abcam

ab289874

Anti-Iba1 antibody [EPR16588] - Microglia marker - Goat IgG (Chimeric)

Anti-Iba1 antibody [EPR16588] - Goat IgG (Chimeric) (ab289874) is a goat monoclonal antibody detecting Iba1 in **Western Blot, Flow Cytometry (Intra), IHC-P, ICC/IF**. Suitable for **Mouse, Human, Rat.**

- Clone EPR16588 is the most cited clone to Iba1

This antibody is the chimeric Goat version of clone EPR16588, available in rabbit as ab178846 with over 750 publications. Same clone, same staining pattern, different species antibody backbone.
Learn more about chimeric antibodies

Lab Essentials | Recombinant | 20ul selling size

Key facts

Isotype	IgG
Host species	Goat
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	EPR16588
Purification technique	Ion exchange chromatography
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Mouse
Dilution info	1/100
Notes	-

Species	Rat
Dilution info	1/100
Notes	-

Species	Human
Dilution info	1/100
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/1000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Mouse
Dilution info	1/1000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Rat
Dilution info	1/1000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Flow Cyt (Intra)

Tested

Species	Human

Dilution info	1/1000
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000
Notes	-

Species	Mouse
Dilution info	1/1000
Notes	-

Species	Rat
Dilution info	-
Notes	-

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	Blue Ice

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 [EPR16588] - Goat IgG (Chimeric) (ab289874) is a goat recombinant monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Intra), Immunohistochemistry (IHC-P), Immunocytochemistry/immunofluorescence (ICC/IF), in House Mouse, Human, Norway Rat samples.

Other related products
We have a range of other formats of antibody clone [EPR16588] also available for your convenience: ab178846, Carrier free - ab220815, Alexa Fluor® 488 - ab225260, Alexa Fluor® 647 - ab225261, ab300156, Carrier free - ab300157, ab318302, Carrier free - ab318305, Alexa Fluor® 750 - ab321218

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

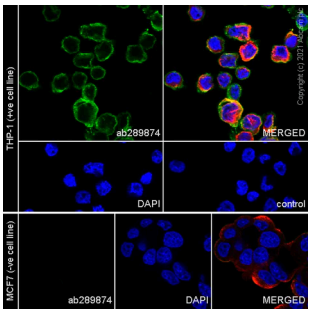
We do not recommend this combination. It is not covered by our product promise.

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.

14 product images



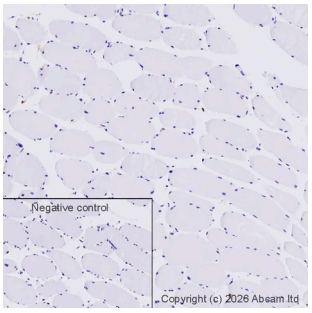
Immunocytochemistry/ Immunofluorescence - Anti-Iba1 antibody [EPR16588] - Microglia marker - Goat IgG (Chimeric) (ab289874)

Iba1 Immunocytochemistry/ Immunofluorescence staining using goat Anti-Iba1 antibody

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized THP-1 cells labelling Iba1 with ab289874 at 1/100 dilution, followed by Donkey Anti-Goat IgG H&L (Alexa Fluor®488) (ab150129) antibody at 1/500 dilution (Green).

Confocal image showing cytoplasmic and membranous staining in THP-1 cell line. **Negative control:** MCF7 (PMID: 30386176).
was used to counterstain tubulin at 1/200 dilution (Magenta). The Nuclear counterstain was DAPI (Blue).

Secondary antibody only control: Secondary antibody is Donkey Anti-Goat IgG H&L (Alexa Fluor®488) (ab150129) at 1/500 dilution.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Iba1 antibody [EPR16588] - Microglia marker - Goat IgG (Chimeric) (ab289874)

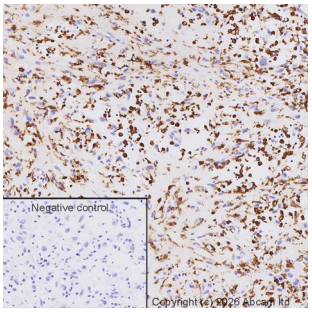
Iba1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human Skeletal Muscle using goat Anti-Iba1 antibody

IHC image of ab289874 staining Iba1 in FFPE Human Skeletal Muscle tissue (Negative Tissue).*

Performed on a Leica BOND™ system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0, epitope retrieval solution 1) for 20mins. The section was then incubated with ab289874 at 1µg/ml, for 15 mins at room temperature and detected using ab205723 Donkey Anti-Goat IgG H&L (HRP). DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX. The inset secondary-only image is taken from an identical assay without primary antibody.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.

