ARG56833
anti-beta Actin antibody (HRP)

Package: 100 µl
Store at: 4°C

Summary

Product Description	HRP-conjugated Mouse Monoclonal antibody recognizes beta Actin
Tested Reactivity	Hu, Ms, Rat, Hm, Mk, Plnt
Tested Application	WB
Specificity	This antibody detects endogenous levels of beta-actin and does not cross-react with related proteins.
Host	Mouse
Clonality	Monoclonal
Isotype	IgG2b
Target Name	beta Actin
Species	Human
Immunogen	Purified recombinant Human beta Actin protein fragments.
Conjugation	HRP
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.

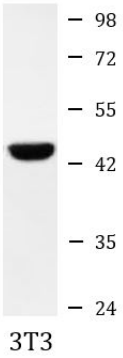
Properties

Form	Liquid
Purification	Affinity purification.
Buffer	PBS (pH 7.4), 50% Glycerol and 0.1 mg/ml BSA.
Stabilizer	50% Glycerol and 0.1 mg/ml BSA
Concentration	0.2 mg/ml
Storage instruction	Aliquot and store in the dark at 2-8°C. Keep protected from prolonged exposure to light. 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]
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	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



ARG56833 anti-beta Actin antibody (HRP) WB image

Western blot: 3T3 cell lysate stained with ARG56833 anti-beta Actin antibody (HRP) at 1:10000 dilution.