

Product datasheet

Anti-C3b / iC3b antibody [7C12] ab231078

4 References 2 Images

Overview

Product name	Anti-C3b / iC3b antibody [7C12]
Description	Mouse monoclonal [7C12] to C3b / iC3b
Host species	Mouse
Tested applications	Suitable for: WB
Species reactivity	Reacts with: Human
Immunogen	Full length native protein (purified) corresponding to Human C3b/ iC3b. C3b(i)-Sepharose. C3bi was deposited on Sepharose 4B via the alternative pathway of complement activation in normal human serum.
Positive control	WB: human serum and plasma lysates, human liver whole tissue lysate
General notes	<p>This antibody clone is manufactured by Abcam. If you require a different buffer formulation or a particular conjugate for your experiments, please contact orders@abcam.com</p> <p>Reproducibility is key to advancing scientific discovery and accelerating scientists' next breakthrough.</p> <p>Abcam is leading the way with our range of recombinant antibodies, knockout-validated antibodies and knockout cell lines, all of which support improved reproducibility.</p> <p>We are also planning to innovate the way in which we present recommended applications and species on our product datasheets, so that only applications & species that have been tested in our own labs, our suppliers or by selected trusted collaborators are covered by our Abpromise™ guarantee.</p> <p>In preparation for this, we have started to update the applications & species that this product is Abpromise guaranteed for.</p> <p>We are also updating the applications & species that this product has been “predicted to work with,” however this information is not covered by our Abpromise guarantee.</p> <p>Applications & species from publications and Abreviews that have not been tested in our own labs or in those of our suppliers are not covered by the Abpromise guarantee.</p> <p>Please check that this product meets your needs before purchasing. 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, as well as customer reviews and Q&As.</p>

Properties

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 long term. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.02% Sodium azide Constituent: PBS
Purity	Protein G purified
Clonality	Monoclonal
Clone number	7C12
Isotype	IgG1
Light chain type	kappa

Applications

Our [Abpromise guarantee](#) covers the use of **ab231078** 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
WB		Use a concentration of 1 µg/ml. Predicted molecular weight: 68 kDa.

Target

Function	<p>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.</p> <p>Derived from proteolytic degradation of complement C3, C3a anaphylatoxin is a mediator of local inflammatory process. In chronic inflammation, acts as a chemoattractant for neutrophils (By similarity). It induces the contraction of smooth muscle, increases vascular permeability and causes histamine release from mast cells and basophilic leukocytes.</p> <p>C3-beta-c: Acts as a chemoattractant for neutrophils in chronic inflammation.</p> <p>Acylation stimulating protein: adipogenic hormone that stimulates triglyceride (TG) synthesis and glucose transport in adipocytes, regulating fat storage and playing a role in postprandial TG clearance. Appears to stimulate TG synthesis via activation of the PLC, MAPK and AKT signaling pathways. Ligand for C5AR2. Promotes the phosphorylation, ARRB2-mediated internalization and recycling of C5AR2 (PubMed:8376604, PubMed:2909530, PubMed:9059512, PubMed:10432298, PubMed:15833747, PubMed:16333141, PubMed:19615750).</p>
Tissue specificity	Plasma. The acylation stimulating protein (ASP) is expressed in adipocytes and released into the plasma during both the fasting and postprandial periods.
Involvement in disease	<p>Complement component 3 deficiency</p> <p>Macular degeneration, age-related, 9</p> <p>Hemolytic uremic syndrome atypical 5</p> <p>Increased levels of C3 and its cleavage product ASP, are associated with obesity, diabetes and coronary heart disease. Short-term endurance training reduces baseline ASP levels and subsequently fat storage.</p>

Sequence similarities

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

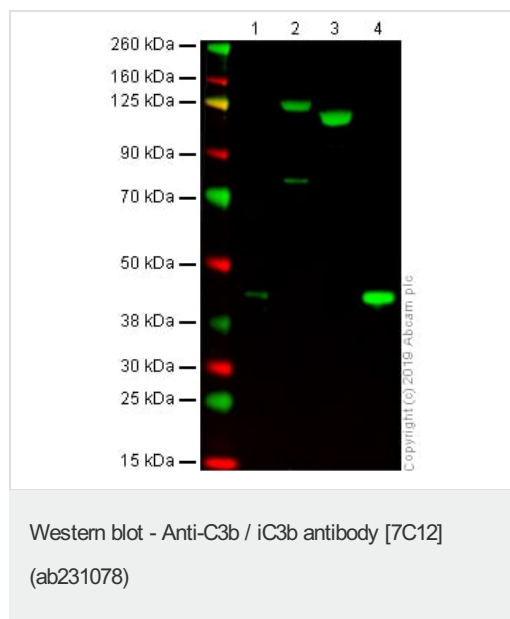
Post-translational modifications

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. C3a is further processed by carboxypeptidases to release the C-terminal arginine residue generating the acylation stimulating protein (ASP). Levels of ASP are increased in adipocytes in the postprandial period and by insulin and dietary chylomicrons. Phosphorylated by FAM20C in the extracellular medium.

Cellular localization

Secreted.

Images



All lanes : Anti-C3b / iC3b antibody [7C12] (ab231078) at 1 µg/ml

Lane 1 : Human Sera diluted 1/1000 at 10 µl

Lane 2 : Purified C3 Protein at 0.1 µg

Lane 3 : Purified C3b Protein at 0.1 µg

Lane 4 : Purified iC3b Protein at 0.1 µg

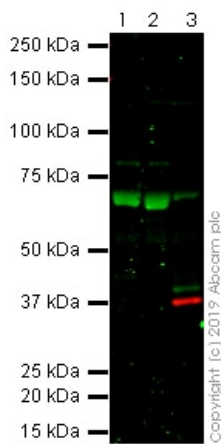
Performed under reducing conditions.

Predicted band size: 68 kDa

Observed band size: 110,125,43,78 kDa

[why is the actual band size different from the predicted?](#)

This blot was produced using a 4-12% Bis-tris under the MOPS buffer system. The gel was run at 200V for 55 minutes before being transferred onto a Nitrocellulose membrane at 30V for 70 minutes. The membrane was then blocked for an hour using 5% milk before being incubated with ab231078 overnight at 4°C at 1µg/ml. Antibody binding was detected using Goat anti-Mouse IgG H&L (IRDye® 800CW) preadsorbed ([ab216772](#)) at 1/20000 dilution for 1 hour at room temperature before imaging.



Western blot - Anti-C3b / iC3b antibody [7C12]
(ab231078)

All lanes :

Lane 1 : Human serum diluted 1/100 at 5 µl

Lane 2 : Human plasma diluted 1/100 at 5 µl

Lane 3 : Human liver whole tissue lysate at 20 µg

Performed under reducing conditions.

Predicted band size: 68 kDa

Additional bands at: 42 kDa (possible cleavage fragment)

This blot was produced using a 4-12% Bis-tris gel under the MOPS buffer system. The gel was run at 200V for 55 minutes before being transferred onto a Nitrocellulose membrane at 30V for 70 minutes. The membrane was then blocked for an hour using 5% milk before ab231078 and ab181602 (Rabbit anti GAPDH) were incubated overnight at 4°C at a 1µg/ml concentration and 1/10000 dilution respectively. Antibody binding was detected using Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (ab216773) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (ab216776) secondary antibodies at 1/20000 dilution for 1 hour at room temperature before imaging.

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

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