*Tissue obtained from the Human Research Tissue Bank, supported by the NIHR Cambridge Biomedical Research Centre



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Iba1 antibody [EPR16588] - Microglia marker - Goat IgG (Chimeric) (ab289874)

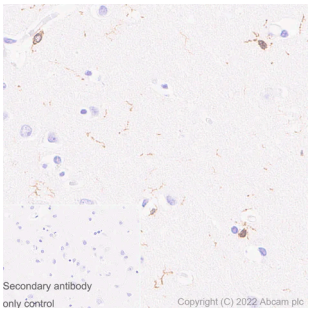
Iba1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human Glioblastoma using goat Anti-Iba1 antibody

IHC image of ab289874 staining Iba1 in FFPE Human Glioblastoma tissue.*

Performed on a Leica BOND™ system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0, epitope retrieval solution 1) for 20mins. The section was then incubated with ab289874 at 1µg/ml, for 15 mins at room temperature and detected using ab205723 Donkey Anti-Goat IgG H&L (HRP). DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX. The inset secondary-only image is taken from an identical assay without primary antibody.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.

*Tissue obtained from the Human Research Tissue Bank, supported by the NIHR Cambridge Biomedical Research Centre



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Iba1 antibody [EPR16588] - Microglia marker - Goat IgG (Chimeric) (ab289874)

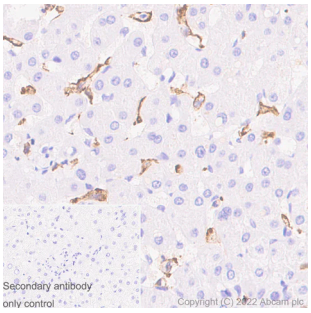
Iba1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human cerebrum tissue using goat Anti-Iba1 antibody

Immunohistochemical analysis of paraffin-embedded Human cerebrum tissue labeling Iba1 with ab289874 at 1/1000 dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Positive staining on microglia in the human cerebrum. The section was incubated with ab289874 for 30 mins at room temperature and followed by specific anti-goat IgG antibody (ab97101) for 8 mins. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Iba1 antibody [EPR16588] - Microglia marker - Goat IgG (Chimeric) (ab289874)

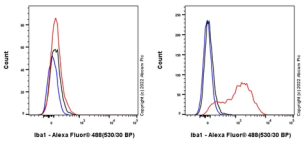
Iba1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human liver Kupffer cells using goat Anti-Iba1 antibody

Immunohistochemical analysis of paraffin-embedded Human liver tissue labeling Iba1 with ab289874 at 1/1000 dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Positive staining on Kupffer cells in the human liver. The section was incubated with ab289874 for 30 mins at room temperature and followed by specific anti-goat IgG antibody (ab97101) for 8 mins. The immunostaining was performed on a Leica Biosystems BOND®RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.

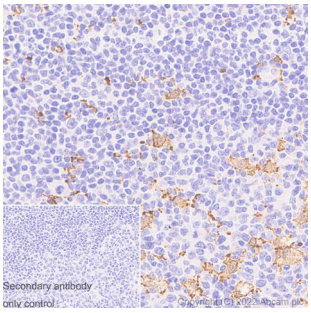


Flow Cytometry - Anti-Iba1 antibody [EPR16588] - Microglia marker - Goat IgG (Chimeric) (ab289874)

Iba1 Flow Cytometry staining using goat Anti-Iba1 antibody

Flow cytometric analysis of 4% Paraformaldehyde fixed, 90% Methanol permeabilized MCF7 (Human breast adenocarcinoma epithelial cell) / THP-1 (Human monocytic leukemia monocyte) cells labelling Iba1 with ab289874 at 1/1000 compared with a Goat IgG /Black isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody). Donkey anti-Goat IgG (Alexa Fluor®488, ab150133) at 1/2000 was used as the secondary antibody.

