

## ARG66382 anti-Actin antibody [SQab18109]

Package: 100 µl  
Store at: -20°C

### Summary

Product Description	Recombinant Rabbit Monoclonal antibody [SQab18109] recognizes Actin
Tested Reactivity	Hu, Ms, Rat, AGMK, Bov, Dog, Pig, Zfsh
Tested Application	IHC-P, WB
Host	Rabbit
Clonality	Monoclonal
Clone	SQab18109
Isotype	IgG
Target Name	Actin
Species	Human
Immunogen	Synthetic peptide around the N-terminus of Human 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	1:800 - 1:1600
	WB	1:1000 - 1:2000
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.

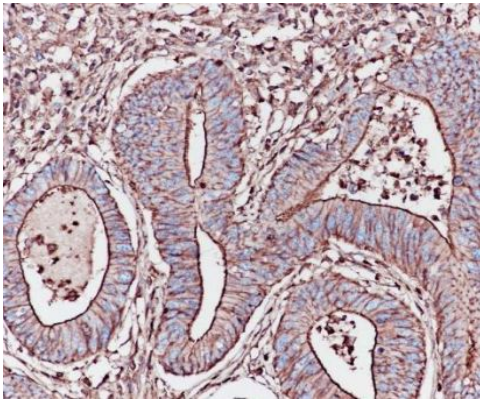
## Bioinformation

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Gene Symbol	ACTA1
Gene Full Name	actin, alpha 1, skeletal muscle
Background	Actin is a highly conserved ubiquitous globular protein (G-actin) that polymerizes to form fibrous F-actin microfilaments. In higher eucaryotes several actin isoforms have been identified, that fall into three classes. Alpha actin is a structural component of the contractile apparatus of muscle cells or muscle-derived cells. Beta actin and gamma actin play roles in regulation of cell motility in other cell types. Specific subcellular structures such as stress fibers, focal adhesions, filopodia etc., are formed by involvement of actin cytoskeleton.
Function	Actins are highly conserved proteins that are involved in various types of cell motility and are ubiquitously expressed in all eukaryotic cells. [UniProt]
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 <i>V.cholerae</i> 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>

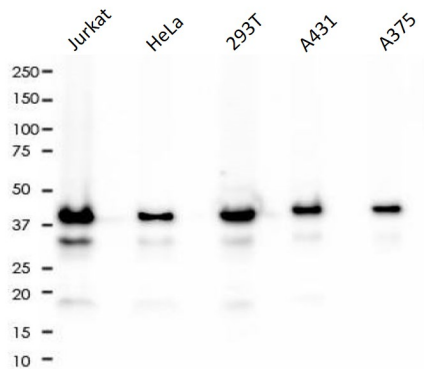
## Images

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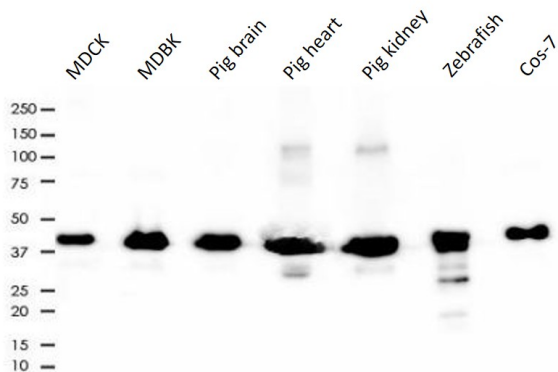
ARG66382 anti-Actin antibody [SQab18109] IHC-P image

Immunohistochemistry: Formalin-fixed and paraffin-embedded Human colonic adenocarcinoma stained with ARG66382 anti-Actin antibody [SQab18109] at 1:1600 dilution. Antigen Retrieval: Heat mediated was performed using Tris/EDTA buffer (pH 9.0).



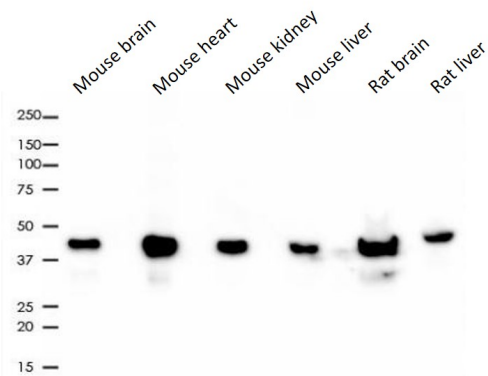
ARG66382 anti-Actin antibody [SQab18109] WB image

Western blot: 10 µg of Jurkat, HeLa, 293T, A431 and A375 cell lysates stained with ARG66382 anti-Actin antibody [SQab18109] at 1:1000 dilution.



ARG66382 anti-Actin antibody [SQab18109] WB image

Western blot: 10 µg of MDCK, MDBK, Pig brain, Pig heart, Pig kidney, Zebrafish and Cos-7 lysates stained with ARG66382 anti-Actin antibody [SQab18109] at 1:1000 dilution.



ARG66382 anti-Actin antibody [SQab18109] WB image

Western blot: 10 µg of Mouse brain, Mouse heart, Mouse kidney, Mouse liver, Rat brain and Rat liver lysates stained with ARG66382 anti-Actin antibody [SQab18109] at 1:1000 dilution.



ARG66382 anti-Actin antibody [SQab18109] WB image

Western blot: Human keratinocytes stained with ARG66382 anti-Actin antibody [SQab18109].

From Jia-Wei Shen et al. *Int J Mol Sci* (2022), [doi: 10.3390/ijms232314623](https://doi.org/10.3390/ijms232314623), Fig. 9.



ARG66382 anti-Actin antibody [SQab18109] WB image

Western blot: Human keratinocytes stained with ARG66382 anti-Actin antibody [SQab18109].

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