abcam

ab207165

Anti-GFAP antibody [EPR19996] - Astrocyte Marker

Anti-GFAP antibody [EPR19996] (ab207165) is a rabbit monoclonal antibody detecting GFAP in **Western Blot, Flow Cytometry (Intra), IP, IHC-P, IHC-Fr, ICC/IF**. Suitable for **Human, Mouse, Rat**.

- Biophysical QC for unrivalled batch-batch consistency
- Over 10 publications

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	EPR19996
Purification technique	Affinity purification Protein A
Concentration	0.123 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Rat
Dilution info	0.1-1 µg/mL
Notes	-

Species	Mouse
Dilution info	0.1-1 µg/mL
Notes	-

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

IP

Tested

Species	Human
Dilution info	1/30
Notes	-

Expected

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

WB

Tested

Species	Mouse
Dilution info	1/5000
Notes	-

Species	Rat
Dilution info	1/5000
Notes	-

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-Fr

Tested

Species	Mouse
Dilution info	1/100
Notes	Antigen retrieval: Heated citrate solution (10mM citrate pH 6.0 + 0.05% Tween-20)

Expected

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

Flow Cyt (Intra)

Tested

Species	Mouse
Dilution info	1/500
Notes	-

Expected

Species	Rat
Dilution info	1/500

Notes	-

Species	Human
Dilution info	1/500
Notes	-

IHC-P

Tested

Species	Mouse
Dilution info	1/400
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Rat
Dilution info	1/400
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Human
Dilution info	1/400
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Target data

See full target information GFAP

Function	GFAP, a class-III intermediate filament, is a cell-specific marker that, during the development of the central nervous system, distinguishes astrocytes from other glial cells.

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-GFAP antibody [EPR19996] (ab207165) is a rabbit recombinant monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Intra), Immunoprecipitation (IP), Immunohistochemistry (IHC-P), Immunohistochemistry (IHC-Fr), Immunocytochemistry/immunofluorescence (ICC/IF) in Human, Mouse, Rat samples.

What is the molecular weight of GFAP?
Anti-GFAP [EPR19996] (ab207165) specifically detects a band for GFAP (UniProt: P14136) at a molecular weight of 49kDa.

Trusted by the scientific community
Anti-GFAP [EPR19996] (ab207165) was first used in a scientific publication in 2016 and has been cited over 10 times in peer-reviewed journals.

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.

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.

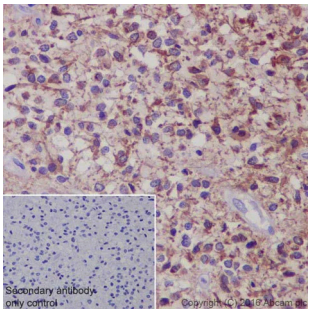
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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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13 product images

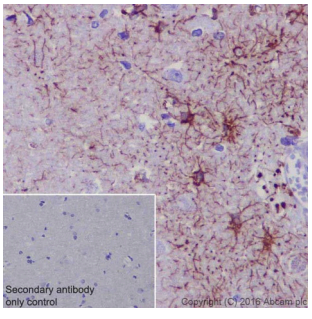


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GFAP antibody [EPR19996] - Astrocyte Marker (ab207165)

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

Immunohistochemical analysis of paraffin-embedded human glioma tissue labeling GFAP with ab207165 at 1/400 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution. Cytoplasmic staining on tumor cells of human glioma 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.

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



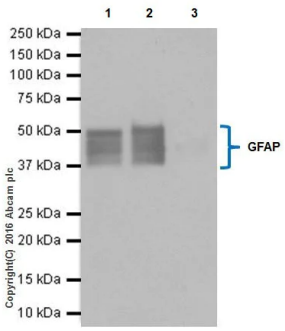
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GFAP antibody [EPR19996] - Astrocyte Marker (ab207165)

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

Immunohistochemical analysis of paraffin-embedded human cerebrum tissue labeling GFAP with ab207165 at 1/400 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500

dilution. Cytoplasmic and membrane staining on glial cells of human cerebrum [PMID: 15378652] 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.

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



Immunoprecipitation - Anti-GFAP antibody [EPR19996] - Astrocyte Marker (ab207165)

GFAP was immunoprecipitated from 0.35 mg of human brain lysate with ab207165 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab207165 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366), was used for detection at 1/10000 dilution.
Lane 1: Human brain lysate 10µg (Input).

Lane 2: ab207165 IP in human brain lysate.

