

Anti-Iba1 antibody [EPR16589] - BSA and Azide free ab221790

Recombinant RabMAb

★★★★★ [1 Abreviews](#) [2 References](#) [10 Images](#)

Overview

Product name	Anti-Iba1 antibody [EPR16589] - BSA and Azide free
Description	Rabbit monoclonal [EPR16589] to Iba1 - BSA and Azide free
Host species	Rabbit
Tested applications	Suitable for: IHC-P, ICC/IF, IP, WB, IHC (PFA fixed)
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: Human spleen lysate; THP-1, MOLT-4 and U937 whole cell lysates; Mouse and rat spleen and testis lysates. IHC-P: Human cerebrum, mouse endometrium and rat cerebrum tissues. ICC/IF: U937 and THP-1 cells. IP: Mouse spleen whole cell lysate.
General notes	<p>ab221790 is the carrier-free version of ab178847.</p> <p>Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency.</p> <p>This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.</p> <p>Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with <1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.</p> <p>This product is compatible with the Maxpar[®] Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar[®] is a trademark of Fluidigm Canada Inc.</p> <p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C. Do Not Freeze.
Storage buffer	pH: 7.2 Constituent: PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR16589
Isotype	IgG

Applications

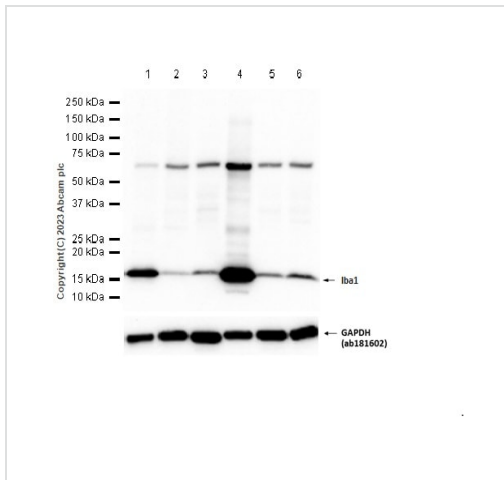
The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab221790 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P		Use at an assay dependent concentration. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
ICC/IF		Use at an assay dependent concentration.
IP		Use at an assay dependent concentration.
WB		Use at an assay dependent concentration. Detects a band of approximately 17 kDa (predicted molecular weight: 17 kDa).
IHC (PFA fixed)		Use at an assay dependent concentration.

Target

Function	Actin-binding protein that enhances membrane ruffling and RAC activation. Enhances the actin-bundling activity of LCP1. Binds calcium. Plays a role in RAC signaling and in phagocytosis. May play a role in macrophage activation and function. Promotes the proliferation of vascular smooth muscle cells and of T-lymphocytes. Enhances lymphocyte migration. Plays a role in vascular inflammation.
Tissue specificity	Detected in T-lymphocytes and peripheral blood mononuclear cells.
Sequence similarities	Contains 2 EF-hand domains.
Post-translational modifications	Phosphorylated on serine residues.
Cellular localization	Cytoplasm > cytoskeleton. Cell projection > ruffle membrane. Associated with the actin

Images



Western blot - Anti-Iba1 antibody [EPR16589] - BSA and Azide free (ab221790)

All lanes : Anti-Iba1 antibody [EPR16589] ([ab178847](#)) at 1/1000 dilution

Lane 1 : Mouse spleen tissue lysate

Lane 2 : Mouse brain tissue lysate

Lane 3 : Mouse hippocampus tissue lysate

Lane 4 : Rat spleen tissue lysate

Lane 5 : Rat brain tissue lysate

Lane 6 : Rat hippocampus tissue lysate

Lysates/proteins at 20 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/20000 dilution

