abcam

ab269710

Anti-CD5 antibody [B-B8] - BSA and Azide free

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 7.3 - 7.5 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Cell preparation containing CD5 protein. The exact immunogen used to generate this antibody is proprietary information. Database link P06127
Carrier free	Yes
Clone number	B-B8
Purification technique	Ion exchange chromatography
Specificity	Recognises CD5.
Light chain type	kappa

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	10 µL for 10^6 Cells

Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

Target data

See full target information CD5

Function	Lymphoid-specific receptor expressed by all T-cells and in a subset of B-cells known as B1a cells. Plays a role in the regulation of TCR and BCR signaling, thymocyte selection, T-cell effector differentiation and immune tolerance. Acts by interacting with several ligands expressed on B-cells such as CD5L or CD72 and thereby plays an important role in contact-mediated, T-dependent B-cell activation and in the maintenance of regulatory T and B-cell homeostasis. Functions as a negative regulator of TCR signaling during thymocyte development by associating with several signaling proteins including LCK, CD3Z chain, PI3K or CBL (PubMed:1384049, PubMed:1385158). Mechanistically, co-engagement of CD3 with CD5 enhances phosphorylated CBL recruitment leading to increased VAV1 phosphorylation and degradation (PubMed:23376399). Modulates B-cell biology through ERK1/2 activation in a Ca(2+)-dependent pathway via the non-selective Ca(2+) channel TRPC1, leading to IL-10 production (PubMed:27499044).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

ab269710 is a carrier free version of ab27371.

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.

Supplementary info

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

Activity summary	CD5 also known as T1 or Leu-1 is a glycoprotein with a molecular mass of approximately 67 kDa. It is expressed mainly on the surface of T cells and a subset of B cells. CD5 plays a major role in the regulation of immune responses. It functions by modulating T-cell receptor (TCR) signaling often acting as a negative regulator to prevent excessive immune activation. Researchers often utilize CD5 antibodies such as those conjugated with PerCP for immunohistochemistry (IHC) to study this protein's expression and distribution.
Biological function summary	CD5 is essential in the immune system's ability to maintain tolerance to self-antigens thereby preventing autoimmune responses. CD5 forms part of a receptor complex on the cell surface that interacts with ligands and other receptors to fine-tune immune cell signaling. Its localization and function in T cells relate closely to its ability to modulate signaling pathways essential for cell survival and proliferation. This modulation is important for ensuring that immune responses are appropriate to the stimuli encountered.
Pathways	CD5 is involved in signal transduction processes important for immune tolerance and modulation. It intersects with pathways like the T cell receptor (TCR) signaling pathway and the NF-kB signaling pathway. These pathways involve interaction with proteins like Zap70 a tyrosine kinase related to TCR signaling and the downstream activation of transcription factors that regulate immune responses. The protein CRIS1 also appears in some pathway interactions highlighting the interconnected nature of immune regulatory proteins.
Associated diseases and disorders	CD5 has significant associations with autoimmune diseases such as systemic lupus erythematosus (SLE) where its modulatory role can affect autoantibody production. Additionally CD5 in conjunction with proteins like OX19 correlates with certain lymphoproliferative disorders including chronic lymphocytic leukemia (CLL). In these disorders the expression and function of CD5 may impact disease progression and patient response to therapy making it a potential target for intervention in immune-related conditions.

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.

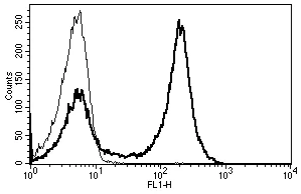
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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1 product image



Flow Cytometry - Anti-CD5 antibody [B-B8] - BSA and Azide free (ab269710)

CD5 Flow Cytometry staining using mouse Anti-CD5 antibody

ab27371, at a dilution of 10µl for 10^6 cells or 100 µl of whole blood, staining CD5 by Flow Cytometry.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab27371).

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