abcam

ab117579

Anti-C5a-R antibody [10/92]

Recombinant

Key facts

Isotype	IgG2a
Host species	Rat
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	Cell preparation containing C5ar1 protein. The exact immunogen used to generate this antibody is proprietary information. Database link P30993
Clone number	10/92
Purification technique	Ion exchange chromatography
Concentration	0.865 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Mouse
Dilution info	1/500
Notes	-

Flow Cyt

Tested

Species	Mouse
Dilution info	1/100
Notes	-

Target data

See full target information C5ar1

Function	Receptor for the chemotactic and inflammatory peptide anaphylatoxin C5a, stimulating chemotaxis, granule enzyme release, intracellular calcium release and superoxide anion production (PubMed:37852260). Ligand binding causes a conformation change that triggers signaling via guanine nucleotide-binding proteins (G proteins) and modulates the activity of downstream effectors, such as adenylate cyclase (PubMed:37852260). C5AR1 is coupled to G(i)/G(o) (GNAI1 or GNAO1) G alpha proteins and mediates inhibition of adenylate cyclase (PubMed:37852260). The ligand interacts with at least two sites on the receptor: a high-affinity site on the extracellular N-terminus, and a second site in the transmembrane region which activates downstream signaling events (By similarity).

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

Notes

The production method has been switched from hybridoma to recombinant on 24th Oct 2025.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Supplementary info

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

Activity summary	C5a-R also known as CD88 or C5aR1 is a protein found primarily on the surface of immune cells like macrophages and neutrophils. Its mass is approximately 45 kDa. C5a-R functions as a G protein-coupled receptor (GPCR) and binds the complement component C5a a powerful inflammatory peptide. The receptor is expressed in various tissues but primarily in the immune system where it plays a significant role in immune responses and inflammatory processes.
Biological function summary	C5a-R functions as a mediator of inflammation and immune responses. It is a part of the complement system a complex of proteins involved in innate immunity. Upon binding to C5a this receptor initiates a signaling cascade that leads to the recruitment and activation of immune cells at sites of inflammation. It amplifies the inflammatory response leading to cell chemotaxis degranulation and the production of pro-inflammatory cytokines.
Pathways	C5a-R plays an important role in the complement and immune pathways. It interacts closely with the C5 protein which is a core component of the complement pathway. This receptor also connects to other immune system proteins such as the C3 and C4 proteins through the cascade. Together these interactions help defend against pathogenic infections and maintain immune homeostasis.
Associated diseases and disorders	C5a-R is associated with conditions like rheumatoid arthritis and sepsis. In rheumatoid arthritis the receptor's activation by C5a contributes to chronic inflammation and joint damage. During sepsis overactivation of C5a-R can lead to excessive inflammation and tissue damage. The receptor's involvement in these diseases is often linked with other proteins in the complement system such as C3a and C4a which also play roles in modulating inflammation and immune responses.

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.

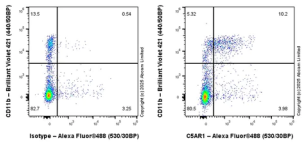
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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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3 product images

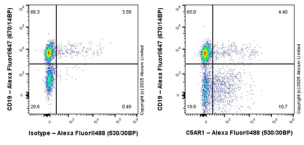


Flow Cytometry - Anti-C5a-R antibody [10/92] (ab117579)

C5a-R Flow Cytometry staining of Mouse PBMCs (mouse primary peripheral blood mononuclear cells) cells using rat Anti-C5a-R antibody

Flow cytometric analysis of Mouse PBMCs (mouse primary peripheral blood mononuclear cells) cells labelling C5a-R with ab117579 at 1/50 dilution (0.1ug) / Right compared with a Rat monoclonal IgG / Left isotype control.

Goat F(ab)2 Anti-Rat IgG Fc (Alexa Fluor® 488, ab150161) was used as a secondary at a 1/5000 dilution.
Gated on viable cells.
Cells were co-stained with anti mouse CD11b conjugated to Brilliant Violet 421.

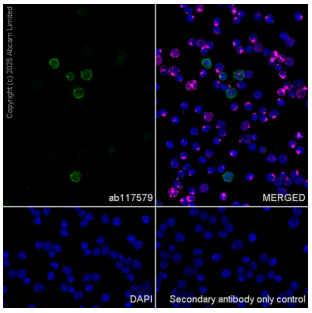


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Goat F(ab)2 Anti-Rat IgG Fc (Alexa Fluor® 488, ab150161) was used as a secondary at a 1/5000 dilution.
Gated on viable cells.
Cells were co-stained with anti mouse CD19 conjugated to Alexa Fluor®647.



Immunocytochemistry/ Immunofluorescence - Anti-C5a-R antibody [10/92] (ab117579)

C5a-R Immunocytochemistry/ Immunofluorescence staining of Mouse PBMC (mouse primary peripheral blood mononuclear cell) using rat Anti-C5a-R antibody

Immunofluorescent analysis of 4% Paraformaldehyde fixed, 0.1% Triton X-100 permeabilized Mouse PBMC (mouse primary peripheral blood mononuclear cell) cells with ab117579 at 1/500 dilution followed by ab150157 Goat Anti-Rat IgG H&L (Alexa Fluor® 488) antibody at 1/1000 dilution (Green). ab206369 Anti-beta Tubulin rabbit monoclonal antibody (Alexa Fluor® 594) was used for counterstain at a 1/200 dilution (Magenta).
Confocal image showing membranous and cytoplasmic staining in subsets of mouse PBMCs (shown in green). The counterstain was observed in magenta. Nuclear DNA was labelled with DAPI (shown in blue). Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

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