abcam

ab28112

FITC Anti-CD55 antibody [MEM-118]

Anti-CD55 antibody [MEM-118] conjugated to FITC - suitable for flow cytometry, and reacts with human samples. Clone [MEM-118] is a mouse monoclonal antibody cited in 2 publications.

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Key facts

Isotype	IgM
Host species	Mouse
Conjugation	FITC
Excitation/Emission	Ex: 495nm, Em: 519nm
Storage buffer	pH: 8 Preservative: 0.097% Sodium azide Constituents: Tris buffered saline, 0.2% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	Cell preparation containing CD55 protein. The exact immunogen used to generate this antibody is proprietary information. Database link P08174
Clone number	MEM-118
Purity	IgM fraction
Specificity	ab28112 recognizes an epitope in SCR4 domain of CD55 antigen (Decay accelerating factor).

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	10 µL for 10^6 Cells
Notes	ab91546 - Mouse monoclonal IgM, is suitable for use as an isotype control with this antibody.

Predicted

Species	Primates
Dilution info	-
Notes	-

Target data

See full target information CD55

Function This protein recognizes C4b and C3b fragments that condense with cell-surface hydroxyl or amino groups when nascent C4b and C3b are locally generated during C4 and c3 activation. Interaction of daf with cell-associated C4b and C3b polypeptides interferes with their ability to catalyze the conversion of C2 and factor B to enzymatically active C2a and Bb and thereby prevents the formation of C4b2a and C3bBb, the amplification convertases of the complement cascade (PubMed:7525274). Inhibits complement activation by destabilizing and preventing the formation of C3 and C5 convertases, which prevents complement damage (PubMed:28657829). (Microbial infection) Acts as a receptor for Coxsackievirus A21, coxsackieviruses B1, B3 and B5. (Microbial infection) Acts as a receptor for Human enterovirus 70 and D68 (Probable). (Microbial infection) Acts as a receptor for Human echoviruses 6, 7, 11, 12, 20 and 21.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C

Notes

The purified antibody is conjugated with Fluorescein isothiocyanate (FITC) under optimum conditions. The reagent is free of unconjugated FITC and adjusted for direct use.

Supplementary info

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

Activity summary	CD55 also known as Decay-Accelerating Factor (DAF) is a glycoprotein that regulates the complement cascade. This protein typically weighs around 70 kDa. It is expressed in many cells including epithelial and endothelial cells and is often present on the surface of blood cells. CD55 plays an important role in protecting cells against lysis by inhibiting the formation and stability of C3 and C5 convertases which ultimately prevent cell destruction by the complement system.
Biological function summary	CD55 helps maintain immune homeostasis by preventing the complement-mediated damage to host tissues. It functions as a member of the regulators of complement activation (RCA) family. While not necessarily part of a larger protein complex its function is related to other regulatory proteins such as CD46 and CD59 which cooperate to regulate complement activity. The DAF protein's immunology function is instrumental in ensuring that self-cells are not inadvertently attacked by the body's immune system.
Pathways	CD55 significantly impacts the complement pathway which is a central component of the innate immune system. It directly interacts with complement components C3 and C5 accelerating their decay and disassembly. Through this pathway CD55 has a working relationship with other complement regulatory proteins like Factor H which also aids in controlling complement activation on the cell surface.
Associated diseases and disorders	A dysfunctional CD55 can relate to conditions such as paroxysmal nocturnal hemoglobinuria (PNH) and atypical hemolytic uremic syndrome (aHUS). In PNH the absence or insufficiency of CD55 (and CD59) on red blood cells leads to complement-mediated lysis causing hemolytic anemia. In aHUS impaired regulation of the complement system including abnormalities in CD55 function exacerbates symptoms. CD55's role is therefore important in preventing these complement-related disorders and preserving cellular integrity in the human body.

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

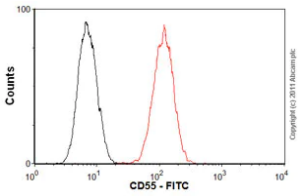
We do not recommend this combination. It is not covered by our product promise.

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

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1 product image



Flow Cytometry - FITC Anti-CD55 antibody [MEM-118] (ab28112)

CD55 Flow Cytometry staining using mouse Anti-CD55 antibody

Overlay histogram showing THP1 cells stained with ab28112 (red line). The cells were fixed with 80% methanol (5 min) and incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab28112, 10µl/1x10^6 cells) for 30 min at 22°C. Isotype control antibody (black line) was mouse IgM (FITC) (ab91546, 10µl/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in THP1 cells fixed with 4% paraformaldehyde (10 min) used under the same conditions.
Please note that Abcam do not have any data for use of this antibody on non-fixed cells. We welcome any customer feedback.

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