abcam

ab288659

Alexa Fluor® 488 Anti-CD72 antibody [3F3]

Anti-CD72 antibody [3F3] conjugated to Alexa Fluor® 488 - suitable for flow cytometry, and reacts with human samples. Clone [3F3] is a mouse monoclonal antibody cited in 6 publications.

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Key facts

Isotype	IgG2b
Host species	Mouse
Conjugation	Alexa Fluor® 488
Excitation/Emission	Ex: 495nm, Em: 519nm
Storage buffer	pH: 7.4 Preservative: 0.098% Sodium azide Constituents: PBS, 0.2% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	Cell preparation containing CD72 protein. The exact immunogen used to generate this antibody is proprietary information. Database link P21854
Clone number	3F3
Purification technique	Size-exclusion chromatography
Specificity	The mouse monoclonal antibody 3F3 recognizes an extracellular epitope of CD72, a 39-43 kDa type II membrane glycoprotein (C-type lectin family). CD72 is a pan-B cell marker expressed throughout the B lymphocytes diferentiation with the exception of plasma cells; it is also present on follicular dendritic cells.

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	-
Notes	-

Target data

See full target information CD72

Function	Co-receptor of B cell receptor (BCR) that plays both positive and negative roles on B-cell functions. Recognizes the Sm/ribonucleoprotein (RNP) self-antigen ligand, and coligation of CD72 and BCR inhibits BCR signaling. Mechanistically, ligand binding leads to the recruitment of PTPN6/SHP-1 to the BCR complex which is inhibitory to BCR signaling. Also acts as a ligand for CD5 and thereby plays a critical role in maintaining regulatory T and B-cell homeostasis.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Store in the dark

Supplementary info

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

Activity summary	CD72 also known as Lyb-2 is a membrane protein with a molecular weight of approximately 45-50 kDa. It is part of the C-type lectin family and expresses mainly on B cells. CD72 serves as a receptor and recognizes ligands to mediate cell signaling. The protein is also present in some myeloid cells contributing to its diverse roles in the immune system. The function of CD72 involves the modulation of B cell receptor (BCR) signaling which is important for B cell development and activation.

Biological function summary	CD72 functions as a regulatory protein that influences B cell activity by modulating BCR signaling thresholds. CD72 is part of receptor-ligand complexes on the B cell surface. It operates alongside other proteins like CD5 and SHP-1 to fine-tune immune responses. By interacting with these proteins CD72 helps in maintaining immune balance and prevents overactivation that can lead to autoimmune reactions. This protein modulates both positive and negative signaling affecting B cell survival and differentiation.
Pathways	CD72 influences immune response pathways specifically the BCR signaling pathway and the downstream PI3K-Akt pathway. As a negative regulator CD72 works in tandem with proteins such as Lyn and SHP-1 to attenuate BCR signal transduction. These signaling cascades play a role in immune responses lymphocyte development and adaptation. The involvement of CD72 in these pathways illustrates its function in balancing the intensity of signals received by B cells ultimately affecting immune response outcomes.
Associated diseases and disorders	CD72 dysregulation has been linked to systemic lupus erythematosus (SLE) and certain lymphomas. Abnormal expression or function of CD72 can lead to improper B cell activation contributing to autoimmune conditions like SLE. In these diseases CD72 interaction with proteins such as SHP-1 and CD22 becomes disrupted affecting immune tolerance and promoting pathological immune responses. Additionally altered CD72 expression or mutations have been observed in B cell malignancies indicating its role in the pathology of these disorders.

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

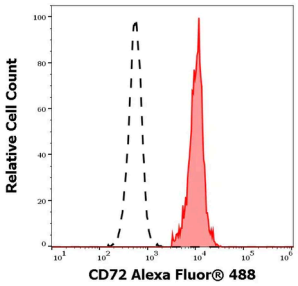
We do not recommend this combination. It is not covered by our product promise.

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.

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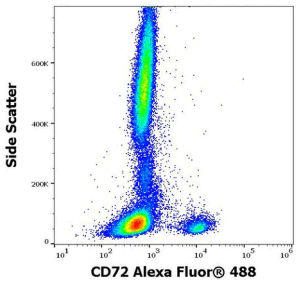
2 product images



Flow Cytometry - Alexa Fluor® 488 Anti-CD72 antibody [3F3] (ab288659)

CD72 Flow Cytometry staining using mouse Anti-CD72 antibody

Separation of human CD72 positive lymphocytes (red-filled) from CD72 negative lymphocytes (black-dashed) in flow cytometry analysis (surface staining) of human peripheral whole blood stained using ab288659 (4 µl reagent / 100 µl of peripheral whole blood).



Flow Cytometry - Alexa Fluor® 488 Anti-CD72 antibody [3F3] (ab288659)

CD72 Flow Cytometry staining using mouse Anti-CD72 antibody

Flow cytometry surface staining pattern of human peripheral whole blood stained using ab288659 (4 µl reagent / 100 µl of peripheral whole blood).

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