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

Beta-actin Antibody
Catalog # ASC10411

Specification

Beta-actin Antibody - Product Information

Application	**WB, ICC, IF**
Primary Accession	P60709
Other Accession	AAH02409, 12803203
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Calculated MW	**Predicted: 41 kDa** **Observed: 41 kDa KDa**
Application Notes	**Beta-actin antibody can be used for the detection of Beta-actin by Western blot at 0.5 - 2 µg/mL. Antibody can also be used for immunocytochemistry starting at 10 µg/mL. For immunofluorescence start at 20 µg/mL.**

Beta-actin Antibody - Additional Information

Gene ID	**60**

Other Names
Beta-actin Antibody: BRWS1, PS1TP5BP1, Actin, cytoplasmic 1, Beta-actin, b-actin, actin, beta

Target/Specificity
ACTB;

Reconstitution & Storage
Beta-actin antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.

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: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).

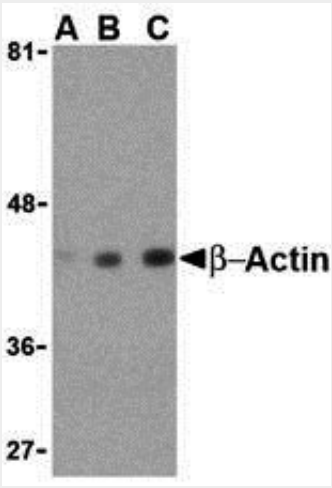
Cellular Location
Cytoplasm, cytoskeleton. Nucleus Note=Localized in cytoplasmic mRNP granules containing untranslated mRNAs.

Beta-actin Antibody - Protocols

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

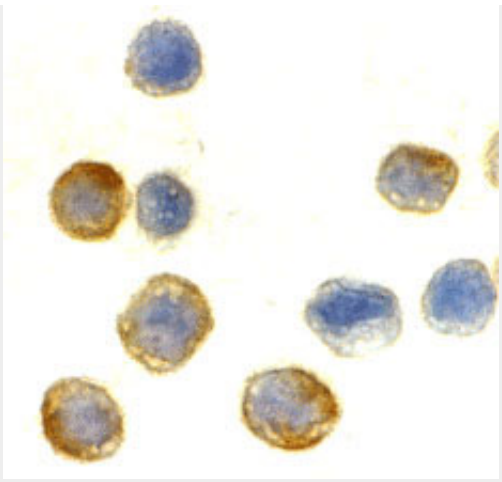
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Beta-actin Antibody - Images

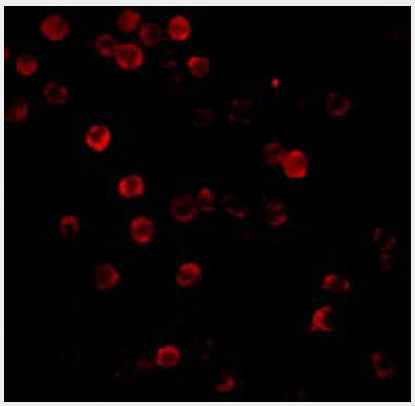


Western blot analysis of beta-actin in HeLa cell lysate with beta-actin antibody at (A) 0.5, (B) 1 and (C) 2 µg/mL.

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Immunocytochemistry of beta-actin in HeLa cells with beta-actin antibody at 10 µg/mL.



Immunofluorescence of Beta-actin in HeLa cells with Beta-actin antibody at 20 µg/mL.

Beta-actin Antibody - Background

Beta-actin Antibody: Actins are highly conserved proteins that are involved in cell motility, structure and integrity, processes that are crucial for tissue development and the development of organism. The actin cytoskeleton is one of the principal drivers of cell motility and is capable of responding to complex signaling cascades. Recent evidence suggests that it may play key roles in regulating apoptosis and aging. Beta actin is one of six different actin isoforms which have been identified. Like GAPDH, beta-actin is constitutively expressed at high levels in almost all tissues and cell lines making it ideal for use as a loading control marker in immunoblots.

Beta-actin Antibody - References

Lambrechts A, Van Troys, M and Ampe C. The actin cytoskeleton in normal and pathological cell motility. Int. J. Biochem. Cell Biol. 2004; 36:1890-909.
Gourlay CW and Ayscough KR. The actin cytoskeleton: a key regulator of apoptosis and ageing. Nat. Rev. 2005; 6:583-9.