

## Product datasheet

### Anti-C4α antibody [EPR10143] ab170942

Recombinant RabMAb

[1 References](#) [8 Images](#)

#### Overview

<b>Product name</b>	Anti-C4a antibody [EPR10143]
<b>Description</b>	Rabbit monoclonal [EPR10143] to C4a
<b>Host species</b>	Rabbit
<b>Specificity</b>	The immunogen used for this product shares 97% homology with C4b. Cross-reactivity with this protein has not been confirmed experimentally.
<b>Tested applications</b>	<b>Suitable for:</b> Flow Cyt (Intra), IHC-P, WB <b>Unsuitable for:</b> ICC/IF or IP
<b>Species reactivity</b>	<b>Reacts with:</b> Human
<b>Immunogen</b>	Recombinant fragment within Human C4a aa 900-1250. The exact sequence is proprietary. Database link: <a href="#">P0C0L4</a>
<b>Positive control</b>	HepG2 cell lysate; Human colon and stomach tissues; HepG2 cells.
<b>General notes</b>	This product is a recombinant monoclonal antibody, which offers several advantages including: <ul style="list-style-type: none"> <li>- High batch-to-batch consistency and reproducibility</li> <li>- Improved sensitivity and specificity</li> <li>- Long-term security of supply</li> <li>- Animal-free production</li> </ul> For more information <a href="#">see here</a> . Our RabMAb <sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMAb<sup>®</sup> patents</a> .

#### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
<b>Storage buffer</b>	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: 9% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA, 50% Tissue culture supernatant
<b>Purity</b>	Protein A purified

<b>Clonality</b>	Monoclonal
<b>Clone number</b>	EPR10143
<b>Isotype</b>	IgG

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab170942 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

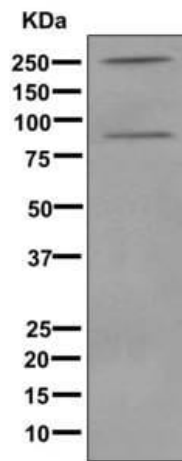
Application	Abreviews	Notes
<b>Flow Cyt (Intra)</b>		1/10 - 1/100. <b>ab172730</b> - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.
<b>IHC-P</b>		1/250 - 1/500. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
<b>WB</b>		1/1000 - 1/5000. Predicted molecular weight: 193 kDa.

**Application notes** Is unsuitable for ICC/IF or IP.

## Target

<b>Function</b>	<p>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.</p> <p>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.</p>
<b>Involvement in disease</b>	<p>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.</p>
<b>Sequence similarities</b>	<p>Contains 1 anaphylatoxin-like domain.</p> <p>Contains 1 NTR domain.</p>
<b>Post-translational modifications</b>	<p>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.</p> <p>N- and O-glycosylated. O-glycosylated with a core 1 or possibly core 8 glycan.</p>
<b>Cellular localization</b>	Secreted.

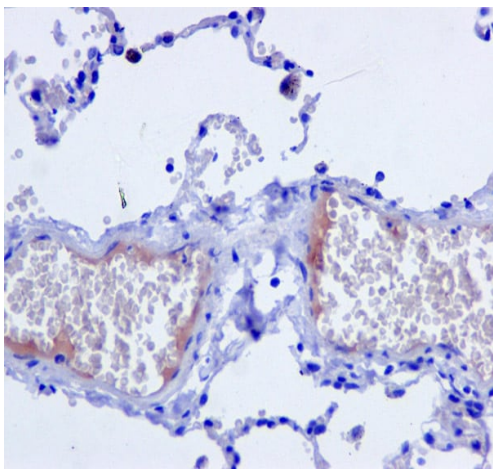
## Images



Western blot - Anti-C4a antibody [EPR10143]  
(ab170942)

Anti-C4a antibody [EPR10143] (ab170942) at 1/1000 dilution +  
HepG2 cell lysate at 10 µg

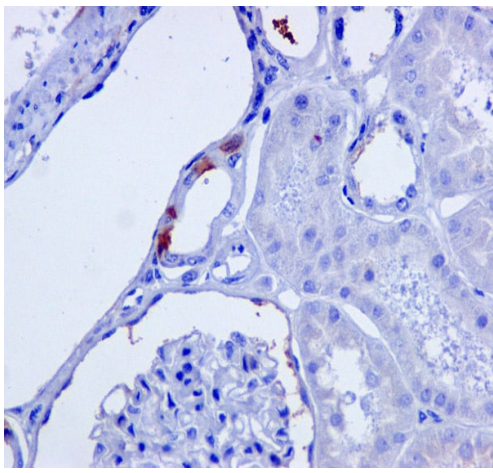
**Predicted band size:** 193 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-  
embedded sections) - Anti-C4a antibody  
[EPR10143] (ab170942)

ab170942 showing +ve staining in Human normal lung tissue.

