abcam

ab251406

Anti-ACTR1B antibody [EPR16969] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR16969
Purification technique	Affinity purification Protein A
Concentration	1.044 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Human
Dilution info	-

Notes	-

IP

Tested

Species	Human
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	-
Notes	-

Target data

See full target information ACTR1B

Function	Component of a multi-subunit complex involved in microtubule based vesicle motility. It is associated with the centrosome.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab251406 is the carrier-free version of ab203835.

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.

Conjugation ready

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. 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.

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.

Compatibility

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.

Supplementary info

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

Activity summary	ACTR1B also known as Actin-Related Protein 1B is part of the ACTR family and plays a mechanical role in cellular processes. It has a molecular mass of approximately 45 kDa. ACTR1B expresses in various tissues including the brain and the testis. The protein is a component of the dynactin complex which associates with microtubules and is essential for dynein-mediated transport within cells.
Biological function summary	ACTR1B supports cellular activities such as intracellular transport and maintenance of cytoskeletal structure. It functions as a part of the dynactin complex a group of proteins that includes p150Glued and p50. This complex has a significant role in the function of cytoplasmic dynein a motor protein responsible for vesicle trafficking mitotic spindle organization and chromosome movement during cell division.
Pathways	ACTR1B contributes to intracellular transport and cytoskeletal regulation through its involvement in the dynactin complex. It directly participates in the dynein-dynactin pathway where it interacts with proteins like LIS1 and Ndel1 to facilitate microtubule-based movements. ACTR1B also plays a part in the endosome sorting pathway affecting proteins related to transport and sorting of intracellular cargo.
Associated diseases and disorders	Faulty ACTR1B function can contribute to neurodegenerative diseases and developmental disorders. For example its connection to dynein pathway disruptions links ACTR1B to defects in nervous system development potentially causing intellectual disabilities and lissencephaly. The protein's role in intracellular trafficking involves it with cellular stress responses linking it to some neurodegenerative diseases through proteins like tau and huntingtin.

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

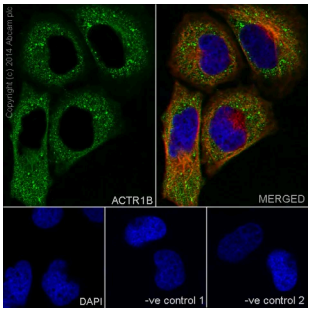
We do not recommend this combination. It is not covered by our product promise.

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.

8 product images



Immunocytochemistry/ Immunofluorescence - Anti-ACTR1B antibody [EPR16969] - BSA and Azide free (ab251406)

ACTR1B Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-ACTR1B antibody

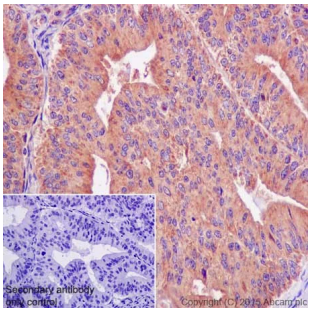
This data was developed using ab203835, the same antibody clone in a different buffer formulation.

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HeLa (Human epithelial cells from cervix adenocarcinoma) cells labeling ACTR1B with ab203835 at 1/250 dilution, followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing cytoplasmic staining on HeLa 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: ab203835 at 1/250 dilution followed by ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/1000 dilution.

-ve control 2: ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution followed by ab150077 (Alexa Fluor®488 Goat Anti-Rabbit IgG H&L) at 1/1000 dilution.



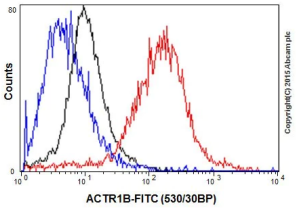
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ACTR1B antibody [EPR16969] - BSA and Azide free (ab251406)

ACTR1B Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-ACTR1B antibody

This data was developed using ab203835, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded Human cervix carcinoma tissue labeling ACTR1B with ab203835 at 1/300 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution. Cytoplasmic staining on Human cervix carcinoma tissue 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.

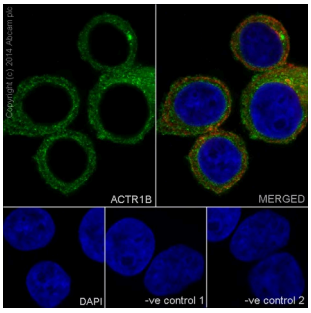
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-ACTR1B antibody [EPR16969] - BSA and Azide free (ab251406)

ACTR1B Flow Cytometry (Intracellular) staining using rabbit Anti-ACTR1B antibody

This data was developed using ab203835, the same antibody clone in a different buffer formulation.
Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed HeLa (Human epithelial cells from cervix adenocarcinoma) cells labeling ACTR1B with ab203835 at 1/300 dilution (red) compared with a rabbit monoclonal IgG isotype control (ab172730; black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody; blue). Goat anti rabbit IgG (FITC) at 1/500 dilution was used as the secondary antibody.



