

## Anti-Actin ACTA1 Antibody (Monoclonal, AC-40)

Catalog Number: MA1000

### About ACTA1

Actin, a highly conserved protein, is a major component of both the cytoskeletal and contractile structures in the cell types. It varies in amount, being related to the type of differentiation and to the functional state of cells and tissues. The actins exhibit over 90% sequence homology, but each isoform has a unique NH<sub>2</sub>-terminal sequence. The isoforms are comprised of three alpha-actin, one beta-actin, two gamma-actin. Because the amino acid sequence of the C-terminal is the same for almost all actins, this antibody has been raised using a synthetic peptide corresponding to the C-terminal 11 residues.

### Overview

Product Name	Anti-Actin ACTA1 Antibody (Monoclonal, AC-40)
Reactive Species	Chicken, Human, Mouse, Rat
Description	Boster Bio Anti-Actin ACTA1 Antibody (Monoclonal, AC-40) catalog # MA1000. Tested in IHC, WB applications. This antibody reacts with Chicken, Human, Mouse, Rat.
Application	IHC, WB
Clonality	Monoclonal AC-40
Formulation	Mouse ascites fluid, 1.2% sodium acetate, 2mg BSA, with 0.01mg NaN <sub>3</sub> as preservative.
Storage Instructions	Store at -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freeze-thaw cycles.
Host	Mouse
Uniprot ID	P68133

### Technical Details

Immunogen	Synthetic actin C-terminal peptide Ser-Gly-Pro-Ser-Ile-Val-His-Arg-Lys-Cys-Phe, attached to a Multiple Antigen Peptide (MAP) backbone.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Mouse IgG (EK1001) for Western blot, and HRP Conjugated anti-Mouse IgG Super Vision Assay Kit (SV0001-1) for IHC(F).
Cross Reactivity	No cross-reactivity with other proteins
Isotype	Mouse IgG2a
Form	Lyophilized
Concentration	Adding 1 ml of PBS buffer will yield a concentration of 100 ug/ml.
Purification	Ascites

**Suggested Dilutions**

Dilute the sample so that the expected range of concentrations fall within the detection range of this kit.

If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples.

Some PubMed article(s) citing the expression level of this target are as follows:

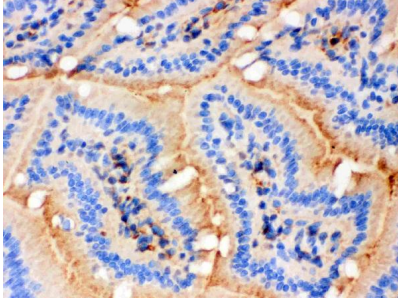
Boster Bio's internal QC testing used:

Immunohistochemistry (Frozen Section), 4ug/ml, Human, chicken, mouse, rat, -

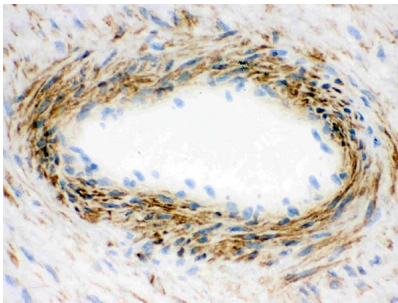
Western blot, 2ug/ml, Human, chicken, mouse, rat

## Anti-Actin ACTA1 Antibody (Monoclonal, AC-40) (MA1000) Images

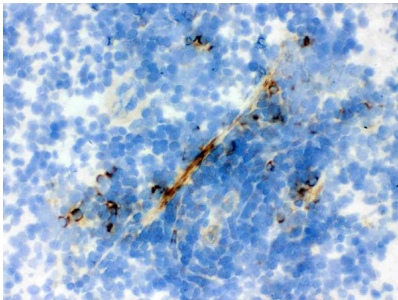
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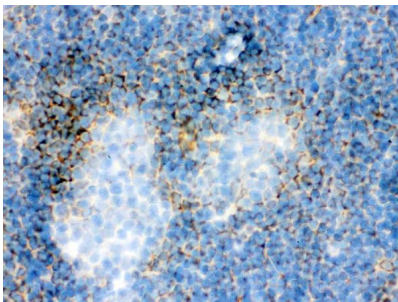
Anti-Actin antibody, MA1000, IHC(F)  
IHC(F): Mouse Intestine Tissue



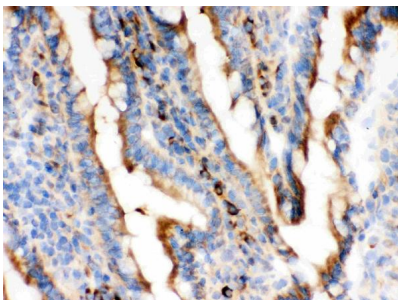
Anti-Actin antibody, MA1000, IHC(F)  
IHC(F): Human Placenta Tissue



Anti-Actin antibody, MA1000, IHC(F)  
IHC(F): Rat Spleen Tissue



Anti-Actin antibody, MA1000, IHC(F)  
IHC(F): Mouse Spleen Tissue



Anti-Actin antibody, MA1000, IHC(F)  
IHC(F): Rat Intestine Tissue

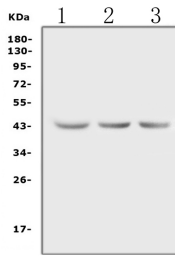


Figure 6. Western blot analysis of Actin using anti-Actin antibody (MA1000).

Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.

Lane 1: human HEK293 whole cell lysate,

Lane 2: rat PC-12 whole cell lysate,

Lane 3: mouse NIH3T3 cell lysate.

After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes.

Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with mouse anti-Actin antigen affinity purified monoclonal antibody (Catalog # MA1000) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-mouse IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1001) with Tanon 5200 system. A specific band was detected for Actin at approximately 43KD. The expected band size for Actin is at 43KD.

## 122 Publications Citing This Product

1. PubMed ID: 10.1016/j.imbio.2020.151933, The mTOR-glycolytic pathway promotes T-cell immunobiology in oral lichen planus
2. PubMed ID: 33607154, Liao L,Huang L,Wei X,Yin L,Wei X,Li T.Bioinformatic and biochemical studies of formononetin against liver injure.Life Sci.2021 Feb 16:119229.doi:10.1016/j.lfs.2021.119229.Epub ahead of print.PMID:33607154.
3. PubMed ID: 33607154, Liao L,Huang L,Wei X,Yin L,Wei X,Li T.Bioinformatic and biochemical studies of formononetin against liver injure.Life Sci.2021 Feb 16:119229.doi:10.1016/j.lfs.2021.119229.Epub ahead of print.PMID:33607154.

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