abcam

ab247391

Anti-C1QC antibody [EPR2984Y] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR2984Y
Purification technique	Affinity purification Protein A
Concentration	1.039 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Not recommended

Species	Human
Dilution info	-

Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Target data

See full target information C1QC

Function

Core component of the complement C1 complex, a multiprotein complex that initiates the classical pathway of the complement system, a cascade of proteins that leads to phagocytosis and breakdown of pathogens and signaling that strengthens the adaptive immune system (PubMed:12847249, PubMed:19006321, PubMed:24626930, PubMed:29449492, PubMed:3258649, PubMed:34155115, PubMed:6249812, PubMed:6776418). The classical complement pathway is initiated by the C1Q subcomplex of the C1 complex, which specifically binds IgG or IgM immunoglobulins complexed with antigens, forming antigen-antibody complexes on the surface of pathogens: C1QA, together with C1QB and C1QC, specifically recognizes and binds the Fc regions of IgG or IgM via its C1q domain (PubMed:12847249, PubMed:19006321, PubMed:24626930, PubMed:29449492, PubMed:3258649, PubMed:6776418). Immunoglobulin-binding activates the proenzyme C1R, which cleaves C1S, initiating the proteolytic cascade of the complement system (PubMed:29449492). The C1Q subcomplex is activated by a hexamer of IgG complexed with antigens, while it is activated by a pentameric IgM (PubMed:19706439, PubMed:24626930, PubMed:29449492). The C1Q subcomplex also recognizes and binds phosphatidylserine exposed on the surface of cells undergoing programmed cell death, possibly promoting activation of the complement system (PubMed:18250442).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab247391 is the carrier-free version of ab75756.

Species reactivity

Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

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.

Conjugation ready

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility

This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

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

Activity summary	C1QC also known as complement component C1q subcomponent subunit C serves a mechanical role in the immune system. The C1QC protein with a molecular mass of about 26 kDa is primarily expressed in immune cells such as macrophages and

	dendritic cells. C1QC is part of the C1 complex which consists of C1q C1r and C1s subcomponents. This complex initiates the classical complement pathway by recognizing and binding to pathogens or apoptotic cells leading to their clearance from the body.
Biological function summary	C1QC is important for recognizing pathogens and apoptotic cells. C1QC is a part of the larger C1 complex essential for immune response effectiveness. By binding to surface molecules on pathogens C1QC triggers a cascade of events that promote cell lysis or phagocytosis. This protein by facilitating immune complex clearance also helps maintain tissue homeostasis and contributes to protection against infections.
Pathways	C1QC plays important roles in the classical complement pathway. Once C1QC identifies a target it activates C1r and C1s initiating a series of proteolytic interactions that result in the formation of the membrane attack complex. Additionally C1QC interacts with proteins like mannose-binding lectin in related pathways linking innate immunity components and further enhancing the body's defense mechanisms.
Associated diseases and disorders	C1QC has connections to systemic lupus erythematosus (SLE) and Alzheimer's disease. Deficiencies or dysregulation of C1QC could lead to autoimmune conditions like SLE where the body attacks its own tissues due to inadequate clearance of apoptotic cells. In Alzheimer's disease impaired C1QC function may affect amyloid-beta clearance which is important for preventing neuronal damage. When discussing C1QC's connections with other proteins the interaction with C1QA and C1QB within the C1 complex is significant in these disorders.

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

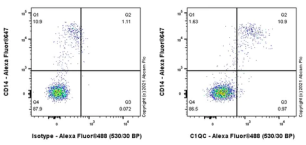
We do not recommend this combination. It is not covered by our product promise.

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.

2 product images

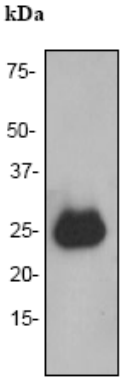


Flow Cytometry (Intracellular) - Anti-C1QC antibody [EPR2984Y] - BSA and Azide free (ab247391)

C1QC Flow Cytometry (Intracellular) staining using rabbit Anti-C1QC antibody

This data was developed using ab75756, the same antibody clone in a different buffer formulation.

Flow Cytometry analysis of Human Peripheral Blood Mononuclear Cell (PBMC) cells labeling C1QC with purified ab75756 at 1/100 dilution (10 µg/mL) (Red). Cells were fixed with 2% Paraformaldehyde and permeabilised with 0.1% Tween-20. A Goat anti rabbit IgG (Alexa Fluor® 488, ab150081) secondary antibody was used at 1/2000. Isotype control - Rabbit monoclonal IgG (Left).



Western blot - Anti-C1QC antibody [EPR2984Y] - BSA and Azide free (ab247391)

C1QC Western blot staining of human plasma lysate using rabbit Anti-C1QC antibody

This data was developed using ab75756, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-C1QC antibody [EPR2984Y] (ab75756) at 1/1000 dilution

All lanes:
human plasma lysate at 10 µg

Secondary

All lanes:
goat anti-rabbit HRP at 1/2000 dilution

Predicted band size: 25 kDa

Observed band size: 26 kDa

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