

# CD22 (4KB128): sc-20053

## 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 $\alpha$  and CD22 $\beta$ . The CD22 $\beta$  monomer is the principally occurring isoform but CD22 also appears as a heterodimer of CD22 $\beta$  and the shorter isoform, CD22 $\alpha$ .

## 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 $\beta$  carry N-linked oligosaccharides with  $\alpha$ -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.
7. Wakabayashi, C., Adachi, T., Wienands, J. and Tsubata, T. 2002. A distinct signaling pathway used by the IgG-containing B cell antigen receptor. *Science* 298: 2392-2395.
8. John, B., Herrin, B.R., Raman, C., Wang, Y.N., Bobbitt, K.R., Brody, B.A. and Justement, L.B. 2003. The B cell co-receptor CD22 associates with AP50, a clathrin-coated pit adapter protein, via tyrosine-dependent interaction. *J. Immunol.* 170: 3534-3543.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

## CHROMOSOMAL LOCATION

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

## SOURCE

CD22 (4KB128) is a mouse monoclonal antibody raised against human neoplastic cells from a case of hairy cell leukemia.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD22 (4KB128) is available conjugated to either phycoerythrin (sc-20053 PE) or fluorescein (sc-20053 FITC), 200  $\mu$ g/ml, for IF, IHC(P) and FCM.

## APPLICATIONS

CD22 (4KB128) is recommended for detection of CD22 of human origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1  $\mu$ g per 1 x 10<sup>6</sup> cells).

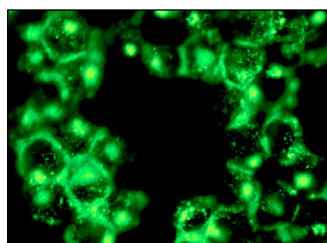
Suitable for use as control antibody for CD22 siRNA (h): sc-29807, CD22 shRNA Plasmid (h): sc-29807-SH and CD22 shRNA (h) Lentiviral Particles: sc-29807-V.

Molecular Weight of CD22: 130 kDa.

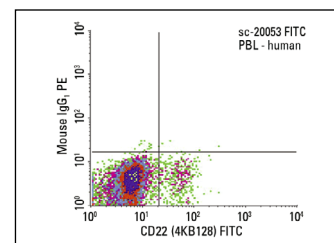
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:  
Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



CD22 (4KB128): sc-20053. Immunofluorescence staining of methanol-fixed BJAB cells showing membrane staining.



CD22 (4KB128) FITC: sc-20053 FITC. FCM analysis of human peripheral blood leukocytes. Quadrant markers were set based on the isotype control, normal mouse IgG<sub>1</sub>-FITC: sc-2855.

## RESEARCH USE

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