

### Anti-C3 antibody ab97462

★★★★★ [1 Abreviews](#) [16 References](#) [7 Images](#)

#### Overview

Product name	Anti-C3 antibody
Description	Rabbit polyclonal to C3
Host species	Rabbit
Tested applications	<b>Suitable for:</b> IHC-P, IP, WB, ICC/IF
Species reactivity	<b>Reacts with:</b> Mouse, Human
Immunogen	Recombinant fragment, corresponding to a region within amino acids 1498 - 1625 of Human C3.
Positive control	WB: HepG2 and Huh7 whole cell lysate. ICC/IF: HeLa cells. IHC: H1299 xenograft tissue; mouse brain tissue. IP: HepG2 whole cell extract.
General notes	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&amp;As</p>

#### Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid repeated freeze / thaw cycles.
Storage buffer	pH: 7.00 Preservative: 0.025% Proclin 300 Constituents: 78% PBS, 1% BSA, 20% Glycerol (glycerin, glycerine)
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

#### Applications

The **Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab97462 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
IHC-P	★★★★★ (1)	1/100 - 1/1000.
IP		1/100 - 1/500.
WB		1/500 - 1/3000. Predicted molecular weight: 187 kDa.
ICC/IF		1/100 - 1/1000.

## Target

### Function

C3 plays a central role in the activation of the complement system. Its processing by C3 convertase is the central reaction in both classical and alternative complement pathways. After activation C3b can bind covalently, via its reactive thioester, to cell surface carbohydrates or immune aggregates.

Derived from proteolytic degradation of complement C3, C3a 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.

### Tissue specificity

Plasma.

### Involvement in disease

Defects in C3 are the cause of complement component 3 deficiency (C3D) [MIM:120700]. A rare defect of the complement classical pathway. Patients develop recurrent, severe, pyogenic infections because of ineffective opsonization of pathogens. Some patients may also develop autoimmune disorders, such as arthralgia and vasculitic rashes, lupus-like syndrome and membranoproliferative glomerulonephritis.

Genetic variation in C3 is associated with susceptibility to age-related macular degeneration type 9 (ARMD9) [MIM:611378]. ARMD is a multifactorial eye disease and the most common cause of irreversible vision loss in the developed world. In most patients, the disease is manifest as ophthalmoscopically visible yellowish accumulations of protein and lipid that lie beneath the retinal pigment epithelium and within an elastin-containing structure known as Bruch membrane.

Defects in C3 are a cause of susceptibility to hemolytic uremic syndrome atypical type 5 (AHUS5) [MIM:612925]. An atypical form of hemolytic uremic syndrome. It is a complex genetic disease characterized by microangiopathic hemolytic anemia, thrombocytopenia, renal failure and absence of episodes of enterocolitis and diarrhea. In contrast to typical hemolytic uremic syndrome, atypical forms have a poorer prognosis, with higher death rates and frequent progression to end-stage renal disease. Note=Susceptibility to the development of atypical hemolytic uremic syndrome can be conferred by mutations in various components of or regulatory factors in the complement cascade system. Other genes may play a role in modifying the phenotype.

### Sequence similarities

Contains 1 anaphylatoxin-like domain.

Contains 1 NTR domain.

### Post-translational modifications

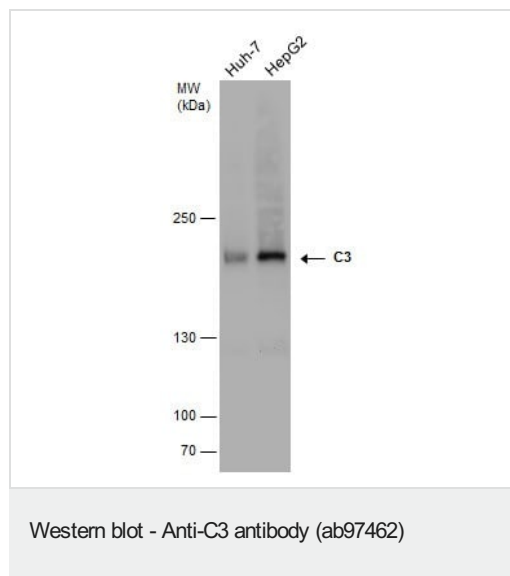
C3b is rapidly split in two positions by factor I and a cofactor to form iC3b (inactivated C3b) and C3f which is released. Then iC3b is slowly cleaved (possibly by factor I) to form C3c (beta chain + alpha' chain fragment 1 + alpha' chain fragment 2), C3dg and C3f. Other proteases produce other fragments such as C3d or C3g.

Phosphorylation sites are present in the extracellular medium.

### Cellular localization

Secreted.

