



## CD20 (2H7): sc-58981

### BACKGROUND

CD20 is a leukocyte surface antigen consisting of four transmembrane regions and cytoplasmic N- and C-termini. The cytoplasmic domain of CD20 contains multiple phosphorylation sites, leading to additional isoforms. CD20 is expressed primarily on B cells but has also been detected on both normal and neoplastic T cells. CD20 functions as a calcium-permeable cation channel, and it is known to accelerate the G<sub>0</sub> to G<sub>1</sub> progression induced by IGF-1. CD20 is activated by the IGF-1 receptor via the  $\alpha$  subunits of the heterotrimeric G proteins. Activation of CD20 significantly increases DNA synthesis and is thought to involve basic helix-loop-helix leucine zipper transcription factors.

### REFERENCES

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3. Szollosi, J., et al. 1996. Supramolecular complexes of MHC class I, MHC class II, CD20, and tetraspan molecules (CD53, CD81, and CD82) at the surface of a B cell line JY. *J. Immunol.* 157: 2939-2946.
4. Algino, K.M., et al. 1996. CD20 (pan-B cell antigen) expression on bone marrow-derived T cells. *Am. J. Clin. Pathol.* 106: 78-81.
5. Smiers, F.J., et al. 1996. CD20 and CD40 mediated mitogenic responses in B-lineage acute lymphoblastic leukaemia. *Br. J. Haematol* 93: 125-130.
6. Himmelmann, A., et al. 1997. PU.1/Pip and basic helix loop helix zipper transcription factors interact with binding sites in the CD20 promoter to help confer lineage- and stage-specific expression of CD20 in B lymphocytes. *Blood* 90: 3984-3995.
7. Kanzaki, M., et al. 1997. Activation of the calcium-permeable cation channel CD20 expressed in BALB/c 3T3 cells by insulin-like growth factor-1. *J. Biol. Chem.* 272: 4964-4969.
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### CHROMOSOMAL LOCATION

Genetic locus: MS4A1 (human) mapping to 11q12.2.

### SOURCE

CD20 (2H7) is a humanized mouse monoclonal antibody raised against tumor antigens of human origin.

### STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

### PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2b</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Available as fluorescein (sc-58981 FITC), PerCP (sc-58981 PerCP) or PerCP-Cy5.5 (sc-58981 PCPC5) conjugates for flow cytometry, 100 tests.

### APPLICATIONS

CD20 (2H7) is recommended for detection of CD20 cell surface phosphoprotein expressed in normal and malignant B cells of human origin by flow cytometry (1  $\mu$ g per 1 x 10<sup>6</sup> cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CD20 siRNA (h): sc-29972, CD20 shRNA Plasmid (h): sc-29972-SH and CD20 shRNA (h) Lentiviral Particles: sc-29972-V.

Molecular Weight of CD20 isoforms: 33 kDa.

### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Immunofluorescence: use goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

### RESEARCH USE

For research use only, not for use in diagnostic procedures.