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CD22 / BL-CAM Antibody - With BSA and Azide

Mouse Monoclonal Antibody [Clone MYG13]
Catalog # AH12675

Product Information

Application	IF, FC
Primary Accession	P20273
Other Accession	933, 579691
Reactivity	Human, Mouse, Rat
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgG1, kappa
Clone Names	MYG13
Calculated MW	95348

Additional Information

Gene ID	933
Other Names	B-cell receptor CD22, B-lymphocyte cell adhesion molecule, BL-CAM, Sialic acid-binding Ig-like lectin 2, Siglec-2, T-cell surface antigen Leu-14, CD22, CD22, SIGLEC2
Application Note	IF~~1:50~200 FC~~1:10~50
Storage	Store at 2 to 8°C.Antibody is stable for 24 months.
Precautions	CD22 / BL-CAM Antibody - With BSA and Azide is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CD22 {ECO:0000303|PubMed:1691828, ECO:0000312|HGNC:HGNC:1643}
Function	Most highly expressed siglec (sialic acid-binding immunoglobulin-like lectin) on B-cells that plays a role in various aspects of B-cell biology including differentiation, antigen presentation, and trafficking to bone marrow (PubMed:34330755, PubMed:8627166). Binds to alpha 2,6-linked sialic acid residues of surface molecules such as CD22 itself, CD45 and IgM in a cis configuration. Can also bind to ligands on other cells as an adhesion molecule in a trans configuration (PubMed:20172905). Acts as an inhibitory coreceptor on the surface of B-cells and inhibits B-cell receptor induced signaling, characterized by inhibition of the calcium mobilization and cellular activation. Mechanistically, the immunoreceptor tyrosine-based inhibitory motif domain is phosphorylated by the Src kinase LYN, which in turn leads to the recruitment of the protein tyrosine phosphatase 1/PTPN6, leading to the

	negative regulation of BCR signaling (PubMed:8627166). If this negative signaling from is of sufficient strength, apoptosis of the B-cell can be induced (PubMed:20516366).
Cellular Location	Cell membrane; Single-pass type I membrane protein
Tissue Location	B-lymphocytes.

Background

Recognizes a protein of 130-140kDa, identified as CD22 (also known as BL-CAM). CD22 expression is restricted to normal and neoplastic B cells and is absent from other haemopoietic cell types. In B-cell ontogeny, CD22 is first expressed in the cytoplasm of pro-B and pre-B cells, and on the surface as B cells mature to become IgD+. It is not expressed by plasma cells, CD22 is found highly expressed in follicular mantle and marginal zone B-cells, and while germinal center B-cells are relatively weak. CD22 is a member of the immunoglobulin superfamily and serves as an adhesion receptor for sialic acid-bearing ligands expressed on erythrocytes and all leukocyte classes. It also associates with tyrosine kinases and play a role in signal transduction and B-cell activation.

References

Knapp, W et al. eds Leukocyte Typing IV, p190-192, Oxford University Press, Oxford, 1989 | Schlossman SF et al. eds. Leukocyte Typing V, p523-503, Oxford University Press, Oxford, 1989. | Tedder TF et al. CD22, a B lymphocyte-specific adhesion molecule that regulates antigen receptor signaling. Annu Rev Immunol 15:481-504. | Cyster JG and Goodnow CC. Tuning antigen receptor signaling by CD22: integrating cues from antigens and the microenvironment. Immunity 1997,6:509-517. | Tuscano JM et al. Involvement of p72syk kinase, p53/56lyn kinase and phosphatidyl inositol-3 kinase in signal transduction via the human B lymphocyte antigen CD22. Eur J Immunol 1996, 26:1246-1252. | Sato S et al. CD22 negatively and positively regulates signal transduction through the B lymphocyte antigen receptor. Semin Immunol 1998, 10:287-297

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