abcam

ab284667

Anti-CD22 (phospho Y822) antibody [Y506] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	Y506
Purification technique	Affinity purification Protein A
Specificity	ab32123 recognises CD22 phosphorylation on Tyrosine 822. This antibody is predicted to detect splice isoform 2 based on sequence homology.

Reactivity data

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-

Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

WB

Tested

Species	Human
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Target data

See full target information CD22 pY822

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).

Storage

Shipped at conditions	Blue Ice

Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C

Notes

ab284667 is the carrier-free version of ab32123
The production method for this product has been changed from hybridoma to recombinant on 23rd April 2026.

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

Conjugation ready
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	CD22 also known as Siglec-2 or B-lymphocyte cell adhesion molecule (BL-CAM) is a transmembrane protein with a mass of around 140 kDa. It is selectively expressed on the surface of mature B cells and some immature B cells. This protein plays an important role in the immune system particularly in the regulation of B cell function. CD22 functions by modulating signal transduction processes through its cytoplasmic domain which contains immunoreceptor tyrosine-based inhibitory motifs (ITIMs).

Biological function summary	CD22 acts mainly as a negative regulator of B cell receptor (BCR) signaling. It is part of a complex that interacts with the BCR and other accessory molecules. CD22 helps maintain B cell tolerance by inhibiting overactive signaling and preventing autoimmune responses. By binding to sialic acid-containing glycans CD22 modulates interactions between B cells and other cells aiding in the maintenance of immune homeostasis.
Pathways	CD22 plays a critical role in the BCR signaling pathway and the regulation of phosphatidylinositol 3-kinase (PI3K) signaling. It works together with proteins like CD19 and SHP-1 that are key components of these pathways. By influencing these signaling cascades CD22 contributes to the modulation of B cell activation proliferation and apoptosis ensuring proper functioning of the immune response.
Associated diseases and disorders	CD22 is associated with autoimmune conditions and hematological malignancies such as hairy cell leukemia (HCL). Therapeutic approaches targeting CD22 such as anti-CD22 antibodies are being explored for treating these diseases. CD22's role in these conditions is connected with proteins involved in the autoimmune pathways or cancer development offering potential therapeutic targets for intervention.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

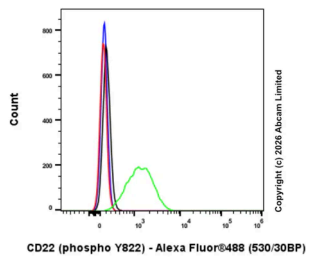
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

3 product images



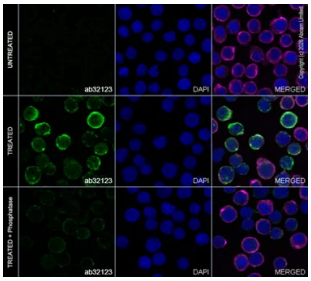
Flow Cytometry (Intracellular) - Anti-CD22 (phospho Y822) antibody [Y506] - BSA and Azide free (ab284667)

CD22 (phospho Y822) Flow Cytometry (Intracellular) staining of Ramos treated with 1mM pervanadate for 30min using rabbit Anti-CD22 (phospho Y822) antibody

This data was developed using ab32123, the same antibody clone in a different buffer formulation.

Flow cytometric analysis of Ramos cells treated with 1mM pervanadate for 30min labelling CD22 (phospho Y822) with ab32123 at 1/1000 dilutioncompared with an isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody).

Cells were fixed with 100µl 4% PFA for 10 min at RT, then permeabilized with 100µl 90% methanol for 30 min (-20° C) followed by blocking with 10% goat serum for 1h at room temperature. Incubate ab32123 for 30 min at room temperature (RT) and then incubate Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150081) for 30 min at room temperature.

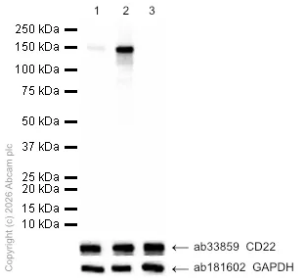


Immunocytochemistry/ Immunofluorescence - Anti-CD22 (phospho Y822) antibody [Y506] - BSA and Azide free (ab284667)

CD22 (phospho Y822) Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-CD22 (phospho Y822) antibody

This data was developed using ab32123, the same antibody clone in a different buffer formulation.

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized Ramos cells with or without treatment labelling CD22 (phospho Y822) with ab32123 at 1/200 dilution followed by Alexa Fluor® 488-conjugated Goat anti-Rabbit secondary antibody (ab150077) at 1/1000 dilution (Green). Confocal images showing no staining in Ramos cells and strong membranous staining in Ramos treated with pervanadate (1mM 30min) but weak membranous staining in Ramos treated with pervanadate (1mM 30min) and phosphatase.
ab7291 Anti-beta Tubulin, used as a counterstain at 1/1000 dilution, was co-incubated with ab32123 overnight at 4° C, followed by Alexa Fluor® 594 Goat Anti-Mouse secondary (ab150120) at 1/1000 dilution at RT for 45 min (Magenta). Nucleus were visualized using DAPI.



Western blot - Anti-CD22 (phospho Y822) antibody [Y506] - BSA and Azide free (ab284667)

CD22 (phospho Y822) Western blot staining using rabbit Anti-CD22 (phospho Y822) antibody

This data was developed using ab32123, the same antibody clone in a different buffer formulation.

Blocking and diluting buffer and concentration: 5% NFDM/TBST.
ab181602 was used as GAPDH loading control.
All lanes:
Western blot - Anti-CD22 (phospho Y822) antibody [Y506] (ab32123) at 1/1000 dilution

Lane 1:
Untreated Ramos (Human Burkitt's lymphoma B lymphocyte) whole cell lysate at 15 µg

Lane 2:
Ramos treated with 1mM pervanadate for 30min whole cell lysate at 15 µg

Lane 3:
Ramos treated with 1mM pervanadate for 30min whole cell lysate. Then the membrane was incubated with alkaline phosphatase at 15 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 150 kDa

Exposure time: 3s

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.