## Images



**All lanes :** Anti-C3 antibody (ab97462) at 1/1000 dilution

**Lane 1 :** Huh7 whole cell lysate

**Lane 2 :** HepG2 (human liver hepatocellular carcinoma cell line) whole cell lysate

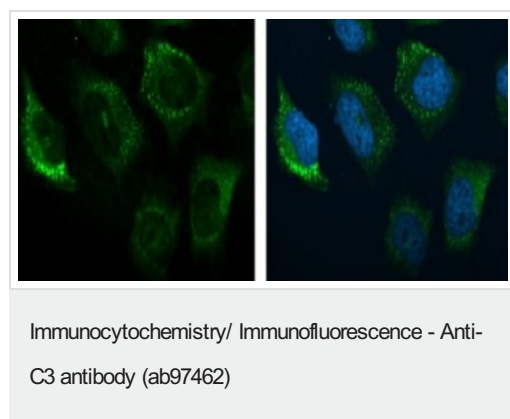
Lysates/proteins at 30 µg per lane.

### Secondary

**All lanes :** HRP-conjugated anti-rabbit IgG

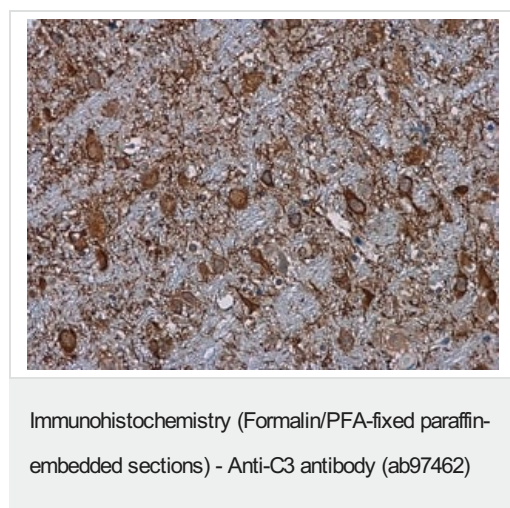
**Predicted band size:** 187 kDa

5% SDS-PAGE.

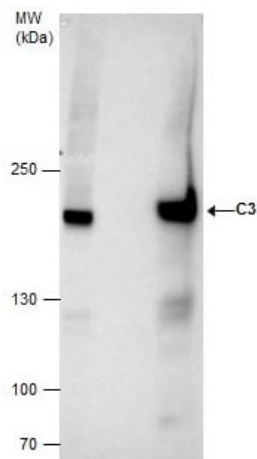


HeLa (human epithelial cell line from cervix adenocarcinoma) cells labeling C3 with ab97462 at 1/200 dilution (green) in ICC/IF. Cells were fixed in 4% paraformaldehyde at room temperature for 15 minutes.

Nuclei were stained using Hoechst 33342 (blue).



Paraffin-embedded mouse brain tissue stained for C3 using ab97462 at 1/500 dilution in immunohistochemical analysis.



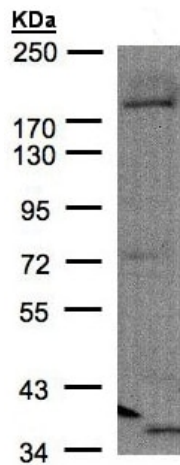
Immunoprecipitation - Anti-C3 antibody (ab97462)

C3 was immunoprecipitated from HepG2 (human liver hepatocellular carcinoma cell line) whole cell extracts using 5  $\mu$ g of ab97462. Western blot was performed from the immunoprecipitate using ab97462.

**Lane 1:** HepG2 whole cell extract.

**Lane 2:** Control IgG instead of ab97462 in HepG2 whole cell extract.

**Lane 3:** ab97462 IP in HepG2 whole cell extract.

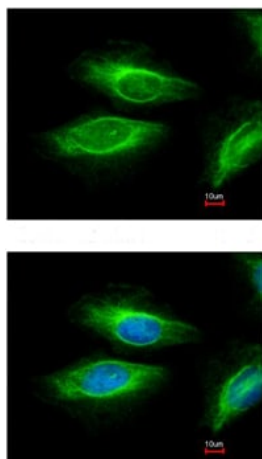


Western blot - Anti-C3 antibody (ab97462)

Anti-C3 antibody (ab97462) at 1/1500 dilution + HepG2 whole cell lysate at 30  $\mu$ g

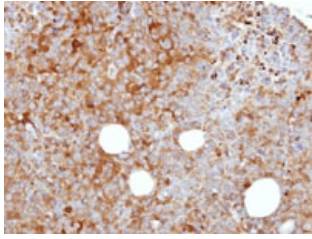
**Predicted band size:** 187 kDa

7.5% SDS-PAGE.



Immunocytochemistry/ Immunofluorescence - Anti-C3 antibody (ab97462)

ab97462 at 1/100 dilution staining C3 in HeLa cells by Immunofluorescence, Paraformaldehyde fixed. Lower image shows cells co-stained with Hoechst 33342.



ab97462 at 1/100 dilution staining C3 in H1299 xenograft by Immunohistochemistry, Paraffin-embedded tissue.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-C3 antibody (ab97462)

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

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