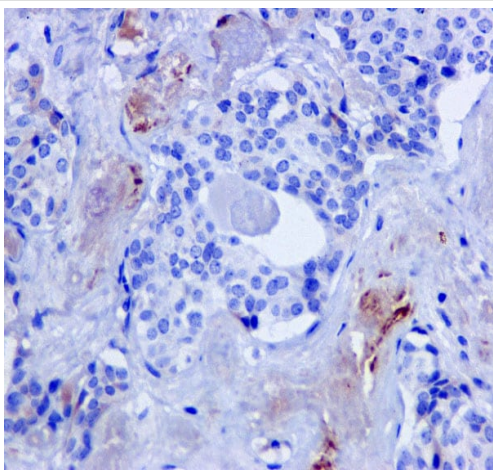
Perform heat mediated antigen retrieval with citrate buffer pH 6  
before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-C4a antibody  
[EPR10143] (ab170942)

ab170942 showing +ve staining in Human normal kidney tissue.

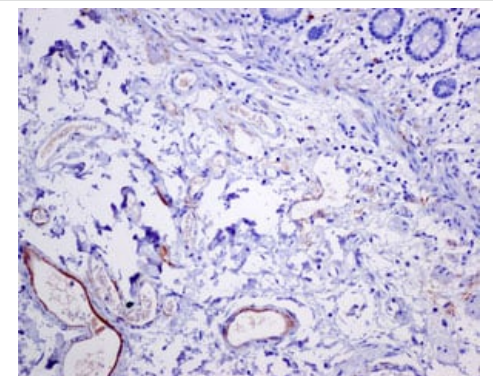
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-C4a antibody  
[EPR10143] (ab170942)

ab170942 showing +ve staining in Human thyroid gland carcinoma tissue.

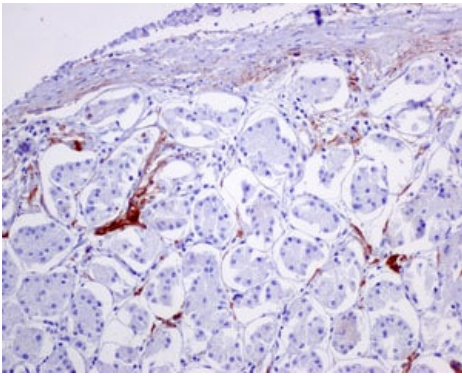
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-C4a antibody  
[EPR10143] (ab170942)

Immunohistochemical analysis of paraffin-embedded Human colon tissue labeling C4a with ab170942 at 1/250 dilution.

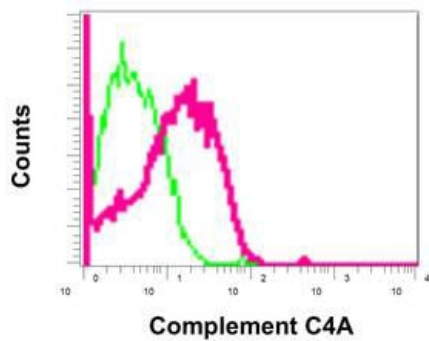
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-C4a antibody  
[EPR10143] (ab170942)

Immunohistochemical analysis of paraffin-embedded Human stomach tissue labeling C4a with ab170942 at 1/250 dilution.

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-C4a antibody  
[EPR10143] (ab170942)

Intracellular flow cytometric analysis of permeabilized HepG2 cells labeling C4a using ab170942 (red) at 1/10 dilution or a rabbit IgG (negative) (green).

### Why choose a recombinant antibody?



Anti-C4a antibody [EPR10143] (ab170942)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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