abcam

Product datasheet

Anti-C3b / iC3b antibody [1H8] ab231080

4 References 2 Images

Overview

Product name	Anti-C3b / iC3b antibody [1H8]
Description	Mouse monoclonal [1H8] to C3b / iC3b
Host species	Mouse
Tested applications	**Suitable for:** ELISA, WB
Species reactivity	**Reacts with:** Human
Immunogen	Full length protein. 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
General notes	This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact **orders@abcam.com**. 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. 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&As

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	1H8
Isotype	IgG2
Light chain type	kappa

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab231080 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
ELISA		Use a concentration of 10 µg/ml.
WB		Use at an assay dependent concentration. Predicted molecular weight: 68 kDa.

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. 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.
C3-beta-c: Acts as a chemoattractant for neutrophils in chronic inflammation.
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).

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

Complement component 3 deficiency
Macular degeneration, age-related, 9
Hemolytic uremic syndrome atypical 5
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.

Sequence similarities

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

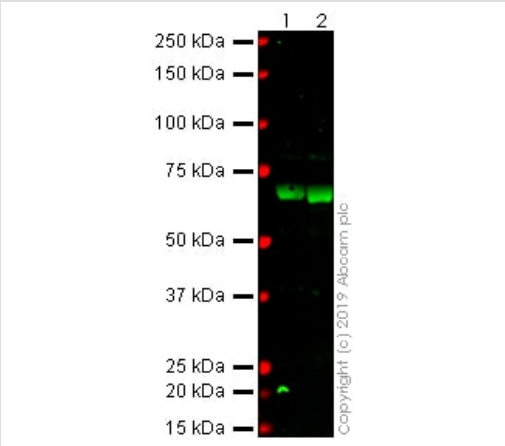
Post-translational modifications

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



Western blot - Anti-C3b / iC3b antibody [1H8] (ab231080)

All lanes :

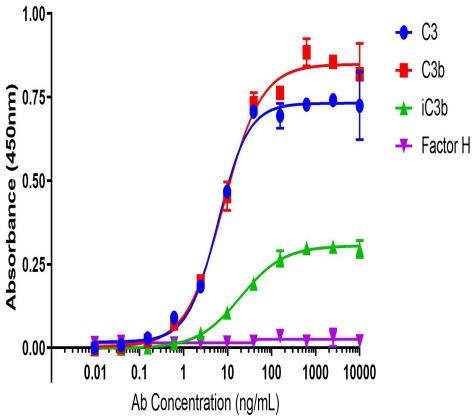
Lane 1 : human serum diluted 1/100
Lane 2 : Human plasma diluted 1/100

Lysates/proteins at 5 µl per lane.

Performed under reducing conditions.

Predicted band size: 68 kDa
Observed band size: 68 kDa

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 being incubated with ab231080 overnight at 4°C. Antibody binding was detected using Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (**ab216773**) at 1/20000 dilution for 1 hour at room temperature before imaging.



ELISA - Anti-C3b / iC3b antibody [1H8] (ab231080)

96-well microtitre plates were coated overnight at 4°C with recombinant human C3, C3b, iC3b, and Factor H proteins, in duplicate at a concentration of 1 µg/mL. Plates were blocked with 1% BSA in PBS-T (0.1% Tween) for 1 hour before incubation with a 10-step 4x serial dilution of ab231080 from 10 µg/mL for 1 hour at room temperature. Antibody binding was detected with Goat Anti-Mouse IgG H&L (HRP) (**ab6789**) secondary antibody at a 1 in 10000 dilution for 1 hour at room temperature. Plates were incubated with TMB ELISA substrate for 7 minutes prior to being stopped with Stop solution and absorbance measured at 450nm.

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