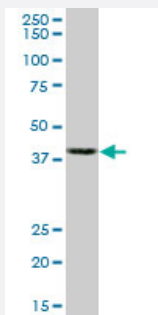


# ACTB monoclonal antibody (M01), clone 3G4-F9

Catalog # H00000060-M01

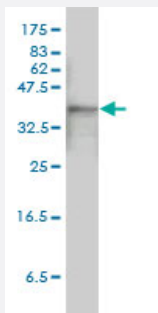
Size 100 ug

## Applications



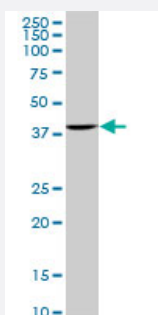
### Western Blot (Cell lysate)

ACTB monoclonal antibody (M01), clone 3G4-F9. Western Blot analysis of ACTB expression in NIH/3T3 ( Cat # L018V1 ).



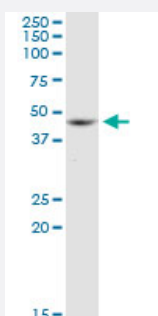
### Western Blot (Cell lysate)

ACTB monoclonal antibody (M01), clone 3G4-F9 Western Blot analysis of ACTB expression in HeLa ( Cat # L013V1 ).



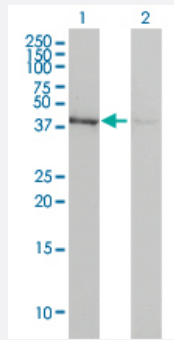
### Western Blot (Cell lysate)

ACTB monoclonal antibody (M01), clone 3G4-F9. Western Blot analysis of ACTB expression in Raw 264.7 ( Cat # L024V1 ).



### Western Blot (Cell lysate)

ACTB monoclonal antibody (M01), clone S1. Western Blot analysis of ACTB expression in K-562.

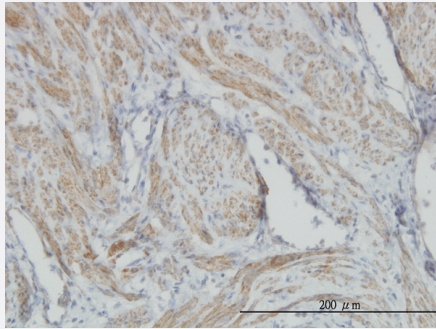


## Western Blot (Transfected lysate)

Western Blot analysis of ACTB expression in transfected 293T cell line by ACTB monoclonal antibody (M01), clone 3G4-F9.

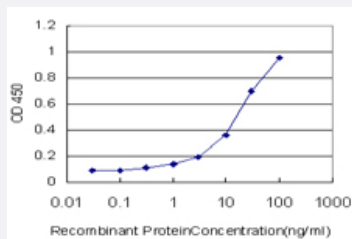
Lane 1: ACTB transfected lysate(42 KDa).

Lane 2: Non-transfected lysate.



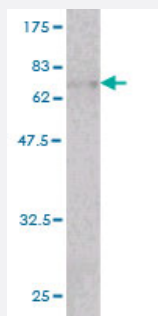
## Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections)

Immunoperoxidase of monoclonal antibody to ACTB on formalin-fixed paraffin-embedded human smooth muscle. [antibody concentration 3 ug/ml]



## Sandwich ELISA (Recombinant protein)

Detection limit for recombinant GST tagged ACTB is approximately 1ng/ml as a capture antibody.



Western Blot detection against Immunogen (66.99 KDa) .

## Specification

### Product Description

Mouse monoclonal antibody raised against a full length recombinant ACTB.

### Immunogen

ACTB (AAH01301, 1 a.a. ~ 375 a.a) full-length recombinant protein with GST tag. MW of the GST tag alone is 26 KDa.

|                         |                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sequence                | MDDDIAALVVDNGSGMCKAGFAGDDAPRAVSPSIVGRPRHQGV MVGMGQKDSYVGDEAQS KR<br>GILTLKYPIEHGVTNWDDMEKIWHHTFYNELRVAPEEHPVLLTEAPLNPKANREKMTQIMFETFNT<br>PAMYVAIQAVLSLYASGRTTGIVMDSGDGVTHTVPIYEGYALPHAILRLDLAGRDLTDYLMKILTERG<br>YSFTTTAEREIVRDIKEKLCYVALDFEQEMATAASSSSLEKSYELPDGQVITIGNERFRCPEALFQP<br>SFLGMESCGIHETTFNSIMKCDVDIRKDLANTVLSSGGTTMYPGIADRMQKEITALAPSTMKIKIAPP<br>ERRYSVWIGGSILASLSTFQQMWISKQEYDESGPSVHRKCF |
| Host                    | Mouse                                                                                                                                                                                                                                                                                                                                                                                                      |
| Reactivity              | Human, Mouse                                                                                                                                                                                                                                                                                                                                                                                               |
| Isotype                 | IgG1 Kappa                                                                                                                                                                                                                                                                                                                                                                                                 |
| Quality Control Testing | Antibody Reactive Against Recombinant Protein.<br>Western Blot detection against Immunogen (66.99 KDa) .                                                                                                                                                                                                                                                                                                   |
| Storage Buffer          | In 1x PBS, pH 7.4                                                                                                                                                                                                                                                                                                                                                                                          |
| Storage Instruction     | Store at -20°C or lower. Aliquot to avoid repeated freezing and thawing.                                                                                                                                                                                                                                                                                                                                   |

