

Anti-smooth muscle Myosin heavy chain 11 antibody [SP314] - BSA and Azide free ab240983

Recombinant RabMAb

11 Images

Overview

Product name	Anti-smooth muscle Myosin heavy chain 11 antibody [SP314] - BSA and Azide free
Description	Rabbit monoclonal [SP314] to smooth muscle Myosin heavy chain 11 - BSA and Azide free
Host species	Rabbit
Tested applications	Suitable for: Flow Cyt (Intra), IHC-Fr, IHC-P
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	Synthetic peptide within Human smooth muscle Myosin heavy chain 11 (N terminal). The exact sequence is proprietary. Database link: P35749
Positive control	IHC-P: Human small intestine, colon, prostate, fallopian tube and ovary tissues, mouse stomach, rat colon
General notes	<p>ab240983 is the carrier-free version of ab224804.</p> <p>Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production <p>For more information see here.</p>

This product is FOR RESEARCH USE ONLY. For commercial use, please contact partnerships@abcam.com.

The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.

If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C. Do Not Freeze.
Storage buffer	pH: 7.20 Constituent: PBS
Carrier free	Yes
Purity	Protein A/G purified
Purification notes	Purified from TCS by protein A/G.
Clonality	Monoclonal
Clone number	SP314
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab240983 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
Flow Cyt (Intra)		Use at an assay dependent concentration.
IHC-Fr		Use at an assay dependent concentration.
IHC-P		Use at an assay dependent concentration. Perform heat mediated antigen retrieval with EDTA buffer pH 8.0 before commencing with IHC staining protocol.

Target

Function	Muscle contraction.
Tissue specificity	Smooth muscle; expressed in the umbilical artery, bladder, esophagus and trachea.

Involvement in disease

Note=A chromosomal aberration involving MYH11 is found in acute myeloid leukemia of M4EO subtype. Pericentric inversion inv(16)(p13;q22). The inversion produces a fusion protein consisting of the 165 N-terminal residues of CBF-beta (PEPB2) and the tail region of MYH11. Defects in MYH11 are the cause of aortic aneurysm familial thoracic type 4 (AAT4) [MIM:132900]; also known as familial thoracic aortic aneurysm and dissection (TAAD). Aneurysms and dissections of the aorta usually result from degenerative changes in the aortic wall. Thoracic aortic aneurysms and dissections are primarily associated with a characteristic histologic appearance known as 'medial necrosis' or 'Erdheim cystic medial necrosis' in which there is degeneration and fragmentation of elastic fibers, loss of smooth muscle cells, and an accumulation of basophilic ground substance. Patients with AAT4 show marked aortic stiffness. Pathological aortas show large areas of medial degeneration with very low smooth muscle cells content.

Sequence similarities

Contains 1 IQ domain.
Contains 1 myosin head-like domain.

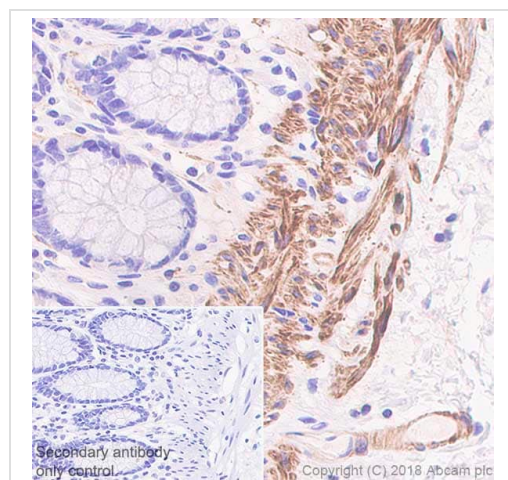
Domain

The rodlike tail sequence is highly repetitive, showing cycles of a 28-residue repeat pattern composed of 4 heptapeptides, characteristic for alpha-helical coiled coils. Each myosin heavy chain can be split into 1 light meromyosin (LMM) and 1 heavy meromyosin (HMM). It can later be split further into 2 globular subfragments (S1) and 1 rod-shaped subfragment (S2).

Cellular localization

Melanosome. Identified by mass spectrometry in melanosome fractions from stage I to stage IV. Thick filaments of the myofibrils.

