abcam

Product datasheet

Anti-smooth muscle Myosin heavy chain 11 antibody [SP314] - N-terminal ab224804

Recombinant RabMAb

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Overview

Product name	Anti-smooth muscle Myosin heavy chain 11 antibody [SP314] - N-terminal
Description	Rabbit monoclonal [SP314] to smooth muscle Myosin heavy chain 11 - N-terminal
Host species	Rabbit
Tested applications	**Suitable for:** IHC-Fr, Flow Cyt (Intra), IHC-P
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	IHC-P: Human small intestine, colon, prostate, fallopian tube and ovary tissues, rat and mouse colon tissue. IHC-Fr: Mouse and rat small intestine tissue. Flow Cyt (Intra): C2C12 cells
General notes	**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 short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.60 Preservative: 0.1% Sodium azide Constituents: PBS, 1% BSA
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 ab224804 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

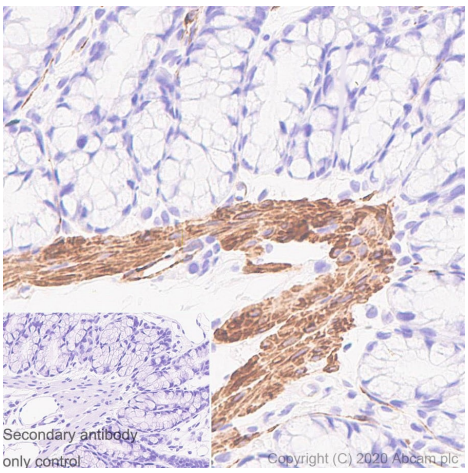
Application	Abreviews	Notes
IHC-Fr		1/500.
Flow Cyt (Intra)		1/80.
IHC-P		1/100. Perform heat mediated antigen retrieval with EDTA buffer pH 8.0 before commencing with IHC staining protocol.

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.

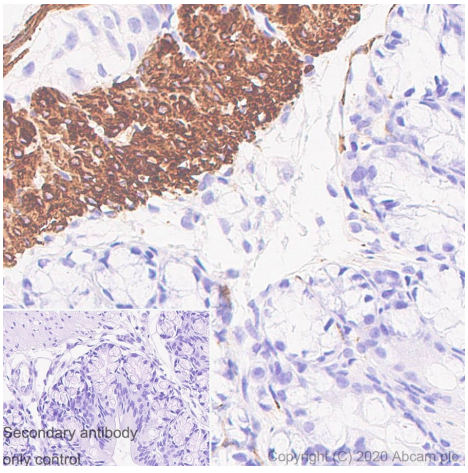
Images

Images



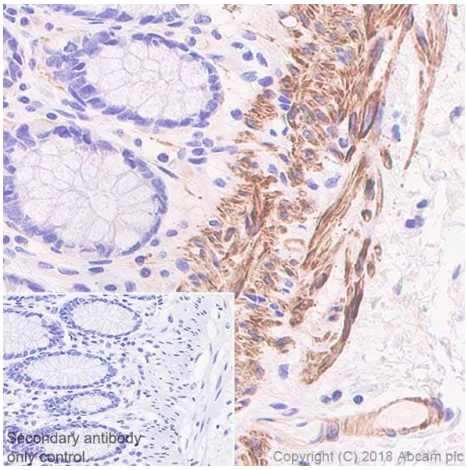
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-smooth muscle Myosin heavy chain 11 antibody [SP314] - N-terminal (ab224804)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of rat colon tissue sections labeling smooth muscle Myosin heavy chain 11 with ab224804 at 1/400 dilution (0.27 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.



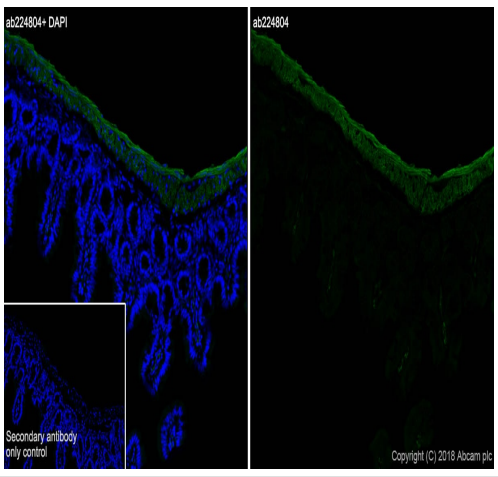
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-smooth muscle Myosin heavy chain 11 antibody [SP314] - N-terminal (ab224804)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of mouse colon tissue sections labeling smooth muscle Myosin heavy chain 11 with ab224804 at 1/400 dilution (0.27 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 colon, performed on a Leica Biosystems BOND™ RX instrument.
The section was incubated with ab224804 for 10 mins at room temperature.



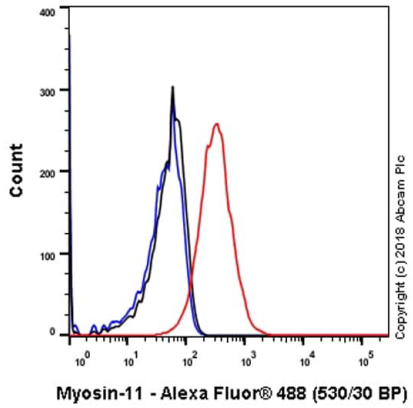
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-smooth muscle Myosin heavy chain 11 antibody [SP314] - N-terminal (ab224804)

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.