## Applications

- Western Blot (Cell lysate)

ACTB monoclonal antibody (M01), clone 3G4-F9. Western Blot analysis of ACTB expression in NIH/3T3 ( Cat # L018V1 ).

[Protocol Download](#)

- Western Blot (Cell lysate)

ACTB monoclonal antibody (M01), clone 3G4-F9 Western Blot analysis of ACTB expression in HeLa ( Cat # L013V1 ).

[Protocol Download](#)

- Western Blot (Cell lysate)

ACTB monoclonal antibody (M01), clone 3G4-F9. Western Blot analysis of ACTB expression in Raw 264.7 ( Cat # L024V1 ).

[Protocol Download](#)

- Western Blot (Cell lysate)

ACTB monoclonal antibody (M01), clone S1. Western Blot analysis of ACTB expression in K-562.

[Protocol Download](#)

- Western Blot (Transfected lysate)

Western Blot analysis of ACTB expression in transfected 293T cell line by ACTB monoclonal antibody (M01), clone 3G4-F9.

Lane 1: ACTB transfected lysate(42 KDa).

Lane 2: Non-transfected lysate.

[Protocol Download](#)

- Western Blot (Recombinant protein)

[Protocol Download](#)

- Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections)

Immunoperoxidase of monoclonal antibody to ACTB on formalin-fixed paraffin-embedded human smooth muscle. [antibody concentration 3 ug/ml]

[Protocol Download](#)

- Sandwich ELISA (Recombinant protein)

Detection limit for recombinant GST tagged ACTB is approximately 1ng/ml as a capture antibody.

[Protocol Download](#)

- ELISA

## Gene Info — ACTB

|               |                    |
|---------------|--------------------|
| Entrez GeneID | <a href="#">60</a> |
|---------------|--------------------|

|                     |                          |
|---------------------|--------------------------|
| GeneBank Accession# | <a href="#">BC001301</a> |
|---------------------|--------------------------|

|                    |                          |
|--------------------|--------------------------|
| Protein Accession# | <a href="#">AAH01301</a> |
|--------------------|--------------------------|

|           |      |
|-----------|------|
| Gene Name | ACTB |
|-----------|------|

|            |           |
|------------|-----------|
| Gene Alias | PS1TP5BP1 |
|------------|-----------|

|                  |             |
|------------------|-------------|
| Gene Description | actin, beta |
|------------------|-------------|

|         |                        |
|---------|------------------------|
| Omim ID | <a href="#">102630</a> |
|---------|------------------------|

|               |                           |
|---------------|---------------------------|
| Gene Ontology | <a href="#">Hyperlink</a> |
|---------------|---------------------------|

|              |                                                                                                                                                                                                                                                                                                 |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Gene Summary | This gene encodes one of six different actin proteins. Actins are highly conserved proteins that are involved in cell motility, structure, and integrity. This actin is a major constituent of the contractile apparatus and one of the two nonmuscle cytoskeletal actins. [provided by RefSeq] |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**Other Designations**

PS1TP5-binding protein 1|actin, cytoplasmic 1|beta actin|beta cytoskeletal actin

**Publication Reference**

- [Impact of carbamazepine on SMARCA4 \(BRG1\) expression in colorectal cancer: modulation by KRAS mutation status.](#)

Aaron Shaykevich, Danbee Chae, Isaac Silverman, Jeremy Bassali, Netanel Louloueian, Alexander Siegman, Gargi Bandyopadhyaya, Sanjay Goel, Radhashree Maitra.

Investigational New Drugs 2024 Apr; 42(2):229.

Application: WB-Ce, Human, HCT116, Hke 3 cells

- [Differences in nonoxidative sulfur metabolism between normal human breast MCF-12A and adenocarcinoma MCF-7 cell lines.](#)

Patrycja Bronowicka-Adamska, Marta Kaczor-Kamińska, Maria Wróbel, Anna Bentke-Imiolek.

Analytical Biochemistry 2024 Apr; 687:115434.

Application: WB, Human, MCF-12A, MCF-7 cells

- [Propargylglycine decreases neuro-immune interaction inducing pain response in temporomandibular joint inflammation model.](#)

Garattini EG, Santos BM, Ferrari D, Porto C, Francescato HDC, Coimbra TM, Leite-Panissi CRA, Branco LGS, Nascimento GC.