Images

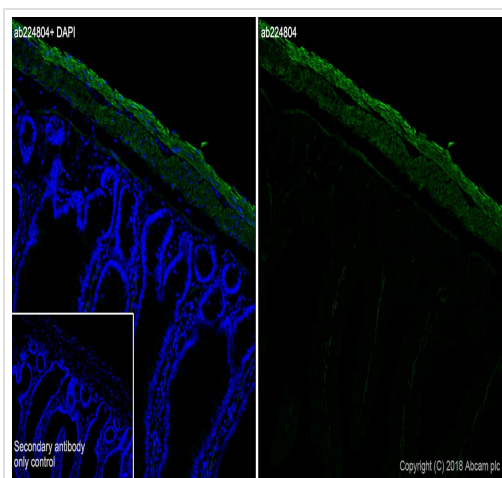


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-smooth muscle Myosin heavy chain 11 antibody [SP314] - BSA and Azide free (ab240983)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human colon tissue sections labeling smooth muscle Myosin heavy chain 11 with [ab224804](#) at 1/100 dilution (1.34 µg/ml). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 10mins. Goat Anti-Rabbit & Mouse IgG (HRP) was used as the secondary antibody. Hematoxylin was used as a counterstain. Positive staining on the smooth muscle cells in human colon, performed on a Leica Biosystems BOND™ RX instrument.

The section was incubated with [ab224804](#) for 10 mins at room temperature.

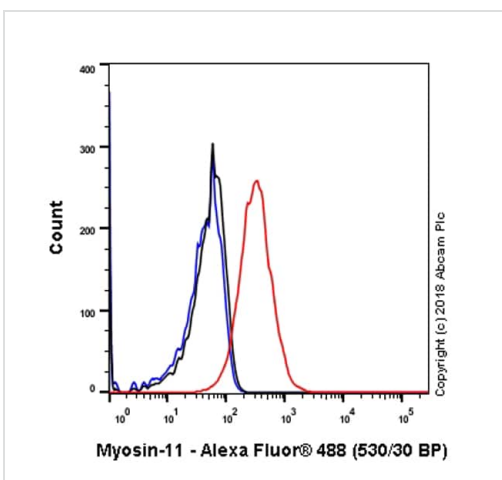
This image was generated using [ab224804](#), the same clone, but with a different buffer formulation.



Immunohistochemistry (Frozen sections) - Anti-smooth muscle Myosin heavy chain 11 antibody [SP314] - BSA and Azide free (ab240983)

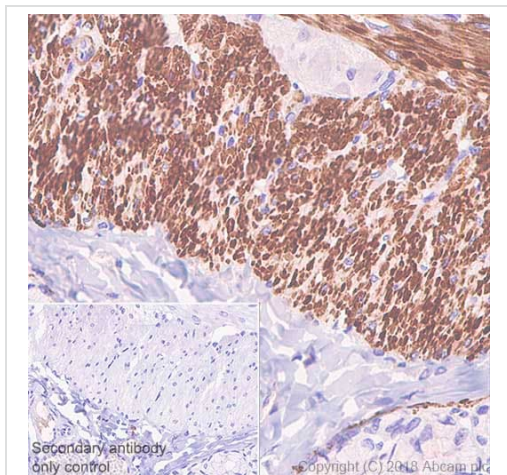
Immunohistochemistry (Frozen) analysis of rat small intestine tissue section labeling smooth muscle Myosin heavy chain 11 with purified **ab224804** at 1/500 (1.8 µg/ml). Sections were fixed in 4% paraformaldehyde and permeabilized with 0.2% Triton X-100. Antigen retrieval was Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20). Goat anti rabbit IgG (Alexa Fluor® 488, **ab150077**) was used as the secondary antibody at 1/1000 (2 µg/ml) dilution. DAPI 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 (**ab224804**).



Flow Cytometry (Intracellular) - Anti-smooth muscle Myosin heavy chain 11 antibody [SP314] - BSA and Azide free (ab240983)

Intracellular Flow Cytometry analysis of C2C12 (Mouse myoblasts myoblast) labeling smooth muscle Myosin heavy chain 11 with purified **ab224804** at 1/80 dilution (1.12 µg/ml) (red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. Goat anti rabbit IgG (Alexa Fluor® 488, **ab150077**) at 1/2000 dilution was used as a secondary antibody. Isotype control - Rabbit monoclonal IgG (**ab172730**) / Black. Unlabeled control - Unlabelled cells / blue. This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab224804**).

