abcam

ab254472

Anti-non-muscle Myosin IIB/MYH10 antibody [EPR22564-23] - 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	EPR22564-23
Purification technique	Affinity purification Protein A
Concentration	1.046 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	-

Notes	-

Expected

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

Predicted

Species	Rat
Dilution info	-
Notes	-

WB

Expected

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

ICC/IF

Tested

Species	Mouse
Dilution info	-
Notes	-

Expected

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

Predicted

Species	Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

Predicted

Species	Rat
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Mouse

Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Rat
Dilution info	-
Notes	-

Target data

See full target information MYH10

Function Cellular myosin that appears to play a role in cytokinesis, cell shape, and specialized functions such as secretion and capping. Involved with LARP6 in the stabilization of type I collagen mRNAs for CO1A1 and CO1A2. During cell spreading, plays an important role in cytoskeleton reorganization, focal contacts formation (in the central part but not the margins of spreading cells), and lamellipodial extension; this function is mechanically antagonized by MYH9. (Microbial infection) Acts as a receptor for herpes simplex virus 1/HHV-1 envelope glycoprotein B.

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

ab254472 is the carrier-free version of ab230823.

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	Non-muscle Myosin IIB also known as MYH10 is a motor protein important in cell division and movement. This protein weighs approximately 228 kDa. Myosin IIB shows expression in various tissues including the brain heart and fibroblasts. Unlike other myosins found in muscle cells Myosin IIB functions mainly in non-muscle cells where it plays a role in organizing intracellular structure and shape.
Biological function summary	The non-muscle Myosin IIB contributes to cell motility and cytokinesis important for normal cell proliferation and maintenance. It operates as part of the actomyosin complex that includes actin and other myosin types. This complex facilitates contractile forces within cells enabling movements such as cell migration and tissue development. Myosin IIB works closely with actin filaments converting chemical energy from ATP into mechanical work required for these processes.
Pathways	Cell migration and tissue morphogenesis involve Myosin IIB. Myosin IIB participates in the Rho-ROCK signaling pathway which regulates actomyosin contraction during cellular movement and morphogenesis. It interacts with other myosins like Myosin IIA illustrating its role in shared pathways. These pathways control the balance between cellular adhesion and detachment necessary for proper cellular function.
Associated diseases and disorders	Non-muscle Myosin IIB associates with neurological disorders and cancer. Changes in Myosin IIB function can disrupt normal cell division leading to cancer progression. In neurological disorders Myosin IIB affects cell signaling and structural integrity of neurons. For instance disruptions in interactions with actin and other related proteins like Myosin IIA and Tropomyosins can lead to these adverse biological effects showing its significance in maintaining healthy cellular operations.

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

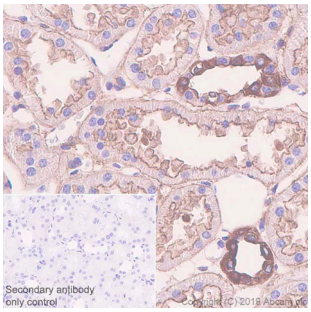
We do not recommend this combination. It is not covered by our product promise.

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.

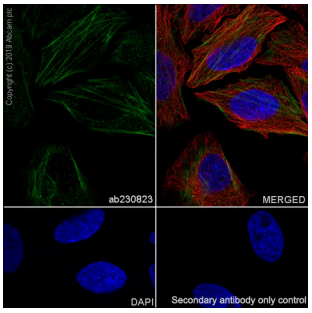
10 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-non-muscle Myosin IIB/MYH10 antibody [EPR22564-23] - BSA and Azide free (ab254472)

Non-muscle Myosin IIB/MYH10 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-non-muscle Myosin IIB/MYH10 antibody

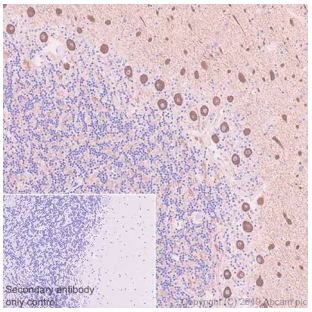
Immunohistochemical analysis of paraffin-embedded human kidney tissue labeling non-muscle Myosin IIB/MYH10 with ab230823 at 1/2000 dilution, followed by Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Positive staining on human renal tubules (PMID: 29208685) is observed. Counterstained with hematoxylin. Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). The section was incubated with ab230823 for 30 mins at RT. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20mins.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab230823).



