

## Anti-beta Actin (RABBIT) Antibody - 600-401-886

**Code:** 600-401-886

**Size:** 200 µg

**Product Description:** Anti-beta Actin (RABBIT) Antibody - 600-401-886

**Concentration:** 1.0 mg/mL by UV absorbance at 280 nm

**PhysicalState:** Liquid (sterile filtered)

<b>Label</b>	Unconjugated
<b>Host</b>	Rabbit
<b>Gene Name</b>	ACTB
<b>Species Reactivity</b>	Mouse, Rat, Human, Monkey, Sheep, Bovine, Goat, Guinea Pig, Swine, Hamster
<b>Buffer</b>	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
<b>Stabilizer</b>	None
<b>Preservative</b>	0.01% (w/v) Sodium Azide
<b>Storage Condition</b>	Store beta-Actin Loading Control Antibody 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.
<b>Synonyms</b>	rabbit anti-beta Actin Antibody, Actin Antibody, Loading Control Antibody, beta actin, β actin, anti-beta actin antibody
<b>Application Note</b>	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. Beta actin present in fibroblast connective tissue stains very brightly. Beta actin present in neuromuscular junctions also stains. Paraformaldehyde fixation yields brighter staining than formalin or methanol fixation. Expect a band at ~42 kDa in size corresponding to beta actin by western blotting in the appropriate cell lysate or extract.
<b>Background</b>	In vertebrates 3 main groups of actin isoforms, alpha, beta and gamma have been identified. Alpha actins are found in muscle tissues and are a major constituent of the contractile apparatus. 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. Beta-Actin Loading Control Antibody is used to normalize the levels of protein detected by confirming that protein loading is uniform across the gel.
<b>Purity And Specificity</b>	Anti-beta-Actin Loading Control Antibody reacts with Human, Rat, Monkey and Mouse. beta-Actin Loading Control Antibody is expected to cross-react with a wide range of species due to sequence homology. Anti-Beta Actin is affinity-purified antibody is directed against human beta Actin protein. A BLAST analysis was used to suggest that this antibody would react with beta Actin from a wide range of organisms, including most vertebrates and some yeast. Broad reactivity makes this antibody an excellent loading control.
<b>Assay Dilutions</b>	User Optimized
<b>ELISA</b>	1:10,000 - 1:40,000
<b>Western Blot</b>	1:1,000 - 1:4,000
<b>IF Microscopy</b>	1:500 - 1:2,000
<b>Other Assays</b>	User Optimized
<b>Expiration</b>	Expiration date is one (1) year from date of opening.
<b>Immunogen</b>	beta-Actin Loading Control Antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to amino acids 359-368 of Human beta Actin.
<b>General Reference</b>	Hu,P., Wu,S. and Hernandez,N. (2004) A role for beta-actin in RNA polymerase III transcription. <i>Genes Dev.</i> 18 (24), 3010-3015. Dahlen,A., et al. (2004) Activation of the GLI oncogene through fusion with the beta-actin gene (ACTB) in a group of distinctive pericytic neoplasms: pericytoma with t(7;12). <i>Am. J. Pathol.</i> 164 (5), 1645-1653. Navarro-Lerida,I., Martinez Moreno,M., Roncal,F., Gavilanes,F., Albar,J.P. and Rodriguez-Crespo,I. (2004) Proteomic identification of brain proteins that interact with dynein light chain LC8. <i>Proteomics</i> 4 (2), 339-346.

## Specific Reference

Hopkins MM, Feng X, Liu M, Parker LP, Koh DW. (2015) Inhibition of the transient receptor potential melastatin-2 channel causes increased DNA damage and decreased proliferation in breast adenocarcinoma cells. *Int J Oncol.* 2015 May;46(5):2267-76. doi: 10.3892/ijo.2015.2919. Epub 2015 Mar 6.

Khoh-Reiter S, Jessen BA. (2009) Evaluation of the cytotoxic effects of ophthalmic solutions containing benzalkonium chloride on corneal epithelium using an organotypic 3-D model. *BMC Ophthalmol.* 2009 Jul 28;9:5. doi: 10.1186/1471-2415-9-5.

## Related Products

200-301-268	Anti-AKT pS473 (MOUSE) Monoclonal Antibody - 200-301-268
610-4302	Anti-MOUSE IgG (H&L) (RABBIT) Antibody Peroxidase Conjugated - 610-4302
611-1302	Anti-RABBIT IgG (H&L) (GOAT) Antibody Peroxidase Conjugated - 611-1302
B304	NORMAL GOAT SERUM (NGS) - B304

## Related Links

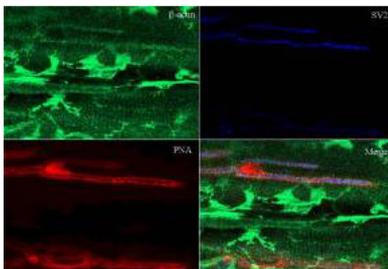
NCBI - 4501885

<http://www.ncbi.nlm.nih.gov/protein/4501885>

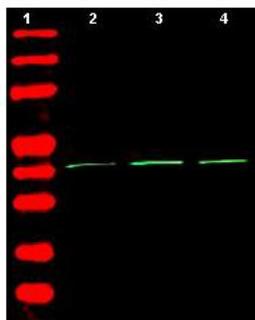
UniProtKB - <http://www.uniprot.org/uniprot/P60709>

## Images

- 1 Immunohistochemistry of Rabbit Anti-Beta Actin Antibody. Tissue: sections 4.2 mm thick of rana pipiens tissue. Fixation: formalin fixed paraffin embedded. Antigen retrieval: not required. Primary antibody: Beta Actin antibody at 1:200 for 1 h at RT. Secondary antibody: Peroxidase rabbit secondary antibody at 1:10,000 for 45 min at RT. Localization: Beta Actin is at the neuromuscular junction. Staining: Beta Actin as precipitated green signal with red and blue counterstain.



- 2 Western Blot of Rabbit Anti-Beta Actin Antibody. Lane 1: molecular weight. Lane 2: human embryonic kidney 293. Lane 3: human lung carcinoma A549. Lane 4: mouse brain. Load: 35  $\mu$ g per lane. Primary antibody: Beta Actin antibody at 1:1,500 for overnight at 4°C. Secondary antibody: IRDye800™ rabbit secondary antibody at 1:10,000 for 45 min at RT. Block: 5% BLOTTO overnight at 4°C. Predicted/Observed size: ~42 kDa corresponding to beta Actin (arrowhead). Other band(s): none.



## Disclaimer

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