURE

This reagent is designed for flow cytometry. A wash is required to yield optimal results
Assay volume: 20 µL per 5 x 10⁵ cells in one test, or per 100 µL whole blood.

SELECTED RESEARCH REFERENCES

- 1) Tedder, T.F., Boyd, A.W., "The B cell surface molecule B1 is functionally linked with B cell activation and differentiation", 1985, *J. Immunol.*, **135**, 2, 973-979

- 2) Clark, E.A., Shu, G., "Activation of human B cell proliferation through surface Bp35 (CD20), polypeptides or immunoglobulin receptors", 1987, *J. Immunol.*, **138**, 3, 720-725.

- 3) Nadler, L.M., Korsmeyer, S.J. et al, "B cell origin of non-T-cell acute lymphoblastic leukemia", 1984, *J. Clin. Invest.*, **74**, 332-340.

1. Tedder, T.F., Engel, P., "CD20: a regulator of cell-cycle progression of B lymphocytes", 1994, *Immunol. Today*, **15**, 450-454.
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3. Uckun, F.M., "Regulation of human B-cell ontogeny", 1990, *Blood*, **76**, 1908-1923.
4. Chang, K.L., Arber, D.A., Weiss, L.M., "CD20: a review", 1996, *Appl. Immunohistochem.*, **4**, 1-15.
5. Hultin, L.E., Hausner, M.A., Hultin, P.M., Giorgi, J.V., "CD20 (pan-B cell) antigen is expressed at a low level on a subpopulation of human T lymphocytes", 1993, *Cytometry*, **14**, 196-204.

TRADEMARKS AND PATENTS

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