SANTA CRUZ BIOTECHNOLOGY, INC.

CD19 (LE-CD19): sc-69735



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 β 1, CD21 and CD81, which are involved in regulating B cell development.

REFERENCES

- Pezzutto, A., et al. 1987. CD19 monoclonal antibody HD37 inhibits antiimmunoglobulin-induced B cell activation and proliferation. J. Immunol. 138: 2793-2799.
- Tedder, T.F. and Isaacs, C.M. 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.
- Bregni, M., et al. 1989. B-cell restricted saporin immunotoxins: activity against B-cell lines and chronic lymphocytic leukemia cells. Blood 73: 753-762.

CHROMOSOMAL LOCATION

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

SOURCE

CD19 (LE-CD19) is a mouse monoclonal antibody raised against the intracytoplasmic C-terminus of CD19 of human origin.

PRODUCT

Each vial contains 200 μg lgG_1 kappa light chain in 1.0 mL PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

CD19 (LE-CD19) is recommended for detection of CD19 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

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: Daudi cell lysate: sc-2415, Ramos cell lysate: sc-2216 or U-698-M whole cell lysate: sc-364799.

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





CD19 (LE-CD19): sc-69735. Western blot analysis of CD19 expression in Ramos (**A**) and U-698-M (**B**) whole cell lysates.

CD19 (LE-CD19): sc-69735. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing membrane and cytoplasmic staining of cells in non-germinal centers (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing cytoplasmic staining of cells in white pulp and cells in red pulp (B).

SELECT PRODUCT CITATIONS

 Sotillo, E., et al. 2015. Convergence of acquired mutations and alternative splicing of CD19 enables resistance to CART-19 immunotherapy. Cancer Dis. 5: 1282-1295.

STORAGE

Store at 4° C, **D0 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 for detailed protocols and support products.



See **CD19 (B-1): sc-390244** for CD19 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor[®] 488, 546, 594, 647, 680 and 790.