

### **Beta Actin Monoclonal Antibody**

Mouse Monoclonal Antibody Catalog # ABV11741

## **Specification**

### **Beta Actin Monoclonal Antibody - Product Information**

Application WB, E, IP
Primary Accession P60709
Reactivity Human
Host Mouse
Clonality Monoclonal
Isotype Mouse IgG
Calculated MW 41737

## **Beta Actin Monoclonal Antibody - Additional Information**

Gene ID 60

Application & Usage

Alias Symbol
Other Names

PS1TP5BP1, ACTB, Beta-actin, b-actin

**Appearance**Colorless liquid

**Formulation** 

100 ug (1mg/ml) of antibody in 0.01M Tris-HCl, pH 8.0, 0.15M NaCl, and 0.02% sodium azide.

Western blot: 1-5 µg/ml; ELISA;

**Beta-Actin** 

Immunoblot Analysis: 0.5-2 μg/ml

Reconstitution & Storage -20 °C

# **Background Descriptions**

### **Precautions**

Beta Actin Monoclonal Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

### **Beta Actin Monoclonal 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:<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 along microtubules (By similarity).

#### **Cellular Location**

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

### **Beta Actin Monoclonal Antibody - Protocols**

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

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

# **Beta Actin Monoclonal Antibody - Images**

### Beta Actin Monoclonal Antibody - Background

Actin is expressed in all eukaryotic cells and is the major component of the cytoskeleton. At least six types of actin are present in mammalian tissues and fall into three classes. Alpha actin expression is limited to various types of muscle and it regulates contactile potentials for the muscle cells, whereas beta and gamma actin, also known as cytoplasmic actin, are predominantly expressed in nonmuscle cells, controlling cell structure and motility.