

# Beta-Actin Antibody

Mouse Monoclonal Antibody (Mab)

Catalog # AM1829B

## Product Information

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<b>Application</b>	WB, IHC-P, IF, FC
<b>Primary Accession</b>	<a href="#">P60709</a>
<b>Other Accession</b>	<a href="#">A2BDB0</a> , <a href="#">P63259</a> , <a href="#">P63260</a> , <a href="#">P63261</a> , <a href="#">Q5ZMQ2</a> , <a href="#">P63258</a> , <a href="#">P60711</a> , <a href="#">Q6QAO1</a> , <a href="#">P60710</a> , <a href="#">Q4R561</a> , <a href="#">P60706</a> , <a href="#">P60712</a> , <a href="#">P53505</a>
<b>Reactivity</b>	Human, Mouse, Rat
<b>Predicted</b>	Rat, Monkey, Pig, Chicken, Bovine, Xenopus
<b>Host</b>	Mouse
<b>Clonality</b>	Monoclonal
<b>Isotype</b>	IgG1,Igk
<b>Clone Names</b>	137CT26.1.1
<b>Calculated MW</b>	41737

## Additional Information

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<b>Gene ID</b>	60
<b>Other Names</b>	Actin, cytoplasmic 1, Beta-actin, Actin, cytoplasmic 1, N-terminally processed, ACTB
<b>Target/Specificity</b>	This ACTB Monoclonal antibody is generated from mouse immunized with ACTB recombinant protein.
<b>Dilution</b>	IHC-P~~1:100~500 FC~~1:25 WB~~1:4000
<b>Format</b>	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.
<b>Storage</b>	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.
<b>Precautions</b>	Beta-Actin Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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<b>Name</b>	ACTB
<b>Function</b>	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.

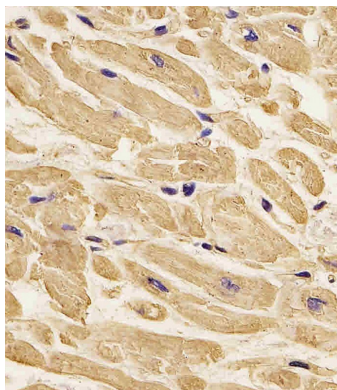
## Background

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.

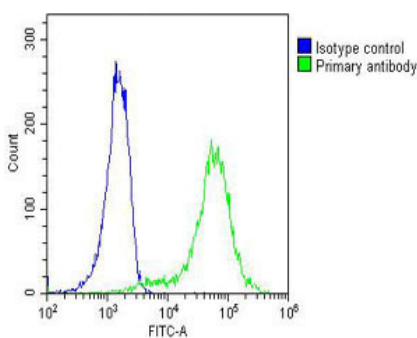
## References

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.

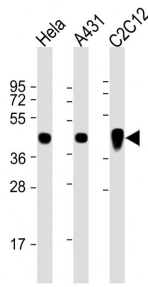
## Images



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 hour at 37°C. An 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 (1 µg/1 × 10<sup>6</sup> cells) used under the same conditions. Acquisition of >10,000 events was performed.



All lanes : Anti-ACTB Antibody at 1:4000 dilution Lane 1: HeLa whole cell lysate Lane 2: A431 whole cell lysate Lane 3: C2C12 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% NFD/MTBST.

## 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](#)
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- [Localized inhibition of P2X7R at the spinal cord injury site improves neurogenic bladder dysfunction by decreasing urothelial P2X3R expression in rats](#)
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