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antibody and ELISA experts

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# Anti-Actin/ACTA1 Antibody Picoband™ (monoclonal, 3H5)

**Catalog Number:** M02014-5

## 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 NH2-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

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| Product Name | Anti-Actin/ACTA1 Antibody Picoband™ (monoclonal, 3H5) |
| Reactive Species | Human, Mouse, Rat |
| Description | Boster Bio Anti-Actin/ACTA1 Antibody Picoband™ (monoclonal, 3H5) catalog # M02014-5. Tested in IHC, WB applications. This antibody reacts with Human, Mouse, Rat. |
| Application | IHC, WB |
| Clonality | Monoclonal 3H5 |
| Formulation | Each vial contains 4mg Trehalose, 0.9mg NaCl and 0.2mg Na2HPO4. |
| 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

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| Immunogen | A synthetic peptide corresponding to a sequence at the C-terminus of human Actin, identical to the related mouse and rat sequences. |
| 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(P). |
| Cross Reactivity | No cross-reactivity with other proteins. |
| Isotype | Mouse IgG1 |
| Form | Lyophilized |
| Concentration | Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml. |
| Purification | Immunogen affinity purified. |

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| Suggested Dilutions | Dilute the sample so that the expected range of concentrations fall within the detection range of this kit.<br>If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples.<br>Some PubMed article(s) citing the expression level of this target are as follows:<br>Boster Bio's internal QC testing used:<br>Western blot, 0.25-0.5ug/ml, Human, Mouse, Rat<br>Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml, Human |

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# Anti-Actin/ACTA1 Antibody Picoband™ (monoclonal, 3H5) (M02014-5) Images

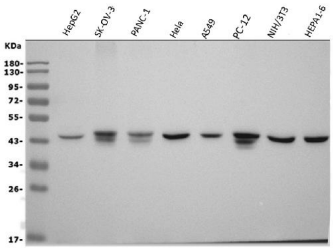


Figure 1. Western blot analysis of Actin/ACTA1 using anti-Actin/ACTA1 antibody (M02014-5).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human HepG2 whole cell lysates,
Lane 2: human SK-OV-3 whole cell lysates,
Lane 3: human PANC-1 whole cell lysates,
Lane 4: human Hela whole cell lysates,
Lane 5: human A549 whole cell lysates,
Lane 6: rat PC-12 whole cell lysates,
Lane 7: mouse NIH/3T3 whole cell lysates,
Lane 8: mouse HEPA1-6 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 mouse anti-Actin/ACTA1 antigen affinity purified monoclonal antibody (Catalog # M02014-5) 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/ACTA1 at approximately 43 kDa. The expected band size for Actin/ACTA1 is at 43 kDa.

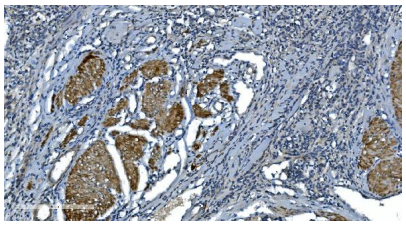

Figure 2. IHC analysis of Actin/ACTA1 using anti-Actin/ACTA1 antibody (M02014-5).
Actin/ACTA1 was detected in a paraffin-embedded section of human bladder cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 5 ug/ml mouse anti-Actin/ACTA1 Antibody (M02014-5) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

## 9 Publications Citing This Product

1. PubMed ID: 10.2147/CMAR.S302084, Grape Seed Proanthocyanidins (GSPs) Inhibit the Development of Cutaneous Squamous Cell Carcinoma by Regulating the hsa_circ_0070934/miR-136-5p/PRAF2 Axis

2. PubMed ID: 10.1245/s10434-009-0395-7, MDR1/P-gp and VEGF Synergistically Enhance the Invasion of Hep-2 Cells with Multidrug Resistance Induced by Taxol

3. PubMed ID: , Telomerase catalyzed fluorescent probes for sensitive protein profiling based on one-dimensional microfluidic beads array

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