ARG46782
anti-beta Actin antibody

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

Summary

Product Description	Goat Polyclonal antibody recognizes beta Actin
Tested Reactivity	Hu, Ms, Mk
Tested Application	ICC/IF, IHC-P, WB
Specificity	Detects a band of approximately 42 kDa by Western blot in the following monkey (COS-7) whole cell lysates.
Host	Goat
Clonality	Polyclonal
Isotype	IgG
Target Name	beta Actin
Species	Human
Immunogen	Purified recombinant peptide derived from within residues 100 aa to the N-terminus of human beta Actin produced in E. coli.
Conjugation	Un-conjugated
Alternate Names	PS1TP5BP1; BRWS1; Actin, cytoplasmic 1; Beta-actin

Application Instructions

Application table

Application	Dilution
ICC/IF	1:50 - 1:250
IHC-P	1:250 - 1:1000
WB	1:250 - 1:2000

Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.
Observed Size	42 kDa

Properties

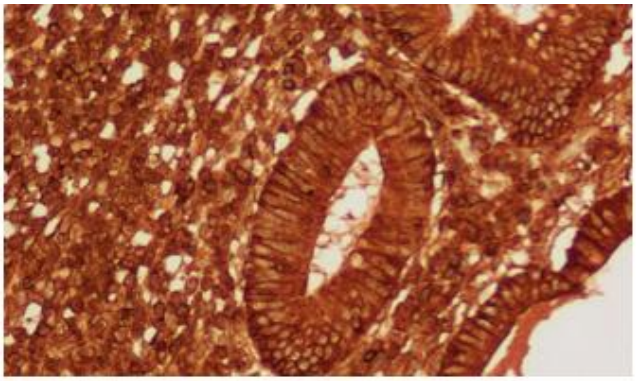
Form	Liquid
Purification	Epitope affinity purified
Buffer	PBS, 0.05% Sodium azide and 20% Glycerol.
Preservative	0.05% Sodium azide
Stabilizer	20% Glycerol
Concentration	3 mg/ml

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

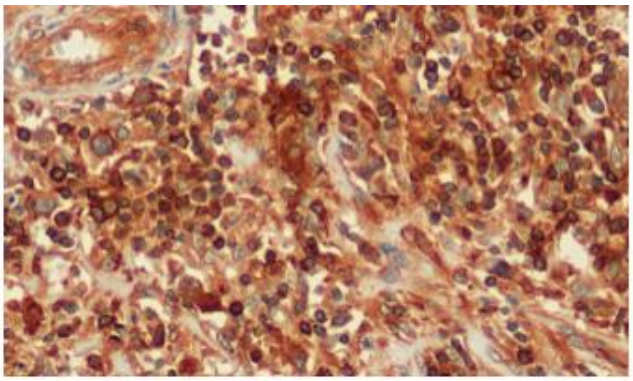
Gene Symbol	ACTB
Gene Full Name	actin, beta
Background	Beta actin is one of six different actin proteins. Actins are highly conserved proteins that are involved in cell motility, structure, integrity, and intercellular signaling. The encoded protein is a major constituent of the contractile apparatus and one of the two nonmuscle cytoskeletal actins that are ubiquitously expressed. Mutations in this gene cause Baraitser-Winter syndrome 1, which is characterized by intellectual disability with a distinctive facial appearance in human patients. Numerous pseudogenes of this gene have been identified throughout the human genome. [provided by RefSeq, Aug 2017]
Function	Actin is a highly conserved protein that polymerizes to produce filaments that form cross-linked networks in the cytoplasm of cells (PubMed:29581253). Actin exists in both monomeric (G-actin) and polymeric (F-actin) forms, both forms playing key functions, such as cell motility and contraction (PubMed:29581253). In addition to their role in the cytoplasmic cytoskeleton, G- and F-actin also localize in the nucleus, and regulate gene transcription and motility and repair of damaged DNA (PubMed:29925947). [UniProt]
Calculated Mw	42 kDa
PTM	ISGylated. Oxidation of Met-44 and Met-47 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). Monomethylation at Lys-84 (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-50 of one monomer and Glu-270 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).

Images



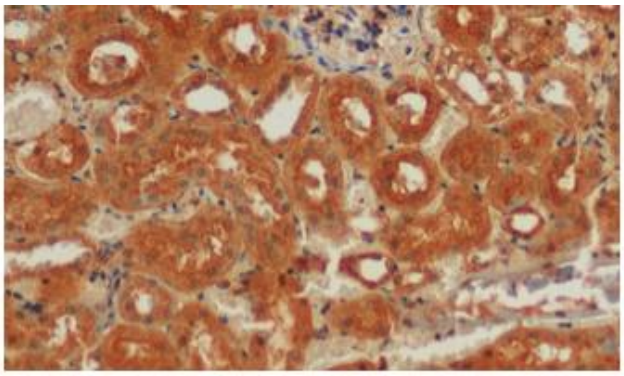
ARG46782 anti-beta Actin antibody IHC-P image

Immunohistochemistry: Human appendix stained with ARG46782 anti-beta Actin antibody at 1:500 dilution.