Predicted band size: 17 kDa

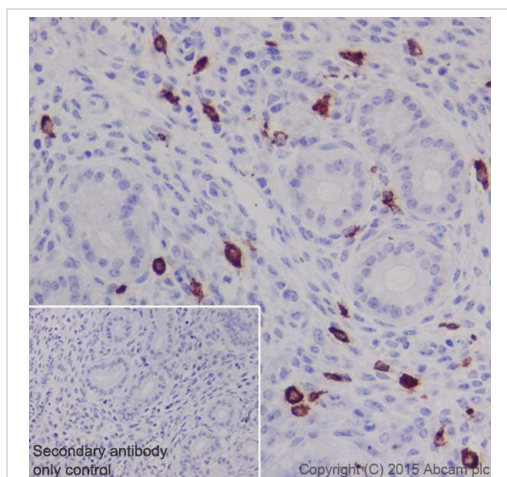
Observed band size: 17 kDa

Exposure time: 40 seconds

This data was developed using [ab178847](#), the same antibody clone in a different buffer formulation.

Blocking/Dilution buffer: 5% NFDm/TBST.

IBA1 is a relatively minor protein of brain and is much more abundant in spleen (PMID: 8912632, PMID: 29232670). We suggest loading higher amount of brain lysate or using lower dilution of antibody for detecting signal in brain related lysates.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Iba1 antibody [EPR16589] - BSA and Azide free (ab221790)

Immunohistochemical analysis of paraffin-embedded Mouse endometrium tissue labeling Iba1 with **ab178847** at 1/8000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution.

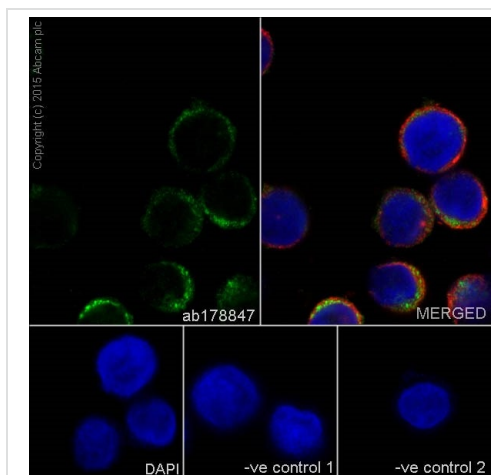
Cytoplasm staining on macrophages of the mouse endometrium.

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab178847**).

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-Iba1 antibody [EPR16589] - BSA and Azide free (ab221790)

Immunofluorescent analysis of 100% methanol-fixed, 0.1% Triton X-100 permeabilized U937 (Human histiocytic lymphoma cell line) cells labeling Iba1 with **ab178847** at 1/100 dilution, followed by Goat Anti-Rabbit IgG (Alexa Fluor® 488) (**ab150077**) secondary antibody at 1/1000 dilution (green).

Confocal image showing cytoplasmic staining on U937 cell line.

The nuclear counterstain is DAPI (blue).

Tubulin is detected with Anti-alpha Tubulin - Loading Control (**ab7291**) at 1/1000 dilution and Goat Anti-Mouse IgG (AlexaFluor®594) preadsorbed (**ab150120**) at 1/1000 dilution (red).

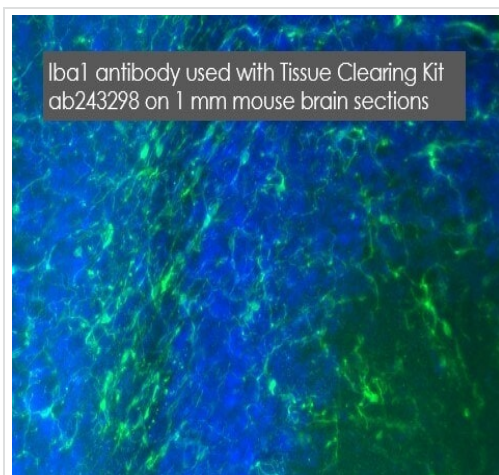
The negative controls are as follows:-

-ve control 1: **ab178847** at 1/100 dilution followed by **ab150120** at 1/1000 dilution.

-ve control 2: **ab7291** at 1/1000 dilution followed by **ab150077** at 1/1000 dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and

sodium azide ([ab178847](#)).



