

ARG66522 anti-Sarcomeric muscle actin antibody

Package: 100 µl
Store at: -20°C

Summary

Product Description	Mouse Monoclonal antibody recognizes Sarcomeric muscle actin
Tested Reactivity	Hu
Tested Application	IHC-P, WB
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1, kappa
Target Name	Sarcomeric muscle actin
Species	Human
Immunogen	Synthetic peptide derived from Human Sarcomeric muscle actin.
Conjugation	Un-conjugated
Alternate Names	CFTDM; MPFD; CFTD; ASMA; NEM1; NEM2; NEM3; Alpha-actin-1; ACTA; CFTD1; Actin, alpha skeletal muscle

Application Instructions

Application table	Application	Dilution
	IHC-P	1:100 - 1:500
	WB	1:500 - 1:2000
Application Note	IHC-P: Antigen Retrieval: Citrate buffer (pH 6.0) was used. * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	
Observed Size	~ 45 kDa	

Properties

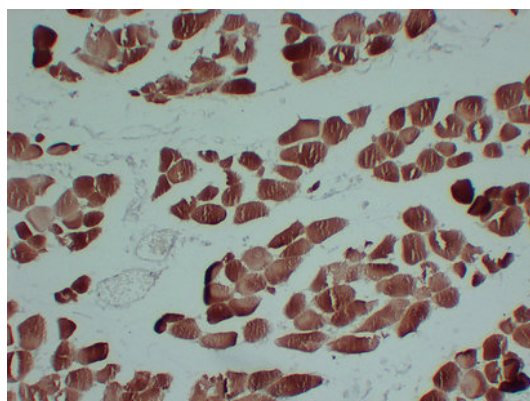
Form	Liquid
Purification	Affinity purification with immunogen.
Buffer	PBS, 0.02% Sodium azide, 50% Glycerol and 0.5% BSA.
Preservative	0.02% Sodium azide
Stabilizer	50% Glycerol and 0.5% BSA
Concentration	1 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.

Note For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

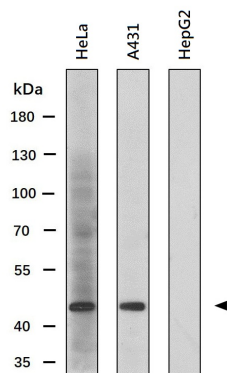
Gene Symbol	ACTA1
Gene Full Name	actin, alpha 1, skeletal muscle
Background	<p>The product encoded by this gene belongs to the actin family of proteins, which are highly conserved proteins that play a role in cell motility, structure and integrity. Alpha, beta and gamma actin isoforms have been identified, with alpha actins being a major constituent of the contractile apparatus, while beta and gamma actins are involved in the regulation of cell motility. This actin is an alpha actin that is found in skeletal muscle. Mutations in this gene cause nemaline myopathy type 3, congenital myopathy with excess of thin myofilaments, congenital myopathy with cores, and congenital myopathy with fiber-type disproportion, diseases that lead to muscle fiber defects. [provided by RefSeq, Jul 2008]</p>
Function	<p>Actins are highly conserved proteins that are involved in various types of cell motility and are ubiquitously expressed in all eukaryotic cells. [UniProt]</p>
Calculated Mw	42 kDa
PTM	<p>Oxidation of Met-46 and Met-49 by MICALs (MICAL1, MICAL2 or MICAL3) to form methionine sulfoxide promotes actin filament depolymerization. MICAL1 and MICAL2 produce the (R)-S-oxide form. The (R)-S-oxide form is reverted by MSRB1 and MSRB2, which promote actin repolymerization (By similarity).</p> <p>Monomethylation at Lys-86 (K84me1) regulates actin-myosin interaction and actomyosin-dependent processes. Demethylation by ALKBH4 is required for maintaining actomyosin dynamics supporting normal cleavage furrow ingression during cytokinesis and cell migration.</p> <p>(Microbial infection) Monomeric actin is cross-linked by V.cholerae toxins RtxA and VgrG1 in case of infection: bacterial toxins mediate the cross-link between Lys-52 of one monomer and Glu-272 of another actin monomer, resulting in formation of highly toxic actin oligomers that cause cell rounding (PubMed:19015515). The toxin can be highly efficient at very low concentrations by acting on formin homology family proteins: toxic actin oligomers bind with high affinity to formins and adversely affect both nucleation and elongation abilities of formins, causing their potent inhibition in both profilin-dependent and independent manners (PubMed:26228148). [UniProt]</p>
Cellular Localization	Cytoplasm, cytoskeleton. [UniProt]

Images



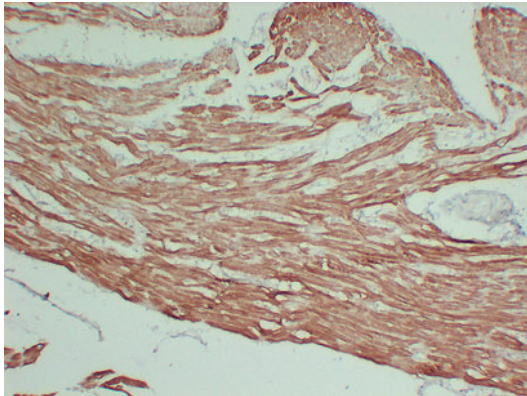
ARG66522 anti-Sarcomeric muscle actin antibody IHC-P image

Immunohistochemistry: Paraffin-embedded Human skeletal muscle stained with ARG66522 anti-Sarcomeric muscle actin antibody at 1:200 (4°C, overnight). Antigen Retrieval: Citrate buffer (pH 6.0) was used.



ARG66522 anti-Sarcomeric muscle actin antibody WB image

Western blot: 30 µg of HeLa, A431 and HepG2 (negative control) whole cell lysates stained with ARG66522 anti-Sarcomeric muscle actin antibody at 1:1000 dilution.



ARG66522 anti-Sarcomeric muscle actin antibody IHC-P image

Immunohistochemistry: Paraffin-embedded Human myocardium stained with ARG66522 anti-Sarcomeric muscle actin antibody at 1:200 (4°C, overnight). Antigen Retrieval: Citrate buffer (pH 6.0) was used.