

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

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**Beta-actin Antibody - Product Information**

Application	WB,E
Primary Accession	<a href="#">P60709</a>
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: <http://www.uniprot.org/citations/25255767> target="\_blank">25255767</a>, PubMed: <http://www.uniprot.org/citations/29581253>

target="\_blank">29581253</a>). Actin exists in both monomeric (G-actin) and polymeric (F-actin) forms, both forms playing key functions, such as cell motility and contraction (PubMed:<a href="http://www.uniprot.org/citations/29581253" target="\_blank">29581253</a>). 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:<a href="http://www.uniprot.org/citations/29925947" target="\_blank">29925947</a>). 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

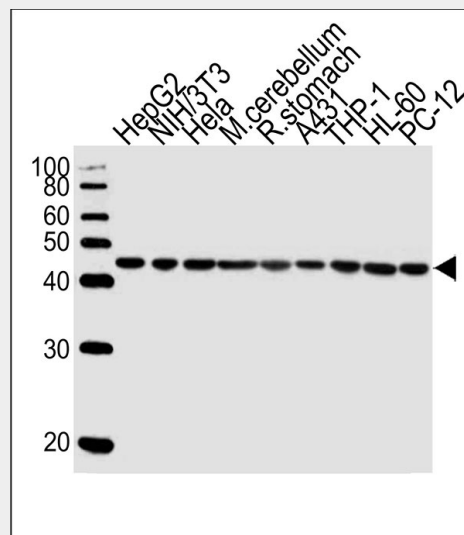
Cytoplasm, cytoskeleton. Nucleus Note=Localized in cytoplasmic mRNP granules containing untranslated mRNAs.

### Beta-actin Antibody - Protocols

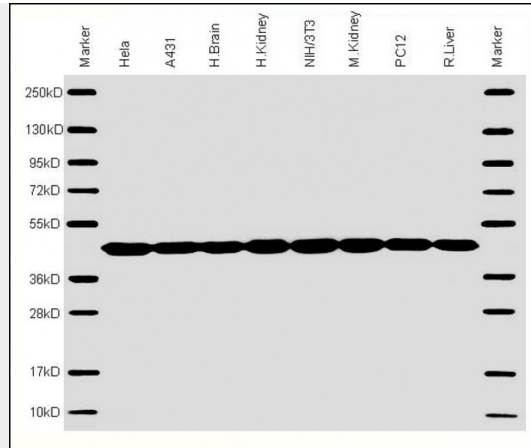
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

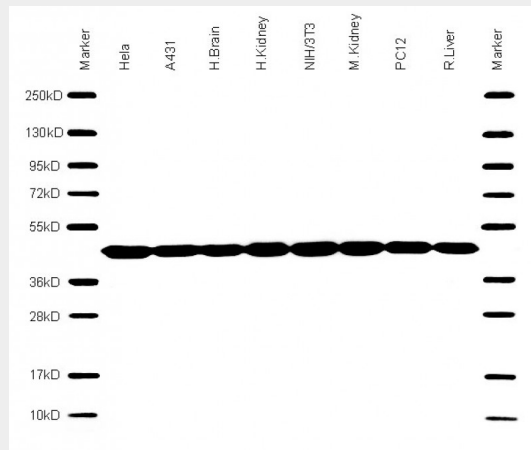
### Beta-actin Antibody - Images



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.



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 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.