SANTA CRUZ BIOTECHNOLOGY, INC.

CD22 (HD6): sc-73362

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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, CD22α and CD22β. The CD22β monomer is the principally occurring isoform but CD22 also appears as a heterodimer of CD22β and the shorter isoform, CD22α.

REFERENCES

1. Stamenkovic, I. and Seed, B. 1990. The B cell antigen CD22 mediates monocyte and erythrocyte adhesion. Nature 345: 74-77.
2. Wilson, G.L., Fox, C.H., Fauci, A.S. and Kehrl, J.H. 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., Sgroi, D., Sjoberg, E.R., Stamenkovic, I. and Varki, A. 1993. Natural ligands of the B cell adhesion molecule CD22β 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.
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 for detailed protocols and support products.

CHROMOSOMAL LOCATION

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

SOURCE

CD22 (HD6) is a mouse monoclonal antibody raised against hairy cell leukemia cells of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

CD22 (HD6) is recommended for detection of normal and neoplastic B lymphocytes of human origin by immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10^6 cells).

Molecular Weight of CD22: 130 kDa.

SELECT PRODUCT CITATIONS

1. Tu, S., Wu, J., Chen, L., Tian, Y., Qin, W., Huang, S., Wang, R., Lin, Z. and Song, Z. 2020. LncRNA CALB2 sponges miR-30b-3p to promote odontoblast differentiation of human dental pulp stem cells via up-regulating RUNX2. Cell. Signal. E-published.

RESEARCH USE

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