

beta Actin Monoclonal Antibody (AC-15)

Product Details	
Size	100 µg
Species Reactivity	Bovine, Dog, Chicken, Fruit fly, Cat, Guinea pig, Human, Sheep, Pig, Rabbit
Published Species	Rabbit, Rat, Virus, Bovine, Hamster, Sheep, Human, Mouse
Host/Isotype	Mouse / IgG1
Class	Monoclonal
Type	Antibody
Clone	AC-15
Conjugate	Unconjugated
Immunogen	A slightly modified synthetic beta-cytoplasmic actin N-terminal peptide, Ac-Asp-Asp-Asp-Ile-Ala-Ala-Leu-Val-Ile-Asp-Asn-Gly-Ser-Gly-Lys, conjugated to KLH
Form	Liquid
Concentration	Conc. Not Determined
Storage buffer	ascites
Contains	15mM sodium azide
Storage conditions	Maintain refrigerated at 2-8°C for up to 1 month. For long term storage store at -20°C
RRID	AB_2536382

Applications	Tested Dilution	Publications
Western Blot (WB)	Assay-dependent	52 Publications
Immunocytochemistry (ICC/IF)	Assay-dependent	2 Publications
Flow Cytometry (Flow)	-	1 Publication
Miscellaneous PubMed (Misc)	-	15 Publications

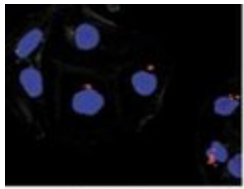
Product Specific Information

The anti-beta-actin monoclonal antibody can be used to analyze beta-actin protein expression in experimental cells by immunofluorescence and western blot and has been specifically used in combination with beta-actin siRNA control to study the specificity and effectiveness of the RNA Interference (RNAi) effect at the protein level.

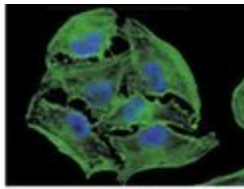
The antibody reacts with beta-actin expressing cells in human, bovine, sheep, pig, rabbit, cat, dog, mouse, rat, guinea pig, chicken, carp, leech and fruit fly tissues, but not in amoeba.

Use Anti-beta-actin for detection of beta-actin by ELISA, immunohistology, western blotting, and immunofluorescence. The antibody specifically recognizes beta-actin in a wide variety of tissues and species using immunoblotting, immunofluorescent staining of cultured cell lines, and immunohistochemistry. The epitope recognized by the antibody is resistant to formalin-fixation and paraffin-embedding. Ethanol, B5, methacarn, or Bouin's solutions may also be used as fixatives.

Advanced Verification Data



β-actin siRNA

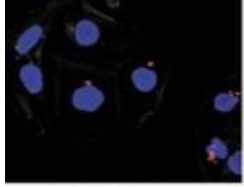


Non-transfected

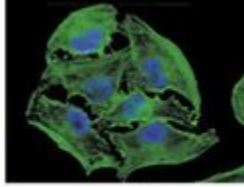
beta Actin Antibody (AM4302)

Antibody specificity was demonstrated by siRNA mediated knockdown of target protein. HeLa cells were transfected with beta actin siRNA and decrease in signal intensity was observed in western blot application (Fig a) using beta actin monoclonal Antibody (Product # AM4302). Densitometric analysis of this western blot is shown in histogram (Fig b). Knockdown validation info.

Product Images For beta Actin Monoclonal Antibody (AC-15)



β-actin siRNA



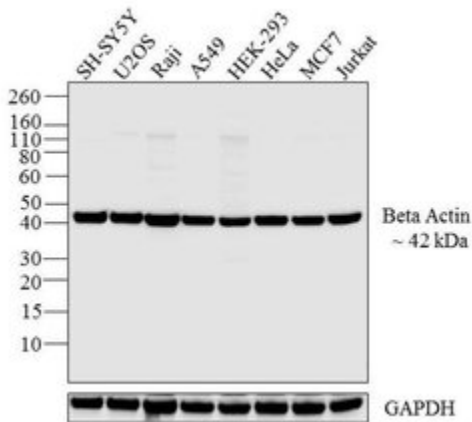
Non-transfected

beta Actin Antibody (AM4302) in ICC/IF

An siRNA targeting beta-actin was labeled with CyTM3 using the SilencerTM siRNA Labeling Kit. The labeled siRNA was transfected into HeLa cells and cells were analyzed 96 hours later using a beta Actin monoclonal antibody (Product # AM4302). Green: beta-actin protein detected with anti-β-actin (Ambion) and a FITC labeled secondary antibody. Red: Cy3 labeled siRNA. Blue: DAPI stained nuclei. (CyTM3 is a trademark of Amersham Biosciences.)