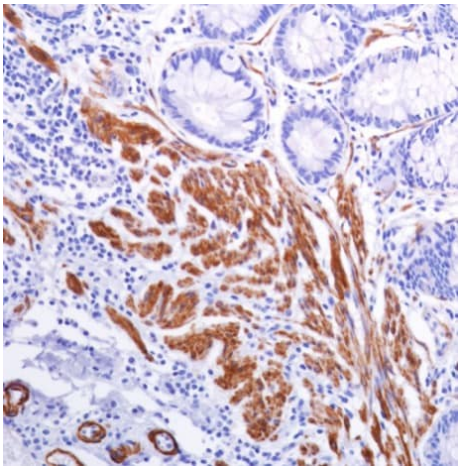
Immunohistochemistry (Frozen sections) - Anti-smooth muscle Myosin heavy chain 11 antibody [SP314] - N-terminal (ab224804)

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.



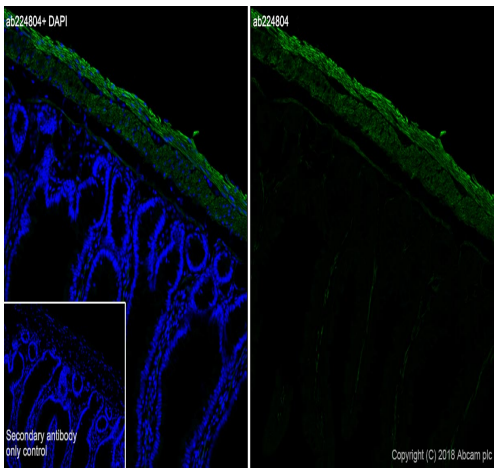
Flow Cytometry (Intracellular) - Anti-smooth muscle Myosin heavy chain 11 antibody [SP314] - N-terminal (ab224804)

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. Unlableled control -Unlabelled cells / blue.



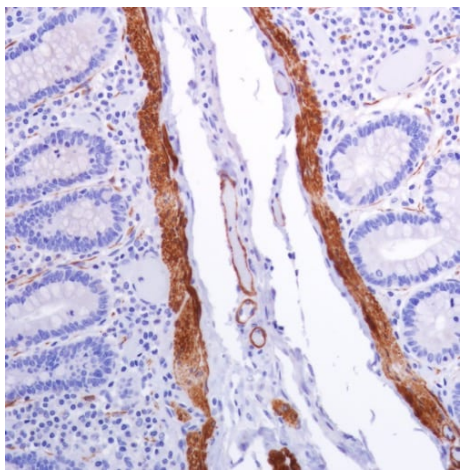
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-smooth muscle Myosin heavy chain 11 antibody [SP314] - N-terminal (ab224804)

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



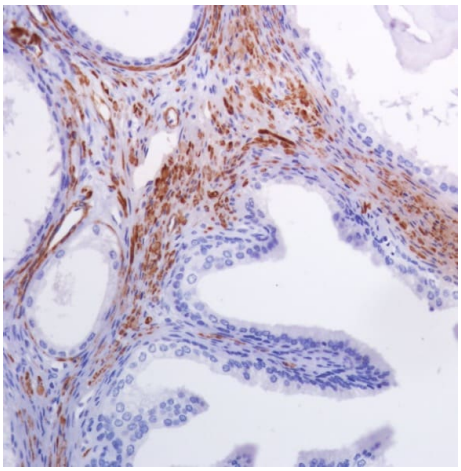
Immunohistochemistry (Frozen sections) - Anti-smooth muscle Myosin heavy chain 11 antibody [SP314] - N-terminal (ab224804)

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.



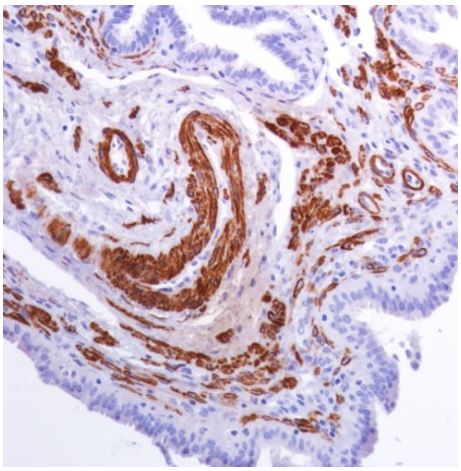
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-smooth muscle Myosin heavy chain 11 antibody [SP314] - N-terminal (ab224804)

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.



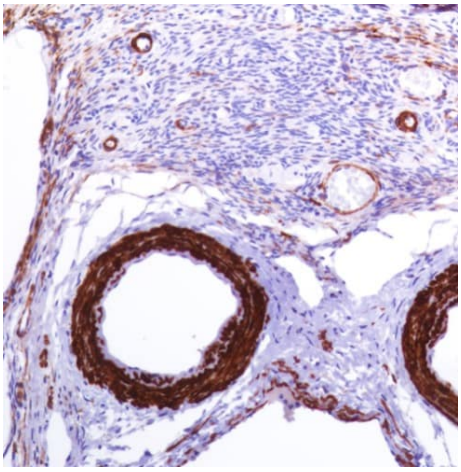
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-smooth muscle Myosin heavy chain 11 antibody [SP314] - N-terminal (ab224804)

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



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-smooth muscle Myosin heavy chain 11 antibody [SP314] - N-terminal (ab224804)

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.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-smooth muscle Myosin heavy chain 11 antibody [SP314] - N-terminal (ab224804)

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

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