



Product datasheet

Anti-smooth muscle Myosin heavy chain 11 antibody [1G12] ab683

★★★★★ 12 Abreviews 29 References 4 Images

Overview

Product name	Anti-smooth muscle Myosin heavy chain 11 antibody [1G12]
Description	Mouse monoclonal [1G12] to smooth muscle Myosin heavy chain 11
Host species	Mouse
Specificity	This antibody reacts with human, mouse, and rat smooth muscle myosin heavy chain 11 (SM2). Does not cross-react with smooth muscle Myosin heavy chain 1.
Tested applications	Suitable for: WB, IHC-Fr, ICC/IF, IHC-P
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	Synthetic peptide corresponding to Human smooth muscle Myosin heavy chain 11. The immunogen sequence exists in isoforms 3 and 4 but not isoforms 1 and 2 of the UniProt record P35749. Sequence: RGPPPQETSQ Database link: P35749-3
	 Run BLAST with  Run BLAST with

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
Purity	Ascites
Clonality	Monoclonal
Clone number	1G12
Isotype	IgG1

Applications

Our [Abpromise guarantee](#) covers the use of **ab683** in the following tested applications.

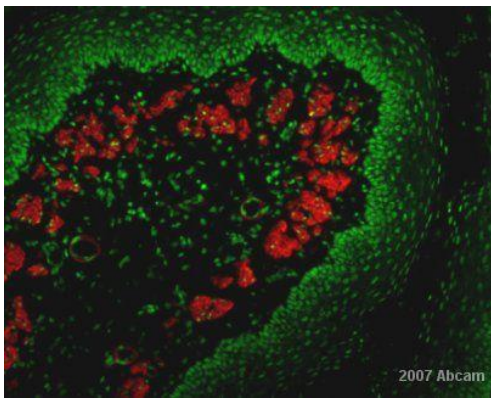
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/1000. PubMed: 21103378
IHC-Fr	★★★★★	1/400.
ICC/IF	★★★★★	1/250.
IHC-P	★★★★☆	1/400. For paraffin embedded sections, Carnoy's fixative may give better results than formalin.

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.

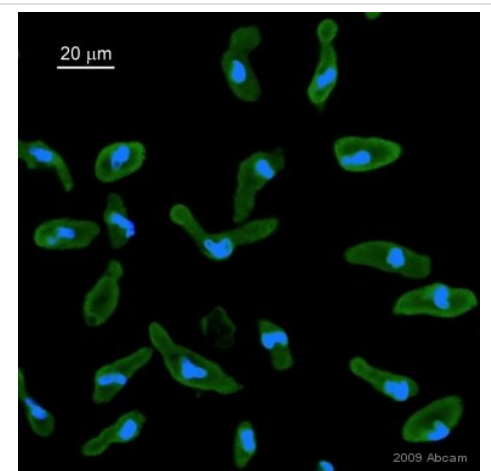
Images



Immunohistochemistry (Frozen sections) - Anti-smooth muscle Myosin heavy chain 11 antibody [1G12] (ab683)

This image is courtesy of an Abreview submitted by Dr Vyacheslav Ogay

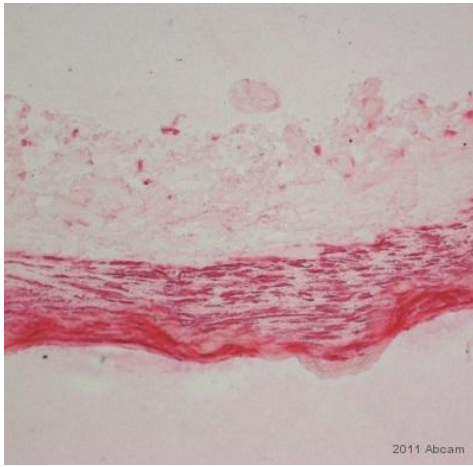
ab683 at 1/400 staining rabbit oesophagus tissue sections by IHC-Fr. The tissue sections were paraformaldehyde fixed and blocked with serum prior to incubation with the antibody for 1 hour. An Alexa Fluor® 594 conjugated goat anti-mouse IgG1 was used as the secondary.



Immunocytochemistry/ Immunofluorescence - Anti-smooth muscle Myosin heavy chain 11 antibody [1G12] (ab683)

This image is courtesy of an anonymous Abreview

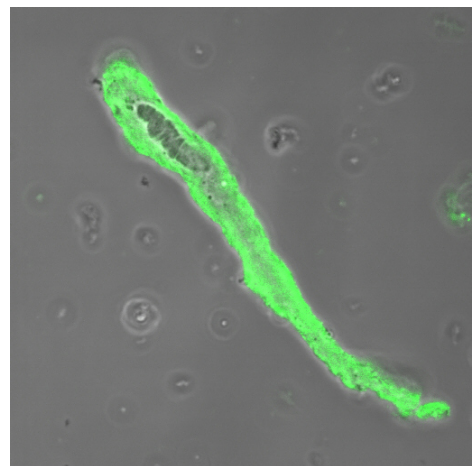
ab683 staining smooth muscle Myosin heavy chain 11 in rat cells from cells from mesenteric artery by ICC/IF. Cells were PFA fixed and permeabilized in 0.3% Triton X-100 prior to blocking in 2% serum for 30 minutes at 20°C. The primary antibody was diluted 1/300 and incubated with the sample for 14 hours at 4°C. Alexa Fluor® 488 chicken polyclonal to mouse Ig, diluted 1/400, was used as the secondary. Nuclei stained with Hoechst 33342.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-smooth muscle Myosin heavy chain 11 antibody [1G12] (ab6883)

This image is courtesy of an anonymous Abreview

ab6883 staining smooth muscle Myosin heavy chain 11 in human cerebral artery tissue sections by Immunohistochemistry (IHC-P - Formalin/PFA-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde, permeabilized with 0.3% Triton-X and blocked with 5% serum for 1 hour at 25°C; antigen retrieval was by heat mediation in sodium citrate. Samples were incubated with the primary antibody (1/500) for 16 hours at 4°C. A biotin-conjugated rabbit anti-mouse IgG polyclonal (1/300) was used as the secondary antibody.



Immunocytochemistry/ Immunofluorescence - Anti-smooth muscle Myosin heavy chain 11 antibody [1G12] (ab6883)

This image is courtesy of an anonymous Abreview

ab6883 staining smooth muscle Myosin heavy chain in human freshly isolated arterial myocyte by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with paraformaldehyde, permeabilized with 0.3% Triton X-100 and blocked with 2% BSA for 30 minutes at 20°C. Samples were incubated with the primary antibody (1/300 in PBS) for 14 hours at 4°C. An Alexa Fluor® 488-conjugated chicken anti-mouse IgG polyclonal (1/400) was used as the secondary antibody.

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