abcam

ab180546

Anti-CD55 antibody [3D5]

Key facts

Isotype	IgG2a
Host species	Rat
Storage buffer	Preservative: 0.02% Sodium azide Constituents: PBS, 0.1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	Cell preparation containing Cd55b protein. The exact immunogen used to generate this antibody is proprietary information. Database link Q61476
Clone number	3D5
Purification technique	Affinity purification Protein G
Concentration	0.1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Expected

Species	Mouse
Dilution info	-
Notes	ab18450 - Rat monoclonal IgG2a, is suitable for use as an isotype control with this antibody.

WB

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
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 duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

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.

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.

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