Beta-actin Antibody
Purified Mouse Monoclonal Antibody (Mab)
Catalog # AM1021B

Specification

Beta-actin Antibody - Product Information

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

Beta-actin Antibody - 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: 1:1000
- IHC-P: 1:10-50

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**: Actins are highly conserved proteins that are involved in various types of cell motility and are ubiquitously expressed in all eukaryotic cells.

Western blot analysis of lysates from HepG2, HL-60 cell line (from left to right), using Beta-actin Antibody(Cat. #AM1021b). AM1021b was diluted at 1:1000 at each lane. A goat anti-mouse IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody. Lysates at 20μg per lane.
Cellular Location
Cytoplasm, cytoskeleton. 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

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

Western blot analysis of lysates from HepG2, HL-60, mouse NIH/3T3 cell line, mouse cerebellum and rat stomach tissue lysate, CHO, COS-7 cell line lysate (from left to right), using Beta-actin Antibody (Cat. #AM1021b). AM1021b was diluted at 1:1000 at each lane. A goat anti-mouse IgG H&L(HRP) at 1:3000 dilution was used as the secondary antibody. Lysates at 35μg per lane.
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.

**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**


**Beta-actin Antibody - Citations**

- *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 CD8α+TCRγδ+ T Cells.*
- *Wnt pathway is involved in 5-FU drug resistance of colorectal cancer cells.*
- *Up-regulated expression of CD147 gene in malignant bone tumor and the possible induction*
mechanism during osteoclast formation.

- Single-walled carbon-nanohorns improve biocompatibility over nanotubes by triggering less protein-initiated pyroptosis and apoptosis in macrophages.
- Huaier suppresses proliferative and metastatic potential of prostate cancer PC3 cells via downregulation of Lamin B1 and induction of autophagy.
- DFNG reverses proliferation and migration of vascular smooth muscle cells induced by co-culture with injured vascular endothelial cells via suppression of the TLR4-mediated signaling pathway.
- Polyphenols mitigate cognitive dysfunction and neuropathology in the APP/PS1 mouse.
- AMP-Activated Protein Kinase (AMPK) Regulates Energy Metabolism through Modulating Thermogenesis in Adipose Tissue.
- Lactoferrin promotes murine C2C12 myoblast proliferation and differentiation and myotube hypertrophy.
- Inhibition of P-glycoprotein mediated efflux in Caco-2 cells by phytic acid.
- A protective role for FADD dominant negative (FADD-DN) mutant in trinitrochlorobenzene (TNBC)-induced murine contact hypersensitivity reactions.
- Overexpression of Sirt6 is a novel biomarker of malignant human colon carcinoma.
- A Recombinant HAV Expressing a Neutralization Epitope of HEV Induces Immune Response against HAV and HEV in Mice.
- TRPV4 Channels Contribute to Renal Myogenic Autoregulation in Neonatal Pigs.
- Zinc Depletion by TPEN Induces Apoptosis in Human Acute Promyelocytic NB4 Cells.
- Schlafen 14 (SLFN14) is a novel antiviral factor involved in the control of viral replication.
- Protective Effects of Geniposide on Hepatic Ischemia/Reperfusion Injury.
- Overexpression of ubiquitin specific peptidase 14 predicts unfavorable prognosis in esophageal squamous cell carcinoma.
- SBIO206965, a novel inhibitor of Ulk1, suppresses non-small cell lung cancer cell growth by modulating both autophagy and apoptosis pathways.
- UVRAG Deficiency Exacerbates Doxorubicin-Induced Cardiotoxicity.
- Metformin Alleviates Aging Cellular Phenotypes in Hutchinson-Gilford Progeria Syndrome Dermal Fibroblasts.
- ACY-1215 accelerates vemurafenib induced cell death of BRAF-mutant melanoma cells via induction of ER stress and inhibition of ERK activation.
- Redistribution of adrenomedullary nicotinic acetylcholine receptor subunits and the effect on circulating epinephrine levels in a murine model of acute asthma.
- STAT3 signaling drives EZH2 transcriptional activation and mediates poor prognosis in gastric cancer.
- Anti-Inflammatory Effects of Chlorantha lactone B in LPS-Stimulated RAW264.7 Cells.
- CUG-binding protein 1 regulates HSC activation and liver fibrogenesis.
- STARD13 promotes hepatocellular carcinoma apoptosis by acting as a ceRNA for Fas.
- Inhibitory effects of silibinin on proliferation and lung metastasis of human high metastasis cell line of salivary gland adenoid cystic carcinoma via autophagy induction.
- Tumor-targeted delivery of a C-terminally truncated FADD (N-FADD) significantly suppresses the B16F10 melanoma via enhancing autophagy.
- Deletion of autophagy-related gene 7 in dopaminergic neurons prevents their loss induced by MPTP.
- Huaier aqueous extract inhibits proliferation and metastasis of tuberous sclerosis complex cell models through downregulation of JAK2/STAT3 and MAPK signaling pathways.
- Ethyl Pyruvate Combats Human Leukemia Cells but Spares Normal Blood Cells.
- Insulin-like growth factor 1 promotes the proliferation and committed differentiation of human dental pulp stem cells through MAPK pathways.
- Huaier restrains proliferative and invasive potential of human hepatoma SKHEP-1 cells partially through decreased Lamin B1 and elevated NOV.
- Inhibition of IL-6 trans-signaling in the brain increases sociability in the BTBR mouse model of autism.
- Splicing mutation in Sbf1 causes nonsyndromic male infertility in the rat.
- 12b-hydroxy-des-D-garcigerin A enhances glucose metabolism in insulin-resistant HepG2 cells via the IRS-1/Pi3-K/Akt cell signaling pathway.
- HMGB1 knockdown effectively inhibits the progression of rectal cancer by suppressing HMGB1 expression and promoting apoptosis of rectal cancer cells.
- HDAC6 promotes cell proliferation and confers resistance to gefitinib in lung adenocarcinoma.
- Inhibition of hepatitis B virus replication by a dNTPase-dependent function of the host restriction factor SAMHD1.
- Huaier aqueous extract sensitizes cells to rapamycin and cisplatin through activating mTOR signaling.
- Abnormal expression of key genes and proteins in the canonical Wnt/β-catenin pathway of articular cartilage in a rat model of exercise-induced osteoarthritis.
- The anti-malaria drug artesunate inhibits cigarette smoke and ovalbumin concurrent
exposure-induced airway inflammation and might reverse glucocorticoid insensitivity.

