

CD20 (H-170): sc-15361

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.
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. Smiers, F.J., et al. 1996. CD20 and CD40 mediated mitogenic responses in B-lineage acute lymphoblastic leukaemia. *Br. J. Haematol* 93: 125-130.

CHROMOSOMAL LOCATION

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

SOURCE

CD20 (H-170) is a rabbit polyclonal antibody raised against amino acids 1-170 mapping at the N-terminus of CD20 of human origin.

PRODUCT

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

APPLICATIONS

CD20 (H-170) 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 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.

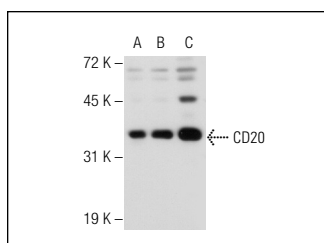
Molecular Weight of CD20 isoforms: 33-37 kDa.

Positive Controls: rat spleen extract: sc-2397, Jurkat whole cell lysate: sc-2204 or CD20 (m): 293T Lysate: sc-119099.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



CD20 (H-170): sc-15361. Western blot analysis of CD20 expression in non-transfected 293T: sc-117752 (A), mouse CD20 transfected 293T: sc-119099 (B) and Jurkat (C) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Palamarchuk, A., et al. 2006. TAL1 transgenic expression reveals absence of B lymphocytes. *Cancer Res.* 66: 6014-6017.
2. Doursout, M.F., et al. 2013. Inflammatory cells and cytokines in the olfactory bulb of a rat model of neuroinflammation; insights into neurodegeneration? *J. Interferon Cytokine Res.* 33: 376-383.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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



Try **CD20 (D-10): sc-393894** or **CD20 (L26): sc-58985**, our highly recommended monoclonal alternatives to CD20 (H-170). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **CD20 (D-10): sc-393894**.