

## Beta Actin Monoclonal antibody

Catalog Number: 66009-1-Ig

Featured Product

7686 Publications

## Basic Information

## Catalog Number:

66009-1-Ig

## Size:

150ul, Concentration: 1000 ug/ml by Nanodrop;

## Source:

Mouse

## Isotype:

IgG2b

## GenBank Accession Number:

NM\_001101

## GeneID (NCBI):

60

## UNIPROT ID:

P60709

## Full Name:

actin, beta

## Calculated MW:

42 kDa

## Observed MW:

42 kDa

## Purification Method:

Protein A purification

## CloneNo.:

2D4H5

## Recommended Dilutions:

WB: 1:20000-1:100000

IP: 0.5-4.0 ug for 1.0-3.0 mg of total protein lysate

IHC: 1:20-1:2000

IF-P: 1:500-1:2000

IF/ICC: 1:500-1:2000

FC (Intra): 0.40 ug per 10<sup>6</sup> cells in a 100 µl suspension

## Applications

## Tested Applications:

WB, IHC, IF/ICC, IF-P, FC (Intra), IP, ELISA

## Cited Applications:

WB, IHC, IF, IP, CoIP, ChIP, ELISA, Cell Culture

## Species Specificity:

human, mouse, rat, pig, rabbit, canine, monkey, chicken, zebrafish, hamster

## Cited Species:

human, mouse, rat, chicken, goat, sheep, aedes albopictus, arabidopsis, golden hamsters, cat

**Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (\*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0**

## Positive Controls:

**WB**: HeLa cells, A549 cells, Jurkat cells, mouse pancreas, rat brain, rat pancreas, HEK-293 cells, HepG2 cells, K-562 cells, HSC-T6 cells, NIH/3T3 cells, 4T1 cells, CHO cells, HSC-T6 cells. NIH/3T3 cells, Pig brain, Rabbit brain, Mouse brain, Chicken brain

**IP**: HeLa cells,

**IHC**: human kidney tissue, human brain tissue, human colon cancer tissue, human heart tissue

**IF-P**: mouse brain tissue,

**IF/ICC**: MDCK cells, HeLa cells

**FC (Intra)**: HeLa cells,

## Background Information

Actins are highly conserved globular proteins that are involved in various types of cell motility and are ubiquitously expressed in all eukaryotic cells. At least six isoforms of actins are known in mammals and other vertebrates: alpha (ACTC1, cardiac muscle 1), alpha 1 (ACTA1, skeletal muscle) and 2 (ACTA2, aortic smooth muscle), beta (ACTB), gamma 1 (ACTG1) and 2 (ACTG2, enteric smooth muscle). Beta and gamma 1 are two non-muscle actin proteins. Most actins consist of 376aa, while ACTG2 (rich in muscles) has 375aa and ACTG1 (found in non-muscle cells) has only 374aa. Beta actin has been widely used as the internal control in RT-PCR and Western Blotting as a 42-kDa protein. However, the 41 kDa cleaved fragment of beta actin can be generated during apoptosis process. This antibody can recognize all the actins. The isotype of this antibody is IgG2b. For murine tissue sample, conjugated antibody (HRP-66009) or rabbit antibody (20536-1-AP) is preferable.

## Notable Publications

Author	Pubmed ID	Journal	Application
Xiaoxuan Zhai	36184541	Int Heart J	WB
Yueke Lin	36178239	EMBO Rep	WB
Yangfei Yi	36178080	Orthop Surg	WB

## Storage

## Storage:

Store at -20°C. Stable for one year after shipment.

## Storage Buffer:

PBS with 0.02% sodium azide and 50% glycerol, pH7.3

Aliquoting is unnecessary for -20°C storage

\*\*\* 20ul sizes contain 0.1% BSA

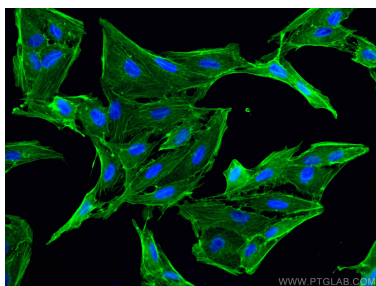
For technical support and original validation data for this product please contact:

T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)

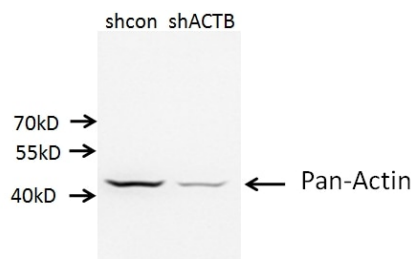
E: [proteintech@ptglab.com](mailto:proteintech@ptglab.com)  
 W: [ptglab.com](http://ptglab.com)

This product is exclusively available under Proteintech Group brand and is not available to purchase from any other manufacturer.

