

ARG66246 anti-alpha smooth muscle Actin antibody [SQab1735]

Package: 100 µl, 50 µl
Store at: -20°C

Summary

Product Description	Recombinant Rabbit Monoclonal antibody [SQab1735] recognizes alpha smooth muscle Actin
Tested Reactivity	Hu, Ms, Rat
Tested Application	FACS, ICC/IF, IHC-P, IP, WB
Host	Rabbit
Clonality	Monoclonal
Clone	SQab1735
Isotype	IgG
Target Name	alpha smooth muscle Actin
Species	Human
Immunogen	Synthetic peptide around the C-terminus of Human alpha smooth muscle Actin.
Conjugation	Un-conjugated
Alternate Names	Cell growth-inhibiting gene 46 protein; MYMY5; ACTSA; Alpha-actin-2; Actin, aortic smooth muscle; AAT6

Application Instructions

Application table	Application	Dilution
	FACS	1:200 - 1:1000
	ICC/IF	1:800 - 1:2000
	IHC-P	1:1000 - 1:2000
	IP	1:10
	WB	1:2000 - 1:5000
Application Note	IHC-P: Antigen Retrieval: Heat mediated was performed using Tris/EDTA buffer pH 9.0. * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	

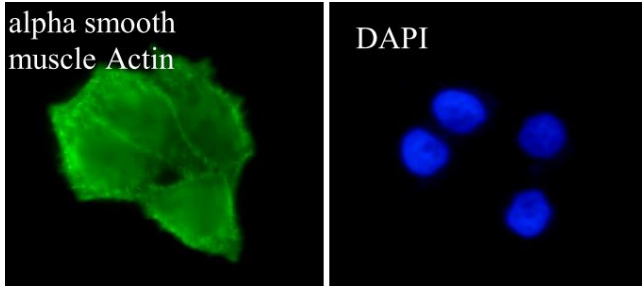
Properties

Form	Liquid
Purification	Purification with Protein A.
Buffer	PBS, 0.01% Sodium azide, 40% Glycerol and 0.05% BSA.
Preservative	0.01% Sodium azide
Stabilizer	40% Glycerol and 0.05% BSA

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.

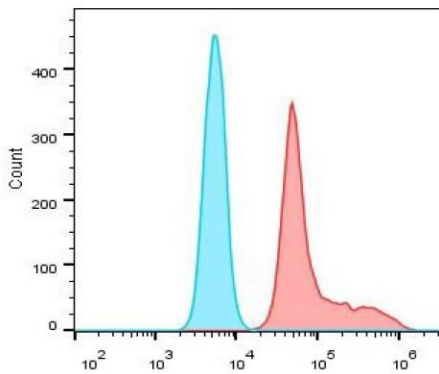
Bioinformation

Gene Symbol	ACTA2
Gene Full Name	actin, alpha 2, smooth muscle, aorta
Background	The protein 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. Defects in this gene cause aortic aneurysm familial thoracic type 6. Multiple alternatively spliced variants, encoding the same protein, have been identified. [provided by RefSeq, Nov 2008]
Function	Actins are highly conserved proteins that are involved in various types of cell motility and are ubiquitously expressed in all eukaryotic cells. [UniProt]
Highlight	<p>Related products: alpha smooth muscle Actin antibodies; alpha smooth muscle Actin Duos / Panels; Anti-Rabbit IgG secondary antibodies;</p> <p>Related news: New antibody panels for Myofibroblasts and CAFs Cancer Pathology Markers (SQ clones) New antibody panels and duos for Tumor immune microenvironment Anti-SerpinB9 therapy, a new strategy for cancer therapy</p>
Research Area	Cell Biology and Cellular Response antibody; Controls and Markers antibody; Signaling Transduction antibody; Cancer-associated fibroblast antibody; Smooth Muscle Marker antibody; CAF Marker antibody; Mural cell Marker antibody; Myofibroblast Marker antibody; Angiogenesis Study antibody; Microvascular Density Study antibody
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>



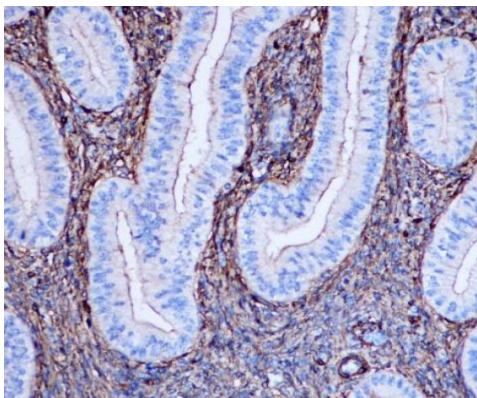
ARG66246 anti-alpha smooth muscle Actin antibody [SQab1735] ICC/IF image

