

Anti-beta Actin ACTB Antibody

Catalog Number: A01263

About ACTB

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.

Overview

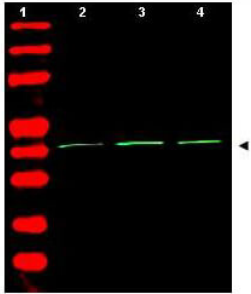
Product Name	Anti-beta Actin ACTB Antibody
Reactive Species	Human, Mouse, Leopard frog
Description	Boster Bio Anti-beta Actin ACTB Antibody (Catalog # A01263). Tested in ELISA, IF, WB applications. This antibody reacts with Human, Mouse, Leopard Frog.
Application	ELISA, IF, WB
Clonality	Polyclonal
Formulation	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2, 0.01% (w/v) Sodium Azide
Storage Instructions	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. Expiration date is one (1) year from date of opening. (Ship on dry ice.)
Host	Rabbit
Uniprot ID	P60709

Technical Details

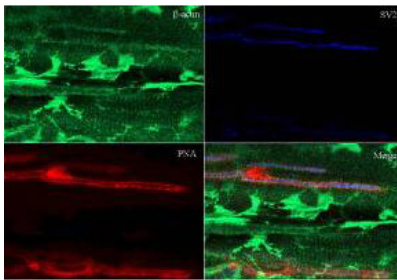
Immunogen	beta-Actin Loading Control Antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to C-Terminal region near amino acids 350-375 of Human beta Actin.
Predicted Reactive Species	Bovine, Goat, Guinea Pig, Hamster, Monkey, Sheep
Cross Reactivity	No cross reactivity with other proteins.
Isotype	IgG
Form	Liquid (sterile filtered)

Concentration	1.0 mg/mL by UV absorbance at 280 nm
Purification	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.
Suggested Dilutions	ELISA: 1:10,000 - 1:40,000 IF Microscopy: 1:500 - 1:2,000 WB: 1:1,000 - 1:4,000 Anti-beta Actin Antibody has been tested for use in ELISA, immunofluorescence, 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.

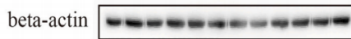
Anti-beta Actin ACTB Antibody (A01263) Images



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 μ 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.



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.



Western blot analysis of Beta Actin using anti-Beta Actin antibody (A01263). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. The sample well of each lane was loaded with 30 μ g of sample under reducing conditions. Lane 1-12: human HEK293T whole cell lysates, After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-Beta Actin antigen affinity purified polyclonal antibody (A01263) at 1:1000 overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody (Catalog # BA1054) at a dilution of 1:5000 for 1 hour at RT. The signal is developed using an ECL Plus Western Blotting Substrate with Azure Biosystems c600 system. A specific band was detected for Beta Actin at approximately 42 kDa. The expected band size for Beta Actin is at 42 kDa.



Western blot analysis of beta Actin using anti-beta Actin antibody (A01263). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. The sample well of each lane was loaded with 30-35 μ g of sample under reducing conditions. Lane 1: human 293T whole cell lysates, Lane 2: human A549 whole cell lysates, Lane 3: mouse brain tissue lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-beta Actin antigen affinity purified polyclonal antibody (A01263) at 1: 1000

overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an ECL Plus Western Blotting Substrate (Catalog # AR1196-200) with Tanon 5200 system. A specific band was detected for beta Actin at approximately 42 kDa. The expected band size for beta Actin is at 42 kDa.

192 Publications Citing This Product

1. PubMed ID: 10.1111/jnc.14890, Activation of liver X receptor promotes hippocampal neurogenesis and improves long-term cognitive function recovery in acute cerebral ischemia/reperfusion mice
2. PubMed ID: 33891271, Gao H,Wang D,Wang YL,Mao JP,Jiang S,Yang XL.Pramipexole attenuates 6-OHDA-induced Parkinson's disease by mediating the Nurr1/NF-kappaB pathway.Mol Biol Rep.2021 Apr 23.doi:10.1007/s11033-021-06343-8.Epub ahead of print.PMID:33891271.
3. PubMed ID: 32184591, Peng L,Liang Y,Zhong X,Liang Z,Tian Y,Li S,Liang J,Wang R,Zhong Y,Shi Y,Zhang X.Aptamer-Conjugated Gold Nanoparticles Targeting Epidermal Growth Factor Receptor Variant III for the Treatment of Glioblastoma.Int J Nanomedicine.2020 Feb 28;15:1363-1372.doi:

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Anti-beta Actin ACTB Antibody

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