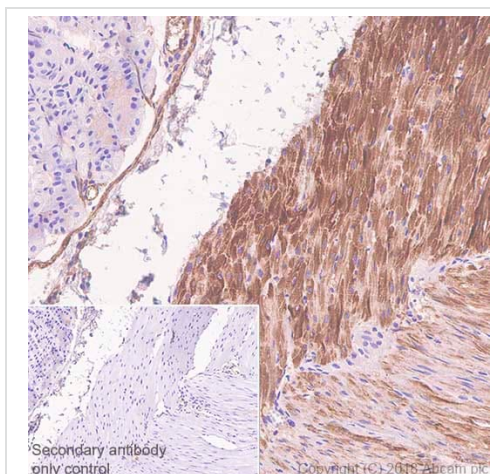


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-smooth muscle Myosin heavy chain 11 antibody [SP314] - BSA and Azide free (ab240983)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Rat colon tissue sections labeling smooth muscle Myosin heavy chain 11 with **ab224804** at 1/100 dilution (1.34 µg/ml). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 10mins. Goat Anti-Rabbit & Mouse IgG (HRP) was used as the secondary antibody. Hematoxylin was used as a counterstain. Positive staining on the smooth muscle cells in rat colon, performed on a Leica Biosystems BOND™ RX instrument.

The section was incubated with **ab224804** for 10 mins at room temperature.

This image was generated using **ab224804**, the same clone, but with a different buffer formulation.

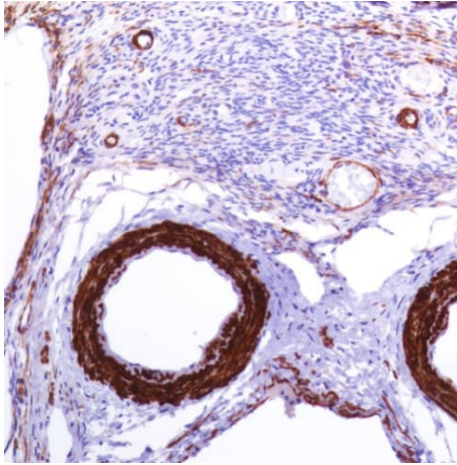


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-smooth muscle Myosin heavy chain 11 antibody [SP314] - BSA and Azide free (ab240983)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Mouse stomach tissue sections labeling smooth muscle Myosin heavy chain 11 with **ab224804** at 1/100 dilution (1.34 µg/ml). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 10mins. Goat Anti-Rabbit & Mouse IgG (HRP) was used as the secondary antibody. Hematoxylin was used as a counterstain. Positive staining on the smooth muscle cells in mouse stomach, performed on a Leica Biosystems BOND™ RX instrument.

The section was incubated with **ab224804** for 10 mins at room temperature.

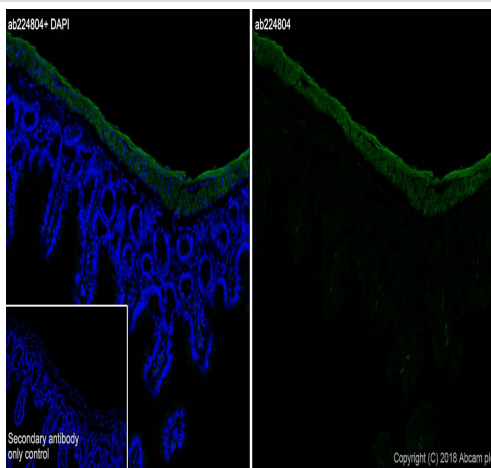
This image was generated using **ab224804**, the same clone, but with a different buffer formulation.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-smooth muscle Myosin heavy chain 11 antibody [SP314] - BSA and Azide free (ab240983)

Formalin-fixed, paraffin-embedded human ovary tissue stained for smooth muscle Myosin heavy chain 11 using **ab224804** at 1/100 dilution in immunohistochemical analysis.

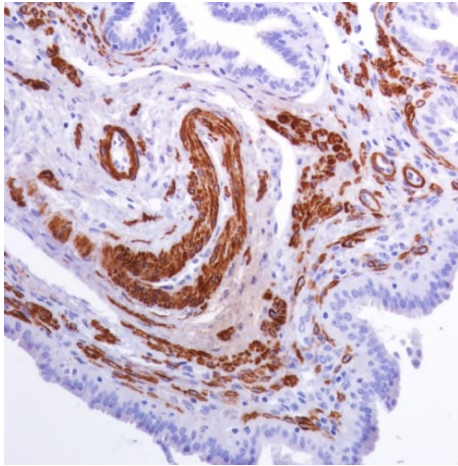
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA and sodium azide (**ab224804**).