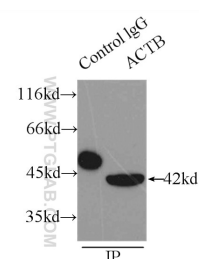
## Selected Validation Data



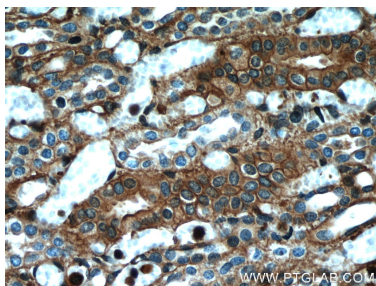
Immunofluorescent analysis of (-20°C Methanol) fixed MDCK cells using Beta Actin antibody (66009-1-Ig, Clone: 2D4H5) at dilution of 1:1000 and CoraLite®488-Conjugated AffiniPure Goat Anti-Mouse IgG(H+L).



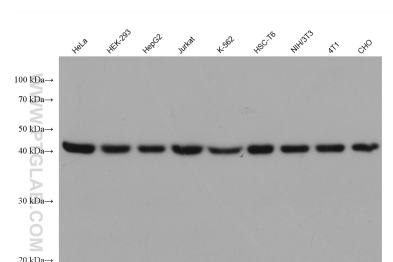
A549 cells (shcontrol and shRNA of Beta Actin) were subjected to SDS PAGE followed by western blot with 66009-1-Ig (Mouse anti Pan-actin antibody) at dilution of 1:10000.



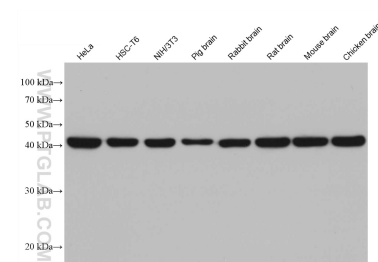
IP result of anti-Beta Actin (IP:66009-1-Ig, 3ug; Detection:66009-1-Ig 1:10000) with HeLa cells lysate 3100ug.



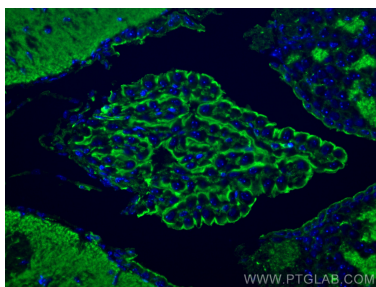
Immunohistochemical analysis of paraffin-embedded human kidney using 66009-1-Ig at dilution of 1:500 (under 40x lens).



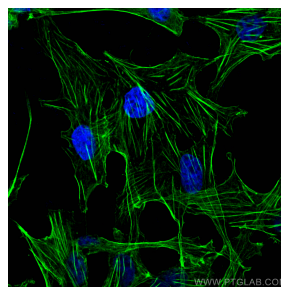
Various lysates were subjected to SDS PAGE followed by western blot with 66009-1-Ig (Beta Actin antibody) at dilution of 1:200000 incubated at room temperature for 1.5 hours.



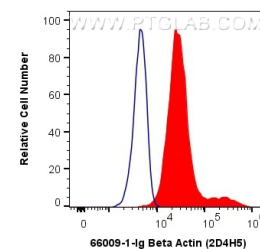
Various lysates were subjected to SDS PAGE followed by western blot with 66009-1-Ig (Beta Actin antibody) at dilution of 1:100000 incubated at room temperature for 1.5 hours.



Immunofluorescent analysis of (4% PFA) fixed paraffin-embedded mouse brain tissue using Beta Actin antibody (66009-1-Ig, Clone: 2D4H5) at dilution of 1:1000 and CoraLite®488-Conjugated Goat Anti-Mouse IgG(H+L) (SA00013-1). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunofluorescent analysis of (4% PFA) fixed MDCK cells using Beta Actin antibody (66009-1-Ig, Clone: 2D4H5) at dilution of 1:3000 and Multi-rAb CoraLite® Plus 488-Goat Anti-Mouse Recombinant Secondary Antibody (H+L) (RGAM002).



1X10<sup>6</sup> HeLa cells were intracellularly stained with 0.4 ug Anti-Human Beta Actin (66009-1-Ig, Clone:2D4H5) and CoraLite®488-Conjugated AffiniPure Goat Anti-Mouse IgG(H+L) at dilution 1:1000 (red), or 0.4 ug Mouse IgG2b Isotype Control (MPC-11) (65128-1-Ig, Clone: MPC-11) (blue). Cells were fixed with 4% PFA and permeabilized with Flow Cytometry Perm Buffer (PF00011-C).