

CD22 (MYG13): sc-7323

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 .

CHROMOSOMAL LOCATION

Genetic locus: CD22 (human) mapping to 19q13.12; Cd22 (mouse) mapping to 7 B1.

SOURCE

CD22 (MYG13) is a mouse monoclonal antibody raised against Raji cells.

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 (MYG13) is available conjugated to agarose (sc-7323 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-7323 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-7323 PE), fluorescein (sc-7323 FITC), Alexa Fluor $^{\text{®}}$ 488 (sc-7323 AF488), Alexa Fluor $^{\text{®}}$ 546 (sc-7323 AF546), Alexa Fluor $^{\text{®}}$ 594 (sc-7323 AF594) or Alexa Fluor $^{\text{®}}$ 647 (sc-7323 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor $^{\text{®}}$ 680 (sc-7323 AF680) or Alexa Fluor $^{\text{®}}$ 790 (sc-7323 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

CD22 (MYG13) is recommended for detection of CD22 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 flow cytometry (1 μ g per 1 x 10⁶ cells).

Suitable for use as control antibody for CD22 siRNA (h): sc-29807, CD22 siRNA (m): sc-29806, CD22 shRNA Plasmid (h): sc-29807-SH, CD22 shRNA Plasmid (m): sc-29806-SH, CD22 shRNA (h) Lentiviral Particles: sc-29807-V and CD22 shRNA (m) Lentiviral Particles: sc-29806-V.

Molecular Weight of CD22: 130 kDa.

Positive Controls: BJAB whole cell lysate: sc-2207, Ramos cell lysate: sc-2216 or Daudi cell lysate: sc-2415.

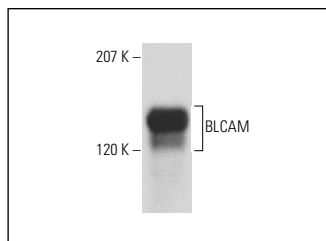
STORAGE

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

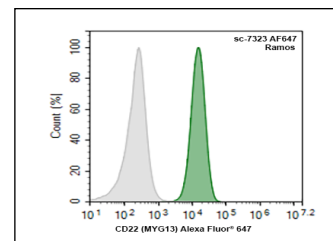
RESEARCH USE

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

DATA



CD22 (MYG13): sc-7323. Western blot analysis of CD22 expression in BJAB whole cell lysate.



CD22 (MYG13) Alexa Fluor $^{\text{®}}$ 647: sc-7323 AF647. FCM analysis of Ramos cells. Gray histogram represents the isotype control, normal mouse IgG $_1$ Alexa Fluor $^{\text{®}}$ 647: sc-24636.

SELECT PRODUCT CITATIONS

1. Mott, R.T., et al. 2004. Neuronal expression of CD22: novel mechanism for inhibiting microglial proinflammatory cytokine production. *Glia* 46: 369-379.
2. DiJoseph, J.F., et al. 2005. Antibody-targeted chemotherapy of B-cell lymphoma using calicheamicin conjugated to murine or humanized antibody against CD22. *Cancer Immunol. Immunother.* 54: 11-24.
3. Chitnis, T., et al. 2007. Elevated neuronal expression of CD200 protects wild mice from inflammation-mediated neurodegeneration. *Am. J. Pathol.* 170: 1695-1712.
4. Reineks, E.Z., et al. 2009. CD22 expression on blastic plasmacytoid dendritic cell neoplasms and reactivity of anti-CD22 antibodies to peripheral blood dendritic cells. *Cytometry B Clin. Cytom.* 76: 237-248.
5. Loomis, K., et al. 2010. Specific targeting to B cells by lipid-based nanoparticles conjugated with a novel CD22-ScFv. *Exp. Mol. Pathol.* 88: 238-249.
6. O'Reilly, M.K., et al. 2011. CD22 is a recycling receptor that can shuttle cargo between the cell surface and endosomal compartments of B cells. *J. Immunol.* 186: 1554-1563.
7. Abuhay, M., et al. 2016. The HB22.7-vcMMAE antibody-drug conjugate has efficacy against non-Hodgkin lymphoma mouse xenografts with minimal systemic toxicity. *Cancer Immunol. Immunother.* 65: 1169-1175.
8. El-Naseery, N.I., et al. 2020. Aging-associated immunosenescence via alterations in splenic immune cell populations in rat. *Life Sci.* 241: 117168.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

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