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Beta-actin Antibody

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AM1021B

Product Information

Application	WB, IHC-P, E
Primary Accession	P60709
Reactivity	Human, Mouse, Rat
Host	Mouse
Clonality	Monoclonal
Isotype	IgG
Clone Names	8H10D10
Calculated MW	41737
Antigen Region	Unknown

Additional Information

Gene ID	60
Other Names	Actin, cytoplasmic 1, Beta-actin, Actin, cytoplasmic 1, N-terminally processed, ACTB
Target/Specificity	ACTB recombinant protein is used to produce this monoclonal antibody.
Dilution	WB~~1:2000~10000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
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.

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). Plays a role in the assembly of the gamma-tubulin ring complex (gTuRC), which regulates the minus-end nucleation of alpha-beta tubulin heterodimers that grow into microtubule protafilaments (PubMed:39321809, PubMed:38609661). Part of the ACTR1A/ACTB filament around which the dynactin complex is built (By similarity). 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.

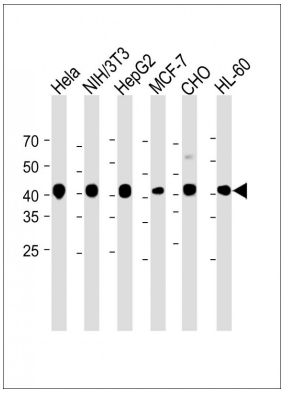
Background

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.

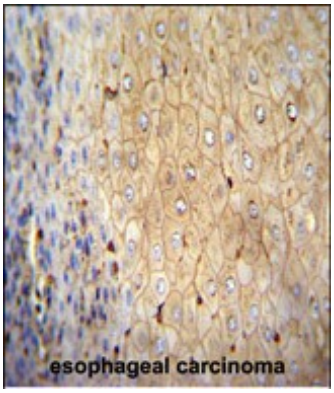
References

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Images



All lanes: Anti-Beta-actin Antibody at 1:1000 dilution Lane 1: Hela whole cell lysate Lane 2: NIH/3T3 whole cell lysate Lane 3: HepG2 whole cell lysate Lane 4: MCF-7 whole cell lysate Lane 5: CHO whole cell lysate Lane 6: HL-60 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary: Goat Anti-Mouse IgG, (H+L), Peroxidase conjugated (ASP1613) at 1/8000 dilution. Observed band size: 42 KDa Blocking/Dilution buffer: 5% NFDM/TBST.



Immunohistochemical analysis of paraffin-embedded H. spleen section using Beta-actin Antibody(Cat#AM1021b). AM1021b 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.

