

CD20 (D-10): sc-393894



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 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; Ms4a1 (mouse) mapping to 19 A.

SOURCE

CD20 (D-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 265-290 at the C-terminus of CD20 of mouse origin.

PRODUCT

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

CD20 (D-10) is available conjugated to agarose (sc-393894 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393894 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; and to either phycoerythrin (sc-393894 PE), fluorescein (sc-393894 FITC) or Alexa Fluor[®] 488 (sc-393894 AF488) or Alexa Fluor[®] 647 (sc-393894 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM.

Blocking peptide available for competition studies, sc-393894 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

Alexa Fluor[®] is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

CD20 (D-10) is recommended for detection of CD20 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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.

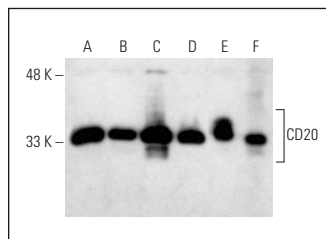
Molecular Weight of CD20 isoforms: 33-37 kDa.

Positive Controls: rat spleen extract: sc-2397, BJAB whole cell lysate: sc-2207 or Ramos cell lysate: sc-2216.

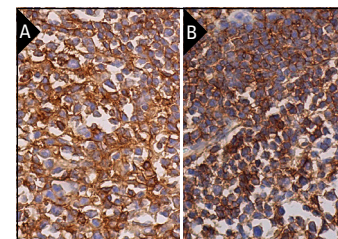
STORAGE

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

DATA



CD20 (D-10) HRP: sc-393894 HRP. Direct western blot analysis of CD20 expression in Raji (A), GA-10 (B), BJAB (C), Ramos (D) and IB4 (E) whole cell lysates and rat spleen tissue extract (F).



CD20 (D-10): sc-393894. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node (A) and human tonsil (B) tissue showing membrane and cytoplasmic staining of cells in germinal center and cells in non-germinal center.

SELECT PRODUCT CITATIONS

- Wang, L., et al. 2016. Follicular dendritic cell sarcoma of the spleen: a case report and review of the literature. *Oncol. Lett.* 12: 2062-2064.
- Kühne, L., et al. 2017. Renal allograft rejection, lymphocyte infiltration, and *de novo* donor-specific antibodies in a novel model of non-adherence to immunosuppressive therapy. *BMC Immunol.* 18: 52.
- Watanabe, S., et al. 2018. Non-alcoholic steatohepatitis aggravates nitric oxide synthase inhibition-induced arteriosclerosis in SHRSP5/Dmcr rat model. *Int. J. Exp. Pathol.* 99: 282-294.
- Pfuderer, P.L., et al. 2019. High endothelial venules are associated with microsatellite instability, hereditary background and immune evasion in colorectal cancer. *Br. J. Cancer* 121: 395-404.
- Bautista-Pérez, R., et al. 2020. The role of P2X7 purinergic receptors in the renal inflammation associated with Angiotensin II-induced hypertension. *Int. J. Mol. Sci.* 21: 4041.
- Tibaldi, E., et al. 2020. Identification of aspartame-induced haematopoietic and lymphoid tumours in rats after lifetime treatment. *Acta Histochem.* 122: 151548.
- Steines, L., et al. 2021. Disruption of Tfh:B cell interactions prevents antibody-mediated rejection in a kidney transplant model in rats: impact of calcineurin inhibitor dose. *Front. Immunol.* 12: 657894.
- Chen, X., et al. 2021. The prognostic and immunological effects of ZBTB7C across cancers: friend or foe? *Aging* 13: 12849-12864.
- Wang, W., et al. 2022. Total coumarin derivatives from *Hydrangea paniculata* attenuate renal injuries in cationized-BSA induced membranous nephropathy by inhibiting complement activation and interleukin 10-mediated interstitial fibrosis. *Phytomedicine* 96: 153886.

RESEARCH USE

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