

Beta-Actin Antibody
Mouse Monoclonal Antibody (Mab)
Catalog # AM1829B

Specification

Beta-Actin Antibody - Product Information

Application	WB, IF, IHC-P, FC, IHC,E
Primary Accession	P60709
Other Accession	A2BDB0 , P63259 , P63260 , P63261 , Q5ZMQ2 , P63258 , P60711 , Q6QAO1 , P60710 , Q4R561 , P60706 , P60712 , P53505 , P60708 , P60713
Reactivity Predicted	Human, Mouse, Rat Xenopus, Bovine, Chicken, Horse, Monkey, Pig, Sheep
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1,Igk

Beta-Actin Antibody - Additional Information

Gene ID 60

Other Names

Actin, cytoplasmic 1, Beta-actin, Actin, cytoplasmic 1, N-terminally processed, ACTB

Target/Specificity

This ACTB Monoclonal antibody is generated from mouse immunized with ACTB recombinant protein.

Dilution

WB~~1:1000
IF~~1:10~50
IHC-P~~1:25
FC~~1:25
IHC~~1:50

Format

Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.

Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

Beta-Actin Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Beta-Actin Antibody - Protein Information

Name ACTB

Function Actin is a highly conserved protein that polymerizes to produce filaments that form cross-linked networks in the cytoplasm of cells (PubMed:[25255767](#), 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](#)). Part of the ACTR1A/ACTB filament around which the dynactin complex is built. The dynactin multiprotein complex activates the molecular motor dynein for ultra-processive transport along microtubules (By similarity).

Cellular Location

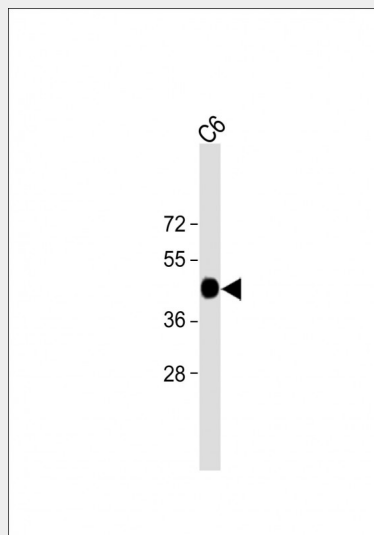
Cytoplasm, cytoskeleton. Nucleus Note=Localized in cytoplasmic mRNP granules containing untranslated mRNAs.

Beta-Actin Antibody - Protocols

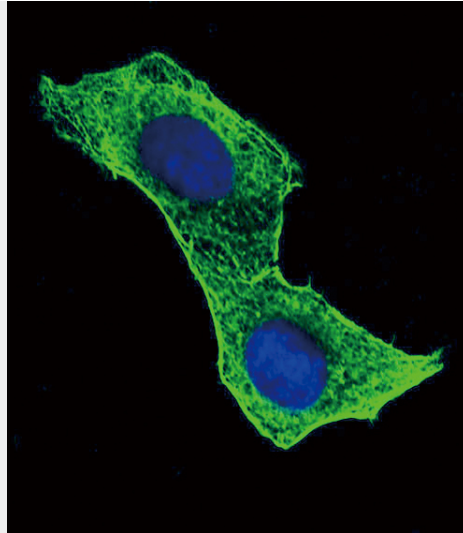
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

