

# Anti-beta Actin Antibody [B4-B2]

## M1210-2



<b>Product Type:</b>	Mouse monoclonal IgG1, primary antibodies
<b>Species reactivity:</b>	Human, Mouse, Rat
<b>Applications:</b>	WB, IF-Cell, IHC-P, FC
<b>Molecular Wt:</b>	Predicted band size: 42 kDa
<b>Clone number:</b>	B4-B2

**Description:** Beta-actin (human gene and protein abbreviation ACTB/ACTB) is one of six different actin isoforms which have been identified in humans. This is one of the two nonmuscle cytoskeletal actins. Actins are highly conserved proteins that are involved in cell motility, structure and integrity. Alpha actins are a major constituent of the contractile apparatus. Beta-actin has been shown to interact with SPTBN2. In addition, RNA-binding protein Sam68 was found to interact with the mRNA encoding  $\beta$ -actin, which regulates the synaptic formation of the dendritic spines with its cytoskeletal components. Beta-actin has been shown to activate eNOS, thereby increasing NO production. An eight-amino acid residue (326-333) in actin has been shown to mediate the interaction between actin and eNOS. Recurrent mutations in this gene have been associated to cases of diffuse large B-cell lymphoma. Beta actin is often used in Western blotting as a loading control, to normalize total protein amounts and check for eventual protein degradation in the samples. Its transcript is also commonly used as a housekeeping gene standard in qPCR. Its molecular weight is approximately 42 kDa.

**Immunogen:** Synthetic peptide within N-terminal of Human beta actin.

**Positive control:** HeLa cell lysate, HepG2 cell lysate, MCF7 cell lysate, A431 cell lysate, Jurkat cell lysate, HEK-293 cell lysate, RAW264.7 cell lysate, C2C12 cell lysate, PC-12 cell lysate, mouse testis tissue lysate, mouse spleen tissue lysate, rat testis tissue lysate, rat kidney tissue lysate, NIH/3T3, human colon carcinoma tissue, mouse kidney tissue.

**Subcellular location:** Cytoplasm.

**Database links:** SwissProt: P60709 Human | P60710 Mouse | P60711 Rat

**Recommended Dilutions:**

<b>WB</b>	1:20,000
<b>IF-Cell</b>	1:100-1:200
<b>IHC-P</b>	1:100-1:200
<b>FC</b>	1:100-1:200

**Storage Buffer:** 1\*PBS (pH7.4), 0.2% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

**Storage Instruction:** Store at -20°C. Stable for 12 months from date of receipt.

**Purity:** Immunogen affinity purified.

Hangzhou Huaan Biotechnology Co., Ltd.

Orders:0086-571-88062880

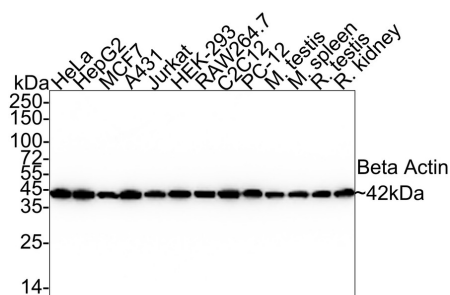
Technical:0086-571-89986345

Service mail:support@huabio.cn

华安生物  
HUABIO  
www.huabio.cn

## Images

**Fig1:** Western blot analysis of beta Actin on different lysates with Mouse anti-beta Actin antibody (M1210-2) at 1/20,000 dilution.



Lane 1: HeLa cell lysate  
 Lane 2: HepG2 cell lysate  
 Lane 3: MCF7 cell lysate  
 Lane 4: A431 cell lysate  
 Lane 5: Jurkat cell lysate  
 Lane 6: HEK-293 cell lysate  
 Lane 7: RAW264.7 cell lysate  
 Lane 8: C2C12 cell lysate  
 Lane 9: PC-12 cell lysate  
 Lane 10: Mouse testis tissue lysate  
 Lane 11: Mouse spleen tissue lysate  
 Lane 12: Rat testis tissue lysate  
 Lane 13: Rat kidney tissue lysate

Lysates/proteins at 10 µg/Lane.