- Proteomic Analysis of Cortical Brain Tissue from the BTBR Mouse Model of Autism: Evidence for Changes in Stop and Myelin-Related Proteins.
- The association of HLA-G and immune markers in recurrent miscarriages.
- Ancestral TCDD exposure promotes epigenetic transgenerational inheritance of imprinted gene
  Igf2: Methylation status and DNMTs.
- Myocyte Enhancer Factor 2A Regulates Hydrogen Peroxide-Induced Senescence of Vascular
  Smooth Muscle Cells Via microRNA-143.
- Rho3g Promotes Pancreatic Carcinogenesis in a Murine Model of Chronic Pancreatitis.
- IGFBP7 promotes hemocyte proliferation in small abalone Haliotis diversicolor, proved by
dsRNA and cap mRNA exposure.
- Interference with HMGB1 increases the sensitivity to chemotherapy drugs by inhibiting
  HMGB1-mediated cell autophagy and inducing cell apoptosis.
- KDM6B induces epithelial-mesenchymal transition and enhances clear cell renal cell carcinoma
  metastasis through the activation of SLUG.
- Autophagy activation attenuates renal ischemia-reperfusion injury in rats.
- Poly(A) polymerase and the nuclear poly(A) binding protein, PABPN1, coordinate the splicing
  and degradation of a subset of human pre-mRNAs.
- Nuclear Factor I-C promotes proliferation and differentiation of apical papilla-derived human
  stem cells in vitro.
- Erythropoietin pretreatment exerts anti-inflammatory effects in hepatic
  ischemia/reperfusion-injured rats via suppression of the TLR2/NF-κB pathway.
- Characterization of the zebrafish Ugt repertoire reveals a new class of drug-metabolizing UDP
  glucuronosyltransferases.
- The Changes of 8-OHdG, hOGG1, APE1 and Pol β in Lenses of Patients with Age-Related
  Cataract.
- MCL-1 degradation mediated by JNK activation via MEKK1/TAK1-MKK4 contributes to
  anticancer activity of new tubulin inhibitor MT189.
- Regulatory interplay between NFIC and TGF-β1 in apical papilla-derived stem cells.
- Focal adhesion kinases and calcium/calmodulin-dependent protein kinases regulate protein
  tyrosine phosphorylation in stallion sperm.
- XAF1 contributes to dengue virus-induced apoptosis in vascular endothelial cells.
- Insulin-like growth factor binding protein 7, a member of insulin-like growth factor signal
  pathway, involved in immune response of small abalone Haliotis diversicolor.
- Insulin-like growth factor 1 enhances the proliferation and osteogenic differentiation of human
  periodontal ligament stem cells via ERK and JNK MAPK pathways.
- Reversal of cocaine-conditioned place preference through methyl supplementation in mice:
  altering global DNA methylation in the prefrontal cortex.
- Dentinogenic capacity: immature root papilla stem cells versus mature root pulp stem cells.
- Levels of Rabs and WAVE family proteins associated with translocation of GLUT4 to the cell
  surface in endometria from hyperinsulinemic PCOS women.