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

Anti-Beta Actin (MOUSE) Monoclonal Antibody

Beta Actin Antibody
Catalog # ASR4219

Specification

Anti-Beta Actin (MOUSE) Monoclonal Antibody - Product Information

Host	**Mouse**
Conjugate	**Unconjugated**
Target Species	**Human**
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Application	**WB, IHC, E, I, LCI**
Application Note	**Anti-beta Actin antibody has been tested for use in ELISA, immunohistochemistry, and Western Blot. Specific conditions for reactivity should be optimized by the end user.**
Physical State	**Liquid (sterile filtered)**
Buffer	**0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2**
Immunogen	**Anti-beta Actin (MOUSE) Monoclonal Antibody was produced in mouse by repeated immunizations with ß-Actin peptide near the N-Terminus followed by hybridoma development.**
Preservative	**0.01% (w/v) Sodium Azide**

Anti-Beta Actin (MOUSE) Monoclonal Antibody - Additional Information

Gene ID 60

Other Names
11461

Purity
Anti-beta Actin was purified from mouse ascites by Protein A chromatography followed by extensive dialysis against the buffer stated above. beta Actin antibody is specific for human and mouse ß Actin protein. Expected to cross-react with a wide range of species due to sequence homology (human, mouse, rat, swine). A BLAST analysis was used to suggest that this antibody would react with beta Actin from a wide range of organisms, including most vertebrates. Cross-reactivity with other sources has not been determined.

Storage Condition
Store Anti-Beta Actin at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

Precautions Note
This product is for research use only and is not intended for therapeutic or diagnostic applications.

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

Anti-Beta Actin (MOUSE) 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:25255767, PubMed: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). 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:39321809, PubMed:38609661). 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.

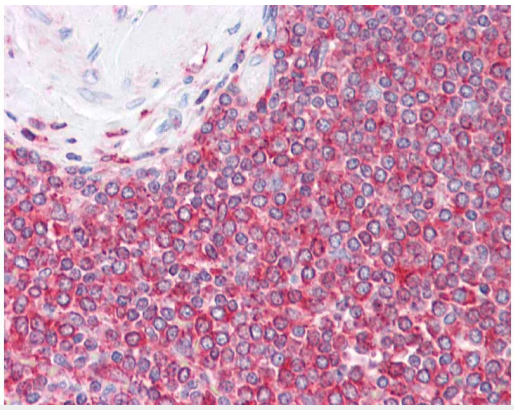
Anti-Beta Actin (MOUSE) Monoclonal Antibody - Protocols

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

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

Anti-Beta Actin (MOUSE) Monoclonal Antibody - Images

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



Immunohistochemistry of Mouse anti-Beta Actin N-Term antibody. Tissue: human spleen. Fixation: formalin fixed paraffin archival tissues. Antigen retrieval: not required. Primary antibody: Beta Actin N-Term antibody at 2.5 µg/mL for 1 h at RT. Secondary antibody: Peroxidase goat anti-rabbit at 1:10,000 for 45 min at RT. Localization: membranous and cytoplasmic. Staining: antibody as precipitated red signal with a hematoxylin purple nuclear counterstain.

Anti-Beta Actin (MOUSE) Monoclonal Antibody - Background

Actins are highly conserved proteins that are involved in various types of cell motility and are ubiquitously expressed in all eukaryotic cells. In vertebrates 3 main groups of actin isoforms, alpha, beta and gamma have been identified. The alpha actins are found in muscle tissues and are a major constituent of the contractile apparatus. The beta and gamma actins coexist in most cell types as components of the cyto-skeleton and as mediators of internal cell motility. Beta actins are highly conserved proteins that are involved in cell motility, structure and integrity. Beta actins are cytoplasmic proteins. Anti-Actin is a loading control antibody and is critical for the correct interpretation of your western blot. Antibodies to loading controls are used to normalize the levels of protein detected by confirming that protein loading is uniform across the gel.