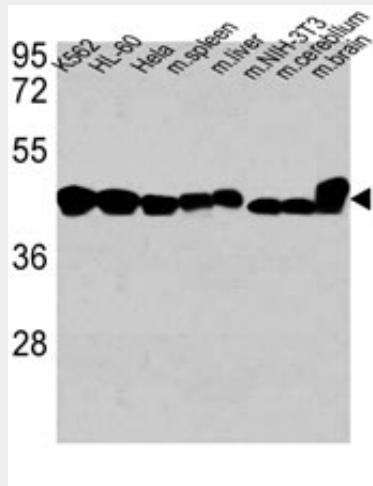
Beta-Actin Antibody - Images



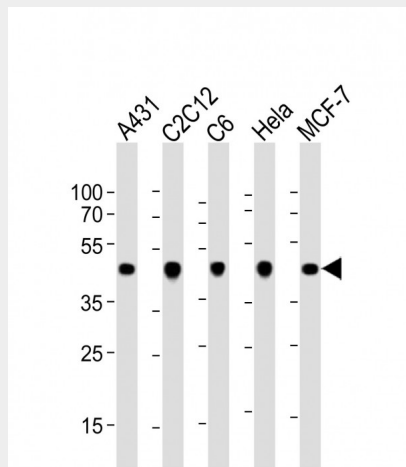
All lanes : Anti-ACTB Antibody at 1:2000 dilution + C6 cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 41 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



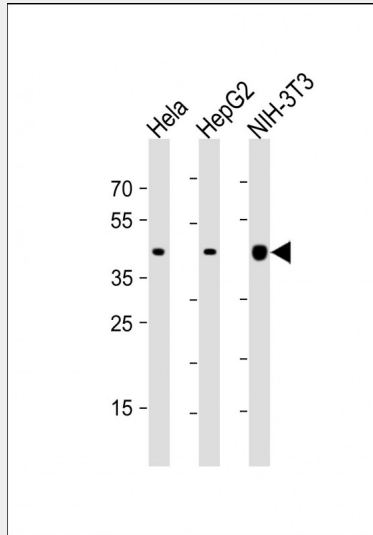
Confocal immunofluorescent analysis of ACTB Antibody (Cat#AM1829b) with HeLa cell followed by Alexa Fluor® 488-conjugated goat anti-mouse IgG (green). DAPI was used to stain the cell nuclear (blue).



Western blot analysis of anti-ACTB Antibody (Cat. #AM1829b) in K562, HL-60, HeLa cell line, mouse spleen, mouse liver tissue lysates, mouse NIH-3T3 cell line lysate and mouse cerebellum, mouse brain tissue lysates (35µg/lane). ACTB (arrow) was detected using the purified Mab.



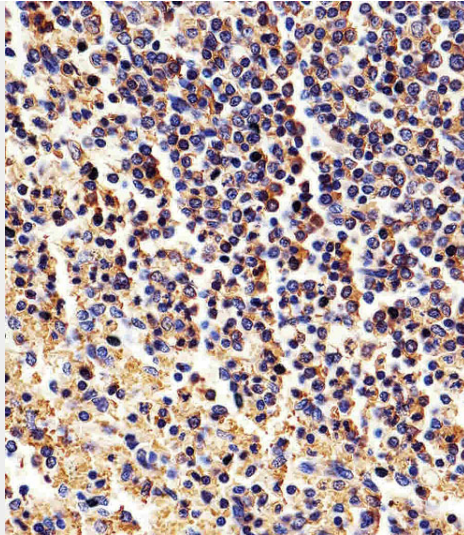
All lanes : Anti-ACTB Antibody at 1:1000 dilution Lane 1: A431 whole cell lysate Lane 2: C2C12 whole cell lysate Lane 3: C6 whole cell lysate Lane 4: HeLa whole cell lysate Lane 5: MCF-7 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 42 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



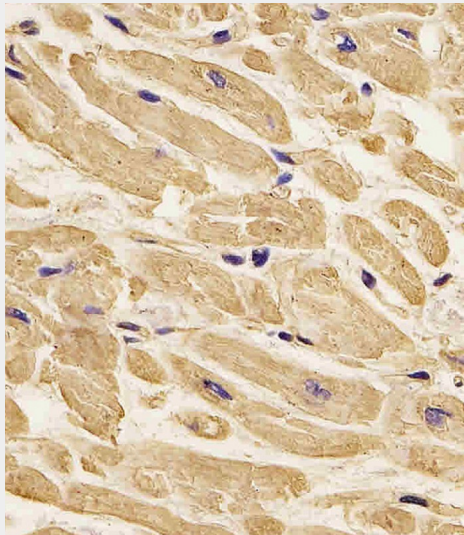
All lanes : Anti-ACTB Antibody at 1:1000 dilution Lane 1: HeLa whole cell lysate Lane 2: HepG2 whole cell lysate Lane 3: NIH-3T3 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 42 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



