abcam

ab314955

APC Anti-C5a-R antibody [EPR23278-117]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	APC
Excitation/Emission	Ex: 650nm, Em: 660nm
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR23278-117
Purification technique	Affinity purification Protein A
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	1/500

Notes	-

ICC/IF

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-P

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
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:10636859, PubMed:15153520, PubMed:1847994, PubMed:29300009, PubMed:36806352, PubMed:7622471, PubMed:8182049, PubMed:9553099). 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:36806352, PubMed:37852260). C5AR1 is coupled to G(i)/G(o) (GNAI1 or GNAO1) G alpha proteins and mediates inhibition of adenylate cyclase (PubMed:36806352, 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 (PubMed:7622471, PubMed:8182049, PubMed:9553099).

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	+4°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle, Store in the dark

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

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

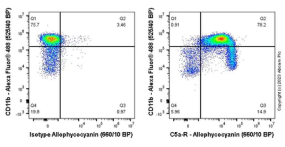
We do not recommend this combination. It is not covered by our product promise.

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.

1 product image



Flow Cytometry - APC Anti-C5a-R antibody [EPR23278-117] (ab314955)

C5a-R Flow Cytometry staining of Human peripheral blood mononuclear cells (PBMCs) using rabbit Anti-C5a-R antibody

Flow cytometry staining of human peripheral blood mononuclear cells (PBMCs) with ab314955 (right) or APC Rabbit IgG, monoclonal [EPR25A] - Isotype Control (left). PBMCs were incubated for 30 min on ice in 1x PBS containing 10 µg/ml human IgG and 10 % normal goat serum to block FC receptors and non-specific protein-protein interaction followed by the antibody ab314955 or APC Rabbit IgG, monoclonal [EPR25A] - Isotype Control (1x 10^6in 100 µl at 1.0 µg/ml (1/500)) for 30min on ice. The cells were simultaneously stained with CD11b.

Acquisition of >30000 events were collected using a 40 mW Red laser (638nm) and 660/10 bandpass filter. Events were gated on viable cells.

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