


Product datasheet

Anti-muscle Actin antibody [MSA/953] ab216039

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Overview

Product name	Anti-muscle Actin antibody [MSA/953]
Description	Mouse monoclonal [MSA/953] to muscle Actin
Host species	Mouse
Tested applications	Suitable for: IHC-P, WB
Species reactivity	Reacts with: Rat, Human Predicted to work with: Rabbit 
Immunogen	Synthetic peptide within Human muscle Actin. The exact sequence is proprietary. (Common among human muscle Actins. UniProt P62736, P68032 and P68133).
Positive control	Human rhabdomyosarcoma and leiomyosarcoma tissues; Rat lung, heart, stomach and skeletal muscle tissues; hSKM cell lysate.
General notes	<p>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.</p> <p>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</p>

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: 0.05% Sodium azide Constituents: 99% PBS, 0.05% BSA
Purity	Protein G purified
Purification notes	ab216039 was purified from Bioreactor Concentrate by Protein A/G.
Clonality	Monoclonal
Clone number	MSA/953

Isotype	IgG1
Light chain type	kappa

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab216039 in the following tested applications.

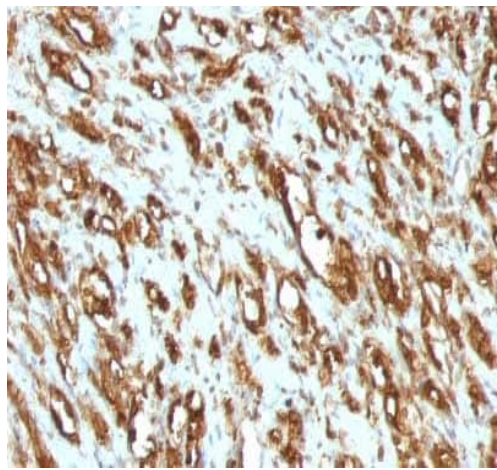
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P		Use a concentration of 0.25 - 5 µg/ml. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol. (Primary incubation for 30 minutes at RT).
WB		Use a concentration of 0.5 - 1 µg/ml. Predicted molecular weight: 42 kDa.

Target

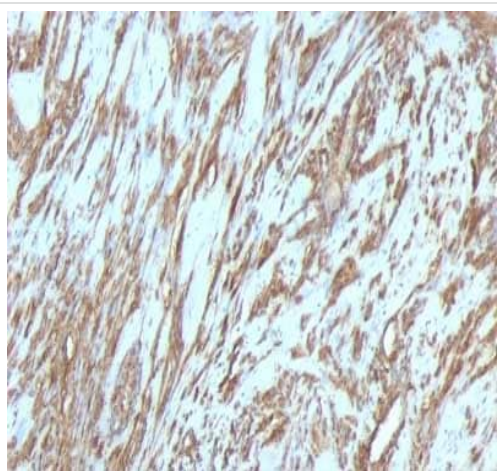
Function	Actins are highly conserved proteins that are involved in various types of cell motility and are ubiquitously expressed in all eukaryotic cells.
Involvement in disease	<p>Defects in ACTA1 are the cause of nemaline myopathy type 3 (NEM3) [MIM:161800]. A form of nemaline myopathy. Nemaline myopathies 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.</p> <p>Defects in ACTA1 are a cause of myopathy, actin, 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.</p> <p>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.</p>
Sequence similarities	Belongs to the actin family.
Post-translational modifications	Oxidation of Met-46 by MICALs (MICAL1, MICAL2 or MICAL3) to form methionine sulfoxide promotes actin filament depolymerization. Methionine sulfoxide is produced stereospecifically, but it is not known whether the (S)-S-oxide or the (R)-S-oxide is produced.
Cellular localization	Cytoplasm > cytoskeleton.