Immunofluorescence: HeLa cells were fixed with 4% paraformaldehyde for 30 min at RT, permeabilized with 0.1% Triton X-100 for 10 min at RT then blocked with 10% goat serum for 30 min at RT. Cells were stained with ARG66246 anti-alpha smooth muscle Actin antibody [SQab1735] (green) at 1:2000 and 4°C. DAPI (blue) was used as the nuclear counter stain.



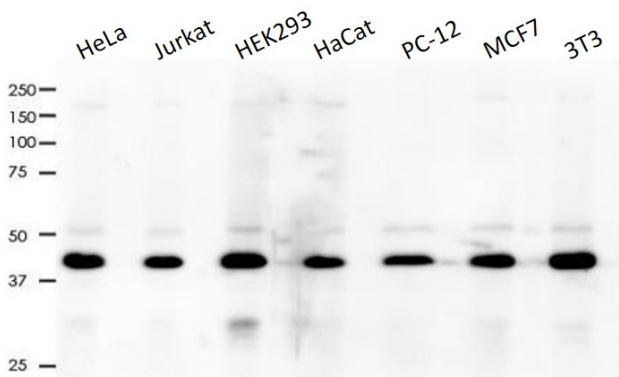
ARG66246 anti-alpha smooth muscle Actin antibody [SQab1735] FACS image

Flow Cytometry: HeLa cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 0.1% TritonX-100 for 15 min. The cells were stained with ARG66246 anti-alpha smooth muscle Actin antibody [SQab1735] (red) at 1:1000 dilution in 1x PBS/1% BSA for 30 min at RT, followed by Alexa Fluor® 488 labelled secondary antibody. Unlabelled sample (blue) was used as a control.



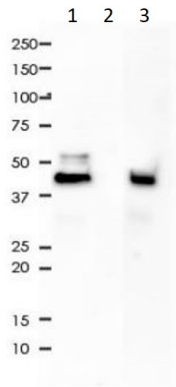
ARG66246 anti-alpha smooth muscle Actin antibody [SQab1735] IHC-P image

Immunohistochemistry: Formalin-fixed and paraffin-embedded Human uterus tissue stained with ARG66246 anti-alpha smooth muscle Actin antibody [SQab1735] at 1:1000 dilution. Antigen Retrieval: Heat mediated was performed using Tris/EDTA buffer pH 9.0.



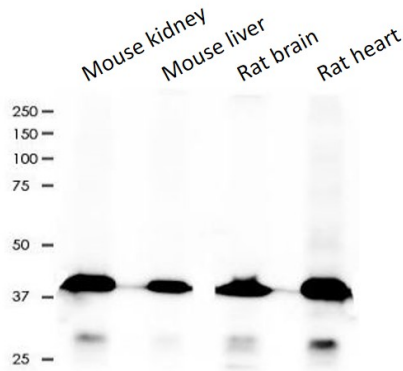
ARG66246 anti-alpha smooth muscle Actin antibody [SQab1735] WB image

Western blot: 10 µg of HeLa, Jurkat, HEK293, HaCat, PC-12, MCF7 and 3T3 cell lysates stained with ARG66246 anti-alpha smooth muscle Actin antibody [SQab1735] at 1:2000 dilution



ARG66246 anti-alpha smooth muscle Actin antibody [SQab1735] IP image

Immunoprecipitation: 0.4 mg of HeLa whole cell lysate immunoprecipitated (1:10) and stained with ARG66246 anti-alpha smooth muscle Actin antibody [SQab1735]. 1) ARG66246 IP in HeLa whole cell lysate, 2) PBS instead of ARG66246 in HeLa whole cell lysate, and 3) HeLa whole cell lysate, 10 µg (input).



ARG66246 anti-alpha smooth muscle Actin antibody [SQab1735] WB image

Western blot: 10 µg of Mouse kidney, Mouse liver, Rat brain and Rat heart lysates stained with ARG66246 anti-alpha smooth muscle Actin antibody [SQab1735] at 1:5000 dilution.