

# CD19 (C-20): sc-8498

## BACKGROUND

CD19 is a transmembrane glycoprotein that contains two extracellular immunoglobulin-like domains. CD19 is selectively expressed on the cell surface of B-lymphocytes, where it activates intracellular signaling cascades involving both Ras and phosphatidylinositol 3-kinase pathways. Activation of CD19 results in cross-linking of the membrane protein immunoglobulin chains and the subsequent association with Src family protein tyrosine kinases (PTK). Expression of CD19 is continuous throughout B-cell development and through terminal differentiation of B-cells into plasma cells. CD19 forms functional complexes with B-lymphocyte surface proteins, including integrin  $\beta 1$ , CD21 and CD81, which are involved in regulating B-cell development.

## REFERENCES

1. Pezzutto, A., et al. 1987. CD19 monoclonal antibody HD37 inhibits anti-immunoglobulin-induced B cell activation and proliferation. *J. Immunol.* 138: 2793-2799.
2. Tedder, T.F., et al. 1989. Isolation of cDNAs encoding the CD19 antigen of human and mouse B lymphocytes. A new member of the immunoglobulin superfamily. *J. Immunol.* 143: 712-717.

## CHROMOSOMAL LOCATION

Genetic locus: CD19 (human) mapping to 16p11.2; Cd19 (mouse) mapping to 7 F3.

## SOURCE

CD19 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of CD19 of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-8498 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

CD19 (C-20) is recommended for detection of CD19 of human, mouse and, to a lesser extent, rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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 CD19 siRNA (h): sc-29968, CD19 siRNA (m): sc-29969, CD19 shRNA Plasmid (h): sc-29968-SH, CD19 shRNA Plasmid (m): sc-29969-SH, CD19 shRNA (h) Lentiviral Particles: sc-29968-V and CD19 shRNA (m) Lentiviral Particles: sc-29969-V.

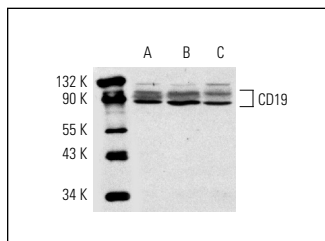
Molecular Weight of CD19: 95 kDa.

Positive Controls: IB4 whole cell lysate: sc-364780, BJAB whole cell lysate: sc-2207 or NAMALWA cell lysate: sc-2234.

## STORAGE

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

## DATA



CD19 (C-20): sc-8498. Western blot analysis of CD19 expression in BJAB (A), NAMALWA (B) and IB4 (C) whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Yang, S.R., et al. 2009. RelB is differentially regulated by I $\kappa$ B Kinase- $\alpha$  in B cells and mouse lung by cigarette smoke. *Am. J. Respir. Cell Mol. Biol.* 40: 147-158.
2. Zumaquero, E., et al. 2010. Exosomes from human lymphoblastoid B cells express enzymatically active CD38 that is associated with signaling complexes containing CD81, Hsc-70 and Lyn. *Exp. Cell Res.* 316: 2692-2706.
3. Hosomi, S., et al. 2011. Increased numbers of immature plasma cells in peripheral blood specifically overexpress chemokine receptor CXCR3 and CXCR4 in patients with ulcerative colitis. *Clin. Exp. Immunol.* 163: 215-224.
4. Verma-Gaur, J., et al. 2012. Negative feedback regulation of antigen receptors through calmodulin inhibition of E2A. *J. Immunol.* 188: 6175-6183.

## RESEARCH USE

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

## PROTOCOLS

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