Images



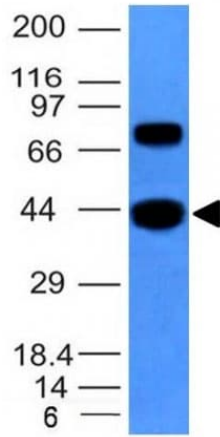
Immunohistochemical analysis of formalin-fixed, paraffin-embedded human rhabdomyosarcoma tissue labeling muscle Actin with ab216039 at 0.5 $\mu\text{g/ml}$.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-muscle Actin antibody [MSA/953] (ab216039)



Immunohistochemical analysis of formalin-fixed, paraffin-embedded human leiomyosarcoma tissue labeling muscle Actin with ab216039 at 0.5 $\mu\text{g/ml}$.

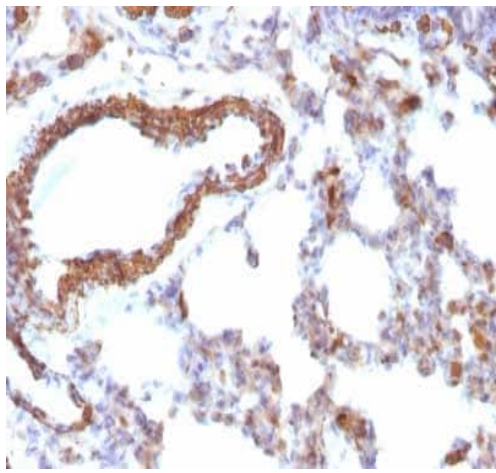
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-muscle Actin antibody [MSA/953] (ab216039)



Anti-muscle Actin antibody [MSA/953] (ab216039) at 1 μ g/ml +
hSKM cell lysate

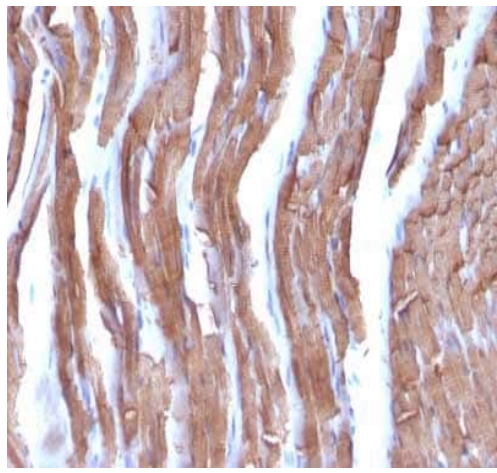
Predicted band size: 42 kDa

Western blot - Anti-muscle Actin antibody
[MSA/953] (ab216039)



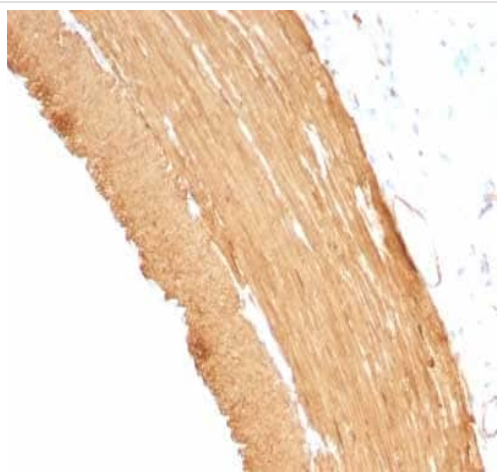
Immunohistochemical analysis of formalin-fixed, paraffin-embedded
rat lung tissue labeling muscle Actin with ab216039 at 0.5 μ g/ml.

Immunohistochemistry (Formalin/PFA-fixed paraffin-
embedded sections) - Anti-muscle Actin antibody
[MSA/953] (ab216039)



Immunohistochemical analysis of formalin-fixed, paraffin-embedded rat heart tissue labeling muscle Actin with ab216039 at 0.5 $\mu\text{g/ml}$.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-muscle Actin antibody [MSA/953] (ab216039)



Immunohistochemical analysis of formalin-fixed, paraffin-embedded rat stomach tissue labeling muscle Actin with ab216039 at 0.5 $\mu\text{g/ml}$.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-muscle Actin antibody [MSA/953] (ab216039)



Immunohistochemical analysis of formalin-fixed, paraffin-embedded rat skeletal muscle tissue labeling muscle Actin with ab216039 at 0.5 µg/ml.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-muscle Actin antibody [MSA/953] (ab216039)

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