abcam

ab276037

Anti-CD55 antibody [076] - BSA and Azide free

Recombinant

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Fragment Protein within Mouse Cd55 aa 1 to C-terminus. The exact immunogen used to generate this antibody is proprietary information. Database link Q61475
Carrier free	Yes
Clone number	076
Purification technique	Affinity purification Protein A

Reactivity data

ICC

Tested

Species	Mouse
Dilution info	1/20 - 1/100
Notes	-

Flow Cyt

Tested

Species	Mouse
Dilution info	1/25 - 1/100
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. Inhibits complement activation by destabilizing and preventing the formation of C3 and C5 convertases, which prevents complement damage.

Storage

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

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

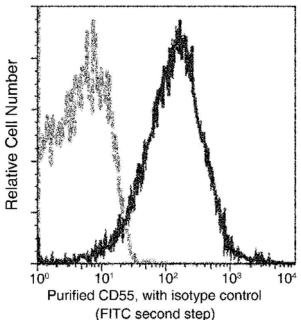
We do not recommend this combination. It is not covered by our product promise.

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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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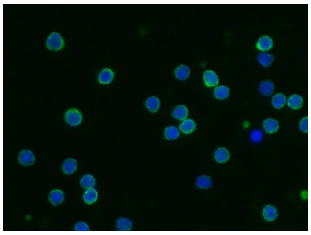
2 product images



Flow Cytometry - Anti-CD55 antibody [076] - BSA and Azide free (ab276037)

CD55 Flow Cytometry staining using rabbit Anti-CD55 antibody

Flow cytometric analysis of CD55 expression on BABL/c splenocytes. Cells were stained with ab276037 at 1/25 dilution (Black) or an isotype control (Grey), then a FITC-conjugated second step antibody. The fluorescence histograms were derived from gated events with the forward and side light-scatter characteristics of intact cells.



Immunocytochemistry - Anti-CD55 antibody [076] - BSA and Azide free (ab276037)

CD55 Immunocytochemistry staining using rabbit Anti-CD55 antibody

Immunofluorescence staining of CD55 in mouse splenocytes. Cells were fixed with 4% PFA, blocked with 10% serum, and incubated with ab276037 at 1/60 dilution at 4° C overnight. Then cells were stained with an AlexaFluor® 488-conjugated Goat Anti-rabbit IgG secondary antibody (green) and counterstained with DAPI (blue).

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