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Beta-Actin Antibody

Mouse Monoclonal Antibody (Mab)
Catalog # AM1829B

Specification

Beta-Actin Antibody - Product Information

Application	**IF, WB, IHC-P, FC,E**
Primary Accession	P60709
Other Accession	A2BDB0, P63259, P63260, P63261, Q5ZMQ2, P63258, P60711, Q6QAQ1, P60710, Q4R561, P60706, P60712, P53505, P60708, P60713
Reactivity	**Human, Mouse, Rat**
Predicted	**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

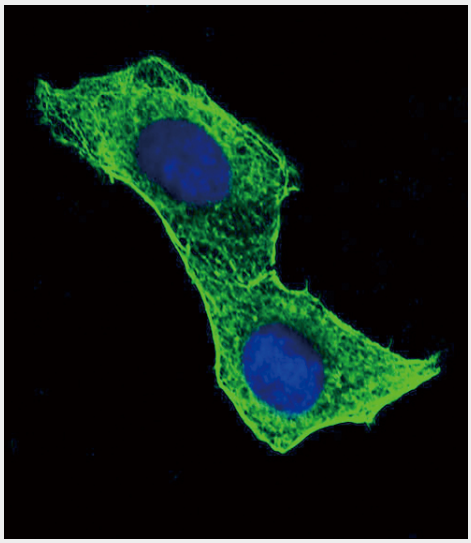
Target/Specificity
This ACTB Monoclonal antibody is generated from mouse immunized with ACTB recombinant protein.

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

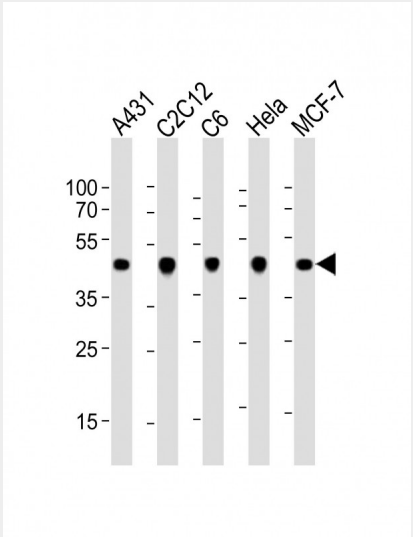
Format
Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.

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



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).



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.

and not for use in diagnostic or therapeutic procedures.

Beta-Actin Antibody - Protein Information

Name ACTB

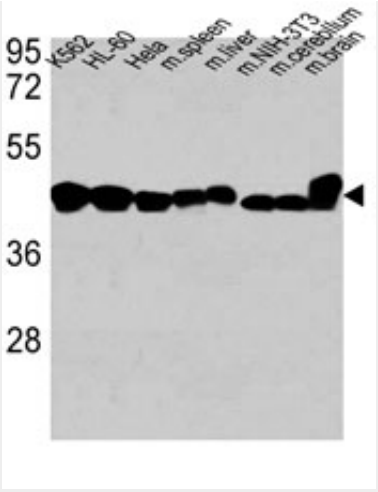
Function
Actin is a highly conserved protein that polymerizes to produce filaments that form cross-linked networks in the cytoplasm of cells (PubMed:29581253). Actin exists in both monomeric (G-actin) and polymeric (F-actin) forms, both forms playing key functions, such as cell motility and contraction (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).

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

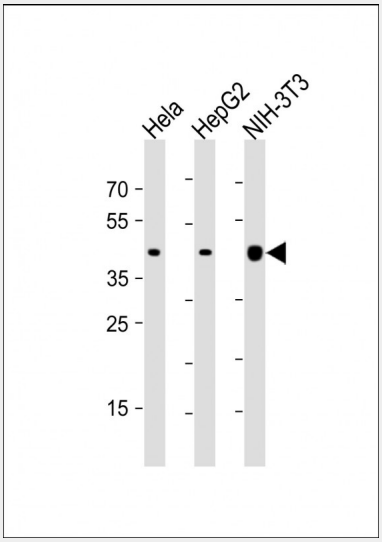
Beta-Actin Antibody - Protocols

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

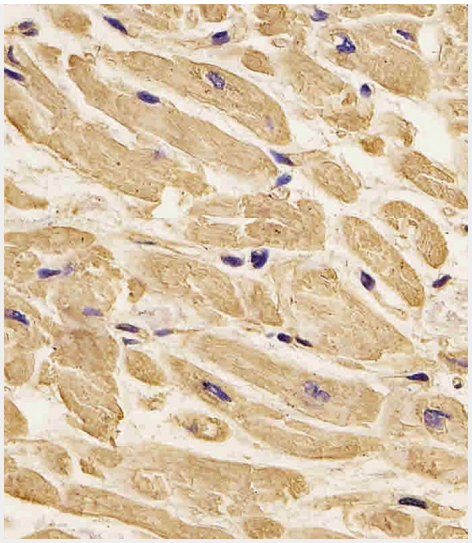
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture



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.

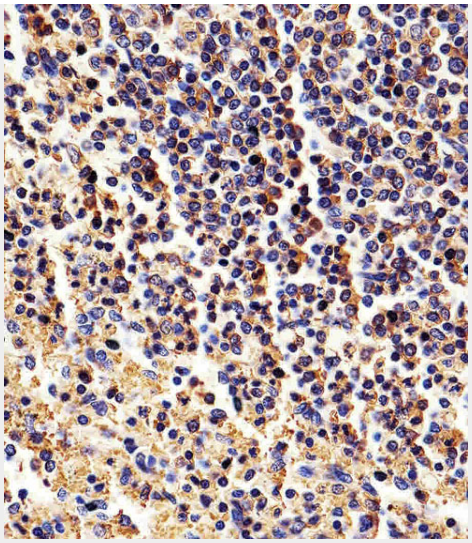


All lanes : Anti-ACTB Antibody at 1:1000 dilution Lane 1: Hela whole cell lysate Lane 2: HepG2 whole cell lysate Lane 3: NIH-3T3 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 42 kDa Blocking/Dilution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

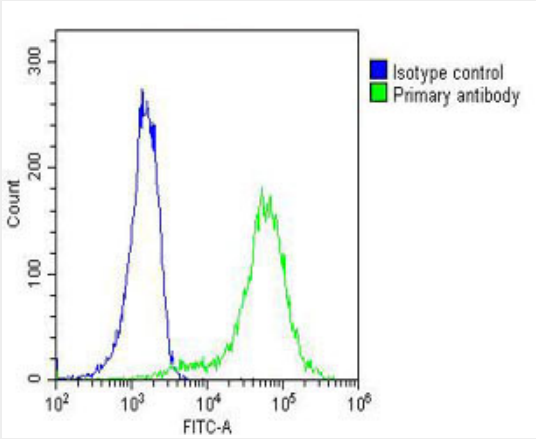


AM1829b staining ACTB in human heart tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3% BSA for 0. 5 hour at room temperature; antigen retrieval was by heat mediation with a citrate buffer (pH6). 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.

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-rabbit IgG at 1:400 dilution was used as the secondary antibody, followed by DAB staining.



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 icubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (AM1829b, 1:25 dilution) for 60 min at 37ºC. The secondary antibody used was Goat-Anti-Mouse IgG, DyLight® 488 Conjugated Highly Cross-Adsorbed(OJ192088) at 1/200 dilution for 40 min at 37ºC. Isotype control antibody (blue line) was mouse IgG1 (1µg/1x10^6 cells) used under the same conditions. Acquisition of >10, 000 events was performed.

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

- 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 â-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.