abcam

ab178680

Anti-Iba1 antibody [EPR6136(2)] - Microglia marker

Anti-Iba1 antibody [EPR6136(2)] (ab178680) is a rabbit monoclonal antibody detecting Iba1 in **Western Blot, Flow Cytometry (Intra), IHC-P, ICC/IF**. Suitable for **Human**.

- Biophysical QC for unrivalled batch-batch consistency
- Over 20 publications

Lab Essentials | Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR6136(2)
Purification technique	Affinity purification Protein A
Concentration	1.0335 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human

Dilution info	1/16000
Notes	**For unpurified use at 1/250 - 1/500.** Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

WB

Tested

Species	Human
Dilution info	1/1000
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/100
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/100 - 1/500
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Target data

See full target information AIF1

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.

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

What is this antibody validated in?
Anti-Iba1 antibody [EPR6136(2)] (ab178680) is a rabbit recombinant monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Intra), Immunohistochemistry (IHC-P), Immunocytochemistry/immunofluorescence (ICC/IF) in Human samples.

What is the molecular weight of Iba1?
Anti-Iba1 [EPR6136(2)] (ab178680) specifically detects a band for Iba1 (UniProt: P55008) at a molecular weight of 16kDa.

Trusted by the scientific community
Anti-Iba1 [EPR6136(2)] (ab178680) was first used in a scientific publication in 2013 and has been cited over 20 times in peer-reviewed journals.

Other related products
We have a range of other formats of antibody clone [EPR6136(2)] also available for your convenience: ab178680, Alexa Fluor® 488 - ab195031, Alexa Fluor® 647 - ab195032, PE - ab209942, Alexa Fluor® 568 - ab221003, Carrier free - ab221933

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Trial sizes available!
Test your antibody or perform pre-screening before committing to a larger quantity. Sold in 20µl. Discover our selection of trial-size antibodies.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Iba1 also known as Allograft Inflammatory Factor 1 (AIF-1) is a 17 kDa protein notable for its involvement in immune responses. It is expressed mainly in microglia and macrophages key components of the central nervous system's immune system. Researchers often use Iba1 in Western blots and immunohistochemistry (IHC) to study microglial activation. The protein's expression is a strong marker of microglial activation making it a focal point in neuroinflammation studies. Anti-Iba1 antibodies have gained popularity for their effectiveness in identifying microglia in brain tissue sections through Iba1 staining techniques.
Biological function summary	Iba1 modulates actin bundling facilitating changes in microglial morphology and motility. It does not form part of a multiprotein complex but is significantly involved in cytoskeletal dynamics. This protein's expression increases during brain injury indicating its role in response to neural trauma. Iba1 has calcium-binding properties which suggest that it might interact with proteins involved in calcium signaling pathways.
Pathways	Calcium signaling and actin cytoskeletal rearrangement are significant biological processes that involve Iba1. Within these pathways Iba1 interacts closely with other actin-binding proteins that affect microglial movement and morphology. Such interactions illustrate how Iba1 helps microglia navigate and respond to changes within the brain environment.
Associated diseases and disorders	Iba1 is often associated with neurodegenerative diseases like Alzheimer's disease and amyotrophic lateral sclerosis (ALS). In these conditions elevated Iba1 levels mark increased microglial activity which correlates with disease progression. Connections with proteins such as amyloid-beta in Alzheimer's disease suggest its role in mediating inflammatory responses and linking inflammation to disease pathology.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

We do not recommend this combination. It is not covered by our product promise.

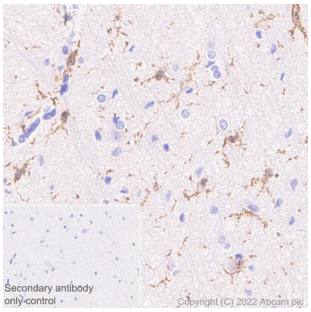
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

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8 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Iba1 antibody [EPR6136(2)] - Microglia marker (ab178680)

Iba1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human cerebrum using rabbit Anti-Iba1 antibody

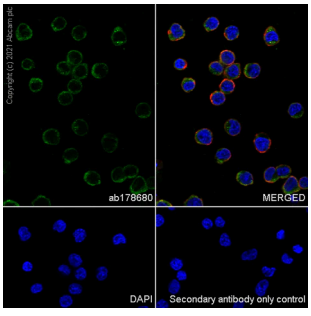
Immunohistochemical analysis of Paraffin-embedded sections Human cerebrum tissue labelling Iba1 with ab178680 at 1/100000 dilution, followed by a ready to use secondary LeicaDS9800 (Bond™ Polymer Refine Detection). Counter stained with Haematoxylin.
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).
Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0) for 20 minutes.

Positive staining on human cerebrum.

The section was incubated with ab178680 for 30 mins at room temperature.

