

CD20 (0.N.85): sc-70582

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 G₀ to G₁ progression induced by IGF-1. CD20 is activated by the IGF-1 receptor via the α 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

1. Tedder, T.F. and Engel, P. 1994. CD20: a regulator of cell-cycle progression of B lymphocytes. *Immunol. Today* 15: 450-454.
2. Schlossman, S., et al., eds. 1995. *Leucocyte Typing V*. New York: Oxford University Press.
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.

CHROMOSOMAL LOCATION

Genetic locus: MS4A1 (human) mapping to 11q12.2; Ms4a1 (mouse) mapping to 19 A.

SOURCE

CD20 (0.N.85) is a mouse monoclonal antibody raised against tonsil B cells of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

CD20 (0.N.85) is recommended for detection of CD20 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for CD20 siRNA (h): sc-29972, CD20 siRNA (m): sc-29973, CD20 shRNA Plasmid (h): sc-29972-SH, CD20 shRNA Plasmid (m): sc-29973-SH, CD20 shRNA (h) Lentiviral Particles: sc-29972-V and CD20 shRNA (m) Lentiviral Particles: sc-29973-V.

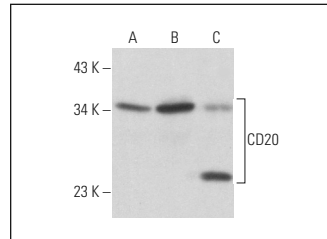
Molecular Weight of CD20 isoforms: 33-37 kDa.

Positive Controls: BJAB whole cell lysate: sc-2207, Raji whole cell lysate: sc-364236 or GA-10 whole cell lysate: sc-364230.

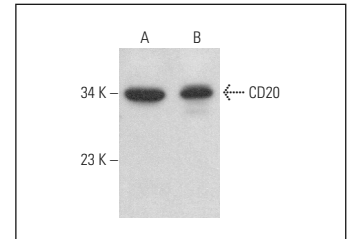
STORAGE

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

DATA



CD20 (0.N.85): sc-70582. Western blot analysis of CD20 expression in BJAB (A), Raji (B) and IB4 (C) whole cell lysates.



CD20 (0.N.85): sc-70582. Western blot analysis of CD20 expression in Raji (A) and GA-10 (B) whole cell lysates.

SELECT PRODUCT CITATIONS


1. Domingos, P.L., et al. 2012. OX40+ T lymphocytes and IFN- γ are associated with American tegumentary leishmaniasis pathogenesis. *An. Bras. Dermatol.* 87: 851-855.
2. Zhao, S., et al. 2014. Use of CD137 ligand expression in the detection of small B-cell lymphomas involving the bone marrow. *Hum. Pathol.* 45: 1024-1030.
3. Khademi, F., et al. 2017. Construction and characterization of monoclonal antibodies against the extracellular domain of B-lymphocyte antigen CD20 using DNA immunization method. *Int. Immunopharmacol.* 43: 23-32.
4. Hautz, T., et al. 2018. Subcutaneous administration of a neutralizing IL-1 β antibody prolongs limb allograft survival. *Am. J. Transplant.* 18: 2029-2042.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.



See **CD20 (D-10): sc-393894** for CD20 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.