Rabbit Actin alpha 1 Polyclonal Antibody | anti-ACTA1 antibody

Actin alpha 1 Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA321984	**Rabbit**	**Human, Mouse, Rat**	**ELISA, Immunoprecipitation, Immunocytochemistry, Immunofluorescence, Immunohistochemistry, Western Blot**

PRODUCT SYNONYMS

Actin alpha 1; Polyclonal Antibody; Actin alpha 1 Antibody; a actin; ACTA; ACTA1; ACTA2; ACTC; ACTC1; Actin; ACTS_HUMAN; ACTSA; Alpha 2 actin; alpha skeletal muscle; Alpha-actin-1; Cardiac muscle alpha actin 1; Skeletal muscle alpha actin 1; anti-ACTA1 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	Actin alpha 1 antibody detects endogenous levels of total Actin alpha 1
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	377
Applicable Applications for anti-ACTA1 antibody	ELISA, IP (Immunoprecipitation), ICC (Immunocytochemistry), IF (Immunofluorescence), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human Actin alpha 1
Subcellular Location	Cytoplasm > Cytoskeleton.
Predicted Cross Reactivity	**Pig, Bovine, Sheep, Rabbit, Chicken**
Similarity	Pig (100%), Bovine (100%), Sheep (100%), Rabbit (100%), Chicken (100%)
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES

IHC (Immunohistochemisry)
AAA321984 at 1/100 staining Human prostate tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.

WB (Western Blot)
Western blot analysis of extracts from mouse tissue sample, using Actin alpha 1 Antibody.

IF (Immunofluorescence)
AAA321984 staining LOVO by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) Ab, diluted at 1/600, was used as the secondary antibody.

ADDITIONAL INFORMATION

Related Product Information for anti-ACTA1 antibody	Description: Actins are highly conserved proteins that are involved in various types of cell motility and are ubiquitously expressed in all eukaryotic cells. Subunit Structure: Polymerization of globular actin (G-actin) leads to a structural filament (F-actin) in the form of a two-stranded helix. Each actin can bind to 4 others. Identified in a complex composed of ACTA1, COBL, GSN AND TMSB4X (By similarity). Interacts with TTID. Interacts (via its C-terminus) with USP25; the interaction occurs for all USP25 isoforms but is strongest for isoform USP25m in muscle differentiating cells. Post-translational Modifications: 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 promotes actin repolymerization. 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. (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). Similarity: Belongs to the actin family.

NCBI AND UNIPROT INFORMATION

NCBI GI #	4501881
NCBI GeneID	58
NCBI Accession #	NP_001091.1
NCBI GenBank Nucleotide #	NM_001100.3
UniProt Accession #	P68133; P02568; P99020; Q5T8M9
Molecular Weight	Observed: 42 kDa Predicted: 43 kDa
NCBI Official Full Name	actin, alpha skeletal muscle
NCBI Official Synonym Full Names	actin, alpha 1, skeletal muscle
NCBI Official Symbol	ACTA1
NCBI Official Synonym Symbols	ACTA; ASMA; CFTD; MPFD; NEM1; NEM2; NEM3; SHPM; CFTD1; CFTDM
NCBI Protein Information	actin, alpha skeletal muscle
UniProt Protein Name	Actin, alpha skeletal muscle
UniProt Gene Name	**ACTA1**
UniProt Synonym Gene Names	ACTA

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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