

ARG53987 anti-beta Actin antibody

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

Summary

Product Description	Mouse Monoclonal antibody recognizes beta Actin
Tested Reactivity	Hu, Ms, Rat, Arabi, C. reinhardtii, Chk, Cucumber, Dm, Fsh, Goat, Hm, Mk, P. pastoris, Pig, Rb, Rice, S. cerevisiae, Yeast, Zfsh
Tested Application	WB
Host	Mouse
Clonality	Monoclonal
Isotype	IgG2b
Target Name	beta Actin
Species	Human
Immunogen	Purified recombinant human beta actin protein fragments expressed in E.coli.
Conjugation	Un-conjugated
Alternate Names	PS1TP5BP1; BRWS1; Actin, cytoplasmic 1; Beta-actin

Application Instructions

Application table	Application	Dilution
	WB	1:1000 - 1:10000
Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	

Properties

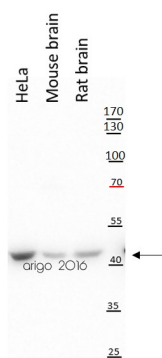
Form	Liquid
Purification	Affinity purified
Buffer	PBS (pH 7.4), 0.02% Sodium azide and 50% Glycerol
Preservative	0.02% Sodium azide
Stabilizer	50% Glycerol
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage 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]
Highlight	Related Antibody Duos and Panels: ARG30270 Loading Control Antibody Panel (Actin, beta Tublin, Histone H3, GAPDH) ARG30276 Cytochrome-C fractionation Antibody Panel (Cytochrome-C, COX IV, beta Actin) Related products: beta Actin antibodies ; beta Actin Duos / Panels ; Anti-Mouse IgG secondary antibodies ;
Research Area	Controls and Markers antibody; Signaling Transduction antibody; Loading Control antibody; Cytochrome-C fractionation Study antibody; Inflammation Study antibody; Tag Internal Control antibody
Calculated Mw PTM	42 kDa 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).
Cellular Localization	Cytoplasm, cytoskeleton

Images



ARG53987 anti-beta Actin antibody WB image

Western blot: 20 µg of HeLa, Mouse brain and Rat brain lysates stained with ARG53987 anti-beta Actin antibody at 1:10000 dilution.