abcam

Product datasheet

Anti-alpha smooth muscle Actin antibody [1A4] ab7817

敲除验证

★★★★★ 103 Abreviews 1031 References 13 图像

概述

产品名称	Anti-alpha smooth muscle Actin抗体[1A4]
描述	小鼠单克隆抗体[1A4] to alpha smooth muscle Actin
宿主	Mouse
经测试应用	**适用于:** ICC/IF, Flow Cyt (Intra), IHC-P, WB
种属反应性	**与反应:** Mouse, Rat, Human **预测可用于:** Sheep, Rabbit, Cow, Pig, Mammals, Baboon
免疫原	Synthetic peptide corresponding to Human alpha smooth muscle Actin (N terminal). Database link: **P62736**
阳性对照	WB: Human foreskin fibroblast lysate, human colon tissue lysate; NIH/3T3, SV40LT-SMC whole cell lysates. Flow Cyt (Intra): SV40LT-SMC. IHC-P: Human breast ductal carcinoma tissue. ICC/IF: SV40LT-SMC cells.
常规说明	This antibody clone [1A4] is manufactured by Abcam. If you require this antibody in a particular buffer formulation or a particular conjugate for your experiments, please contact **orders@abcam.com** or you can find further information **here**. 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

性能

形式	Liquid
存放说明	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle.
存储溶液	pH: 7.40

	Preservative: 0.02% Sodium azide Constituents: PBS, 6.97% L-Arginine
纯度	Protein G purified
克隆	单克隆
克隆编号	1A4
同种型	IgG2a
轻链类型	kappa

应用

The Abpromise guarantee Abpromise™承诺保证使用ab7817于以下的经测试应用

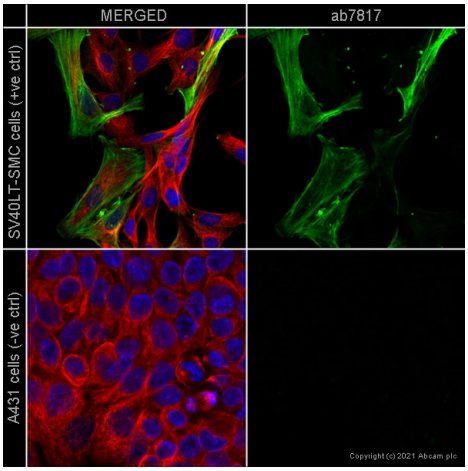
"应用说明"部分 下显示的仅为推荐的起始稀释度;实际最佳的稀释度/浓度应由使用者检定。

应用	Ab评论	说明
ICC/IF	★★★★★ (22)	Use a concentration of 1 µg/ml.
Flow Cyt (Intra)		Use a concentration of 1.137 µg/ml.
IHC-P	★★★★★ (39)	Use a concentration of 0.034 µg/ml. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
WB	★★★★★ (15)	Use a concentration of 1 µg/ml.

靶标

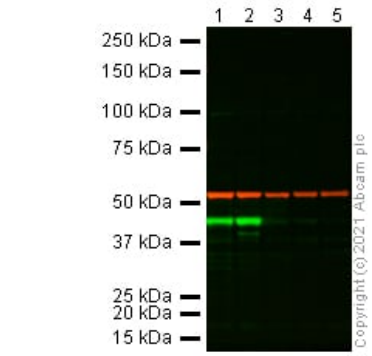
功能	Actins are highly conserved proteins that are involved in various types of cell motility and are ubiquitously expressed in all eukaryotic cells.
疾病相关	Defects in ACTA2 are the cause of aortic aneurysm familial thoracic type 6 (AAT6) [MIM:611788]. AATs are characterized by permanent dilation of the thoracic aorta usually due to degenerative changes in the aortic wall. They 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.
序列相似性	Belongs to the actin family.
细胞定位	Cytoplasm > cytoskeleton.

