SANTA CRUZ BIOTECHNOLOGY, INC.

CD20 (L26): sc-58985

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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_0 to G_1 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; Ms4a1 (mouse) mapping to 19 A.

SOURCE

CD20 (L26) is a mouse monoclonal antibody raised against tonsil B cells of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD20 (L26) is available conjugated to agarose (sc-58985 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-58985 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-58985 PE), fluorescein (sc-58985 FITC), Alexa Fluor® 488 (sc-58985 AF488), Alexa Fluor® 546 (sc-58985 AF546), Alexa Fluor® 594 (sc-58985 AF594) or Alexa Fluor® 647 (sc-58985 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-58985 AF680) or Alexa Fluor® 790 (sc-58985 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

CD20 (L26) is recommended for detection of CD20 of mouse, rat and human origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution to be determined by researcher, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution to be determined by researcher, 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.

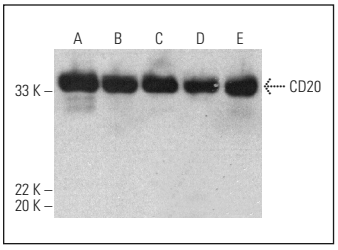
Molecular Weight of CD20 isoforms: 33-37 kDa.

Positive Controls: BJAB whole cell lysate: sc-2207, Ramos cell lysate: sc-2216 or Raji whole cell lysate: sc-364236.

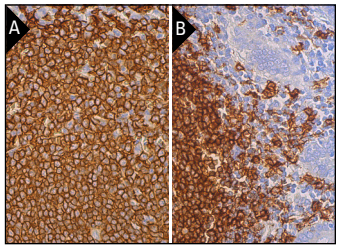
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



CD20 (L26) HRP: sc-58985 HRP. Direct western blot analysis of CD20 expression in BJAB (**A**), Raji (**B**), GA-10 (**C**), IB4 (**D**) and Ramos (**E**) whole cell lysates.



CD20 (L26): sc-58985. Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing membrane and cytoplasmic staining of cells in white pulp (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human appendix tissue showing membrane and cytoplasmic staining of lymphoid cells (**B**).

SELECT PRODUCT CITATIONS

1. Cao, W., et al. 2008. Expression of LMP-1 and cyclin D1 protein is correlated with an unfavorable prognosis in nasal type NK/T cell lymphoma. Mol. Med. Rep. 1: 363-368.
2. Wattenberg, M.M., et al. 2014. Expanding the use of monoclonal antibody therapy of cancer by using ionising radiation to upregulate antibody targets. Br. J. Cancer 110: 1472-1480.
3. Huang, C., et al. 2018. Fludarabine-resistance associates with ceramide metabolism and leukemia stem cell development in chronic lymphocytic leukemia. Oncotarget 9: 33124-33137.

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.

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