Nitric Oxide : Biology and Chemistry 2019 Dec; 93:90.

Application: WB-Ti, Rat, Temporomandibular joints, Trigeminal ganglion

- [Monospecific antibody targeting of CDH11 inhibits epithelial-to-mesenchymal transition and represses cancer stem cell-like phenotype by up-regulating miR-335 in metastatic breast cancer, in vitro and in vivo.](#)

Chen JH, Huang WC, Bamodu OA, Chang PM, Chao TY, Huang TH.

BMC Cancer 2019 Jun; 19(1):634.

Application: WB-Ce, WB-Tr, Human, Cancer-associated fibroblasts, MCF-7, MDA-MB-231 cells

- [MiR-9 functions as a tumor suppressor in acute myeloid leukemia by targeting CX chemokine receptor 4.](#)

Zhu B, Xi X, Liu Q, Cheng Y, Yang H.

American Journal of Translational Research 2019 Jun; 11(6):3384.

Application: WB-Ce, WB-Tr, Human, CD34+ cells, HL-60, KG-1a, Kasumi-1, NB4, SKNO-1 cells, Human bone marrow

- [Quinacrine pretreatment reduces microwave-induced neuronal damage by stabilizing the cell membrane.](#)

Ding XF, Wu Y, Qu WR, Fan M, Zhao YQ.

Neural Regeneration Research 2018 Mar; 13(3):449.

Application: WB, Rat, PC-12 cells

- [Mammalian Oocytes Locally Remodel Follicular Architecture to Provide the Foundation for Germline-Soma Communication.](#)  
El-Hayek S, Yang Q, Abbassi L, FitzHarris G, Clarke HJ.  
Current Biology : CB 2018 Apr; 28(7):1124.
- [Multiple chimeric antigen receptors successfully target chondroitin sulfate proteoglycan 4 in several different cancer histologies and cancer stem cells.](#)  
Beard RE, Zheng Z, Lagisetty KH, Burns WR, Tran E, Hewitt SM, Abate-Daga D, Rosati SF, Fine HA, Ferrone S, Rosenberg SA, Morgan RA.  
Journal for Immunotherapy of Cancer 2014 Aug; 2:25.  
  
Application: Array, Human, Total proteins were extracted from different tissues
- [A microRNA-135a/b binding polymorphism in CD133 confers decreased risk and favorable prognosis of lung cancer in Chinese by reducing CD133 expression.](#)  
Cheng M, Yang L, Yang R, Yang X, Deng J, Yu B, Huang D, Zhang S, Wang H, Qiu F, Zhou Y, Lu J.  
Carcinogenesis 2013 Oct; 34(10):2292.  
  
Application: WB-Ti, Human, Lung cancer
- [Systematic proteomic analysis of human hepatocellular carcinoma cells reveals molecular pathways and networks involved in metastasis.](#)  
Yu Y, Shen H, Yu H, Zhong F, Zhang Y, Zhang C, Zhao J, Li H, Chen J, Liu Y, Yang P.  
Molecular BioSystems 2011 Jun; 7(6):1908.  
  
Application: WB-Ce, Human, MHCC97L, MHCC97H, HCCLM3, HCCLM6
- [Identification of early transcripts related to male development in chicken embryos.](#)  
Lin YP, Chen LR, Chen CF, Liou JF, Chen YL, Yang JR, Shiue YL.  
Theriogenology 2010 Oct; 74(7):1161.  
  
Application: WB-Ti, Chicken, Chicken gonad
- [Anti-microtubule 'plinabulin' chemical probe KPU-244-B3 labeled both alpha- and beta-tubulin.](#)  
Yamazaki Y, Sumikura M, Hidaka K, Yasui H, Kiso Y, Yakushiji F, Hayashi Y.  
Bioorganic & Medicinal Chemistry 2010 May; 18(9):3169.  
  
Application: WB, Human, HT-1080 cells
- [7beta-Hydroxy-epiandrosterone-mediated regulation of the prostaglandin synthesis pathway in human peripheral blood monocytes.](#)  
Mee SL, Hennebert O, Ferrec C, Wulfert E, Morfin R.  
Steroids 2008 May; 73(11):1148.  
  
Application: WB-Ce, Human, PBMCs

## Pathway

- [Adherens junction](#)
- [Arrhythmogenic right ventricular cardiomyopathy \(ARVC\)](#)
- [Focal adhesion](#)
- [Hypertrophic cardiomyopathy \(HCM\)](#)
- [Leukocyte transendothelial migration](#)
- [Pathogenic Escherichia coli infection - EHEC](#)
- [Regulation of actin cytoskeleton](#)
- [Tight junction](#)
- [Vibrio cholerae infection](#)

## Disease

- [Breast cancer](#)
- [Breast Neoplasms](#)