图片



Immunocytochemistry/ Immunofluorescence - Anti-alpha smooth muscle Actin antibody [1A4] (ab7817)

ab7817 staining alpha smooth muscle Actin in SV40LT-SMC cells (positive control, top panel) and A431 cells (negative control, bottom panel). The cells were fixed with 100% methanol (5 min) then permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated with ab7817 at 1µg/ml concentration and **ab6046** (Rabbit polyclonal to beta Tubulin) at 1/1000 dilution overnight at 4°C followed by a further incubation at room temperature for 1h with a goat secondary antibody to mouse IgG (Alexa Fluor® 488) (**ab150117**) at 2 µg/ml (shown in green) and a goat secondary antibody to rabbit IgG (Alexa Fluor® 594) (**ab150080**) at 2 µg/ml (shown in red). Nuclear DNA was labelled in blue with DAPI.
Image was taken with a confocal microscope (Leica-Microsystems TCS SP8).



Western blot - Anti-alpha smooth muscle Actin antibody [1A4] (ab7817)

All lanes : Anti-alpha smooth muscle Actin antibody [1A4] (ab7817) at 1 µg/ml

Lane 1 : NIH 3T3 whole cell lysate
Lane 2 : SV40LT-SMC whole cell lysate
Lane 3 : A431 whole cell lysate
Lane 4 : A549 whole cell lysate
Lane 5 : Jurkat whole cell lysate

Lysates/proteins at 20 µg per lane.

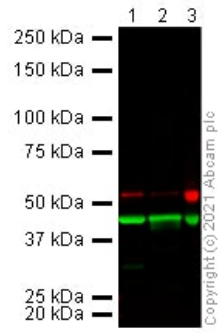
Secondary
All lanes : Goat anti-Mouse IgG H&L (IRDye® 800RD) at 1/10000 dilution

Observed band size: 42 kDa

Gel type: MOPS

Blocking buffer: 3% milk

Loading control: alpha tubulin (**ab52866**), secondary Goat anti-Rabbit IgG H&L (IRDye® 680CW) preadsorbed (1:10000 dilution)



Western blot - Anti-alpha smooth muscle Actin antibody [1A4] (ab7817)

All lanes : Anti-alpha smooth muscle Actin antibody [1A4] (ab7817) at 1 µg/ml

Lane 1 : Human colon tissue lysate
Lane 2 : Mouse colon tissue lysate
Lane 3 : Human Foreskin Fibroblast Whole Cell Lysate

Lysates/proteins at 20 µg per lane.

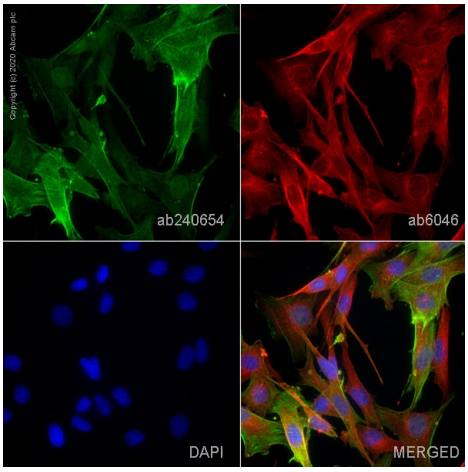
Secondary
All lanes : Goat anti-Mouse IgG H&L (IRDye® 800RD) at 1/10000 dilution

Observed band size: 42 kDa

Gel type: MOPS

Blocking buffer: 3% milk

Loading control: alpha tubulin (**ab52866**), secondary Goat anti-Rabbit IgG H&L (IRDye® 680CW) preadsorbed (1:10000 dilution)

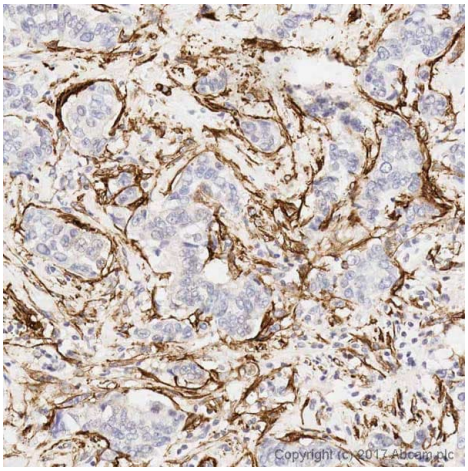


Immunocytochemistry/ Immunofluorescence - Anti-alpha smooth muscle Actin antibody [1A4] (ab7817)