beta Actin Antibody (AM4302) in WB

Western blot analysis of Beta-Actin was performed by loading 20 μg of SH-SY5Y (lane1), U2OS (lane2), Raji (lane3), A549 (lane4), HEK-293 (lane5), HeLa (lane6), MCF7 (lane 7) and Jurkat (lane8) cell lysate using Novex® NuPAGE® 4-12 % Bis-Tris gel (Product # NP0321BOX), XCell SureLock Electrophoresis System (Product # EI0002), Novex® Sharp Pre-Stained Protein Standard (LC5800), and iBlot® Dry Blotting System (IB21001). Proteins were transferred to a nitrocellulose membrane and blocked with 5 % skim milk for 1 hour at room temperature. Beta-Actin was detected at ~42 kDa using Beta-Actin Mouse Monoclonal Antibody (Product # AM4302) at 0.5 μg/mL in 2.5 % skim milk at 4°C overnight on a rocking platform. Goat Anti-Mouse IgG - HRP Secondary Antibody (Product # 62-6520) at 1:4000 dilution was used and chemiluminescent detection was performed using PierceTM ECL Western Blotting Substrate (Product # 32106).



Western Blot (52)

Cell reports

p97/VCP inhibition causes excessive MRE11-dependent DNA end resection promoting cell killing after ionizing radiation.

"AM4302 was used in Western Blotting to find that p97 physically and functionally interacts with the MRE11-RAD50-NBS1 (MRN) complex on chromatin and that inactivation of p97 blocks the disassembly of the MRN complex from the sites of DNA damage upon ionizing radiation (IR)."

Authors: Kilgas S, Singh AN, Paillas S, Then CK, Torrecilla I, Nicholson J, Browning L, Vendrell I, Konietzny R, Kessler BM, Kiltie AE, Ramadan K

Species
Human

Dilution
Not Cited

Year
2021

Biomolecules

The Presence of Cholesteryl Ester Transfer Protein (CETP) in Endothelial Cells Generates Vascular Oxidative Stress and Endothelial Dysfunction.

"AM4302 was used in Western Blotting to support the notion that CETP expression negatively impacts endothelial cell function, revealing a new mechanism that might contribute to atherosclerosis."

Authors: Wanschel ACBA, Guizoni DM, Lorza-Gil E, Salerno AG, Paiva AA, Dorighello GG, Davel AP, Balkan W, Hare JM, Oliveira HCF

Species
Human

Dilution
Not Cited

Year
2021

[View more WB references on thermofisher.com](#)

Immunocytochemistry (2)

Journal of stem cell research & therapy

Improved Method for Isolation of Neonatal Rat Cardiomyocytes with Increased Yield of C-Kit+ Cardiac Progenitor Cells.

"AM4302 was used in Immunocytochemistry-immunofluorescence to create a protocol for improved isolation of neonatal rat cardiomyocytes that also enables enhanced yields of cardiac progenitor cells."

Authors: Ruterger J, Ilmer M, Recio A, Coleman M, Vykoukal J, Alt E

Species
Rat

Dilution
Not Cited

Year
2020

iScience

TRAF6 Plays a Proviral Role in Tick-Borne Flavivirus Infection through Interaction with the NS3 Protease.

"AM4302 was used in Immunocytochemistry to analyse tick borne flavivirus polyproteins in silico for antiviral protein binding motifs to identify therapeutic targets."

Authors: Youseff BH, Brewer TG, McNally KL, Izuogu AO, Lubick KJ, Presloid JB, Alqahtani S, Chattopadhyay S, Best SM, Hu X, Taylor RT

Species
Human

Dilution
Not Cited

Year
2019

More applications with references on thermofisher.com

Flow (1)

Misc (15)

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