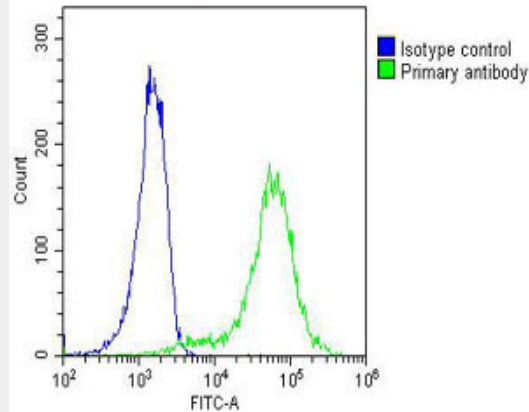
Immunohistochemical analysis of paraffin-embedded H.skeletal muscle section using Beta-Actin Antibody(Cat#AM1829b). AM1829b was diluted at 1:25 dilution. A peroxidase-conjugated goat anti-mouse IgG at 1:400 dilution was used as the secondary antibody, followed by DAB staining.



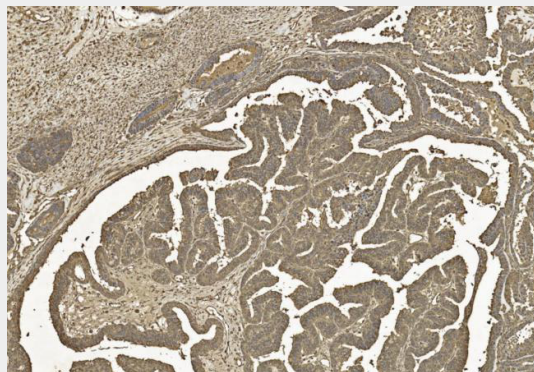
Immunohistochemical analysis of paraffin-embedded H.spleen section using Beta-Actin Antibody(Cat#AM1829b). AM1829b was diluted at 1:25 dilution. A peroxidase-conjugated goat anti-Mouse IgG at 1:400 dilution was used as the secondary antibody, followed by DAB staining.



AM1829b staining ACTB in human heart tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3% BSA for 0.5 hour at room temperature; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody (1/25) for 1 hours at 37°C. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.



Overlay histogram showing A431 cells stained with AM1829b (green line). The cells were fixed with 2% paraformaldehyde (10 min) and then permeabilized with 90% methanol for 10 min. The cells were then incubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (AM1829b, 1:25 dilution) for 60 min at 37°C. The secondary antibody used was Goat-Anti-Mouse IgG, DyLight® 488 Conjugated Highly Cross-Adsorbed (OJ192088) at 1/200 dilution for 40 min at 37°C. Isotype control antibody (blue line) was mouse IgG1 (1µg/1x10⁶ cells) used under the same conditions. Acquisition of >10,000 events was performed.



Immunohistochemical analysis of paraffin-embedded Human Ovarian cancer section using Pink1 (Cat# am1829b). am1829b was diluted at 1:50 dilution. A undiluted biotinylated goat polyvalent antibody was used as the secondary, followed by DAB staining.

Beta-Actin Antibody - Background

This gene encodes one of six different actin proteins. Actins are highly conserved proteins that are involved in cell motility, structure, and integrity. This actin is a major constituent of the contractile apparatus and one of the two nonmuscle cytoskeletal actins.

