invitrogen™ | MOLECULAR PROBES®

PRODUCT INSERT

RAT anti-MOUSE CD22 (Lyb-8)

Product	Form	Volume	Antibody*	Excitation (nm)	Peak Emission (nm)	Matching Isotype Controls	
MCD2201	FITC	1.0 ml	500 µg	488	525	Rat IgG1 FITC	Code R101
MCD2204	R-PE	1.0 ml	100 µg	488	575	Rat IgG1 R-PE	Code R104

PRODUCT DESCRIPTION

Rat monoclonal antibody to mouse CD22 (Lyb-8)

Clone: 2D6 (also known as NIMR-6)

Isotype: Rat IgG1κ

Lot No.: See label **Expiration:** See label

Buffer: Phosphate buffered saline (PBS)

Preservatives: 0.1% ***sodium azide.*** Sodium azide is an extremely toxic and dangerous compound particularly when combined with acids or metals. Solutions containing sodium azide should be disposed of properly.

Stabilizer: Sucrose

STORAGE & HANDLING

Store reagents at 2-8°C. Do not freeze! Light exposure should be avoided for fluorochrome-conjugated reagents. Use dim light during handling, incubation with cells and prior to analysis. It is recommended that cells be analyzed within 18 hours of staining. If the reagent is being diluted, it is recommended that only the quantity to be used within one week be diluted.

PRODUCT CHARACTERIZATION

Antigen Specificity: CD22 (Mr 150 kDa), also known as Lyb-8, is a heterodimeric transmembrane glycoprotein and a member of a structurally-related group of immunoglobulin (Ig) superfamily domain-containing proteins called the sialoadhesin family. It is detected in the cytoplasm early in B cell development (late pro-B cell stage), appears on the cell surface concomitant with IgD, and is found on most IgM+IgD+ mature B lymphocytes. Expression is lost with terminal differentiation of B cells and is absent on plasma cells. Activation of B cells via cross-linking of surface Ig increases CD22 expression.[1,2] CD22 associates with the B cell receptor (BCR) complex and mediates intercellular adhesion.[2-5] Its intracellular domain is phosphorylated after antigen receptor crosslinking and is involved in negative regulation of B-cell activation.[6-9]

Research Applications:

- Flow cytometry[2]
- Blocking of B cell homotypic adhesion[2]

PRODUCT QUALITY CONTROL

To ensure lot-to-lot consistency, each batch of monoclonal antibody is tested by flow cytometry to conform to characteristics of a standard reference reagent. From this testing it is recommended that between 0.25µg and 0.5 µg of antibody be used per 1 x 10^6 cells in a 100 µl staining volume. Because conditions may vary, it is recommended that each investigator determine the optimal amount of antibody to be used for each application.

* The amount of antibody is determined by measuring the optical density using a spectrophotometer. The antibody titer is verified by immunofluorescent staining and flow cytometric analysis.

REFERENCES:

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4. Law C.-L. Aruffo, A. Chandran, K.A. Doty, R.T. and Clark, E.A. 1995. *J Immunol* 155:3368.
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8. Law, C.-L., S.P. Sidorenko, K.A. Chandran, Z. Zhao, S.-H. Shen, E.H. Fischer, and E.A. Clark. 1996. *J. Exp Med* 183:547.
9. O'Keefe, T.L., G.T. Williams, S.L. Davies, and M.S. Neuberger. 1996. *Science* 274:798.

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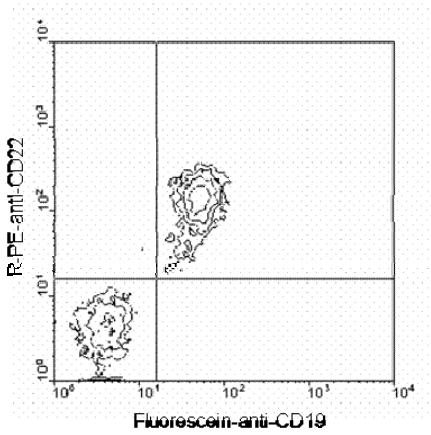

Mouse CD22 R-PE

BALB/c splenocytes were double-stained with rat anti-mouse CD22-R-PE (0.3 µg/10^6 cells) and rat anti-mouse CD19-Fluorescein. Small lymphocytes were gated and analyzed on a FACScan™ flow cytometer (BDIS, San Jose, CA).

Note: Flow cytometric data shown may not necessarily have been generated using the enclosed lot of reagent. For this reason, and due to differences in flow cytometers and cytometer settings, results may vary from those illustrated above. It is suggested that investigators titrate reagents to determine optimal conditions for use in their systems.