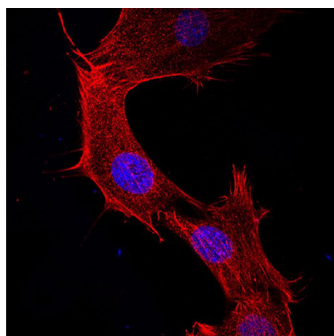
Predicted band size: 42 kDa

Observed band size: 42 kDa

Exposure time: 10 seconds;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (M1210-2) at 1/20,000 dilution was used in 5% NFDM/TBST at 4°C overnight. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1/50,000 dilution was used for 1 hour at room temperature.



**Fig2:** ICC staining of beta Actin in NIH/3T3 cells (red). Formalin fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 10 minutes at room temperature and blocked with 10% negative goat serum for 15 minutes at room temperature. Cells were probed with the primary antibody (M1210-2, 1/50) for 1 hour at room temperature, washed with PBS. Alexa Fluor®594 conjugate-Goat anti-Mouse IgG was used as the secondary antibody at 1/1,000 dilution. The nuclear counter stain is DAPI (blue).

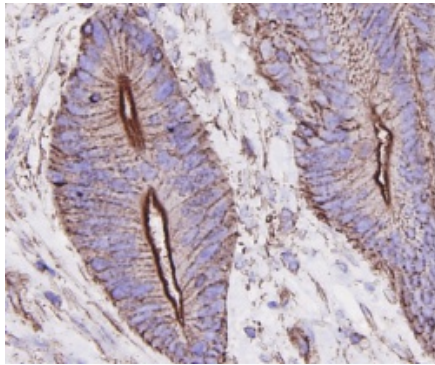
Hangzhou Huaan Biotechnology Co., Ltd.

Orders:0086-571-88062880

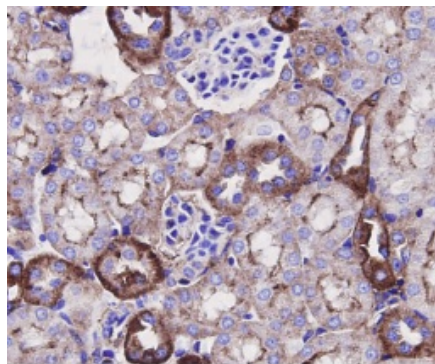
Technical:0086-571-89986345

Service mail:support@huabio.cn

华安生物  
HUABIO  
www.huabio.cn



**Fig3:** Immunohistochemical analysis of paraffin-embedded human colon carcinoma tissue using anti-beta Actin antibody. The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 30 minutes at room temperature, washed with ddH<sub>2</sub>O and PBS, and then probed with the primary antibody (M1210-2, 1/50) for 30 minutes at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.



**Fig4:** Immunohistochemical analysis of paraffin-embedded mouse kidney tissue using anti-beta Actin antibody. The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 30 minutes at room temperature, washed with ddH<sub>2</sub>O and PBS, and then probed with the primary antibody (M1210-2, 1/50) for 30 minutes at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

**Note:** All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

### Background References

1. "The nucleotide sequence of the rat cytoplasmic beta-actin gene." Nudel U., Zakut R., Shani M., Neuman S., Levy Z., Yaffe D. *Nucleic Acids Res.* 11:1759-1771(1983)
2. "De novo mutations in the actin genes ACTB and ACTG1 cause Baraitser-Winter syndrome." Riviere J.B., *Nat. Genet.* 44:440-444(2012)

Hangzhou Huaan Biotechnology Co., Ltd.

Orders:0086-571-88062880

Technical:0086-571-89986345

Service mail:support@huabio.cn


  
 华安生物
   
 HUABIO
   
[www.huabio.cn](http://www.huabio.cn)