

anti-human CD20

Monoclonal Antibody HI20a to CD20 (Human)

Cat-No: 21819201

100 µg in 100 µl

Clone: HI20a

Specificity: The antibody HI20a recognizes a 33-37 kD type III non-glycosylated phosphoprotein which crosses the cell membrane four times called TM4. CD20 antigen is expressed on pre-B cells, resting/activated B cell and corresponding neoplastic B cells, but is absent from plasma cells. HI20a antigen is present in 8-16 % of normal peripheral blood lymphocytes. It functions the regulation of B lymphocyte activation and proliferation.

Isotype subclass: Mouse IgG2a

Form: Purified from ascites by protein G affinity chromatography

Physical state: Liquid

Buffer/Additives/Preservative: PBS, pH 7.2, containing 0.09% sodium azide.

Expiration date: The reagent is stable until the expiry date stated on the vial label.

Storage conditions: Store at 4 °C. For long-term storage aliquot and store at -20°C. Avoid freeze/thaw cycles.

Application: Flow Cytometry

Background: CD20 is a cell surface 33-37 (depending on the degree of phosphorylation) kDa non-glycosylated surface phosphoprotein expressed on mature and most malignant B cells, but not stem cells or plasma cells (low number of the Cd20 has been also detected on a subpopulation of T lymphocytes and it can be expressed on follicular dendritic cells). Its expression on B cells is synchronous with the expression of surface IgM. CD20 regulates transmembrane calcium conductance (probably functioning as a component of store operated calcium channel), cell cycle progression and B-cell proliferation. It is associated with lipid rafts, but the intensity of this association depends on extracellular triggering, employing CD20 conformational change and/or BCR (B cell antigen receptor) aggregation. After the receptor ligation, BCR and CD20 colocalize and then rapidly dissociate before BCR endocytosis, whereas CD20 remains at the cell surface. CD20 serves as a useful target for antibody-mediated therapeutic depletion of B cells, as it is expressed at high levels on most B-cell malignancies, but does not become internalized or shed from the plasma membrane following mAb treatment.

References

*Leucocyte Typing VII. Mason D. et al. (Eds.), Oxford University Press (2002).

Warning: Sodium azide is harmful if swallowed (R22). Keep out of reach of children (S2). Keep away from food, drink and animal feeding stuff (S13). Wear suitable protective clothing (S36). If swallowed, seek medical advice immediately and show this container or label (S46). Contact with acids liberates very toxic gas (R32). Azide compounds should be flushed with large volumes of water during disposal to avoid deposits in lead or copper plumbing where explosive conditions can develop.

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