Immunocytochemistry/ Immunofluorescence - Anti-ACTR1B antibody [EPR16969] - BSA and Azide free (ab251406)

ACTR1B Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-ACTR1B antibody

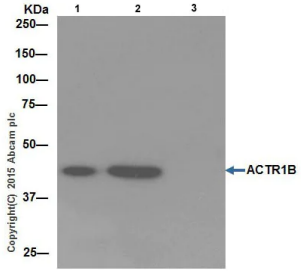
This data was developed using ab203835, the same antibody clone in a different buffer formulation.

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized MCF7 (Human breast adenocarcinoma cell line) cells labeling ACTR1B with ab203835 at 1/250 dilution, followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing cytoplasmic staining on MCF7 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: ab203835 at 1/250 dilution followed by ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/1000 dilution.

-ve control 2: ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution followed by ab150077 (Alexa Fluor®488 Goat Anti-Rabbit IgG H&L) at 1/1000 dilution.



Immunoprecipitation - Anti-ACTR1B antibody [EPR16969] - BSA and Azide free (ab251406)

This data was developed using ab203835, the same antibody clone in a different buffer formulation.
ACTR1B was immunoprecipitated from 1mg of HeLa (Human epithelial cells from cervix adenocarcinoma) whole cell lysate with ab203835 at 1/100 dilution. Western blot was performed from the immunoprecipitate using ab203835 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366), was used for detection at 1/1500 dilution.

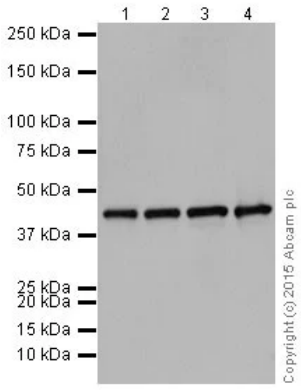
Lane 1: HeLa whole cell lysate 10ug (Input). Lane 2: ab203835 IP in HeLa whole cell lysate. Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab203835 in HeLa whole cell lysate.

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

Exposure time: 5 seconds.

All lanes:
Immunoprecipitation - Anti-ACTR1B antibody [EPR16969] (ab203835)

Predicted band size: 42 kDa



Western blot - Anti-ACTR1B antibody [EPR16969] - BSA and Azide free (ab251406)

This data was developed using ab203835, the same antibody clone in a different buffer formulation.
Blocking and dilution buffer: 5% NFDM/TBST.

All lanes:
Western blot - Anti-ACTR1B antibody [EPR16969] (ab203835) at 1/10000 dilution

Lane 1:
MOLT-4 (Human lymphoblastic leukemia cell line) whole cell lysate at 10 µg

Lane 2:
HepG2 (Human liver hepatocellular carcinoma) whole cell lysate at 10 µg

Lane 3:
293 (Human epithelial cells from embryonic kidney) whole cell lysate at 10 µg

Lane 4:
HeLa (Human epithelial cells from cervix adenocarcinoma) whole cell lysate at 10 µg

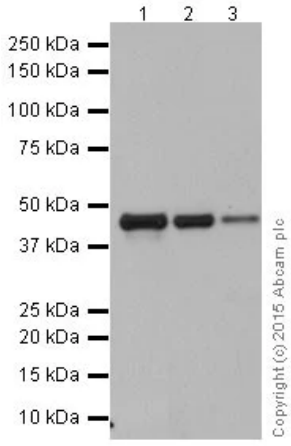
Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 42 kDa

Observed band size: 42 kDa

Exposure time: 10s



Western blot - Anti-ACTR1B antibody [EPR16969] - BSA and Azide free (ab251406)

This data was developed using ab203835, the same antibody clone in a different buffer formulation.
Blocking and dilution buffer: 5% NFDM/TBST.

All lanes:
Western blot - Anti-ACTR1B antibody [EPR16969] (ab203835) at 1/10000 dilution

Lane 1:
Human fetal brain lysate at 10 µg

Lane 2:
Human fetal kidney lysate at 10 µg

Lane 3:
Human fetal spleen lysate at 10 µg

Secondary

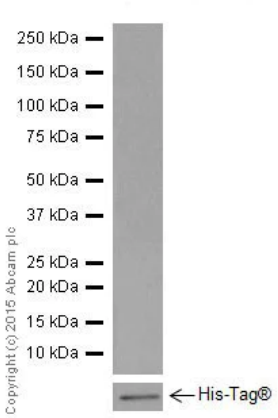
All lanes:

Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/1000 dilution

Predicted band size: 42 kDa

Observed band size: 42 kDa

Exposure time: 15s



Western blot - Anti-ACTR1B antibody [EPR16969] - BSA and Azide free (ab251406)

This data was developed using ab203835, the same antibody clone in a different buffer formulation.
Blocking and dilution buffer: 5% NFDM/TBST.

All lanes:
Western blot - Anti-ACTR1B antibody [EPR16969] - BSA and Azide free (ab251406) at 1/1000 dilution

All lanes:
Full length Human ACTR1A recombination protein at 0.01 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/50000 dilution

Predicted band size: 42 kDa

Exposure time: 3min

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