

For Research Use Only

# Beta Actin Monoclonal antibody



Catalog Number: 66009-1-Ig

Featured Product

1485 Publications

## Basic Information

### Catalog Number:

66009-1-Ig

### Size:

150UL, Concentration: 427 µg/ml by Bradford method using BSA as the standard;

### Source:

Mouse

### Isotype:

IgG2b

### GenBank Accession Number:

NM\_001101

### GeneID (NCBI):

60

### Full Name:

actin, beta

### Calculated MW:

42 kDa

### Observed MW:

42 kDa

### Purification Method:

Protein A purification

### CloneNo.:

2D4H5

### Recommended Dilutions:

WB 1:5000-1:50000

IP 0.5-4.0 µg for IP and 1:5000-1:50000 for WB

IHC 1:20-1:2000

IF 1:200-1:1500

## Applications

### Tested Applications:

FC, IF, IHC, IP, WB, ELISA

### Cited Applications:

IF, IHC, IP, WB

### Species Specificity:

human, mouse, rat, hamster, zebrafish, monkey

### Cited Species:

Aedes albopictus, Arabidopsis, bovine, canine, carp, chicken, Drosophila, duck, fish, goat

**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**: multi-cells, Jurkat cells, A549 cells, CHO cells, HeLa cells

**IP**: HeLa cells,

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

**IF**: MDCK cells, HepG2 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
Qian Xu	33062012	Evid Based Complement Alternat Med	WB
Qian Wang	32999044	Mol Cancer Ther	WB
Zhi Chen	31542928	J Agric Food Chem	WB

## Storage

### Storage:

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

### Storage Buffer:

PBS with 0.02% sodium azide and 50% glycerol pH 7.3.

Aliquoting is unnecessary for -20°C storage

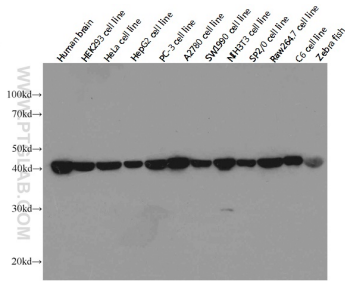
For technical support and original validation data for this product please contact:

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

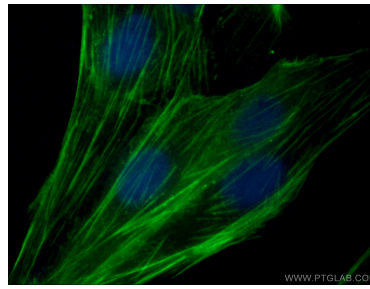
E: proteintech@ptglab.com  
W: ptglab.com

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

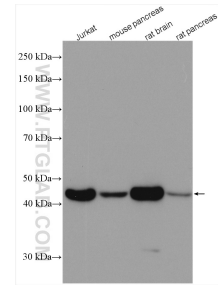
## Selected Validation Data



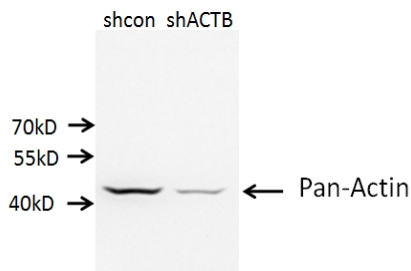
Western blot analysis of beta-actin in various tissues and cell lines using Proteintech antibody 66009-1-Ig at a dilution of 1:20000. (Exposure time: 10 seconds).



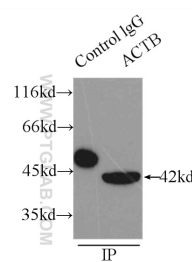
Immunofluorescent analysis of (-20°C Methanol) fixed MDCK cells using 66009-1-Ig (beta Actin antibody) at dilution of 1:1000 and CoraLite488-Conjugated AffiniPure Goat Anti-Mouse IgG(H+L).



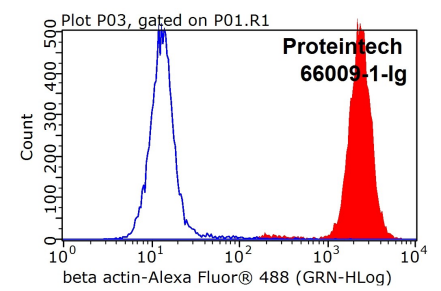
Various lysates were subjected to SDS PAGE followed by western blot with 66009-1-Ig (beta Actin antibody) at dilution of 1:8000 incubated at room temperature for 1.5 hours.



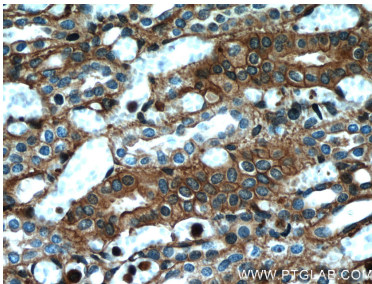
A549 cells (shcontrol and shRNA of Beta Actin) were subjected to SDS PAGE followed by western blot with 66009-1-Ig (Mouse anti Pan-actin antibody) at dilution of 1:10000.



IP Result of anti-beta actin (IP:66009-1-Ig, 3ug; Detection:66009-1-Ig 1:10000) with HeLa cells lysate 3100ug.



1X10<sup>6</sup> HeLa cells were stained with 0.2ug beta actin antibody (66009-1-Ig, red) and control antibody (blue). Fixed with 4% PFA blocked with 3% BSA (30 min). FITC-Goat anti-Mouse IgG with dilution 1:100.



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