

# Anti-CD22 Antibody [A2G6]

## EM1902-13



<b>Product Type:</b>	Mouse monoclonal IgG1, primary antibodies
<b>Species reactivity:</b>	Human
<b>Applications:</b>	WB, IHC-P, FC
<b>Molecular Wt:</b>	Predicted band size: 95 kDa.
<b>Clone number:</b>	A2G6

**Description:** CD22, or cluster of differentiation-22, is a molecule belonging to the SIGLEC family of lectins. It is found on the surface of mature B cells and to a lesser extent on some immature B cells. Generally speaking, CD22 is a regulatory molecule that prevents the overactivation of the immune system and the development of autoimmune diseases. CD22 is a sugar binding transmembrane protein, which specifically binds sialic acid with an immunoglobulin (Ig) domain located at its N-terminus. The presence of Ig domains makes CD22 a member of the immunoglobulin superfamily. CD22 functions as an inhibitory receptor for B cell receptor (BCR) signaling. Mediates B-cell B-cell interactions. May be involved in the localization of B-cells in lymphoid tissues. Binds sialylated glycoproteins; one of which is CD45. Preferentially binds to alpha-2,6-linked sialic acid. The sialic acid recognition site can be masked by cis interactions with sialic acids on the same cell surface. Upon ligand induced tyrosine phosphorylation in the immune response seems to be involved in regulation of B-cell antigen receptor signaling. Plays a role in positive regulation through interaction with Src family tyrosine kinases and may also act as an inhibitory receptor by recruiting cytoplasmic phosphatases via their SH2 domains that block signal transduction through dephosphorylation of signaling molecules.

**Immunogen:** Recombinant protein within Human CD22 aa 20-200.

**Positive control:** Raji cell lysate, Daudi cell lysate, human spleen tissue, Daudi.

**Subcellular location:** Cell membrane.

**Database links:** SwissProt: P20273 Human

**Recommended Dilutions:**

<b>WB</b>	1:500-1:1,000
<b>IHC-P</b>	1:50-1:200
<b>FC</b>	1:50-1:100

**Storage Buffer:** 1\*PBS (pH7.4), 0.2% BSA, 50% Glycerol. Preservative: 0.05% Sodium Azide.

**Storage Instruction:** Shipped at 4°C. Store at +4°C short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20°C long term.

**Purity:** Protein G affinity purified.

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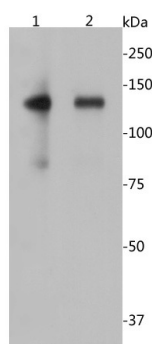
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## Images

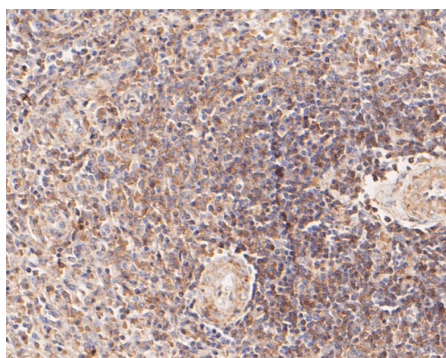


**Fig1:** Western blot analysis of CD22 on different lysates. Proteins were transferred to a PVDF membrane and blocked with 5% BSA in PBS for 1 hour at room temperature. The primary antibody (EM1902-13, 1/500) was used in 5% BSA at room temperature for 2 hours. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1:5,000 dilution was used for 1 hour at room temperature.

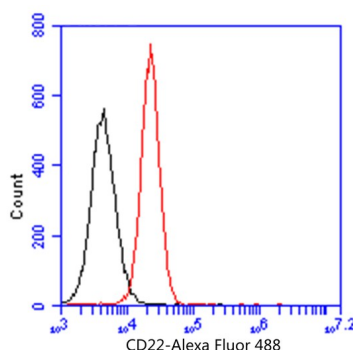
**Positive control:**

Lane 1: Raji cell lysate

Lane 2: Daudi cell lysate



**Fig2:** Immunohistochemical analysis of paraffin-embedded human spleen tissue using anti-CD22 antibody. The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 8.0-8.4) for 20 minutes. The tissues were blocked in 5% BSA for 30 minutes at room temperature, washed with ddH<sub>2</sub>O and PBS, and then probed with the primary antibody (EM1902-13, 1/1000) for 30 minutes at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.



**Fig3:** Flow cytometric analysis of CD22 was done on Daudi cells. The cells were fixed, permeabilized and stained with the primary antibody (EM1902-13, 1/100) (red). After incubation of the primary antibody at room temperature for an hour, the cells were stained with a Alexa Fluor<sup>TM</sup>488 Goat anti-Mouse IgG Secondary antibody at 1/500 dilution for 30 minutes. Unlabelled sample was used as a control (cells without incubation with primary antibody; black).

**Note:** All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

## Background References

1. Hatta Y, Tsuchiya N, Matsushita M, Shiota M, Hagiwara K, Tokunaga K (April 1999). "Identification of the gene variations in human CD22". *Immunogenetics*. 49 (4): 280–6.
2. Lee M, Kiefel H, LaJevic MD, Macauley MS, Kawashima H, O'Hara E, et al. (October 2014). "Transcriptional programs of lymphoid tissue capillary and high endothelium reveal control mechanisms for lymphocyte homing". *Nature Immunology*. 15 (10): 982–95.

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