

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

Code: 600-401-886S

Size: 25 µL

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

Concentration: 1.0 mg/ml by UV absorbance at 280 nm

PhysicalState: Liquid (sterile filtered)

Label	Unconjugated
Host	Rabbit
Gene Name	ACTB
Species Reactivity	Mouse, Rat, Human, Monkey, Sheep, Bovine, Goat, Guinea Pig, Swine, Hamster
Buffer	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Stabilizer	None
Preservative	0.01% (w/v) Sodium Azide
Storage Condition	Store vial at -20° C or below prior to opening. This vial contains a relatively low volume of reagent (25 µL). To minimize loss of volume dilute 1:10 by adding 225 µL of the buffer stated above directly to the vial. Recap, mix thoroughly and briefly centrifuge to collect the volume at the bottom of the vial. Use this intermediate dilution when calculating final dilutions as recommended below. Store the vial at -20°C or below after dilution. Avoid cycles of freezing and thawing.
Synonyms	rabbit anti-beta Actin Antibody, Actin Antibody, Loading Control Antibody, beta actin, β actin, anti-beta actin antibody
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. 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.
Background	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.
Purity And Specificity	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.
Assay Dilutions	User Optimized
ELISA	1:10,000 - 1:40,000
Western Blot	1:1,000 - 1:4,000
IF Microscopy	1:500 - 1:2,000
Other Assays	User Optimized
Expiration	Expiration date is one (1) year from date of opening.
Immunogen	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.
General Reference	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

600-401-886	Anti-beta-Actin (RABBIT) Antibody - 600-401-886
611-1302	Anti-RABBIT IgG (H&L) (GOAT) Antibody Peroxidase Conjugated - 611-1302
B552-0500	BLOTTO A PRE-MIXED - for a 1X SOLUTION of Immunoanalytical Grade 5% NON-FAT DRY MILK in TBS with TWEEN-20 - B552-0500
KBB-001	2X SDS-PAGE Sample Buffer - KBB-001

Related Links

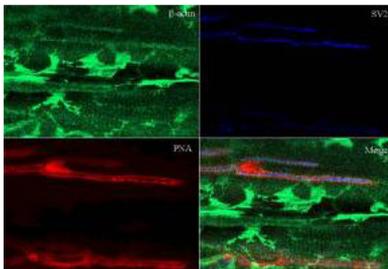
NCBI - 4501885

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

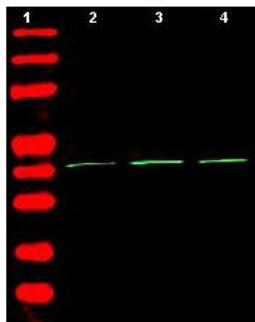
UniProtKB - P60709 <http://www.uniprot.org/uniprot/P60709>

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 µg 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.



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This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.