Beta-Actin Antibody - References

- Sex-specific proteome differences in the anterior cingulate cortex of schizophrenia. Martins-de-Souza D, et al. J Psychiatr Res, 2010 Apr 8. PMID 20381070.
- Identification of a hormone-regulated dynamic nuclear actin network associated with estrogen receptor alpha in human breast cancer cell nuclei. Ambrosino C, et al. Mol Cell Proteomics, 2010 Jun. PMID 20308691.
- Contribution of rearranged actin structures to the spread of Ectromelia virus infection in vitro. Boratynska A, et al. Acta Virol, 2010. PMID 20201613.
- Molecular mechanisms underlying nucleocytoplasmic shuttling of actinin-4. Kumeta M, et al. J Cell Sci, 2010 Apr 1. PMID 20197409.
- Tyrosine phosphorylation of cofilin at Y68 by v-Src leads to its degradation through ubiquitin-proteasome pathway. Yoo Y, et al. Oncogene, 2010 Jan 14. PMID 19802004.

Beta-Actin Antibody - Citations

- [β-catenin links cell seeding density to global gene expression during mouse embryonic stem cell differentiation.](#)
- [Aspirin potentiates celecoxib-induced growth inhibition and apoptosis in human non-small cell lung cancer by targeting GRP78 activity.](#)
- [Voiding Dysfunction in Old Male Rats Associated With Enlarged Prostate and Irregular Afferent-Triggered Reflex Responses.](#)
- [Mammalian Atg8 proteins and the autophagy factor IRGM control mTOR and TFEB at a regulatory node critical for responses to pathogens.](#)
- [Allopregnanolone restores the tyrosine hydroxylase-positive neurons and motor performance in a 6-OHDA-injected mouse model.](#)
- [ASK1 inhibition reduces cell death and hepatic fibrosis in an Nlrp3 mutant liver injury model.](#)
- [Allopregnanolone Modulates GABAAR-Dependent CaMKIIδ3 and BDNF to Protect SH-SY5Y Cells Against 6-OHDA-Induced Damage.](#)
- [Innovative mouse model mimicking human-like features of spinal cord injury: efficacy of Docosahexaenoic acid on acute and chronic phases.](#)
- [Precise targeting of POLR2A as a therapeutic strategy for human triple negative breast cancer.](#)
- [Yap1 safeguards mouse embryonic stem cells from excessive apoptosis during differentiation.](#)
- [Huaier suppresses proliferative and metastatic potential of prostate cancer PC3 cells via downregulation of Lamin B1 and induction of autophagy.](#)
- [CD133 Promotes Adhesion to the Ovarian Cancer Metastatic Niche.](#)
- [Stk33 is required for spermatid differentiation and male fertility in mice.](#)
- [Induction of miR-155 after Brain Injury Promotes Type 1 Interferon and has a Neuroprotective Effect.](#)
- [Isoprenylcysteine carboxylmethyltransferase is critical for malignant transformation and tumor maintenance by all RAS isoforms.](#)
- [Berberine-induced Inactivation of Signal Transducer and Activator of Transcription 5 Signaling Promotes Male-specific Expression of a Bile-acid Uptake Transporter.](#)
- [Activation of GR but not PXR by Dexamethasone Attenuated Acetaminophen Hepatotoxicities via Fgf21 Induction.](#)
- [Localized inhibition of P2X7R at the spinal cord injury site improves neurogenic bladder dysfunction by decreasing urothelial P2X3R expression in rats.](#)
- [Reduced Glutamate Release in Adult BTBR Mouse Model of Autism Spectrum Disorder.](#)
- [CYLD Promotes TNF-α-Induced Cell Necrosis Mediated by RIP-1 in Human Lung Cancer Cells.](#)
- [Abnormal Accumulation of Desmin in Gastrocnemius Myofibers of Patients with Peripheral Artery Disease: Associations with Altered Myofiber Morphology and Density, Mitochondrial Dysfunction and Impaired Limb Function.](#)
- [Androgen receptor silences thioredoxin-interacting protein and competitively inhibits glucocorticoid receptor-mediated apoptosis in pancreatic β-cells.](#)
- [Functional analyses of the three simian hemorrhagic Fever virus nonstructural protein 1 papain-like proteases.](#)
- [Addiction to multiple oncogenes can be exploited to prevent the emergence of therapeutic resistance.](#)
- [Evidence for a novel antioxidant function and isoform-specific regulation of the human p66Shc gene.](#)