

MONOCLONAL ANTIBODY CD20

Cat. No.	Form	Quantity	Presentation
1342	Purified	0.2 mg	Freeze-dried
1451	Phycoerythrin	100 tests	Liquid 2 ml
1454	Purified	100 tests	Liquid 2 ml
1455	FITC	100 tests	Liquid 2 ml
1850	PE-Cy5	100 tests	Liquid 2 ml

Clone B9E9 (HRC20)

Isotype IgG2a (mouse)

Immunogen B cells

Hybridoma Myeloma X63 Ag 8.653 x Balb/c spleen cells

Specificity The molecular weight of the recognized antigen is 35-37 kDa.
CD20 is a B-cell restricted antigen.

B9E9 recognizes a phosphoprotein present on all B lymphocytes from peripheral blood, lymph node, spleen, tonsil and bone marrow. CD20 antigen is absent on plasma cells.

CD20 expression is down-regulated by IL-4, CD40 antibody reverse this inhibition (1).

B9E9 reacts with RPMI, BCC1, Daudi, Raji, Reh cell lines and with non-T ALL, CLL. It does not react with T lymphocytes and monocytes.

This antibody is intended for the enumeration of all mature B cells.

Applications Flow cytometry

Research studies indicate that the CD20 antibody may be useful in characterizing B-cell leukemias. Studies have shown that CD20 is hyperphosphorylated in hairy cells (2).

Buffer Freeze-dried forms: 1 mg/ml bovine serum albumin in phosphate buffered saline.

Liquid forms: 2 mg/ml bovine serum albumin in phosphate buffered saline containing 0.1% sodium azide.

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Reconstitution and Storage

The freeze-dried form may be stored at 2-8°C until the expiration date. Reconstitute with 1 ml of distilled water. No preservative has been added. The reconstituted form may be stored at -20°C until the expiration date. Aliquotting is suggested to avoid multiple freeze-thaw cycles. The addition of sodium azide at 0.1% (w/v) is recommended for storage of the reconstituted form for up to one month at 2-8°C.

The purified liquid form should be stored at 2 - 8°C.

The conjugated forms should not be frozen and should be stored in the dark at 2 - 8°C.

Recommended Procedures

Fluorescent microscopy or flow cytometry:

Liquid form: 20 µl/5x10⁵ cells/test or 100 µl whole blood

Freeze-dried form: 2 µg/5x10⁵ cells/test

Limitation : PE-Cy5 conjugates are recommended for use only on flow cytometers equipped with a 675 nm band pass filter in front of the third fluorescence detector

References

- 1) Dancescu, M., Changyou, W., Rubio, M., Delespesse, G., Sarfati, M., "IL-4 induces conformational change of CD20 antigen via a protein kinase C-independent pathway", 1992, J Immunol, **148** (8), 2411-2416.
- 2) Genot, E., Valentine, M.A., Degos, L., Sigaux, F., Kolb, J.P., "Hyperphosphorylation of CD20 in hairy cells; Alteration by low molecular weight Bcell growth factor and IFN-α " 1991, J Immunol, **146** (3), 870-878.
- 3) 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.
- 4) 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.
- 5) 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.