This data was developed using the same antibody clone in a different buffer formulation that is PBS and sodium azide free (**ab240654**)

ab240654 staining alpha smooth muscle Actin in SV40LT-SMC cells. The cells were fixed with 4% paraformaldehyde (10 min), permeabilized with 0.1% PBS-Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1%PBS-Tween for 1h. The cells were then incubated overnight at 4°C with **ab240654** at 1µg/ml and **ab6046**, Rabbit polyclonal to beta Tubulin - Loading Control. Cells were then incubated with **ab150117**, Goat polyclonal Secondary Antibody to Mouse IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 dilution (shown in green) and **ab150080**, Goat polyclonal Secondary Antibody to Rabbit IgG - H&L (Alexa Fluor® 594) at 1/1000 dilution (shown in pseudocolour red). Nuclear DNA was labelled with DAPI (shown in blue).

Image was acquired with a high-content analyser (Operetta CLS, Perkin Elmer) and a maximum intensity projection of confocal sections is shown.

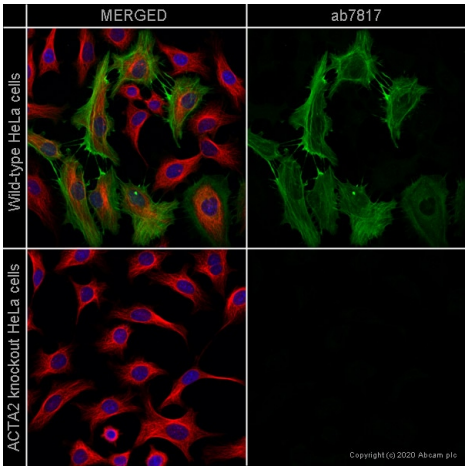


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-alpha smooth muscle Actin antibody [1A4] (ab7817)

IHC image of alpha smooth muscle actin staining in a human breast ductal carcinoma formalin fixed paraffin embedded tissue section*, performed on a Leica Bond™ system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab7817, 0.034µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

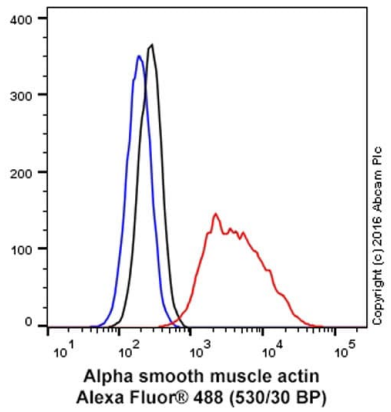
For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.

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



Immunocytochemistry/ Immunofluorescence - Anti-alpha smooth muscle Actin antibody [1A4] (ab7817)

ab7817 staining alpha smooth muscle Actin in wild-type HeLa cells (top panel) and ACTA2 knockout HeLa cells (bottom panel). The cells were fixed with 100% methanol (5 min) then permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated with ab7817 at 5µg/ml concentration and **ab6046** (Rabbit polyclonal to beta Tubulin) at 1/1000 dilution overnight at 4°C followed by a further incubation at room temperature for 1h with a goat secondary antibody to mouse IgG (Alexa Fluor® 488) (**ab150117**) at 2 µg/ml (shown in green) and a goat secondary antibody to rabbit IgG (Alexa Fluor® 594) (**ab150080**) at 2 µg/ml (shown in red). Nuclear DNA was labelled in blue with DAPI.
Image was taken with a confocal microscope (Leica-Microsystems TCS SP8).



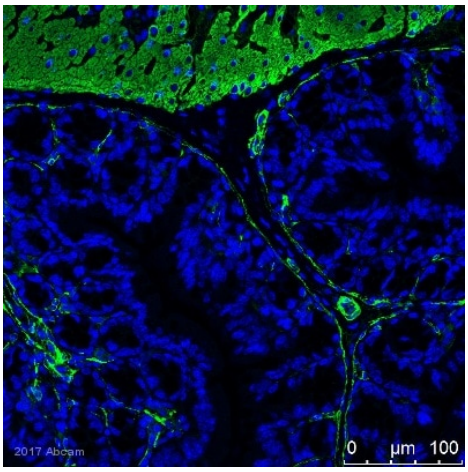
Flow Cytometry (Intracellular) - Anti-alpha smooth muscle Actin antibody [1A4] (ab7817)

Overlay histogram showing SV40LT-SMC cells stained with ab7817 (red line). The cells were fixed with 4% formaldehyde (10 min) and then permeabilized with 0.1% PBS-Triton X-100 for 15 min. The cells were then incubated in 1x PBS / 10% normal goat serum to block non-specific protein-protein interactions followed by the antibody (ab7817, 1.137µg/ml) for 30 min at 22°C. The secondary antibody used was Goat Anti-Mouse IgG H&L (Alexa Fluor® 488) (**ab150113**) at 1/2000 dilution for 30 min at 22°C

Isotype control antibody (black line) was mouse IgG2a [18C8BC7AD10] (**ab170191**) used at the same concentration and conditions as the primary antibody. Unlabelled sample (blue line) was also used as a control.

