

CD20 (M-20): sc-7735

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., et al. 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.

CHROMOSOMAL LOCATION

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

SOURCE

CD20 (M-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of CD20 of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-7735 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CD20 (M-20) 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) 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 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, Ramos cell lysate: sc-2216 or rat spleen extract: sc-2397.

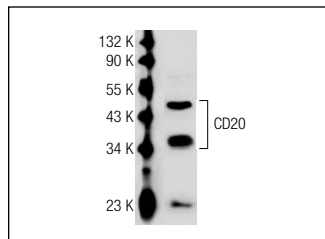
RESEARCH USE

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

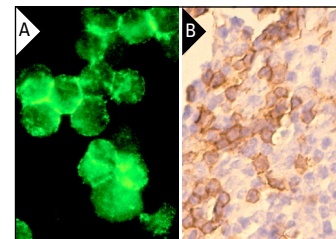
STORAGE

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

DATA



CD20 (M-20): sc-7735. Western blot analysis of CD20 expression in BJAB whole cell lysate.



CD20 (M-20): sc-7735. Immunofluorescence staining of methanol-fixed BJAB cells showing membrane localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse spleen tissue showing membrane localization (B).

SELECT PRODUCT CITATIONS

1. Ju, Y.K., et al. 2003. IGF-1 enhances a store-operated Ca²⁺ channel in skeletal muscle myoblasts: involvement of a CD20-like protein. *J. Cell. Physiol.* 197: 53-60.
2. Parolini, D., et al. 2009. CD20-related signaling pathway is differently activated in normal and dystrophic circulating CD133⁺ stem cells. *Cell. Mol. Life Sci.* 66: 697-710.
3. Mata, K.M., et al. 2010. Combining two potential causes of metalloproteinase secretion causes abdominal aortic aneurysms in rats: a new experimental model. *Int. J. Exp. Pathol.* 92: 26-39.
4. Chang, Y., et al. 2010. Therapeutic effects of TACI-Ig on rats with adjuvant-induced arthritis via attenuating inflammatory responses. *Rheumatology* 50: 862-870.
5. Canale-Zambrano, J.C., et al. 2010. Toll-like receptor-4 genotype influences the survival of cystic fibrosis mice. *Am. J. Physiol. Gastrointest. Liver Physiol.* 299: G381-G390.
6. Bailón, E., et al. 2010. DNFB-DNS hapten-induced colitis in mice should not be considered a model of inflammatory bowel disease. *Inflamm. Bowel Dis.* 17: 2087-2101.
7. Oscherwitz, J., et al. 2010. A CD20 tandem-epitope immunogen elicits antibody in mice that binds murine cell surface CD20 and depletes splenic B cells *in vivo*. *Mol. Immunol.* 47: 1484-1491.



Try **CD20 (D-10): sc-393894** or **CD20 (L26): sc-58985**, our highly recommended monoclonal alternatives to CD20 (M-20). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **CD20 (D-10): sc-393894**.