

Beta Actin Monoclonal antibody

Catalog Number: 66009-1-Ig

Featured Product

5219 Publications

Basic Information

Catalog Number: 66009-1-Ig	GenBank Accession Number: NM_001101	Purification Method: Protein A purification
Size: 150ul, Concentration: 1000 µg/ml by Nanodrop;	GeneID (NCBI): 60	CloneNo.: 2D4H5
Source: Mouse	Full Name: actin, beta	Recommended Dilutions: WB 1:20000-1:100000 IP 0.5-4.0 µg for 1.0-3.0 mg of total protein lysate IHC 1:20-1:2000 IF 1:500-1:2000
Isotype: IgG2b	Calculated MW: 42 kDa Observed MW: 42 kDa	

Applications

Tested Applications:
FC, IF, IHC, IP, WB, ELISA

Cited Applications:
Cell treatment, ChIP, CoIP, ELISA, IF, IHC, IP, WB

Species Specificity:
human, mouse, rat, hamster, monkey, pig, chicken, rabbit, zebrafish, canine

Cited Species:
human, goat, chicken, rat, Arabidopsis, Golden hamsters, Aedes albopictus, mouse, monkey, rabbit

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, HSC-T6 cells, NIH/3T3 cells, Pig brain, Rabbit brain, Rat brain, Mouse brain, Chicken brain, HEK-293 cells, HepG2 cells, K-562 cells, HHSC-T6 cells, 4T1 cells, CHO cells, mouse pancreas, rat pancreas

IP: HeLa cells,

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

IF: MDCK cells, 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

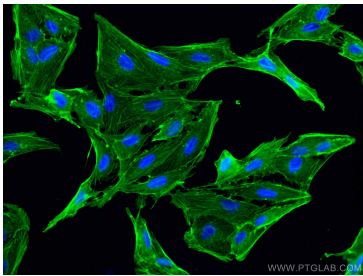
Storage:
Store at -20°C. Stable for one year after shipment.
Storage Buffer:
PBS with 0.02% sodium azide and 50% glycerol pH 7.3.
Aliquoting is unnecessary for -20°C storage

*** 20ul sizes contain 0.1% BSA

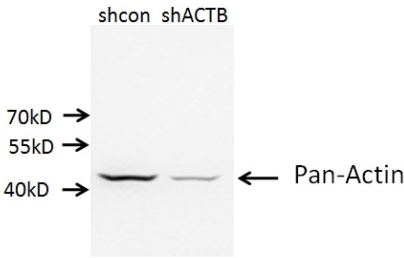
For technical support and original validation data for this product please contact:
 T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)
 E: proteintech@ptglab.com
 W: ptglab.com

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

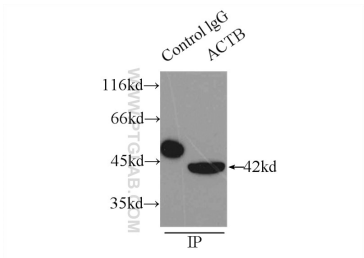
Selected Validation Data



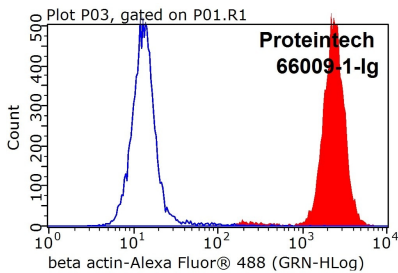
Immunofluorescent analysis of (-20°C Methanol) fixed MDCK cells using Beta Actin antibody (66009-1-Ig, Clone: 2D4H5) at dilution of 1:1000 and CoraLite®488-Conjugated AffiniPure Goat Anti-Mouse IgG(H+L).



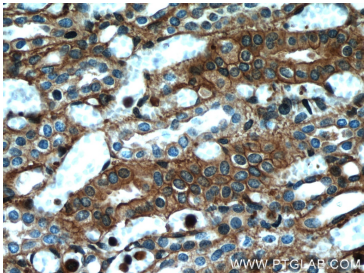
A549 cells (shcontrol and shRNA of Beta Actin) were subjected to SDS PAGE followed by western blot with 66009-1-Ig (Mouse anti Pan-actin antibody) at dilution of 1:10000.



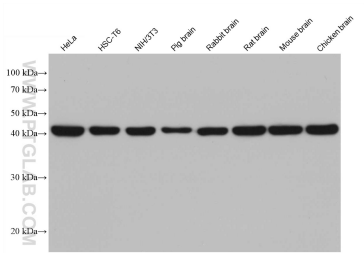
IP Result of anti-beta actin (IP:66009-1-Ig, 3ug; Detection:66009-1-Ig 1:10000) with HeLa cells lysate 3100ug.



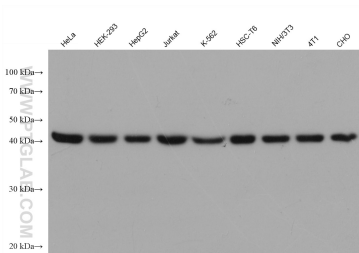
1X10⁶ HeLa cells were stained with 0.05 ug Anti-Human Beta Actin (66009-1-Ig, Clone:2D4H5) and FITC-Goat anti-mouse IgG at dilution 1:100 (red), or stained with 0.05 ug isotype control and FITC-Goat anti-mouse IgG at dilution 1:100 (blue). Cells were fixed with 4% PFA and permeabilized with 0.1% TritonX-100.



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 1:100000 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 1:200000 incubated at room temperature for 1.5 hours.