Acquisition of >5,000 events were collected using a 50 mW Blue laser (488nm) and 530/30 bandpass filter.

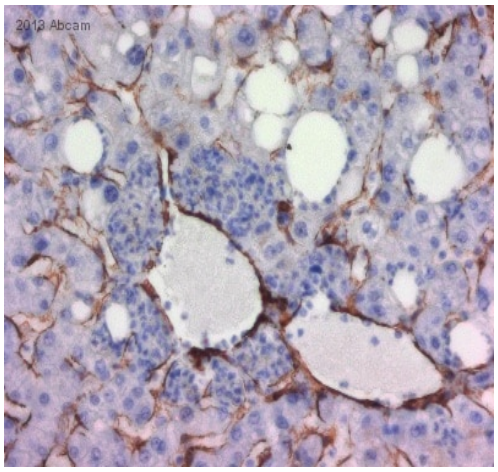
This antibody gave a positive signal in HeLa cells fixed with 80% methanol (5 min)/permeabilized with 0.1% PBS-Triton X-100 for 15 min used under the same conditions.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-alpha smooth muscle Actin antibody [1A4] (ab7817)

This image is courtesy of an anonymous Abreview

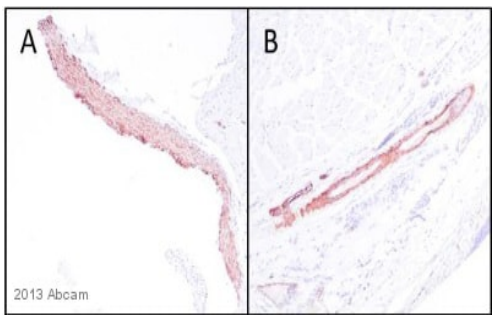
Ab7817 staining alpha smooth muscle actin in Mouse intestine tissue by Immunohistochemistry-Immunofluorescence. Tissue was fixed with formaldehyde and blocked with 100% Cas-block for 30 minutes at room temperature; antigen retrieval was performed by heat mediated citrate buffer, pH6. The sample was incubated with primary antibody at 0.034µg/ml for 16 hours at 4°C. An Alexa Fluor® 488 Goat anti-mouse IgG was used as the secondary antibody at 1/400 dilution. Autofluorescence was blocked with 0.1% Sudan Black in 70% ethanol for 10 minutes at room temperature after antigen retrieval, and followed with 3X wash with PBS-T after antigen retrieval. Image was taken with confocal microscope.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-alpha smooth muscle Actin antibody [1A4] (ab7817)

This image is courtesy of an Abreview submitted by Rudolf Jung

ab7817 staining alpha smooth muscle actin in Human liver tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with paraformaldehyde and permeabilized with wash buffer with tween; antigen retrieval was by heat mediation in Tris-EDTA buffer, pH 9.0. Samples were incubated with primary antibody (0.034µg/ml in blocking buffer) for 30 minutes at 20°C. A HRP-conjugated Goat anti-mouse IgG polyclonal (undiluted) was used as the secondary antibody.

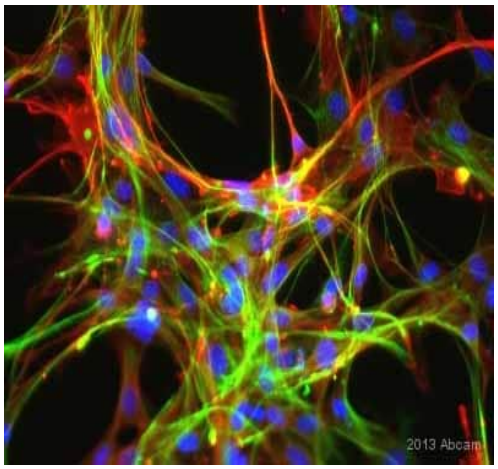


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-alpha smooth muscle Actin antibody [1A4] (ab7817)

This image is courtesy of an anonymous Abreview

Immunohistochemical analysis of mouse aorta (A) or skin (B) tissue, staining alpha smooth muscle Actin with ab7817.