Negative control: MCF7 (PMID: 30386176).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Iba1 antibody [EPR16588] - Microglia marker - Goat IgG (Chimeric) (ab289874)

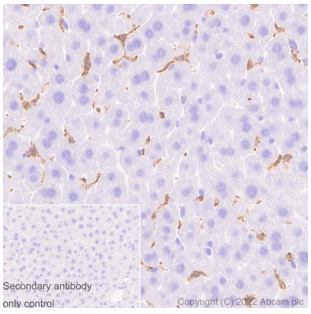
Iba1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human tonsil tissue using goat Anti-Iba1 antibody

Immunohistochemical analysis of paraffin-embedded Human tonsil tissue labeling Iba1 with ab289874 at 1/1000 dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Positive staining on human tonsil. The section was incubated with ab289874 for 30 mins at room temperature and followed by specific anti-goat IgG antibody (ab97101) for 8 mins. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Iba1 antibody [EPR16588] - Microglia marker - Goat IgG (Chimeric) (ab289874)

Iba1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Mouse liver tissue using goat Anti-Iba1 antibody

Immunohistochemical analysis of paraffin-embedded Mouse liver tissue labeling Iba1 with ab289874 at 1/1000 dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

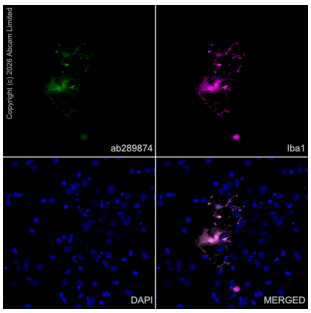
Positive staining on Kupffer cells in the mouse liver.

The section was incubated with ab289874 for 30 mins at room temperature and followed by specific anti-goat IgG antibody (ab97101) for 8 mins. The immunostaining was performed on a Leica Biosystems BOND® RX instrument.

Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.



Immunocytochemistry/ Immunofluorescence - Anti-Iba1 antibody [EPR16588] - Microglia marker - Goat IgG (Chimeric) (ab289874)

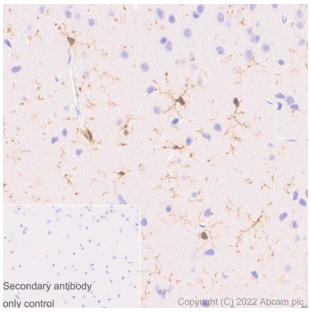
Iba1 Immunocytochemistry/ Immunofluorescence staining of mouse primary neural/glia cell using goat Anti-Iba1 antibody

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized mouse primary neural/glia cell cells labelling Iba1 with ab289874 at 1/1000 dilution , followed by ab150129 Donkey Anti-Goat IgG H&L (Alexa Fluor® 488) antibody at 1/500 dilution (Green).

Confocal image showing positive staining in mouse primary microglial cells (shown in green). The counterstain was observed in magenta. Nuclear DNA was labelled with DAPI (shown in blue). Image was taken with a confocal microscope(Leica-Microsystems, TCS SP8).
Confocal scanning Z step was set as 0.3 µm followed by image processing with maximum Z projection.

Rabbit anti-Iba1 antibody was used to counterstain Iba1 at 1/1000 dilution (Magenta). The Nuclear counterstain was DAPI (Blue).

Secondary antibody only control: Secondary antibody is ab150129 Donkey Anti-Goat IgG H&L (Alexa Fluor® 488) at 1/500 dilution.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Iba1 antibody [EPR16588] - Microglia marker - Goat IgG (Chimeric) (ab289874)

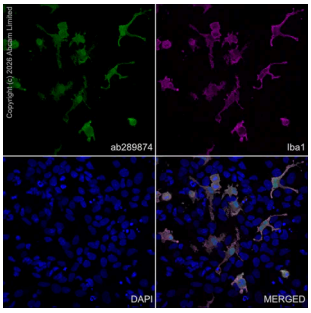
Iba1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Mouse cerebrum tissue using goat Anti-Iba1 antibody

Immunohistochemical analysis of paraffin-embedded Mouse cerebrum tissue labeling Iba1 with ab289874 at 1/1000 dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Positive staining on microglia in the mouse cerebrum. The section was incubated with ab289874 for 30 mins at room temperature and followed by specific anti-goat IgG antibody (ab97101) for 8 mins. The immunostaining was performed on a Leica Biosystems BOND®RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.



Immunocytochemistry/ Immunofluorescence - Anti-Iba1 antibody [EPR16588] - Microglia marker - Goat IgG (Chimeric) (ab289874)

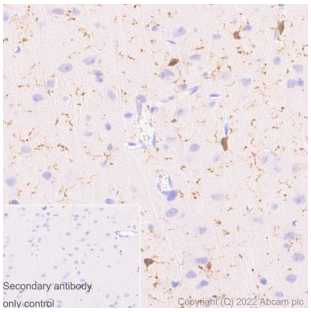
Iba1 Immunocytochemistry/ Immunofluorescence staining of rat primary neural/glia cell using goat Anti-Iba1 antibody

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized rat primary neural/glia cell cells labelling Iba1 with ab289874 at 1/1000 dilution, followed by ab150129 Donkey Anti-Goat IgG H&L (Alexa Fluor® 488) antibody at 1/500 dilution (Green).