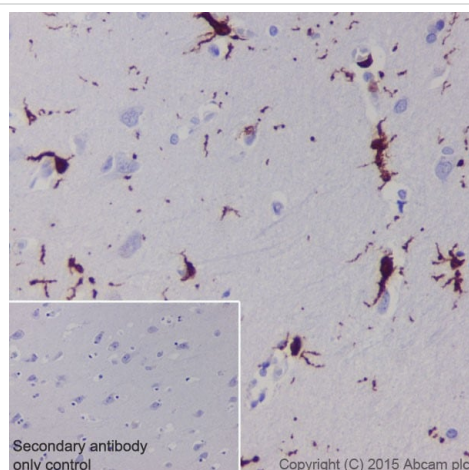
Immunohistochemistry (PFA fixed) - Anti-Iba1 antibody [EPR16589] - BSA and Azide free (ab221790)

This data was developed using [ab178847](#), the same antibody clone in a different buffer formulation.

Iba1 antibody [ab178847](#) was used with Tissue Clearing Kit [ab243298](#) to penetrate, stain and clear a 1 mm coronal section of mouse brain. Blue: DAPI, Green: Iba1.

Learn more about [tissue clearing kits, reagents, and protocols](#) designed to make it easier to stain thick tissue sections and get more data from each valuable tissue section.

For 1 mm brain sections, we recommend a starting dilution of 1:100, and also using Goat Anti-Rabbit IgG H&L AlexaFluor488 ([ab150077](#)) at a dilution of 1:400.



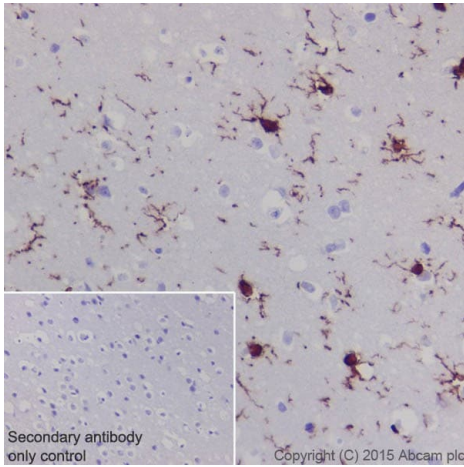
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Iba1 antibody [EPR16589] - BSA and Azide free (ab221790)

Immunohistochemical analysis of paraffin-embedded Human cerebrum tissue labeling Iba1 with [ab178847](#) at 1/8000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/500 dilution.

Cytoplasm staining on microglia of the normal Human cerebrum is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is [ab97051](#) at 1/500 dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab178847](#)).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Iba1 antibody [EPR16589] - BSA and Azide free (ab221790)

Immunohistochemical analysis of paraffin-embedded Rat cerebrum tissue labeling Iba1 with **ab178847** at 1/8000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution.

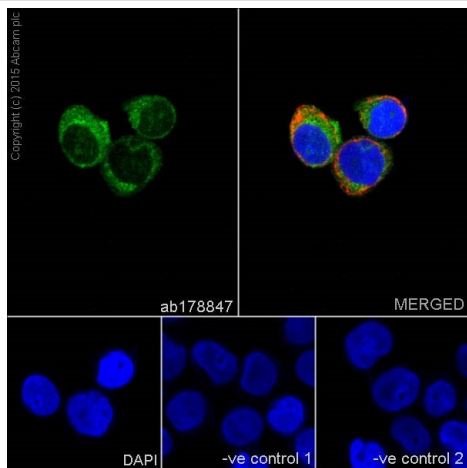
Cytoplasm staining on microglia of the rat cerebrum is observed.

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab178847**).

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-Iba1 antibody [EPR16589] - BSA and Azide free (ab221790)

Immunofluorescent analysis of 100% methanol-fixed, 0.1% Triton X-100 permeabilized THP-1 (Human monocytic leukemia cell line) cells labeling Iba1 with **ab178847** at 1/100 dilution, followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (**ab150077**) secondary antibody at 1/1000 dilution (green).

Confocal image showing cytoplasmic staining on THP-1 cell line.