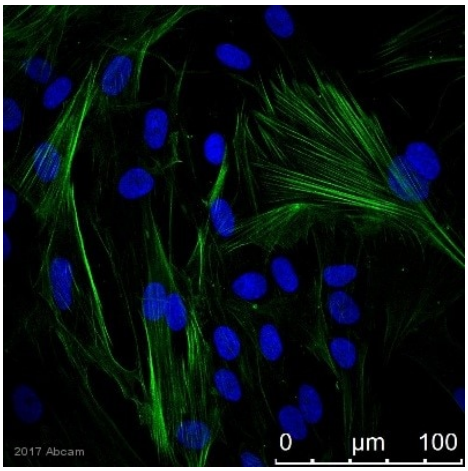
Tissue was fixed with 10% Neutral Buffered Formalin and blocked with 1% serum for 45 minutes 21°C; antigen retrieval was by enzymatic method in 0.0001% Trypsin-CaCl. Samples were incubated with primary antibody (0.034µg/ml in 0.3% Triton X-100 in PBS) for 1 hour at 21&degC. A biotin-conjugated horse anti-mouse polyclonal IgG (1/50) was used as the secondary antibody.



Immunocytochemistry/ Immunofluorescence - Anti-alpha smooth muscle Actin antibody [1A4] (ab7817)

This image is courtesy of an Abreview submitted by Charles Pallangyo

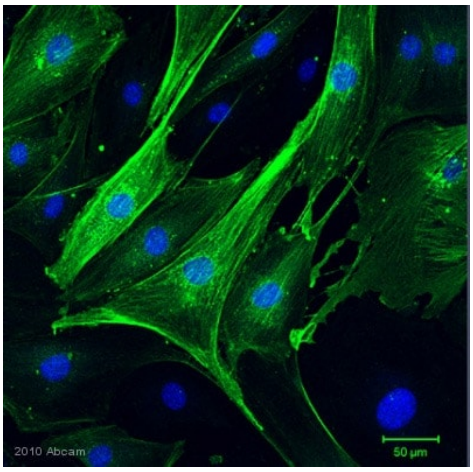
ab7817 staining alpha smooth muscle Actin (green) in Mouse primary colon myofibroblasts by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with acetone and blocked with 5% BSA for 30 hours at 25°C. Samples were incubated with primary antibody (1/100 in PBS + 5% BSA) for 2 hours at 25°C. **Donkey Anti-Mouse IgG H&L (DyLight® 488) (ab96875)** (1/1000) was used as the secondary antibody. Costained with **ab92547**, Rabbit anti-Vimentin (red).



Immunocytochemistry/ Immunofluorescence - Anti-alpha smooth muscle Actin antibody [1A4] (ab7817)

This image is courtesy of an anonymous abreview.

ab7817 staining alpha smooth muscle Actin in human IMR-90 (Human Lung Fibroblast Cell Line) cells by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with paraformaldehyde, permeabilized with 0.1% TritonX-100 and blocked with 100% Cad-Block for 30 minutes at room temperature. Samples were incubated with primary antibody 3.41µg/ml in antibody diluent buffer for 16 hours at 4°C. An Alexa Fluor® 488-conjugated polyclonal Goat anti-mouse IgG, dilution 1/400, was used as secondary antibody.



Immunocytochemistry/ Immunofluorescence - Anti-alpha smooth muscle Actin antibody [1A4] (ab7817)

This image is courtesy of an Abreview submitted by Dr. Ho-Jae Lee

ab7817 staining alpha smooth muscle Actin in mouse heart cells by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with paraformaldehyde, permeabilized with TritonX-100 and blocked with 5% BSA for 30 minutes at room temperature. Samples were incubated with primary antibody 6.82µg/ml in blocking buffer for 2 hours. An Alexa Fluor® 488-conjugated Donkey monoclonal to mouse IgG, dilution 1/200, was used as secondary antibody.

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