IOTest® CD22-FITC

PN IM0779U – 2 mL Liquid – 20 µL / test* – Clone SJ10.1H11

Analyte Specific Reagent.

Analytical and performance characteristics are not established.

SPECIFICITY

The CD22 molecule is a single chain, type I transmembrane molecule, with a molecular weight of 130 –140 kDa, composed by seven immunoglobulin-like (Ig-like) domains (1). CD22 is, like CD33 and the myelin-associated glycoprotein (MAG), a member of the sialoadhesin family (2). The N-terminal domain distal to the membrane is a V-type Ig domain whereas the others six domains proximal to the membrane are C2-type Ig domains (2). The cytoplasmic domain of CD22 includes six tyrosine residues that are possible targets for phosphorylation. Some regions of the intracytoplasmic tail are homologous to the tyrosine-based activations motifs (ITAM) and some others to the tyrosine-based inihbition motifs (ITIM) (2, 3).

CD22 appears constituvely associated with the BCR (B Cell antigen Receptor) and this may involve CD22 recognition of membrane IgM carbohydrate determinants (4–6). The CD22 molecule mediates adhesion of B-B lymphocyte interactions, and B cells and erythrocytes or leucocytes interactions (2, 5, 7, 8).

The CD22 antigen is detected in the cytoplasm early during B cell ontogeny (late pro-B stage), appears on the cell surface simultaneously with the expression of membraneous IgD, and is found on most mature B lymphocytes (1). The CD22 antigen is lost during the terminal stages of differentiation prior to the plasma cell stage (1). On peripheral whole blood, the expression of CD22 antigen is restricted to B lymphocytes.

The SJ10.1H11 monoclonal antibody has been assigned to the CD22 cluster of differentiation at the 2nd International Workshop on Human Leukocyte Differentiation Antigens in Boston, USA, in 1984 (9).

REAGENT

IOTest CD22-FITC Conjugated Antibody
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Clone	SJ10.1H11
Isotype	IgG1, mouse
Immunogen	Human NALM1 cell line
Hybridoma	SP2/0 x Balb/c
Source	Ascites fluid
Purification	Ion exchange or affinity chromatography
Conjugation	FITC (Fluorescein isothiocyanate) is conjugated at 5 – 7 moles of FITC per mole of Ig.
Fluorescence	FITC (Green) Excites at 468 – 509 nm Emits at 504 – 541 nm

REAGENT CONTENTS

This reagent is provided in phosphate-buffered saline, with 0.1% sodium azide (NaN_3) as preservative, and 2.0 mg / mL bovine serum albumin (BSA).

STATEMENT OF WARNINGS

1. This reagent contains 0.1% sodium azide. Sodium azide under acid conditions yields hydrazoic acid, an extremely toxic compound. Azide compounds should be flushed with running water while being discarded. These precautions are recommended to avoid deposits in metal piping in which explosive conditions can develop. If skin or eye contact occurs, wash excessively with water.
2. Do not use antibody beyond the expiration date on the label.
3. Samples and all material coming in contact with them should be handled as if capable of transmitting infection and disposed of with proper precautions.
4. Never pipet by mouth and avoid contact of samples with skin and mucous membranes
5. Minimize exposure of reagent to light during storage or incubation.
6. Avoid microbial contamination of reagents or incorrect results might occur.
7. Use good laboratory practices when handling this reagent.

STORAGE CONDITIONS AND STABILITY

This reagent is stable up to the expiration date when stored at 2 – 8°C. Do not freeze. Minimize exposure to light.

EVIDENCE OF DETERIORATION

Any change in the physical appearance of this FITC-labeled reagent (clear, colorless to yellowish-green liquid) or any major variation in values obtained for control samples may indicate deterioration and the reagent should not be used.

REAGENT PREPARATION

No preparation is necessary. This monoclonal antibody may be used directly from the vial. Bring reagent to 18 – 25°C prior to use.

SELECTED RESEARCH REFERENCES

1. Kehrl,J., "CD22 workshop Panel report", 1995, Leucocyte Typing V, White Cell Differentiation Antigens. Schlossman, S.F., et al., Eds., Oxford University Press, 523-527.
2. Tedder, T.F., Tuscano, J., Sato,S., Kehrl, J.H., "CD22, A B lymphocyte-specific adhesion molecule that regulates antigen receptor signaling", 1997, Rev. Immunol., 15, 481 -504.
3. Unkeless, J.C., Jin, J., "Inhibitory receptors, ITIM sequences and phosphatases", 1997, Curr. Opin. Immunol., 9, 338-343.
4. Buhl, A.M., Cambier, J.C., "Co-receptor and accessory regulation of B-cell antigen receptor signal transduction", 1997, Immunol. Rev., 160, 127-138.
5. Law, C.L., Sidorenko, S.P., Clark, E.A., "Regulation of lymphocyte activation by the cell-surface molecule CD22", 1994, Immunol. Today, 9, 15, 442-449.
6. Doody, G.M., Dempsey, P.W., Fearon, D.T., "Activation of B lymphocytes : integrating signals from CD19, CD22 and FcgammaRIIb1", 1996, Curr. Opin. Immunol., 8, 378-382.
7. Lynn Wilson, G., "Genomic structure and chromosomal mapping of the human CD22 gene", 1993, J. Immunol., 11, 150, 5013.
8. Stamenkovic, I., Sgroi, D., Aruffo, A., Sy, M.S., Anderson, T., "The B lymphocyte adhesion molecule CD22 interacts with leukocyte common antigen CD45RO on T cells and alpha2-6 sialyltranferase, CD75, on B cells", 1991, Cell, 66, 1133-1144.
9. Nadler, L.M., "B cell/Leukemia panel worshop: Summary and comments", 1986, Leucocyte Typing II, Human T lymphocytes, Reinherz, E.L., et al. Eds., 4-43.

PRODUCT AVAILABILITY

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For additional information in the USA, call 800-526-7694.
Outside the USA, contact your local Beckman Coulter representative.

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(*): 20 µL is the quantity of product sufficient to stain 5×10^5 cells in a standard immunofluorescence assay