

# beta Actin Mouse Monoclonal Antibody

Mouse mAb Catalog # AP90008

## **Specification**

# beta Actin Mouse Monoclonal Antibody - Product Information

Application WB
Primary Accession P60709
Reactivity Rat

Clonality Monoclonal Isotype Mouse IgG1 Host Mouse Calculated MW 41737 Da

# beta Actin Mouse Monoclonal Antibody - Additional Information

Dilution WB~~1:1000

Purification Affinity-chromatography

Immunogen A synthesized peptide derived from human

beta Actin

Description beta-Actin is one of six different actin

isoforms that have been identified. The actin molecules found in cells of various species and tissues tend to be very similar

in their immunological and physical

properties. Therefore, Antibodies against beta-Actin are useful as loading controls for Western Blotting. However it should be noted that levels of beta-Actin may not be

stable in certain cells. For example,

expression of beta-Actin in adipose tissue is very low and therefore it should not be used as loading control for these tissues. Mouse IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide

and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid

freeze / thaw cycle.

## beta Actin Mouse Monoclonal Antibody - Protein Information

#### Name ACTB

Storage Condition and Buffer

#### **Function**

Actin is a highly conserved protein that polymerizes to produce filaments that form cross-linked networks in the cytoplasm of cells (PubMed:<a href="http://www.uniprot.org/citations/25255767" target="\_blank">25255767</a>, PubMed:<a href="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>). 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:<a href="http://www.uniprot.org/citations/39321809" target="\_blank">39321809</a>, PubMed:<a href="http://www.uniprot.org/citations/38609661" target="\_blank">38609661</a>). 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

#### **Cellular Location**

along microtubules (By similarity).

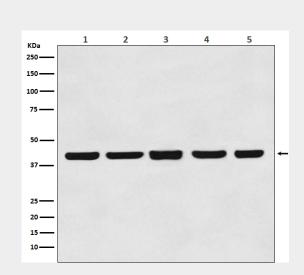
Cytoplasm, cytoskeleton. Nucleus Note=Localized in cytoplasmic mRNP granules containing untranslated mRNAs.

#### beta Actin Mouse Monoclonal Antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- <u>Immunoprecipitation</u>
- Flow Cytomety
- Cell Culture

## beta Actin Mouse Monoclonal Antibody - Images



Western blot analysis of beta Actin expression in (1) Hela cell lysate; (2) Rat brain lysate; (3) Mouse brain lysate; (4) Chicken lung lysate; (5) Rabbit testis lysate with beta Actin mouse mAb