10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Beta-actin Antibody
Purified Mouse Monoclonal Antibody (Mab)
Catalog # AW5206

Specification

Beta-actin Antibody - Product Information

Application	**WB,E**
Primary Accession	P60709
Reactivity	**Human, Mouse, Rat**
Predicted	**Bovine, Chicken, Xenopus**
Host	**Mouse**
Clonality	**Monoclonal**
Calculated MW	**H=42;M=42;Rat=42 KDa**
Antigen Source	**HUMAN**

Beta-actin Antibody - Additional Information

Gene ID 60

Other Names
ACTB; Actin, cytoplasmic 1; Beta-actin; Actin, cytoplasmic 1, N-terminally processed

Dilution
WB~~1:2000

Target/Specificity
ACTB recombinant protein is used to produce this monoclonal antibody.

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
Actin is a highly conserved protein that polymerizes to produce filaments that form cross-linked networks in the cytoplasm of cells (PubMed:25255767, PubMed:<a href="http://www.uniprot.org/citations/29581253"

target="_blank">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). Part of the ACTR1A/ACTB filament around which the dynactin complex is built. The dynactin multiprotein complex activates the molecular motor dynein for ultra-processive transport along microtubules (By similarity).

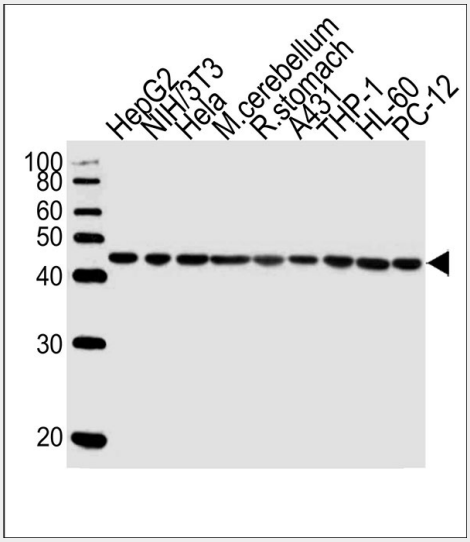
Cellular Location
Cytoplasm, cytoskeleton. Nucleus Note=Localized in cytoplasmic mRNP granules containing untranslated mRNAs.

Beta-actin Antibody - Protocols

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

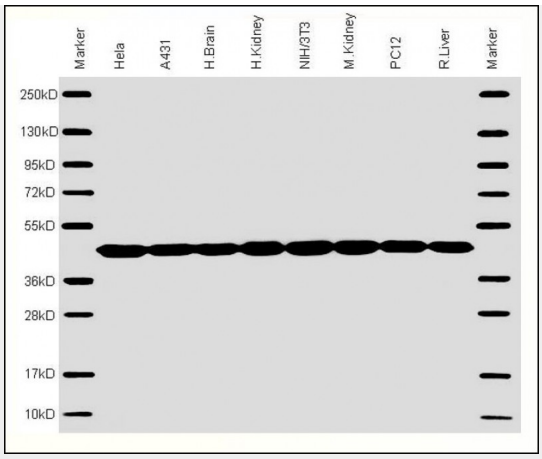
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Beta-actin Antibody - Images

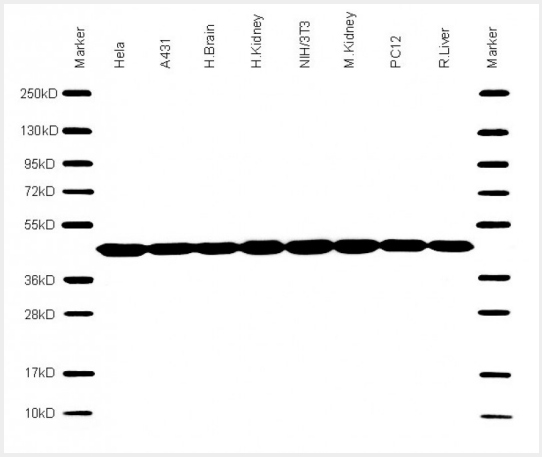


Western blot analysis of lysates from HepG2,mouse NIH/3T3,Hela cell line,mouse cerebellum,rat stomach tissue lysate,A431,THP-1,HL-60,rat PC-12 cell line (from left to right), using Beta-actin Antibody(Cat. #AW5206). AW5206 was diluted at 1:1000 at each lane. A goat anti-mouse IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody.

10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999



All lanes : Anti-Beta-actin Antibody at1:2000 dilution Lane 1: Hela whole cell lysate Lane 2: A431 whole cell lysate Lane 3: human brain lysate Lane 4: human kidney lysate Lane 5: NIH/3T3 whole cell lysate Lane 6: mouse kidney lysate Lane 7: PC12 whole cell lysate Lane 8: rat liver 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.



All lanes : Anti-Beta-actin Antibody at 1:2000 dilution Lane 1: Hela whole cell lysate Lane 2: A431 whole cell lysate Lane 3: Human brain cell lysate Lane 4: Human kidney cell lysate Lane 5: NIH/3T3 whole cell lysate Lane 6: Mouse kidney cell lysate Lane 7: PC-12 whole cell lysate Lane 8: Rat liver 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.

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.