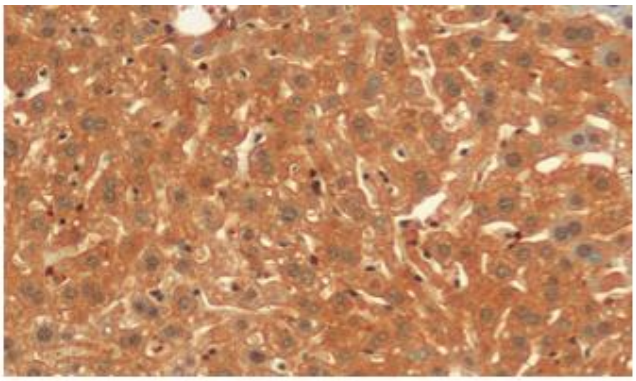
ARG46782 anti-beta Actin antibody IHC-P image

Immunohistochemistry: Human lymph node stained with ARG46782 anti-beta Actin antibody at 1:500 dilution.



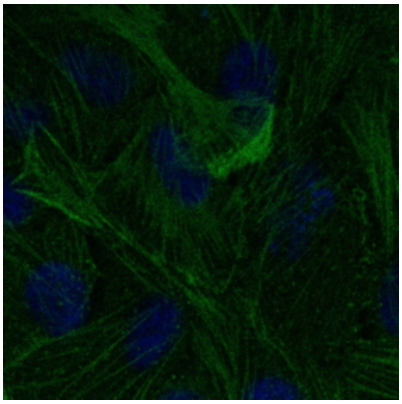
ARG46782 anti-beta Actin antibody IHC-P image

Immunohistochemistry: Mouse kidney stained with ARG46782 anti-beta Actin antibody at 1:500 dilution.



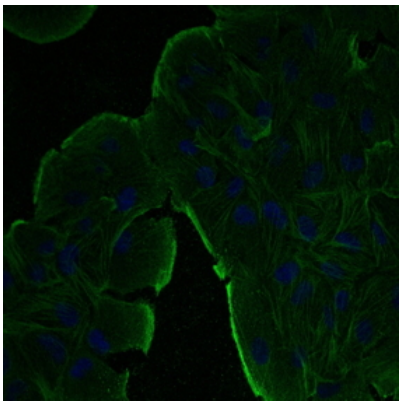
ARG46782 anti-beta Actin antibody IHC-P image

Immunohistochemistry: Mouse liver stained with ARG46782 anti-beta Actin antibody at 1:500 dilution.



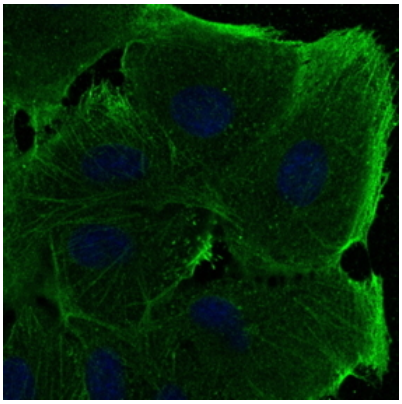
ARG46782 anti-beta Actin antibody ICC/IF image

Immunofluorescence: NHI/3T3 stained with ARG46782 anti-beta Actin antibody at 1:100 dilution.



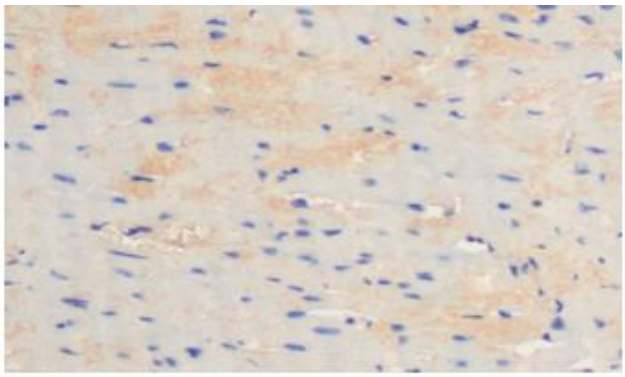
ARG46782 anti-beta Actin antibody ICC/IF image

Immunofluorescence: NHI/3T3 stained with ARG46782 anti-beta Actin antibody at 1:100 dilution.



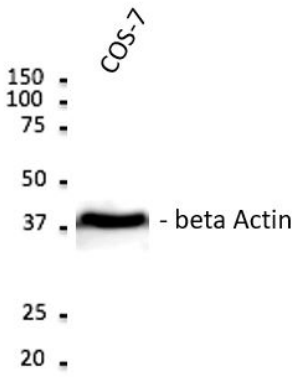
ARG46782 anti-beta Actin antibody ICC/IF image

Immunofluorescence: NHI/3T3 stained with ARG46782 anti-beta Actin antibody at 1:100 dilution.



ARG46782 anti-beta Actin antibody IHC-P image

Immunohistochemistry: Human Mouse heart stained with ARG46782 anti-beta Actin antibody at 1:500 dilution.



ARG46782 anti-beta Actin antibody WB image

Western blot: COS-7 stained with ARG46782 anti-beta Actin antibody at 1:500 dilution.