abcam

ab240069

Anti-smooth muscle Myosin heavy chain 11 antibody [EPR5336(B)] - 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	EPR5336(B)
Purification technique	Affinity purification Protein A
Concentration	0.944 - 1.047 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	-

Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Target data

See full target information MYH11

Function	Muscle contraction.

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

ab240069 is the carrier-free version of ab133567.

Species reactivity

Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

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	Smooth muscle Myosin heavy chain 11 also known as MYH11 or myosin 11 is a protein that plays a mechanical role in muscle contraction. It forms part of the thick filament in smooth muscle cells. MYH11 has a molecular mass of approximately 227 kDa and is expressed in smooth muscle tissues including the walls of blood vessels the gastrointestinal tract and the respiratory system. As a member of the myosin heavy chain family it functions by interacting with actin filaments to facilitate contraction allowing for the maintenance and regulation of vascular tone and organ motility.

Biological function summary	Smooth muscle Myosin heavy chain 11 contributes to muscle function through its role within myofilament complexes. These complexes enable cells to achieve the force generation necessary for muscle contraction. MYH11 is critical to cytoskeletal maintenance and cell movement especially in the smooth muscles that line the visceral organs and blood vessels. Without proper functioning of MYH11 cells may lose structural stability and functionality leading to impaired muscle contraction and vessel elasticity.
Pathways	Smooth muscle Myosin heavy chain 11 engages intimately with signal transduction processes governing muscle contraction and relaxation. MYH11 acts in the RhoA/ROCK signaling pathway which is vital to the regulation of vascular smooth muscle contraction. Within this pathway MYH11 influences the activity of proteins like myosin light chain kinase and phosphatase. The protein also plays a role in actin-myosin complex dynamics through its interaction with cellular elements such as tropomyosin and caldesmon significantly impacting cellular processes like cell proliferation and migration.
Associated diseases and disorders	Smooth muscle Myosin heavy chain 11 has significant correlations with conditions such as familial thoracic aortic aneurysm and aortic dissection types. Mutations or dysfunctions in MYH11 have a direct impact on the integrity of the aortic wall which can lead to these severe vascular conditions. Additionally MYH11 has associations with hypertension through its involvement in vascular tension regulation. The protein's malfunction may disturb its interactions with other myosin heavy chain family members exacerbating vascular risk factors.

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

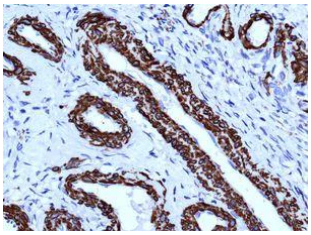
We do not recommend this combination. It is not covered by our product promise.

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.

7 product images

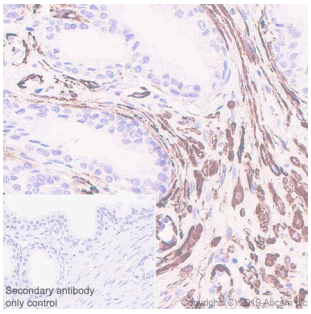


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-smooth muscle Myosin heavy chain 11 antibody [EPR5336(B)] - BSA and Azide free (ab240069)

Smooth muscle Myosin heavy chain 11 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-smooth muscle Myosin heavy chain 11 antibody

Immunohistochemical analysis of paraffin-embedded Human ovary tissue labelling smooth muscle Myosin heavy chain 11 with unpurified, ab133567 at 1/250 dilution.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab133567).

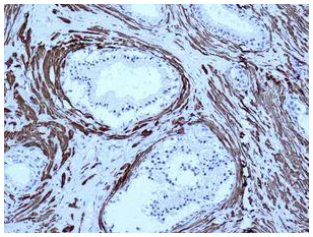
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-smooth muscle Myosin heavy chain 11 antibody [EPR5336(B)] - BSA and Azide free (ab240069)

Smooth muscle Myosin heavy chain 11 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-smooth muscle Myosin heavy chain 11 antibody

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human prostatic hyperplasia tissue sections labeling smooth muscle Myosin heavy chain 11 with purified ab133567 at 1/1000 dilution (0.12 µg/mL). Perform heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0). Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab133567).

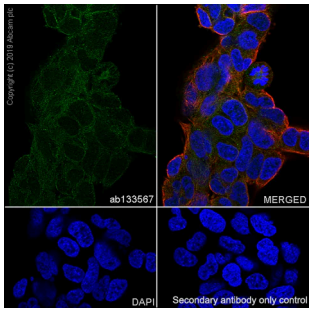


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-smooth muscle Myosin heavy chain 11 antibody [EPR5336(B)] - BSA and Azide free (ab240069)

Smooth muscle Myosin heavy chain 11 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-smooth muscle Myosin heavy chain 11 antibody

Immunohistochemical analysis of paraffin-embedded Human prostate tissue labelling smooth muscle Myosin heavy chain 11 with unpurified ab133567 at 1/250 dilution.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab133567).

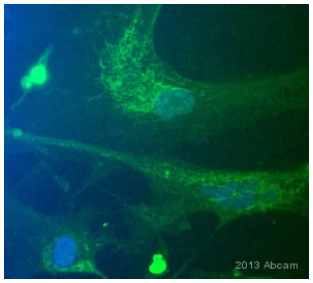
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-smooth muscle Myosin heavy chain 11 antibody [EPR5336(B)] - BSA and Azide free (ab240069)

Smooth muscle Myosin heavy chain 11 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-smooth muscle Myosin heavy chain 11 antibody

Immunocytochemistry/ Immunofluorescence analysis of A-673 (Human muscle Ewing's Sarcoma) cells labeling smooth muscle Myosin heavy chain 11 with purified ab133567 at 1/50 dilution (2.34 µg/mL). Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% TritonX-100. Cells were counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1/200 (2.5 µg/mL). 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 nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab133567).

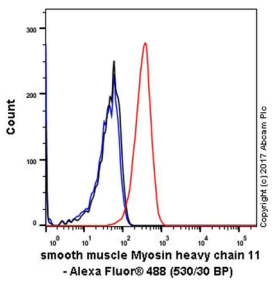


This image is courtesy of an anonymous customer review.

Immunocytochemistry/ Immunofluorescence - Anti-smooth muscle Myosin heavy chain 11 antibody [EPR5336(B)] - BSA and Azide free (ab240069)

Smooth muscle Myosin heavy chain 11 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-smooth muscle Myosin heavy chain 11 antibody

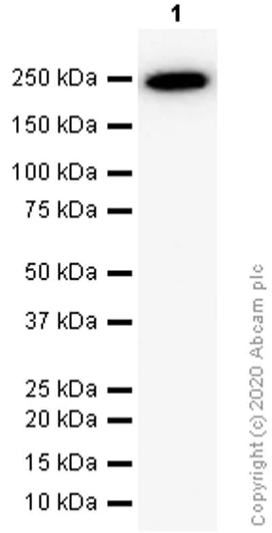
Unpurified ab133567 staining smooth muscle Myosin heavy chain 11 in Human smooth muscle cells by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with paraformaldehyde and permeabilized and blocked in 1% serum, 0.1%triton, 0.1% BSA in PBS. Samples were incubated with primary antibody (1/100) for 16 hours at 4°C. A Goat anti-rabbit IgG Alexa 488 (green) was used as the secondary antibody, and DAPI was used to stain cell nuclei (blue).
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab133567).



Flow Cytometry (Intracellular) - Anti-smooth muscle Myosin heavy chain 11 antibody [EPR5336(B)] - BSA and Azide free (ab240069)

Smooth muscle Myosin heavy chain 11 Flow Cytometry (Intracellular) staining using rabbit Anti-smooth muscle Myosin heavy chain 11 antibody

Intracellular Flow Cytometry analysis of 293 (Human embryonic kidney epithelial cell) cells labeling smooth muscle Myosin heavy chain 11 (red) with purified ab133567 at a 1/20 dilution (10ug/mL). Cells were fixed with 4% paraformaldehyde and permeabilized with 90% methanol. A goat anti rabbit IgG (Alexa Fluor® 488) (ab150077) was used as the secondary antibody at a 1/2000 dilution. Black - Rabbit monoclonal IgG (Black) (ab172730). Blue (unlabeled control) - Cell without incubation with primary antibody and secondary antibody (Blue).
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab133567).



Western blot - Anti-smooth muscle Myosin heavy chain 11 antibody [EPR5336(B)] - BSA and Azide free (ab240069)

Smooth muscle Myosin heavy chain 11 Western blot staining of Human testis lysate using rabbit Anti-smooth muscle Myosin heavy chain 11 antibody

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab133567).
All lanes:
Western blot - Anti-smooth muscle Myosin heavy chain 11 antibody [EPR5336(B)] (ab133567) at 1/5000 dilution

All lanes:
Human testis lysate at 15 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000 dilution

Predicted band size: 227 kDa

Observed band size: 227 kDa

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