The immunostaining was performed on a Leica Biosystems BOND® RX instrument

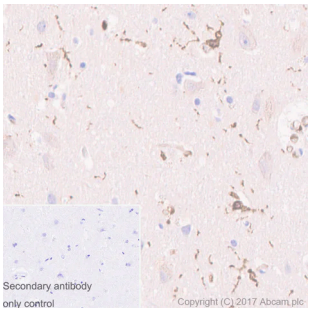
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Immunocytochemistry/ Immunofluorescence - Anti-Iba1 antibody [EPR6136(2)] - Microglia marker (ab178680)

Iba1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Iba1 antibody

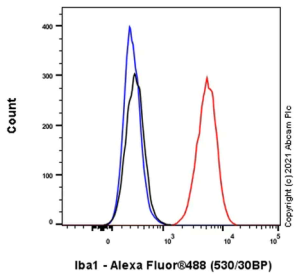
Immunocytochemistry analysis of Jurkat (Human T cell leukemia T lymphocyte) cells labeling Iba1 with purified ab178680 at 1:100 dilution (9.7 µg/ml). Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Cells were counterstained with Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) at 1/200 dilution (2.5 µg/ml) (ab195889) (red). Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) was used as the secondary antibody at 1:1000 (2 µg/ml) dilution. DAPI (blue) was used as a nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Iba1 antibody [EPR6136(2)] - Microglia marker (ab178680)

Iba1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Iba1 antibody

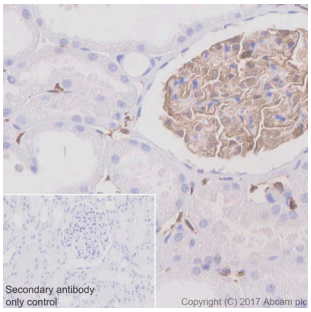
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human cerebrum tissue sections labeling Iba1 with purified ab178680 at 1:16000 (0.06 µg/ml). Heat mediated antigen retrieval was performed using ab93678 (citrate buffer, pH 6.0). Tissue was counterstained with Hematoxylin. ImmunoHistoProbe one step HRP Polymer (ready to use) was used at 1:0 dilution. PBS instead of the primary antibody was used as the negative control.



Flow Cytometry (Intracellular) - Anti-Iba1 antibody [EPR6136(2)] - Microglia marker (ab178680)

Iba1 Flow Cytometry (Intracellular) staining using rabbit Anti-Iba1 antibody

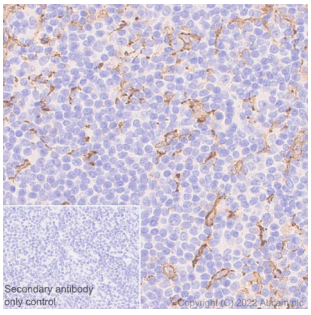
Flow Cytometry analysis of K-562 (Human chronic myelogenous leukemia lymphoblast) cells labelling Iba1 with purified ab178680 at 1/100 dilution (10 µg/ml) (red). Cells were fixed with 4% Paraformaldehyde and permeabilised with 90% Methanol. A Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150081) secondary antibody was used at 1/2000. Isotype control - Rabbit monoclonal IgG (black). Unlabelled control - Cell without incubation with primary antibody and secondary antibody (blue).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Iba1 antibody [EPR6136(2)] - Microglia marker (ab178680)

Iba1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Iba1 antibody

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human kidney tissue sections labeling Iba1 with purified ab178680 at 1:16000 (0.06 µg/ml). Heat mediated antigen retrieval was performed using ab93678 (citrate buffer, pH 6.0). Tissue was counterstained with Hematoxylin. ImmunoHistoProbe one step HRP Polymer (ready to use) was used at 1:0 dilution. PBS instead of the primary antibody was used as the negative control.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Iba1 antibody [EPR6136(2)] - Microglia marker (ab178680)

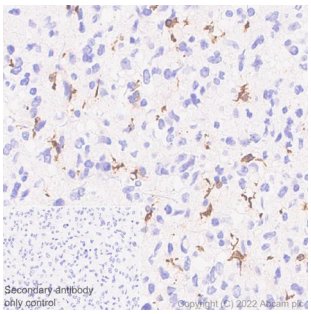
Iba1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human tonsil using rabbit Anti-Iba1 antibody

Immunohistochemical analysis of Paraffin-embedded sections Human tonsil tissue labelling Iba1 with ab178680 at 1/100000 dilution, followed by a ready to use secondary LeicaDS9800 (Bond™ Polymer Refine Detection). Counter stained with Haematoxylin.
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).
Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0) for 20 minutes.

Positive staining on human tonsil.

The section was incubated with ab178680 for 30 mins at room temperature.

The immunostaining was performed on a Leica Biosystems BOND® RX instrument.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Iba1 antibody [EPR6136(2)] - Microglia marker (ab178680)

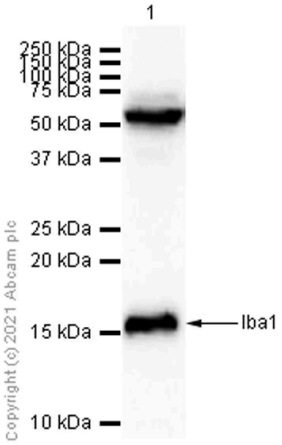
Iba1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human glioma using rabbit Anti-Iba1 antibody

Immunohistochemical analysis of Paraffin-embedded sections Human glioma tissue labelling Iba1 with ab178680 at 1/100000 dilution, followed by a ready to use secondary LeicaDS9800 (Bond™ Polymer Refine Detection). Counter stained with Haematoxylin.
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).
Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0) for 20 minutes.

Positive staining on human glioma.

The section was incubated with ab178680 for 30 mins at room temperature.

The immunostaining was performed on a Leica Biosystems BOND® RX instrument.



Western blot - Anti-Iba1 antibody [EPR6136(2)] - Microglia marker (ab178680)

Iba1 Western blot staining of THP-1 (Human monocytic leukemia monocyte) whole cell lysate using rabbit Anti-Iba1 antibody

All lanes:
Western blot - Anti-Iba1 antibody [EPR6136(2)] - Microglia marker (ab178680) at 1/1000 dilution

All lanes:
THP-1 (Human monocytic leukemia monocyte) whole cell lysate at 20 µg

Secondary

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

Predicted band size: 16 kDa

Observed band size: 17 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.