Citations

- Discovery of a Potent Fluorescence Polarization Probe for Identifying USP1 Allosteric Inhibitors.
- Microglial MARCO facilitates Varicella zoster virus uptake and triggers TLR2-mediated neuroinflammation.
- Deacetylation of BmHSP90 at Lysines 550/567 Stimulates Its Chaperone Function and Actin Polymerization to Drive the Proliferation of Bombyx mori Nucleopolyhedrovirus.
- AMPK activator C24 inhibits hepatic lipogenesis and ameliorates dyslipidemia in HFHC diet-induced animal models
- Fraxinellone alleviates kidney fibrosis by inhibiting CUG-binding protein 1-mediated fibroblast activation
- Varicella zoster virus glycoprotein E facilitates PINK1/Parkin-mediated mitophagy to evade STING and MAVS-mediated antiviral innate immunity
- SARS-CoV-2 main protease cleaves MAGED2 to antagonize host antiviral defense
- Alamandine/MrgD axis prevents TGF-β1-mediated fibroblast activation via regulation of aerobic glycolysis and mitophagy
- Seasonal expressions of GPR41 and GPR43 in the colon of the wild ground squirrels ( )
- A comprehensive analysis of the circRNA-miRNA-mRNA network in osteocyte-like cell associated with Mycobacterium leprae infection
- Design, synthesis and biological evaluation of thioether-containing lenalidomide and pomalidomide derivatives with anti-multiple myeloma activity
- Revealing the Therapeutic Potential of Botulinum Neurotoxin Type A in Counteracting Paralysis and Neuropathic Pain in Spinally Injured Mice
- Novel Class of Colony-Stimulating Factor 1 Receptor Kinase Inhibitors Based on an -Aminopyridyl Alkynyl Scaffold as Potential Treatment for Inflammatory Disorders
- DOT1L regulates thermogenic adipocyte differentiation and function via modulating H3K79 methylation
- Triose Kinase Controls the Lipogenic Potential of Fructose and Dietary Tolerance
- MiR-4448 is involved in deltamethrin resistance by targeting CYP4H31 in Culex pipiens pallens
- p120-catenin suppresses proliferation and tumor growth of oral squamous cell carcinoma via inhibiting nuclear phospholipase C-γ1 signaling
- Seasonal expressions of SF-1, StAR and P450scc in the scent glands of the muskrats (Ondatra zibethicus)
- Very Early Involvement of Innate Immunity in Peripheral Nerve Degeneration in SOD1-G93A Mice
- Interleukin-9 regulates macrophage activation in the progressive multiple sclerosis brain
- Let-7f promotes the differentiation of neural stem cells in rats
- UCH-L3 promotes non-small cell lung cancer proliferation via accelerating cell cycle and inhibiting cell apoptosis
- Gambogic acid exhibits anti-metastatic activity on malignant melanoma mainly through inhibition of PI3K/Akt and ERK signaling pathways
- Sex-determining region Y box 4 (SOX4) suppresses Hepatitis B virus replication by inhibiting hepatocyte nuclear factor 4α expression
- Metformin Synergistically Enhanced the Antitumor Activity of Celecoxib in Human Non-Small Cell Lung Cancer Cells
- Coxsackievirus B3 Infection of Human Neural Progenitor Cells Results in Distinct Expression Patterns of Innate Immune Genes
- EBP2, a novel NPM-ALK-interacting protein in the nucleolus, contributes to the proliferation of ALCL cells by regulating tumor suppressor p53
- Deoxycholic Acid Upregulates Serum Golgi Protein 73 through Activating NF-κB Pathway and Destroying Golgi Structure in Liver Disease
- Zika Virus-Induction of the Suppressor of Cytokine Signaling 1/3 Contributes to the Modulation of Viral Replication
- Discovery of a novel third-generation EGFR inhibitor and identification of a potential combination strategy to overcome resistance
- Predicting Radiation Resistance in Breast Cancer with Expression Status of Phosphorylated S6K1
- Diphyllin Improves High-Fat Diet-Induced Obesity in Mice Through Brown and Beige Adipocytes
- ADT-OH, a hydrogen sulfide-releasing donor, induces apoptosis and inhibits the development of melanoma in vivo by upregulating FADD
- The effects of glucose and fatty acids on CXCL10 expression in skeletal muscle cells
- Tau interactome analyses in CRISPR-Cas9 engineered neuronal cells reveal ATPase-dependent binding of wild-type but not P301L Tau to non-muscle myosins
- Soluble CD146, a cerebrospinal fluid marker for neuroinflammation, promotes blood-brain barrier dysfunction
- Melatonin alleviates vascular calcification and ageing through exosomal miR-204/miR-211 cluster in a paracrine manner
- Berberine derivatives with a long alkyl chain branched by hydroxyl group and methoxycarbonyl group at 9-position show improved anti-proliferation activity and membrane permeability in A549 cells
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- CD146-HIF-1α hypoxic reprogramming drives vascular remodeling and pulmonary arterial hypertension.
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- Berberine promotes the recruitment and activation of brown adipose tissue in mice and humans.
- The ubiquitin ligase CHIP modulates cellular behaviors of gastric cancer cells by regulating TRAF2.
- Seasonal expressions of growth hormone receptor, insulin-like growth factor 1 and insulin-like growth factor 1

