

Product datasheet

Anti-Alpha Skeletal Muscle Actin antibody [EPR18430] ab184705

Recombinant RabMAb

7 Images

Overview

Product name	Anti-Alpha Skeletal Muscle Actin antibody [EPR18430]
Description	Rabbit monoclonal [EPR18430] to Alpha Skeletal Muscle Actin
Host species	Rabbit
Tested applications	Suitable for: WB, IHC-P
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	Recombinant fragment within Human Alpha Skeletal Muscle Actin aa 1-200. The exact sequence is proprietary. Database link: P68133
Positive control	WB: Human, mouse and rat skeletal muscle and heart lysates; Human bladder lysate. IHC-P: Mouse and rat skeletal muscle tissues.
General notes	<p>IHC is recommended for rat and mouse only.</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> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p> <p>Reproducibility is key to advancing scientific discovery and accelerating scientists' next breakthrough.</p> <p>Abcam is leading the way with our range of recombinant antibodies, knockout-validated antibodies and knockout cell lines, all of which support improved reproducibility.</p> <p>We are also planning to innovate the way in which we present recommended applications and species on our product datasheets, so that only applications & species that have been tested in our own labs, our suppliers or by selected trusted collaborators are covered by our Abpromise[™] guarantee.</p> <p>In preparation for this, we have started to update the applications & species that this product is Abpromise guaranteed for.</p>

We are also updating the applications & species that this product has been “predicted to work with,” however this information is not covered by our Abpromise guarantee.

Applications & species from publications and Abreviews that have not been tested in our own labs or in those of our suppliers are not covered by the Abpromise guarantee.

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, as well as 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: 7.2 Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR18430
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab184705** 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. Detects a band of approximately 42 kDa (predicted molecular weight: 42 kDa).
IHC-P		1/100. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Target

Function	Actins are highly conserved proteins that are involved in various types of cell motility and are ubiquitously expressed in all eukaryotic cells.
Involvement in disease	Defects in ACTA1 are the cause of nemaline myopathy type 3 (NEM3) [MIM:161800]. A form of nemaline myopathy. Nemaline myopathies are muscular disorders characterized by muscle weakness of varying severity and onset, and abnormal thread-or rod-like structures in muscle fibers on histologic examination. The phenotype at histological level is variable. Some patients present areas devoid of oxidative activity containing (cores) within myofibers. Core lesions are unstructured and poorly circumscribed. Defects in ACTA1 are a cause of myopathy congenital with excess of thin myofilaments

(MPCETM) [MIM:161800]. A congenital muscular disorder characterized at histological level by areas of sarcoplasm devoid of normal myofibrils and mitochondria, and replaced with dense masses of thin filaments. Central cores, rods, ragged red fibers, and necrosis are absent. Defects in ACTA1 are a cause of congenital myopathy with fiber-type disproportion (CFTD) [MIM:255310]; also known as congenital fiber-type disproportion myopathy (CFTDM). CFTD is a genetically heterogeneous disorder in which there is relative hypotrophy of type 1 muscle fibers compared to type 2 fibers on skeletal muscle biopsy. However, these findings are not specific and can be found in many different myopathic and neuropathic conditions.

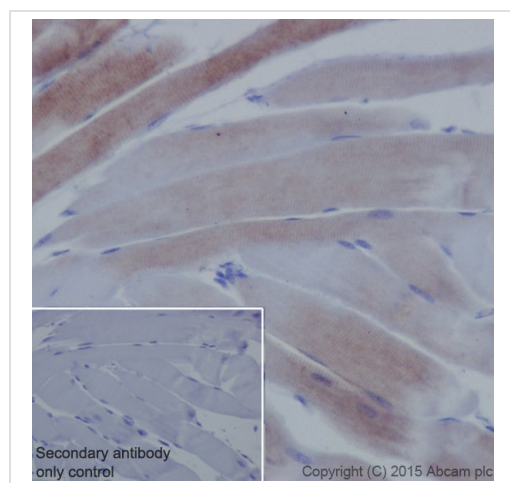
Sequence similarities

Belongs to the actin family.

Cellular localization

Cytoplasm > cytoskeleton.

Images



Immunohistochemical analysis of paraffin-embedded Rat skeletal muscle tissue labeling Alpha Skeletal Muscle Actin with ab184705 at 1/100 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

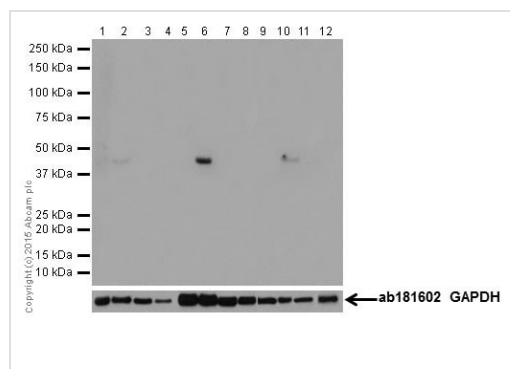
Weak cytoplasm staining in rat skeletal muscle is observed.