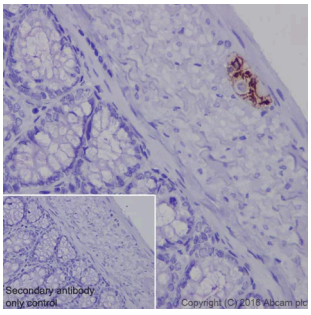
Lane 3: Rabbit IgG, monoclonal [EPR25A] - Isotype Control (ab172730) instead of ab207165 in human brain lysate.

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

Exposure time: 1 second.

All lanes:
Immunoprecipitation - Anti-GFAP antibody [EPR19996] - Astrocyte Marker (ab207165)

Predicted band size: 49 kDa

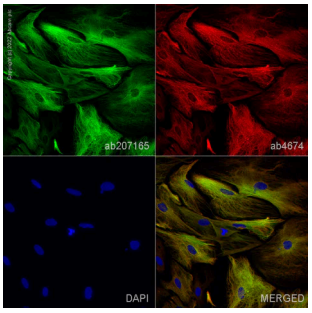


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GFAP antibody [EPR19996] - Astrocyte Marker (ab207165)

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

Immunohistochemical analysis of paraffin-embedded rat colon tissue labeling GFAP with ab207165 at 1/400 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution. Specific cytoplasmic staining on myenteric nerve plexus, and negative on epithelial cells and smooth muscle cells of rat colon 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.

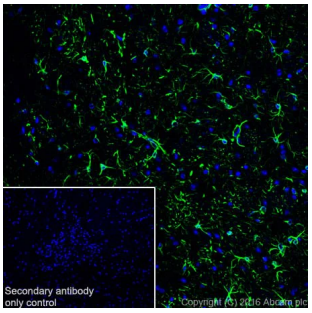
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-GFAP antibody [EPR19996] - Astrocyte Marker (ab207165)

GFAP Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-GFAP antibody

Immunofluorescence staining of GFAP using ab207165 in primary rat hippocampal mixed glia, (prepared from P2 rat hippocampal brain area, obtained from Transnetyx Tissue by BrainBits, LLC, cat.no. SDPHP4m), DIV4. The cells were fixed with 100% MeOH (5 min), permeabilized with 0.1% Triton-X-100 (in PBS) for 5 mins and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated overnight at +4°C with ab207165 at 0.1 µg/ml and ab4674, Anti-GFAP antibody, at 1/1000 dilution. Cells were then incubated with ab150081, Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 dilution (shown in green) and ab150176, Goat Anti-Chicken IgY H&L (Alexa Fluor® 594) preadsorbed at 1/1000 dilution (shown in red). Nuclear DNA was labelled with DAPI (shown in blue). Images were acquired with the Perkin Elmer Operetta HCA and a maximum intensity projection of confocal sections is shown. The antibody ab207165 gave comparable results using 4% formaldehyde fixation (10 min).



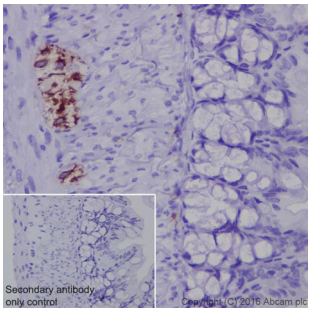
Immunohistochemistry (Frozen sections) - Anti-GFAP antibody [EPR19996] - Astrocyte Marker (ab207165)

GFAP Immunohistochemistry (Frozen sections) staining using rabbit Anti-GFAP antibody

Immunohistochemical analysis of 4% paraformaldehyde-fixed, 0.2% Triton X-100 permeabilized frozen mouse cerebrum tissue labeling GFAP with ab207165 at 1/100 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Cytoplasmic and membrane staining on glial cells of mouse cerebrum is observed.

The nuclear counterstain is DAPI (blue).

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution.

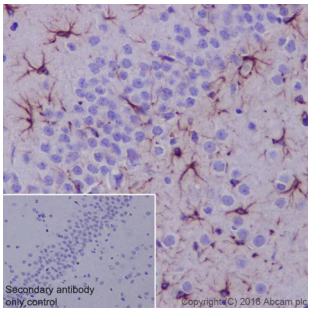


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GFAP antibody [EPR19996] - Astrocyte Marker (ab207165)

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

Immunohistochemical analysis of paraffin-embedded mouse colon tissue labeling GFAP with ab207165 at 1/400 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution. Specific cytoplasmic staining on myenteric nerve plexus, and negative on epithelial cells and smooth muscle cells of mouse colon 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.

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

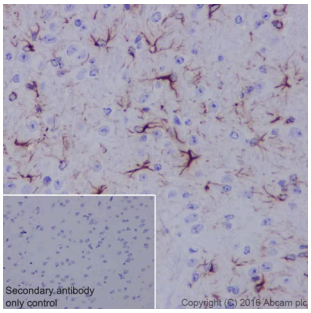


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GFAP antibody [EPR19996] - Astrocyte Marker (ab207165)

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

Immunohistochemical analysis of paraffin-embedded rat hippocampus tissue labeling GFAP with ab207165 at 1/400 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution. Cytoplasmic and membrane staining on glial cells of rat hippocampus 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.

