abcam

Product datasheet

# Anti-smooth muscle Myosin heavy chain 11 antibody [EPR5336(B)] ab133567

Recombinant RabMAb

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## Overview

| | |
|---|---|
| **Product name** | Anti-smooth muscle Myosin heavy chain 11 antibody [EPR5336(B)] |
| **Description** | Rabbit monoclonal [EPR5336(B)] to smooth muscle Myosin heavy chain 11 |
| **Host species** | Rabbit |
| **Tested applications** | **Suitable for:** Flow Cyt (Intra), WB, IHC-P, ICC/IF |
| **Species reactivity** | **Reacts with:** Human |
| **Immunogen** | Synthetic peptide. This information is proprietary to Abcam and/or its suppliers. |
| **Positive control** | IHC: Human ovary and prostate tissues; WB: Human bladder, artery and testis tissue lysates; Flow Cyt (intra): 293 cells; ICC/IF: Human smooth muscle and A673 cells. |
| **General notes** | This product is a recombinant monoclonal antibody, which offers several advantages including:<br>- High batch-to-batch consistency and reproducibility<br>- Improved sensitivity and specificity<br>- Long-term security of supply<br>- Animal-free production<br>For more information **see here**.<br>Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.<br><br>Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information. |

## 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. Stable for 12 months at -20°C. |
| **Storage buffer** | pH: 7.2<br>Preservative: 0.01% Sodium azide<br>Constituents: 40% Glycerol, 59% PBS, 0.05% BSA |
| **Purity** | Protein A purified |

| | |
|---|---|
| **Clonality** | Monoclonal |
| **Clone number** | EPR5336(B) |
| **Isotype** | IgG |

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab133567 in the following tested applications.

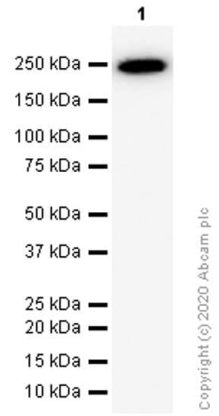
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

| Application | Abreviews | Notes |
|---|---|---|
| **Flow Cyt (Intra)** | | 1/20. |
| **WB** | ★★★★☆ (1) | 1/1000 - 1/10000. Predicted molecular weight: 227 kDa. |
| **IHC-P** | | 1/1000. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol. For unpurified use at 1/100-1/250 |
| **ICC/IF** | ★★★★☆ (1) | 1/50. |

## 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.<br>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.<br>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



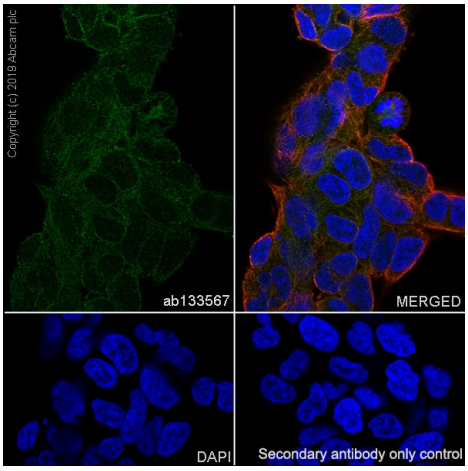

Western blot - Anti-smooth muscle Myosin heavy chain 11 antibody [EPR5336(B)] (ab133567)

Anti-smooth muscle Myosin heavy chain 11 antibody [EPR5336(B)] (ab133567) at 1/5000 dilution (purified) + Human testis lysate at 15 µg

**Secondary**

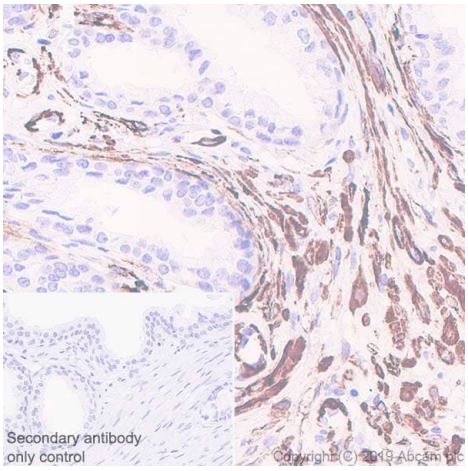
Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000 dilution

**Predicted band size:** 227 kDa
**Observed band size:** 227 kDa



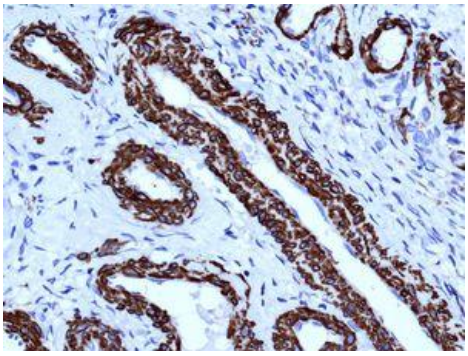

Immunocytochemistry/ Immunofluorescence - Anti-smooth muscle Myosin heavy chain 11 antibody [EPR5336(B)] (ab133567)

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.




Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-smooth muscle Myosin heavy chain 11 antibody [EPR5336(B)] (ab133567)

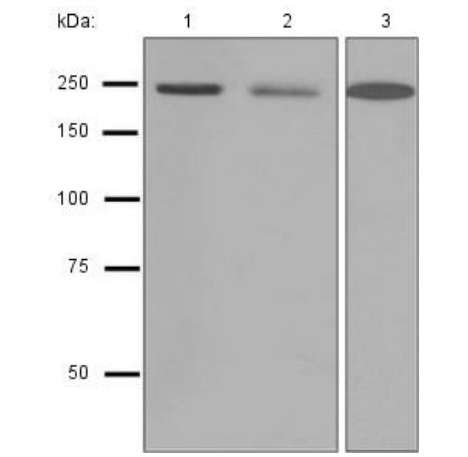
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human prostatic hyperplasia tissue sections labeling smooth muscle Myosin heavy chain 11 with purified ab133567 at 1/1000 dilution (0.12 µg/mL). Perform heat mediated antigen retrieval using **ab93684** (Tris/EDTA buffer, 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.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-smooth muscle Myosin heavy chain 11 antibody [EPR5336(B)] (ab133567)

Immunohistochemical analysis of paraffin-embedded Human ovary tissue labelling smooth muscle Myosin heavy chain 11 with unpurified ab133567 at 1/250 dilution.

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




Western blot - Anti-smooth muscle Myosin heavy chain 11 antibody [EPR5336(B)] (ab133567)

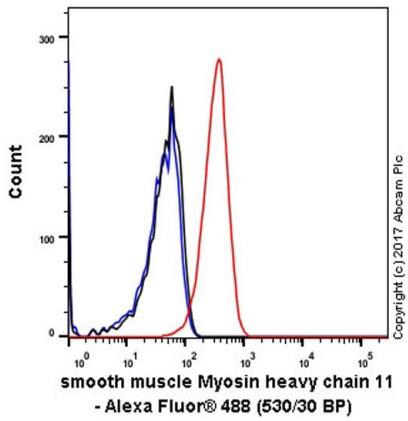
**All lanes :** Anti-smooth muscle Myosin heavy chain 11 antibody [EPR5336(B)] (ab133567) at 1/1000 dilution (unpurified)

**Lane 1 :** Human bladder lysate
**Lane 2 :** Human artery lysate
**Lane 3 :** Human testis lysate

Lysates/proteins at 10 µg per lane.

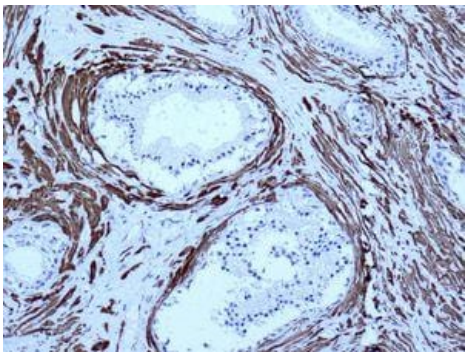
**Secondary**
**All lanes :** HRP labelled goat anti-rabbit at 1/2000 dilution

**Predicted band size:** 227 kDa




Flow Cytometry (Intracellular) - Anti-smooth muscle Myosin heavy chain 11 antibody [EPR5336(B)] (ab133567)

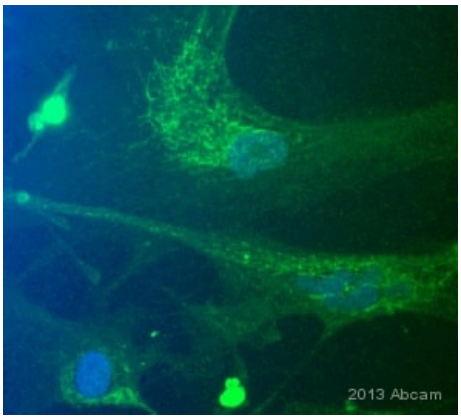
Intracellular Flow Cytometry analysis of 293 (Human embryonic kidney epithelial cell) cells labeling smooth muscle Myosin heavy chain 11 (red) with purified ab133567 at a 1/20 dilution (10ug/mL). Cells were fixed with 4% paraformaldehyde and permeabilized with 90% methanol. A goat anti rabbit IgG (Alexa Fluorr® 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).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-smooth muscle Myosin heavy chain 11 antibody [EPR5336(B)] (ab133567)

Immunohistochemical analysis of paraffin-embedded Human prostate tissue labelling smooth muscle Myosin heavy chain 11 with unpurified ab133567 at 1/250 dilution.

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)] (ab133567)

This image is courtesy of an anonymous abreview.

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).


Anti-smooth muscle Myosin heavy chain 11 antibody [EPR5336(B)] (ab133567)

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