

CD22 (D-5): sc-271579

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

1. Stamenkovic, I., et al. 1990. The B cell antigen CD22 mediates monocyte and erythrocyte adhesion. *Nature* 345: 74-77.
2. Wilson, G.L., et al. 1991. cDNA cloning of the B cell membrane protein CD22: a mediator of B-B cell interactions. *J. Exp. Med.* 173: 137-146.
3. Powell, L.D., et al. 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., et al. 1993. Genomic structure and chromosomal mapping of the human CD22 gene. *J. Immunol.* 150: 5013-5024.
5. Sgroi, D., et al. 1995. Regulation of CD45 engagement by the B cell receptor CD22. *Proc. Natl. Acad. Sci. USA* 92: 4026-4030.
6. Tedder, T.F., et al. 1997. CD22, a B lymphocyte-specific adhesion molecule that regulates antigen receptor signaling. *Annu. Rev. Immunol.* 15: 481-504.

CHROMOSOMAL LOCATION

Genetic locus: CD22 (human) mapping to 19q13.12.

SOURCE

CD22 (D-5) is a mouse monoclonal antibody raised against amino acids 20-240 mapping at the N-terminus of CD22 of human origin.

PRODUCT

Each vial contains 200 μ g IgG $_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD22 (D-5) is available conjugated to agarose (sc-271579 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271579 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271579 PE), fluorescein (sc-271579 FITC), Alexa Fluor® 488 (sc-271579 AF488), Alexa Fluor® 546 (sc-271579 AF546), Alexa Fluor® 594 (sc-271579 AF594) or Alexa Fluor® 647 (sc-271579 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271579 AF680) or Alexa Fluor® 790 (sc-271579 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

CD22 (D-5) is recommended for detection of CD22 of 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 CD22 siRNA (h): sc-29807, CD22 shRNA Plasmid (h): sc-29807-SH and CD22 shRNA (h) Lentiviral Particles: sc-29807-V.

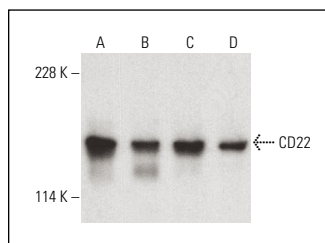
Molecular Weight of CD22: 130 kDa.

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

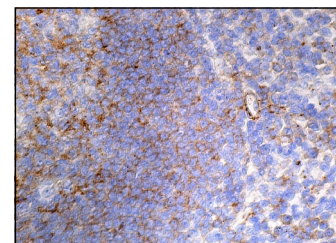
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



CD22 (D-5) HRP: sc-271579 HRP. Direct western blot analysis of CD22 expression in BJAB (A), Raji (B), Ramos (C) and NAMALWA (D) whole cell lysates.



CD22 (D-5): sc-271579. Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing cytoplasmic staining of cells in germinal and non-germinal centers.

STORAGE

Store at 4° C, **DO 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.