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is ab97051 at 1/500 dilution.

Perform heat mediated antigen retrieval with EDTA buffer pH 9 before commencing with IHC staining protocol.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Alpha Skeletal Muscle Actin antibody [EPR18430] (ab184705)



Western blot - Anti-Alpha Skeletal Muscle Actin antibody [EPR18430] (ab184705)

All lanes : Anti-Alpha Skeletal Muscle Actin antibody [EPR18430] (ab184705) at 1/1000 dilution

- Lane 1 :** Mouse brain lysate
- Lane 2 :** Mouse heart lysate
- Lane 3 :** Mouse kidney lysate
- Lane 4 :** Mouse spleen lysate
- Lane 5 :** Rat brain lysate
- Lane 6 :** Rat heart lysate
- Lane 7 :** Rat kidney lysate
- Lane 8 :** Rat spleen lysate
- Lane 9 :** Human brain lysate
- Lane 10 :** Human heart lysate
- Lane 11 :** Human kidney lysate
- Lane 12 :** Human spleen lysate

Lysates/proteins at 10 µg per lane.

Secondary

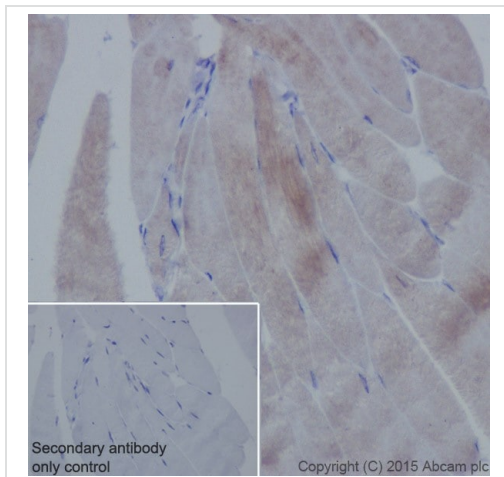
All lanes : Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/1000 dilution

Predicted band size: 42 kDa

Observed band size: 42 kDa

Exposure time: 3 minutes

Blocking/Dilution buffer: 5% NFDm/TBST.



Immunohistochemical analysis of paraffin-embedded Mouse skeletal muscle tissue labeling Alpha Skeletal Muscle Actin with ab184705 at 1/100 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

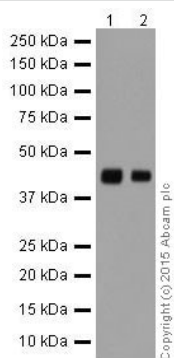
Weak cytoplasm staining in mouse skeletal muscle is observed.

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is ab97051 at 1/500 dilution.

Perform heat mediated antigen retrieval with EDTA buffer pH 9 before commencing with IHC staining protocol.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Alpha Skeletal Muscle Actin antibody [EPR18430] (ab184705)



Western blot - Anti-Alpha Skeletal Muscle Actin antibody [EPR18430] (ab184705)

All lanes : Anti-Alpha Skeletal Muscle Actin antibody [EPR18430] (ab184705) at 1/1000 dilution

Lane 1 : Human skeletal muscle lysate

Lane 2 : Mouse skeletal muscle lysate

Lysates/proteins at 10 µg per lane.

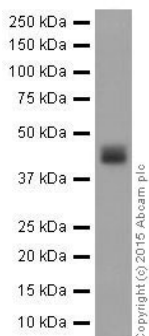
Secondary

All lanes : Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/10000 dilution

Predicted band size: 42 kDa

Observed band size: 42 kDa

Exposure time: 5 seconds



Western blot - Anti-Alpha Skeletal Muscle Actin antibody [EPR18430] (ab184705)

Anti-Alpha Skeletal Muscle Actin antibody [EPR18430] (ab184705) at 1/1000 dilution + Rat skeletal muscle lysate at 10 µg

Secondary

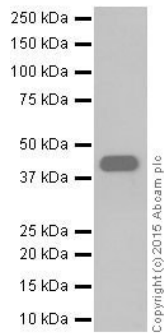
Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/10000 dilution

Predicted band size: 42 kDa

Observed band size: 42 kDa

Exposure time: 1 second

Blocking/Dilution buffer: 5% NFD/MBST.



Western blot - Anti-Alpha Skeletal Muscle Actin antibody [EPR18430] (ab184705)

Anti-Alpha Skeletal Muscle Actin antibody [EPR18430] (ab184705)
at 1/1000 dilution + Human bladder lysate at 10 µg

Secondary

Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at
1/10000 dilution

Predicted band size: 42 kDa

Observed band size: 42 kDa

Exposure time: 3 minutes

Blocking/Dilution buffer: 5% NFDm/TBST.

Why choose a recombinant antibody?



Research with confidence
Consistent and reproducible results



Long-term and scalable supply
Recombinant technology



Success from the first experiment
Confirmed specificity



Ethical standards compliant
Animal-free production

Anti-Alpha Skeletal Muscle Actin antibody [EPR18430] (ab184705)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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