

CD22 (Mc64-12): sc-80697

BACKGROUND

The B lymphocyte specific CD22 antigen, also designated B lymphocyte cell adhesion molecule (BLCAM), sialic acid-binding Ig-like lectin 2 (Siglec-2) and Leu-14, is a type I integral membrane glycoprotein, structurally similar to other cell adhesion molecules (CAMs), which acts as a regulator of B cell signaling. CD22 is expressed as both a cytoplasmic and membrane protein during discrete stages of B cell lymphocyte differentiation. The cytoplasmic form of CD22, expressed early in B cell development, is a useful marker for acute lymphocytic leukemia. The membrane form of CD22 is expressed in mature B cells prior to their differentiation into plasma cells. Alternative splicing results in two different isoforms, CD22 α and CD22 β . The CD22 β monomer is the principally occurring isoform but CD22 also appears as a heterodimer of CD22 β and the shorter isoform, CD22 α .

REFERENCES

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3. Powell, L.D., Sgroi, D., Sjoberg, E.R., Stamenkovic, I. and Varki, A. 1993. Natural ligands of the B cell adhesion molecule CD22 β carry N-linked oligosaccharides with α -2,6-linked sialic acids that are required for recognition. *J. Biol. Chem.* 268: 7019-7027.
4. Wilson, G.L., Najfeld, V., Kozlow, E., Menniger, J., Ward, D. and Kehrl, J.H. 1993. Genomic structure and chromosomal mapping of the human CD22 gene. *J. Immunol.* 150: 5013-5024.
5. Sgroi, D., Koretzky, G.A. and Stamenkovic, I. 1995. Regulation of CD45 engagement by the B cell receptor CD22. *Proc. Natl. Acad. Sci. USA* 92: 4026-4030.
6. Tedder, T.F., Tuscano, J., Sato, S. and Kehrl, J.H. 1997. CD22, a B lymphocyte-specific adhesion molecule that regulates antigen receptor signaling. *Annu. Rev. Immunol.* 15: 481-504.
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CHROMOSOMAL LOCATION

Genetic locus: CD22 (human) mapping to 19q13.1.

SOURCE

CD22 (Mc64-12) is a mouse monoclonal antibody raised against CD22 isolated from Daudi cells of human origin.

STORAGE

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

PRODUCT

Each vial contains 100 μ g IgG₁ in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and 0.1% BSA.

Available as phycoerythrin (sc-80697 PE) or fluorescein (sc-80697 FITC) conjugates for flow cytometry, 100 tests.

APPLICATIONS

CD22 (Mc64-12) is recommended for detection of CD22 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) and flow cytometry (1 μ g per 1 x 10⁶ cells).

Suitable for use as control antibody for CD22 siRNA (h): sc-29807, CD22 shRNA Plasmid (h): sc-29807-SH and CD22 shRNA (h) Lentiviral Particles: sc-29807-V.

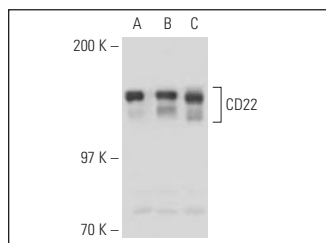
Molecular Weight of CD22: 130 kDa.

Positive Controls: Raji whole cell lysate, Daudi cell lysate: sc-2415 or BJAB whole cell lysate: sc-2207.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



CD22 (Mc64-12): sc-80697. Western blot analysis of CD22 expression in Raji (A), Daudi (B) and BJAB (C) whole cell lysates.

RESEARCH USE

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