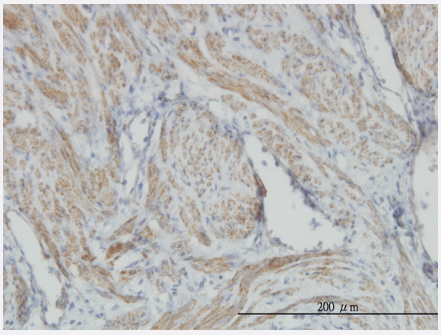
ACTB monoclonal antibody (M01), clone 3G4-F9

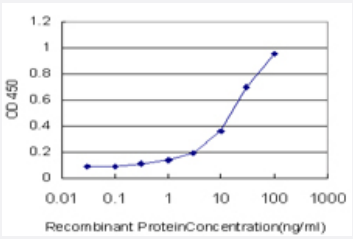
Catalog # H00000060-M01 Size 100 ug

Applications



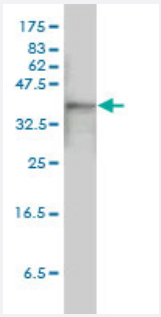
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections)

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



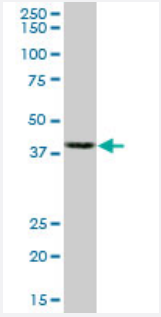
Sandwich ELISA (Recombinant protein)

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



Western Blot (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 NIH/3T3 (Cat # L018V1).

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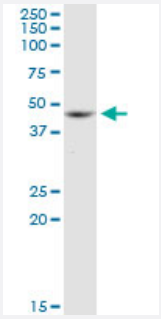
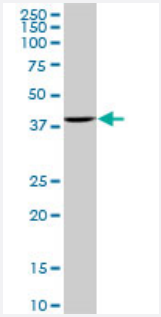


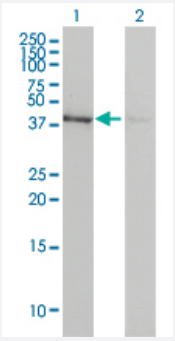
Western Blot (Cell lysate)

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



Western Blot (Cell lysate)

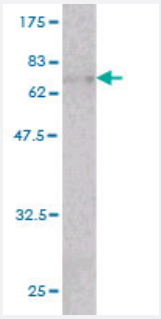
ACTB monoclonal antibody (M01), clone 3G4-F9. Western Blot analysis of ACTB expression in Raw 264.7 (Cat # L024V1).



Western Blot (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.



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.

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Sequence	MDDDIAALVVDNGSGMCKAGFAGDDAPRAVSPSIVGRPRHQGVMVGMGQKDSYVGDEAQSKR GILTLKYPIEHGIVTNWDDMEKIWHHTFYNELRVAPEEHPVLLTEAPLNPKANREKMTQIMFETFNT PAMYVAIQAVLSLYASGRTTGIVMDSGDGVTHTVPIYEGYALPHAILRLDLAGRDLTDYLMKILTERG YSFTTTAEREIVRDIKEKLCYVALDFEQEMATAASSSSLEKSYELPDGQVITIGNERFRCPEALFQP SFLGMESCGIHETTFNSIMKCDVDIRKDLYANTVLSGGTTMYPGIADRMQKEITALAPSTMKIKIIAPP ERRYSVWIGGSILASLSTFQQMWISKQEYDESGPSIVHRKCF
Host	Mouse
Reactivity	Human, Mouse
Isotype	IgG1 Kappa
Quality Control Testing	Antibody Reactive Against Recombinant Protein. 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

- 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

- ELISA

- Sandwich ELISA (Recombinant protein)

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

  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 NIH/3T3 (Cat # L018V1).

  Protocol Download

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- Western Blot (Cell lysate)

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

  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 (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

Gene Info — ACTB

Entrez GeneID	60
GeneBank Accession#	BC001301
Protein Accession#	AAH01301
Gene Name	ACTB
Gene Alias	PS1TP5BP1
Gene Description	actin, beta
Omim ID	102630
Gene Ontology	Hyperlink
Gene Summary	This gene encodes one of six different actin proteins. Actins are highly conserved proteins that ar e 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

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Publication Reference

- Erlotinib Treatment in Colorectal Cancer Suppresses Autophagy Based on KRAS Mutation.

  Alexander Siegman., Aaron Shaykevich., Danbee Chae., Isaac Silverman., Sanjay Goel., Radhashree Maitra.

  Current Issues in Molecular Biology 2024 Jul; 46(7):7530.

  Application: WB, Human, CRC cells

- 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

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- 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 hepotacellular 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

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- 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

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