abcam

ab24036

Anti-C5a-R antibody [P12/1]

Key facts

Isotype	IgG2a
Host species	Mouse
Storage buffer	pH: 7.3 Preservative: 0.09% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Synthetic Peptide within Human C5AR1 aa 1-50. The exact immunogen used to generate this antibody is proprietary information. Database link P21730
Clone number	P12/1
Purification technique	Affinity purification
Specificity	No P12/1 signal after pre-incubation of HMC-1 cells with C5a, meaning that P12/1 does not displace C5a.
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Expected

Species	Human
Dilution info	1 mg/mL
Notes	-

Species	Rhesus monkey
Dilution info	1 mg/mL
Notes	-

IHC-P

Expected

Species	Human
Dilution info	1 mg/mL
Notes	-

Species	Rhesus monkey
Dilution info	1 mg/mL
Notes	-

IHC-Fr

Expected

Species	Human
Dilution info	1 mg/mL
Notes	-

Species	Rhesus monkey
Dilution info	1 mg/mL
Notes	-

Flow Cyt

Expected

Species	Human
Dilution info	1 mg/mL
Notes	-

Species	Rhesus monkey

Dilution info	1 mg/mL
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	-20°C
Aliquoting information	Upon delivery aliquot

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.

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Terms & Conditions.

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