Immunohistochemistry (Frozen sections) - Anti-smooth muscle Myosin heavy chain 11 antibody [SP314] - BSA and Azide free (ab240983)

Immunohistochemistry (Frozen) analysis of mouse small intestine tissue section labeling smooth muscle Myosin heavy chain 11 with purified **ab224804** at 1/500 (1.8 µg/ml). Sections were fixed in 4% paraformaldehyde and permeabilized with 0.2% Triton X-100. Antigen retrieval was Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20). Goat anti rabbit IgG (Alexa Fluor® 488, **ab150077**) was used as the secondary antibody at 1/1000 (2 µg/ml) dilution. DAPI was used as nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.

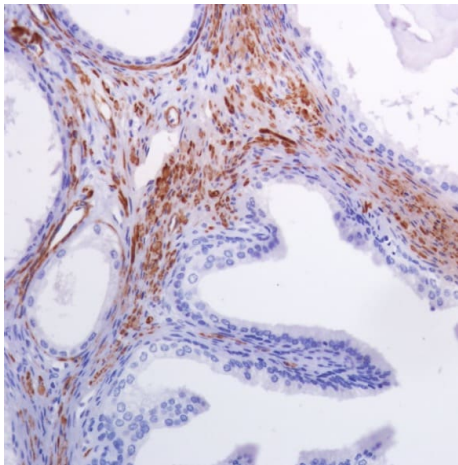
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab224804**).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-smooth muscle Myosin heavy chain 11 antibody [SP314] - BSA and Azide free (ab240983)

Formalin-fixed, paraffin-embedded human fallopian tube tissue stained for smooth muscle Myosin heavy chain 11 using [**ab224804**](#) at 1/100 dilution in immunohistochemical analysis.

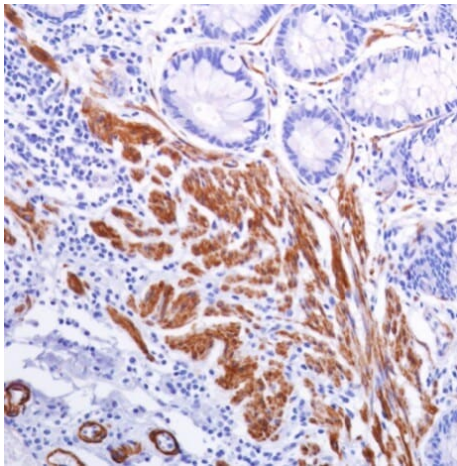
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA and sodium azide ([**ab224804**](#)).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-smooth muscle Myosin heavy chain 11 antibody [SP314] - BSA and Azide free (ab240983)

Formalin-fixed, paraffin-embedded human prostate tissue stained for smooth muscle Myosin heavy chain 11 using [**ab224804**](#) at 1/100 dilution in immunohistochemical analysis.

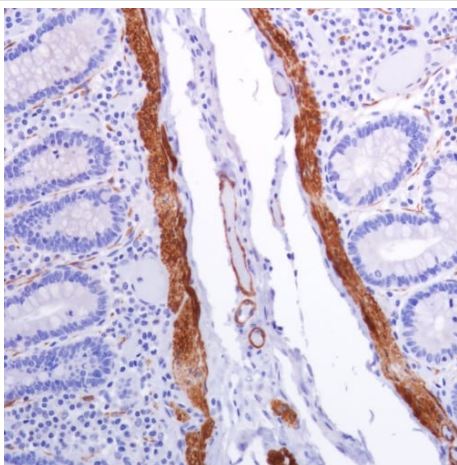
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA and sodium azide ([**ab224804**](#)).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-smooth muscle Myosin heavy chain 11 antibody [SP314] - BSA and Azide free (ab240983)

Formalin-fixed, paraffin-embedded human colon tissue stained for smooth muscle Myosin heavy chain 11 using **ab224804** at 1/100 dilution in immunohistochemical analysis.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA and sodium azide (**ab224804**).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-smooth muscle Myosin heavy chain 11 antibody [SP314] - BSA and Azide free (ab240983)

Formalin-fixed, paraffin-embedded human small intestine tissue stained for smooth muscle Myosin heavy chain 11 using **ab224804** at 1/100 dilution in immunohistochemical analysis.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA and sodium azide (**ab224804**).

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