Immunocytochemistry/ Immunofluorescence - Anti-non-muscle Myosin IIB/MYH10 antibody [EPR22564-23] - BSA and Azide free (ab254472)

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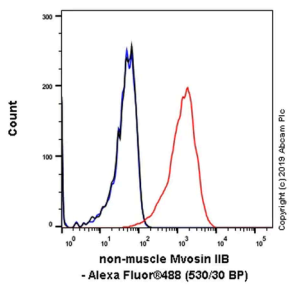
Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HeLa (human epithelial cell line from cervix adenocarcinoma) cells labeling non-muscle Myosin IIB/MYH10 with ab230823 at 1/100 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing cytoplasmic staining in HeLa cells. The nuclear counterstain is DAPI (blue). Tubulin is detected with Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) (ab195889) at 1/200 dilution (red). Secondary antibody only control: Used PBS instead of primary antibody, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution.
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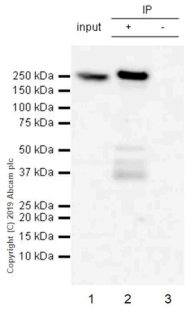
Immunohistochemical analysis of paraffin-embedded human cerebellum tissue labeling non-muscle Myosin IIB/MYH10 with ab230823 at 1/2000 dilution, followed by Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Strong positive staining on Purkinje cells of human cerebellum (PMID: 29330091) is observed. Counterstained with hematoxylin. Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). The section was incubated with ab230823 for 30 mins at RT. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20mins.
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Flow Cytometry (Intracellular) - Anti-non-muscle Myosin IIB/MYH10 antibody [EPR22564-23] - BSA and Azide free (ab254472)

Non-muscle Myosin IIB/MYH10 Flow Cytometry (Intracellular) staining using rabbit Anti-non-muscle Myosin IIB/MYH10 antibody

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed, 90% methanol-permeabilized HEK-293T (human epithelial cell line from embryonic kidney transformed with large T antigen) cells labeling non-muscle Myosin IIB/MYH10 with ab230823 at 1/600 (red) compared with a Rabbit IgG, monoclonal [EPR25A] - Isotype Control (ab172730) (black) and an unlabeled control (cells without incubation with primary antibody and secondary antibody) (blue). Goat Anti-Rabbit IgG H&L (Alexa Fluor®488) (ab150077), at 1/2000 dilution was used as the secondary antibody.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab230823).



Immunoprecipitation - Anti-non-muscle Myosin IIB/MYH10 antibody [EPR22564-23] - BSA and Azide free (ab254472)

non-muscle Myosin IIB/MYH10 was immunoprecipitated from 0.35 mg of HEK-293T (human epithelial cell line from embryonic kidney transformed with large T antigen) whole cell lysate with ab230823 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab230823 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366), was used as secondary antibody at 1/5000 dilution.
Lane 1: HEK-293T whole cell lysate 10 µg (Input).
Lane 2: ab230823 IP in HEK-293T whole cell lysate.
Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab230823 in HEK-293T whole cell lysate.

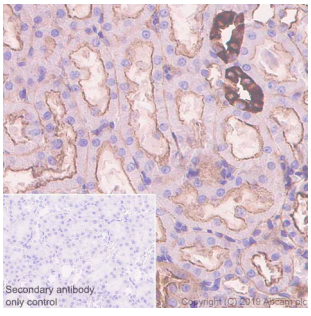
Blocking/Dilution buffer: 5% NFDM/TBST.
Exposure time: 3 secs.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab230823).

All lanes:
Immunoprecipitation - Anti-non-muscle Myosin IIB/MYH10 antibody [EPR22564-23] (ab230823)

Predicted band size: 229 kDa

Observed band size: 230 kDa



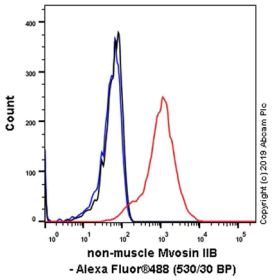
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Non-muscle Myosin IIB/MYH10 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-non-muscle Myosin IIB/MYH10 antibody

Immunohistochemical analysis of paraffin-embedded rat kidney tissue labeling non-muscle Myosin IIB/MYH10 with ab230823 at 1/2000 dilution, followed by Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Positive staining on rat renal tubules (PMID: 29208685) is observed. Counterstained with hematoxylin. Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Rabbit specific IHC polymer detection kit HRP/DAB

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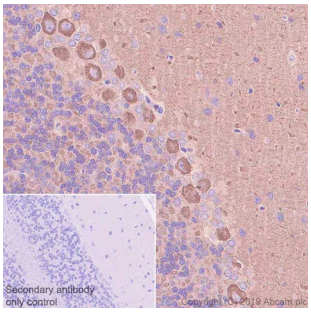
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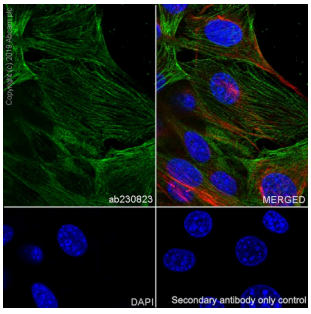


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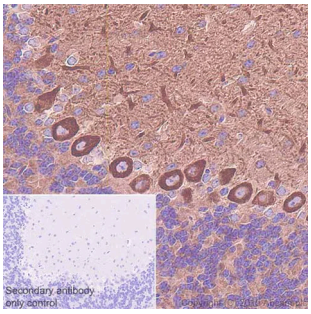


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