abcam

Product datasheet

Anti-C4a antibody ab87429

1 References 1 Image

Overview

Product name	Anti-C4a antibody
Description	Rabbit polyclonal to C4a
Host species	Rabbit
Tested applications	**Suitable for:** WB
Species reactivity	**Reacts with:** Human
Immunogen	Synthetic peptide corresponding to Human C4a aa 700-800 conjugated to keyhole limpet haemocyanin. (Peptide available as ab87430)
Positive control	This antibody gave a positive signal in the Human plasma total protein

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.02% Sodium Azide Constituents: 1% BSA, PBS, pH 7.4
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

Our Abpromise guarantee covers the use of **ab87429** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes

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WB		Use a concentration of 2 µg/ml. Detects a band of approximately 95 kDa (predicted molecular weight: 193 kDa). Complement C4-A circulates in blood as a disulphide linked trimer of an alpha, beta and gamma chain (95, 75 and 33 kDa respectively). Our immunogen sequence is within the region corresponding to the alpha chain (95 kDa).

Target

Function

C4 plays a central role in the activation of the classical pathway of the complement system. It is processed by activated C1 which removes from the alpha chain the C4a anaphylatoxin. The remaining alpha chain fragment C4b is the major activation product and is an essential subunit of the C3 convertase (C4b2a) and the C5 convertase (C3bC4b2a) enzymes of the classical complement pathway.
Derived from proteolytic degradation of complement C4, C4a anaphylatoxin is a mediator of local inflammatory process. It induces the contraction of smooth muscle, increases vascular permeability and causes histamine release from mast cells and basophilic leukocytes.

Involvement in disease

Defects in C4A are the cause of complement component 4A deficiency (C4AD) [MIM:120810]. A rare defect of the complement classical pathway associated with the development of autoimmune disorders, mainly systemic lupus with or without associated glomerulonephritis.

Sequence similarities

Contains 1 anaphylatoxin-like domain.
Contains 1 NTR domain.

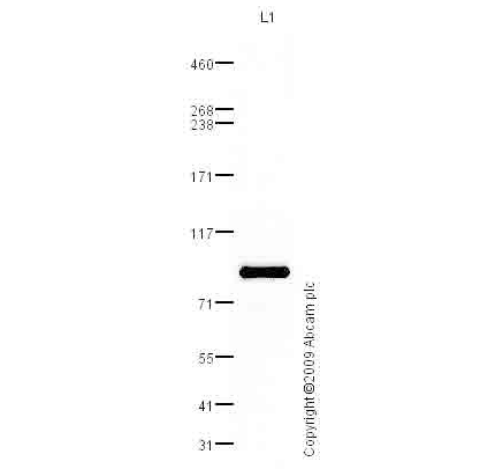
Post-translational modifications

Prior to secretion, the single-chain precursor is enzymatically cleaved to yield the non-identical chains (alpha, beta and gamma). During activation, the alpha chain is cleaved by C1 into C4a and C4b, and C4b stays linked to the beta and gamma chains. Further degradation of C4b by C1 into the inactive fragments C4c and C4d blocks the generation of C3 convertase.
N- and O-glycosylated. O-glycosylated with a core 1 or possibly core 8 glycan.

Cellular localization

Secreted.

Images



Western blot - Anti-C4a antibody (ab87429)

Anti-C4a antibody (ab87429) at 2 µg/ml + Human Plasma Total Protein Lysate at 20 µg

Secondary

Goat polyclonal to Rabbit IgG - H&L - Pre-Adsorbed (HRP) at 1/3000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 193 kDa
Observed band size: 95 kDa

why is the actual band size different from the predicted?

Exposure time: 2 minutes

Complement C4-A circulates in blood as a disulphide linked trimer of an alpha, beta and gamma chain (95, 75 and 33 kDa respectively). Our immunogen sequence is within the region corresponding to the alpha chain (95 kDa).

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