receptor in the scented glands of the muskrats (Ondatra zibethicus).
- Quantitative Proteomics of Presynaptic Mitochondria Reveal an Overexpression and Biological Relevance of Neuronal MitoNEET in Postnatal Brain Development.
- RelB plays an oncogenic role and conveys chemo-resistance to DLD-1 colon cancer cells.
- Neutrophils and neutrophil extracellular traps enhance venous thrombosis in mice bearing human pancreatic tumors.
- SIRT5 Regulates Brown Adipocyte Differentiation and Browning of Subcutaneous White Adipose Tissue.
- Glutathione prevents chronic oscillating glucose intake-induced β-cell dedifferentiation and failure.
- Effects of BENC-511, a novel PI3K inhibitor, on the proliferation and apoptosis of A549 human lung adenocarcinoma cells.
- Exosomes increased angiogenesis in papillary thyroid cancer microenvironment.
- Bim escapes displacement by BH3-mimetic anti-cancer drugs by double-bolt locking both Bcl-XL and Bcl-2.
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- Characterization of the zebrafish Ugt repertoire reveals a new class of drug-metabolizing UDP glucuronosyltransferases.
- Erythropoietin pretreatment exerts anti-inflammatory effects in hepatic ischemia/reperfusion-injured rats via suppression of the TLR2/NF-κB pathway.
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- Reg3g Promotes Pancreatic Carcinogenesis in a Murine Model of Chronic Pancreatitis.
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- The association of HLA-G and immune markers in recurrent miscarriages.
- Proteomic Analysis of Cortical Brain Tissue from the BTBR Mouse Model of Autism: Evidence for Changes in Stop and Myelin-Related Proteins.
- The anti-malaria drug artesunate inhibits cigarette smoke and ovalbumin concurrent exposure-induced airway inflammation and might reverse glucocorticoid insensitivity.
- Huaier aqueous extract sensitizes cells to rapamycin and cisplatin through activating mTOR signaling.
- Sulfuretin protects hepatic cells through regulation of ROS levels and autophagic flux.
- γ-secretase inhibitor DAPT mitigates cisplatin-induced acute kidney injury by suppressing Notch1 signaling.
- Dominant Negative FADD/MORT1 Inhibits the Development of Intestinal Intraepithelial Lymphocytes With a Marked Defect on CD8αα+TCRγδ+ T Cells.
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- Inhibition of P-glycoprotein mediated efflux in Caco-2 cells by phytic acid.
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- Overexpression of Sirt6 is a novel biomarker of malignant human colon carcinoma.

- TRPV4 Channels Contribute to Renal Myogenic Autoregulation in Neonatal Pigs.
- Zinc Depletion by TPEN Induces Apoptosis in Human Acute Promyelocytic NB4 Cells.
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- Protective Effects of Geniposide on Hepatic Ischemia/Reperfusion Injury.
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- SBI0206965, a novel inhibitor of Ulk1, suppresses non-small cell lung cancer cell growth by modulating both autophagy and apoptosis pathways.
- ACY-1215 accelerates vemurafenib induced cell death of BRAF-mutant melanoma cells via induction of ER stress and inhibition of ERK activation.
- Huaier aqueous extract inhibits proliferation and metastasis of tuberous sclerosis complex cell models through downregulation of JAK2/STAT3 and MAPK signaling pathways.
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- Ethyl Pyruvate Combats Human Leukemia Cells but Spares Normal Blood Cells.
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- Interleukin 1 beta-induced calcium signaling via TRPA1 channels promotes mitogen-activated protein kinase-dependent mesangial cell proliferation
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- An organoid-based screen for epigenetic inhibitors that stimulate antigen presentation and potentiate T-cell-mediated cytotoxicity
- Extracellular NLRP3 inflammasome particles are internalized by human coronary artery smooth muscle cells and induce pro-atherogenic effects
- Activation of unfolded protein response overcomes Ibrutinib resistance in diffuse large B-cell lymphoma
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- MiR-279-3p regulates deltamethrin resistance through CYP325BB1 in Culex pipiens pallens
- Development of a whole-cell biosensor for ethylene oxide and ethylene
- β-Cyclodextrin/dialdehyde glucan-coated keratin nanoparticles for oral delivery of insulin
- Restriction of Influenza A Virus by SERINC5
- Chitosan nanoparticles for sustained release of metformin and its derived synthetic biopolymer for bone regeneration
- The PRMT5/WDR77 complex restricts hepatitis E virus replication

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