**Beta-actin Antibody**

**Purified Mouse Monoclonal Antibody (Mab)**

Catalog # AM1021B

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**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.

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**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.**

**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.**
cells.

**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

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**
Sex-specific proteome differences in the anterior
cingulate cortex of schizophrenia.

**Beta-actin Antibody - Citations**

- TRPV4 Channels Contribute to Renal Myogenic Autoregulation in Neonatal Pigs.
- Zinc Depletion by TPEN Induces Apoptosis in Human Acute Promyelocytic NB4 Cells.
- PML-RARα stabilized by zinc in human acute promyelocytic leukemia 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.
- SBI0206965, 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 Chloranthalactone 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 apoptosis.
- Deletion of autophagy-related gene 7 in dopaminergic neurons prevents their loss induced by MPTP.
- Huai er 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.
- Huai er 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.
- Huai er 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.**
• **Reg3g 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 INK 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 INK 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.**