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Datasheet for 200-301-E69

Beta Actin Antibody

Overview

Description:	Anti-Beta Actin (MOUSE) Monoclonal Antibody - 200-301-E69
Item No.:	200-301-E69
Size:	100 µg
Applications:	ELISA, IHC, WB
Reactivity:	Human, Mouse, Rat
Host Species:	Mouse

Product Details

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.
Synonyms:	mouse anti-beta Actin Antibody, Actin Antibody, Loading Control Antibody, beta actin, ß actin, anti-beta actin antibody
Host Species:	Mouse
Clonality:	Monoclonal
Clone ID:	3H2.E4.E12
Format:	IgG2a

Target Details

Gene Name:	ACTB
Reactivity:	Human, Mouse, Rat

Immunogen Type:	Conjugated Peptide
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.
Purity/Specificity:	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.
Relevant Links:	• UniProtKB - P60709 • NCBI - NP_001092.1 • GeneID - 60 • UniProtKB - P60710 • NCBI - NP_031419.1 • GeneID - 11461

Application Details

Tested Applications:	ELISA, IHC, WB
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.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:5000-1:50000
IHC:	User Optimized
WB:	1 µg/mL

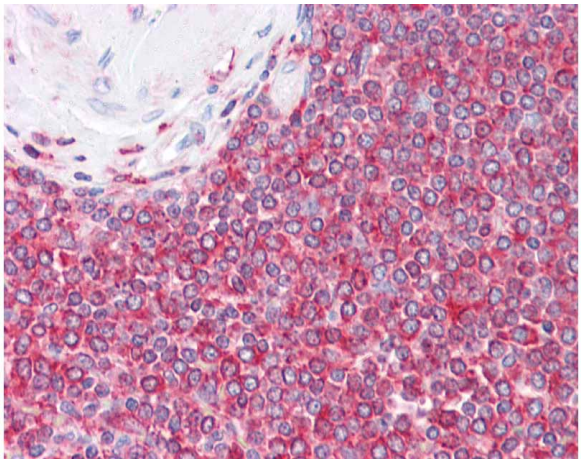
Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	1.0 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

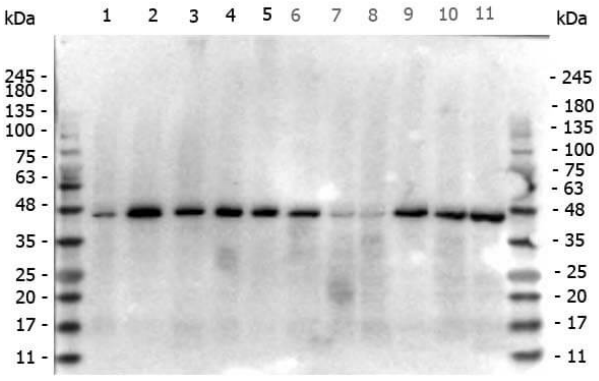
Shipping & Handling

Shipping Condition:	Dry Ice
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.
Expiration:	Expiration date is one (1) year from date of receipt.

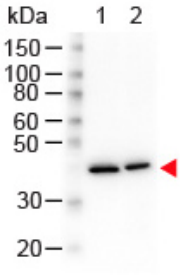
Images



Immunohistochemistry
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.



Western Blot
Western Blot of Mouse anti-beta Actin antibody. Marker: Opal Pre-stained ladder (p/n MB-210-0500). Lane 1: HEK293 lysate (p/n W09-000-365). Lane 2: HeLa Lysate (p/n W09-000-364). Lane 3: MCF-7 Lysate (p/n W09-000-360). Lane 4: Jurkat Lysate (p/n W09-000-370). Lane 5: A431 Lysate (p/n W09-000-361). Lane 6: A549 Lysate (p/n W09-001-372). Lane 7: LNCap Lysate (p/n W09-001-GJ9). Lane 8: MOLT-4 Lysate (p/n W09-001-GK2). Lane 9: Raji Lysate (p/n W09-001-368). Lane 10: Ramos Lysate (p/n W09-000-GK4). Lane 11: PC-12 (p/n W12-001-GL9). Load: 10 µg per lane. Primary antibody: beta-Actin antibody at 1:1,000 o/n at 4C. Secondary antibody: Peroxidase mouse secondary (p/n 610-403-C46) at 1:40,000 for 60 min at RT. Blocking Buffer: 1% Casein-TTBS (p/n MB-082) for 30 min at RT. Predicted/Observed size: 42 kDa for beta-Actin.



Western Blot
Western Blot of Mouse anti-N-Term Beta Actin Monoclonal Antibody. Lane 1: HeLa Whole Cell Lysate (p/n W09-000-364). Lane 2: NIH/3T3 Whole Cell Lysate (p/n W10-000-358). Load: 10 µg per lane. Primary antibody: N-Term Beta Actin Monoclonal Antibody at 1.13µg/mL overnight at 4°C. Secondary antibody: HRP mouse secondary antibody (p/n 610-403-C46) at 1:40,000 for 30 min at RT. Block: (p/n MB-070) for 30 min at RT. Predicted/Observed size: 42 kDa, 42 kDa for N-Term Beta Actin.

References

- Carvajal et al. Structural domains within the HIV-1 mRNA and the ribosomal protein S25 influence cap-independent translation initiation. *The FEBS Journal* (2016)
- Muppidi, A et al. Targeted delivery of ubiquitin-conjugated BH3 peptide-based Mcl-1 inhibitors into cancer cells. *Bioconjugate Chemistry* (2014)

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