

CD20 (B-LY1): sc-19990

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.

CHROMOSOMAL LOCATION

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

SOURCE

CD20 (B-LY1) is a mouse monoclonal antibody raised against CD20 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD20 (B-LY1) is available conjugated to agarose (sc-19990 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-19990 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-19990 PE), fluorescein (sc-19990 FITC), Alexa Fluor[®] 488 (sc-19990 AF488), Alexa Fluor[®] 546 (sc-19990 AF546), Alexa Fluor[®] 594 (sc-19990 AF594) or Alexa Fluor[®] 647 (sc-19990 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-19990 AF680) or Alexa Fluor[®] 790 (sc-19990 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

CD20 (B-LY1) is recommended for detection of an epitope located on the surface of B-cells of 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 flow cytometry (1 μ g per 1 x 10⁶ cells).

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: 33-37 kDa.

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

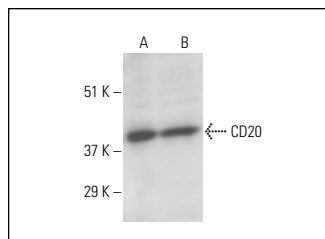
STORAGE

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

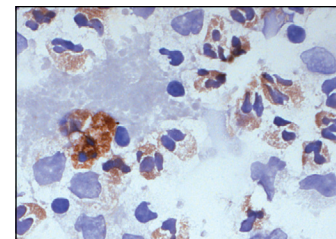
RESEARCH USE

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

DATA



CD20 (B-LY1): sc-19990. Western blot analysis of CD20 expression in GA-10 (A) and BJAB (B) whole cell lysates.



CD20 (B-LY1): sc-19990. Immunoperoxidase staining of formalin-fixed, human peripheral blood lymphocytes showing membrane staining.

SELECT PRODUCT CITATIONS

- Landsverk, O.J., et al. 2012. Differential regulation of MHC II and invariant chain expression during maturation of monocyte-derived dendritic cells. *J. Leukoc. Biol.* 91: 729-737.
- Palma, I., et al. 2013. Detection of Epstein-Barr virus and genotyping based on EBNA2 protein in Mexican patients with hodgkin lymphoma: a comparative study in children and adults. *Clin. Lymphoma Myeloma Leuk.* 13: 266-272.
- Mo, J., et al. 2013. The *in-vitro* spheroid culture induces a more highly differentiated but tumorigenic population from melanoma cell lines. *Melanoma Res.* 23: 254-263.
- Yang, M., et al. 2020. Macrophages affect immune inflammation and proliferation in benign prostatic hyperplasia via androgen receptor and CD40/CD40L signaling pathway. *Tissue Cell* 64: 101343.
- Tricarico, D., et al. 2022. Inflammatory related reactions in humans and in canine breast cancers, a spontaneous animal model of disease. *Front. Pharmacol.* 13: 752098.
- LeBlanc, F.R., et al. 2022. Combined epigenetic and immunotherapy for blastic and classical mantle cell lymphoma. *Oncotarget* 13: 986-1002.

PROTOCOLS

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