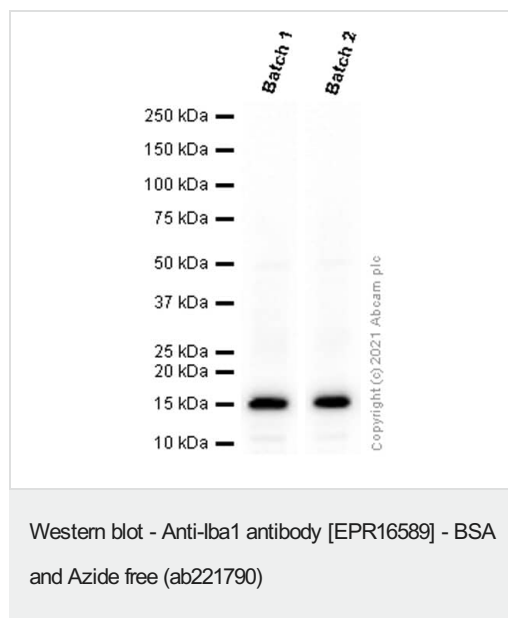
The nuclear counterstain is DAPI (blue). Tubulin is detected with **ab7291** (anti-Tubulin mouse mAb) at 1/1000 dilution and **ab150120** (AlexaFluor®594 Goat anti-Mouse secondary) at 1/1000 dilution (red).

The negative controls are as follows:-

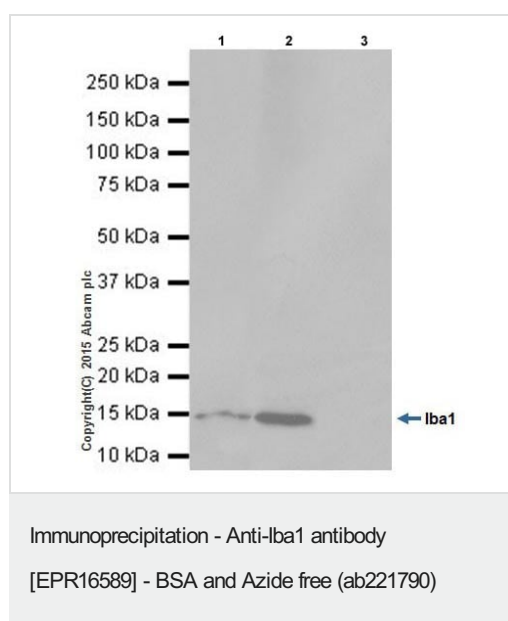
-ve control 1: **ab178847** at 1/100 dilution followed by **ab150120** at 1/1000 dilution.

-ve control 2: **ab7291** at 1/1000 dilution followed by **ab150077** at 1/1000 dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab178847**).



This data was developed using [ab178847](#), the same antibody clone in a different buffer formulation. Different batches of [ab178847](#) were tested on U-937 (Human histiocytic lymphoma monocyte) lysate at 0.5 µg/ml. 15 µg of lysate was loaded in each lane. Bands observed at 17 kDa.



Iba1 was immunoprecipitated from 1mg of Mouse spleen whole cell lysate with [ab178847](#) at 1/40 dilution.

Western blot was performed from the immunoprecipitate using [ab178847](#) at 1/1000 dilution.

VeriBlot for IP Detection Reagent (HRP) ([ab131366](#)), was used for detection at 1/10000 dilution.

Lane 1: Mouse spleen whole cell lysate 10µg (Input).

Lane 2: [ab178847](#) IP in Mouse spleen whole cell lysate.

Lane 3: Rabbit IgG, monoclonal-Isotype Control ([ab172730](#)) instead of [ab178847](#) in Mouse spleen whole cell lysate.

Blocking and dilution buffer and concentration: 5% NFDm/TBST.

Exposure time: 5 seconds.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab178847](#)).

Why choose a recombinant antibody?



Research with confidence
Consistent and reproducible results



Long-term and scalable supply
Recombinant technology



Success from the first experiment
Confirmed specificity



Ethical standards compliant
Animal-free production

Anti-Iba1 antibody [EPR16589] - BSA and Azide free
(ab221790)

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

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.com/abpromise> or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors