

Alexa Fluor® 647 Anti-smooth muscle Myosin heavy chain 11 antibody [EPR5336(B)]

Recombinant

RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	Alexa Fluor® 647
Excitation/Emission	Ex: 650nm, Em: 665nm
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 30% Glycerol (glycerin, glycerine), 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR5336(B)
Purification technique	Affinity purification Protein A
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/100
Notes	Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Expected

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

Not recommended

Species	Mouse
Dilution info	-
Notes	Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

IHC-Fr

Tested

Species	Rat
Dilution info	1/100
Notes	-

Expected

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

Not recommended

Species	Mouse
Dilution info	-

Notes	-
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Flow Cyt (Intra)

Expected

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

Predicted

Species	Rat
Dilution info	-
Notes	-

Not recommended

Species	Mouse
Dilution info	-
Notes	-

ICC/IF

Expected

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

Predicted

Species	Rat
Dilution info	-
Notes	-

Not recommended

Species	Mouse
Dilution info	-
Notes	-

Target data

[See full target information MYH11](#) 

Function	Muscle contraction.
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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, Store in the dark

Notes

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.

Alexa Fluor® is a registered trademark of Molecular Probes, Inc, a Thermo Fisher Scientific Company. The Alexa Fluor® dye included in this product is provided under an intellectual property license from Life Technologies Corporation. As this product contains the Alexa Fluor® dye, the purchase of this product conveys to the buyer the non-transferable right to use the purchased product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). As this product contains the Alexa Fluor® dye the sale of this product is expressly conditioned on the buyer not using the product or its components, or any materials made using the product or its components, in any activity to generate revenue, which may include, but is not limited to use of the product or its components: (i) to provide a service, information, or data in return for payment (iii) for therapeutic, diagnostic or prophylactic purposes; or (iv) for resale, regardless of whether they are sold for use in research. For information on purchasing a license to this product for purposes other than research,

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

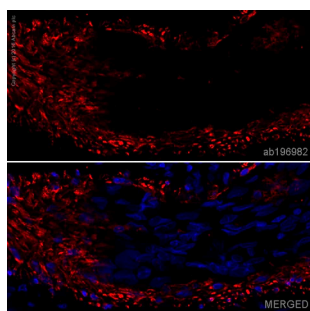
We do not recommend this combination. It is not covered by our product promise.

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.](#)

2 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Alexa Fluor® 647 Anti-smooth muscle Myosin heavy chain 11 antibody [EPR5336(B)] (ab196982)

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

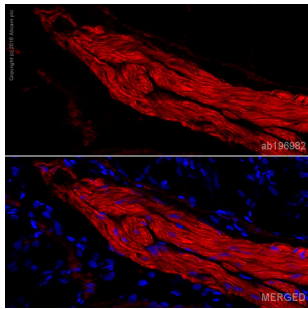
IHC image of smooth muscle Myosin heavy chain 11 staining in a section of formalin-fixed paraffin-embedded human colon adenocarcinoma*.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6) in a Dako Pascal pressure cooker using the standard factory-set regime. Non-specific protein-protein interactions were then blocked in TBS containing 0.025% (v/v) Triton X-100, 0.3M (w/v) glycine and 1% (w/v) BSA for 1h at room temperature. The section was then incubated overnight at +4°C in TBS containing 0.025% (v/v) Triton X-100 and 1% (w/v) BSA with ab196982 at 1/100 (shown in red). Nuclear DNA was labelled with DAPI (shown in blue). The section was then mounted using Fluoromount®.

Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

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

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



Immunohistochemistry (Frozen sections) - Alexa Fluor® 647 Anti-smooth muscle Myosin heavy chain 11 antibody [EPR5336(B)] (ab196982)

Smooth muscle Myosin heavy chain 11 Immunohistochemistry (Frozen sections) staining using rabbit Anti-smooth muscle Myosin heavy chain 11 antibody

IHC image of smooth muscle Myosin heavy chain 11 staining in a section of frozen normal rat large intestine.

The section was fixed using 10% formaldehyde in 1XPBS for 10 minutes. No antigen retrieval step was performed prior to staining. Non-specific protein-protein interactions were then blocked in TBS containing 0.025% (v/v) Triton X-100, 0.3M (w/v) glycine and 1% (w/v) BSA for 1h at room temperature. The section was then incubated overnight at +4°C in TBS containing 0.025% (v/v) Triton X-100 and 1% (w/v) BSA with ab196982 at 1/100 (shown in red). Nuclear DNA was labelled with DAPI (shown in blue). The section was then mounted using Fluoromount®.

Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

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

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