Confocal image showing positive staining in rat primary microglial cells (shown in green). The counterstain was observed in magenta. Nuclear DNA was labelled with DAPI (shown in blue). Image was taken with a confocal microscope(Leica-Microsystems, TCS SP8).
Confocal scanning Z step was set as 0.3 µm followed by image processing with maximum Z projection.

Rabbit anti-Iba1 antibody was used to counterstain Iba1 at 1/1000 dilution (Magenta). The Nuclear counterstain was DAPI (Blue).

Secondary antibody only control: Secondary antibody is ab150129 Donkey Anti-Goat IgG H&L (Alexa Fluor® 488) at 1/500 dilution.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Iba1 antibody [EPR16588] - Microglia marker - Goat IgG (Chimeric) (ab289874)

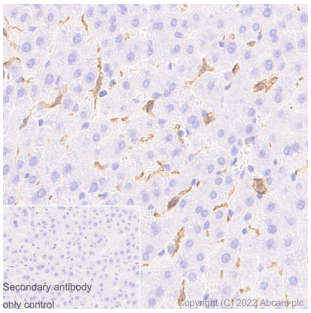
Iba1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Rat cerebrum tissue using goat Anti-Iba1 antibody

Immunohistochemical analysis of paraffin-embedded Rat cerebrum tissue labeling Iba1 with ab289874 at 1/1000 dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Positive staining on microglia in the rat cerebrum. The section was incubated with ab289874 for 30 mins at room temperature and followed by specific anti-goat IgG antibody (ab97101) for 8 mins. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Iba1 antibody [EPR16588] - Microglia marker - Goat IgG (Chimeric) (ab289874)

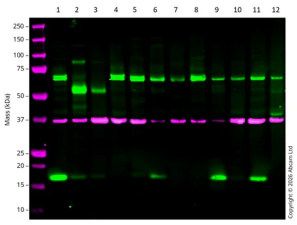
Iba1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Rat liver tissue using goat Anti-Iba1 antibody

Immunohistochemical analysis of paraffin-embedded Rat liver tissue labeling Iba1 with ab289874 at 1/1000 dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Positive staining on Kupffer cells in the rat liver. The section was incubated with ab289874 for 30 mins at room temperature and followed by specific anti-goat IgG antibody (ab97101) for 8 mins. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.



Western blot - Anti-Iba1 antibody [EPR16588] - Microglia marker - Goat IgG (Chimeric) (ab289874)

Iba1 Western blot staining using goat Anti-Iba1 antibody

Western blot: Anti-Iba1 antibody [EPR16588] - Microglia marker - Goat IgG (Chimeric) (ab289874) at 1/1000, shown in green; Mouse anti GAPDH ab8245 loading control staining at 1/20,000 dilution, shown in magenta. A band was observed at 17 kDa. To generate this image, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 3% milk in TBS-0.1 % Tween® 20 (TBS-T) before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Donkey anti-Goat IgG 800CW and Donkey anti-Mouse IgG 680RD at 1/20,000 dilution.
All lanes:
Western blot - Anti-Iba1 antibody [EPR16588] - Microglia marker - Goat IgG (Chimeric) (ab289874) at 1/1000 dilution

Lane 1:
THP-1 (Human monocytic cell line) cell lysate

Lane 2:
Human spleen tissue lysate

Lane 3:
Human brain tissue lysate

Lane 4:
MCF7 (human breast cancer cell line) cell lysate

Lane 5:
RAW264.7 (mouse macrophage cell line) cell lysate

Lane 6:
Mouse spleen tissue lysate

Lane 7:
Mouse brain tissue lysate

Lane 8:
NIH/3T3 (mouse embryonic fibroblast cell line) cell lysate

Lane 9:
Rat spleen tissue lysate

Lane 10:
Rat brain tissue lysate

Lane 11:
NR8383 (rat alveolar macrophage cell line) cell lysate

Lane 12:
C6 (rat glioma cell line) cell lysate

Secondary

All lanes:
Donkey anti-Goat IgG 800CW and Donkey anti-Mouse IgG 680RD at 1/20000 dilution

Observed band size: 17 kDa, 36 kDa

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