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

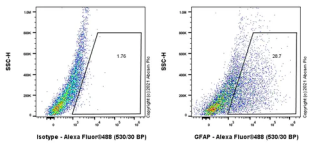


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GFAP antibody [EPR19996] - Astrocyte Marker (ab207165)

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

Immunohistochemical analysis of paraffin-embedded mouse cerebrum tissue labeling GFAP with ab207165 at 1/400 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution. Cytoplasmic and membrane staining on glial cells of mouse 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.

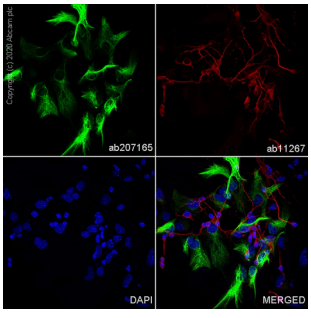
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-GFAP antibody [EPR19996] - Astrocyte Marker (ab207165)

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

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized Mouse primary brain cells cells labelling GFAP with ab207165 at 1/500 dilution (0.1ug)/ Right compared with a Rabbit monoclonal IgG (ab172730) / Left isotype control. A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as the secondary antibody.

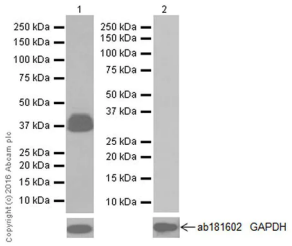


Immunocytochemistry/ Immunofluorescence - Anti-GFAP antibody [EPR19996] - Astrocyte Marker (ab207165)

GFAP Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-GFAP antibody

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized mouse primary neural/glia cells labelling GFAP with ab207165 at 1/1000 dilution, followed by ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) antibody at 1/1000 dilution (2 µg/mL)

(Green). Confocal image showing cytoplasmic staining in mouse primary astrocyte. Confocal scanning Z step was set as 0.3 µm followed by image processing with maximum Z projection. ab11267 Anti-MAP2 mouse monoclonal antibody was used to counterstain tubulin at 1/500 dilution (4 µg/mL) followed by ab150120 Goat Anti-Mouse IgG H&L (Alexa Fluor® 594) at 1/1000 dilution (2 µg/mL) (Red). The Nuclear counterstain was DAPI (Blue).



Western blot - Anti-GFAP antibody [EPR19996] - Astrocyte Marker (ab207165)

GFAP Western blot staining using rabbit Anti-GFAP antibody

Blocking/Dilution buffer: 5% NFDM/TBST.
The molecular weight observed is consistent with the literature.

Negative control: NIH/3T3 (PMID: 824020; PMID:2294; PMID: 6340792; PMID: 9466565).

Lane 1:
Western blot - Anti-GFAP antibody [EPR19996] - Astrocyte Marker (ab207165) at 1/10000 dilution

Lane 2:
Western blot - Anti-GFAP antibody [EPR19996] - Astrocyte Marker (ab207165) at 1/1000 dilution

Lane 1:
Human brain lysate at 10 µg

Lane 2:
NIH/3T3 (Mouse embryonic fibroblast cell line) whole cell lysate at 10 µg

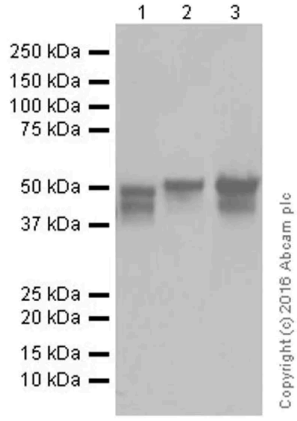
Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Predicted band size: 49 kDa

Observed band size: 40-54 kDa

Exposure time: 1min



Western blot - Anti-GFAP antibody [EPR19996] - Astrocyte Marker (ab207165)

GFAP Western blot staining using rabbit Anti-GFAP antibody

Blocking/Dilution buffer: 5% NFDM/TBST.
The molecular weight observed is consistent with the literature (PMID: 824020; PMID:2294; PMID: 6340792).

All lanes:
Western blot - Anti-GFAP antibody [EPR19996] - Astrocyte Marker (ab207165) at 1/5000 dilution

Lane 1:
Mouse brain lysate at 10 µg

Lane 2:
Rat brain lysate at 10 µg

Lane 3:
Rat cerebellum lysate at 10 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Predicted band size: 49 kDa

Observed band size: 40-54 kDa

Exposure time: 1s

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