Anti-beta Actin Antibody [A2-F6-R]

HA601082

Product Type:	Recombinant Mouse monoclonal IgG1, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB
Molecular Wt:	Predicted band size: 42 kDa
Clone number:	A2-F6-R

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 β-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 human Beta-actin .

Positive control: HepG2 cell lysates, NIH/3T3 cell lysates, PC-12 cell lysates, MCF-7 cell lysate, THP-1 cell lysate, PMVEC cell lysate, RH-35 cell lysate, RAW264.7 cell lysate, B16F1 cell lysate, MEF cell lysate, Hela cell lysate, F9 cell lysate, Mouse lung cell lysate, L6 cell lysate.

Subcellular location: Cytoplasm.

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

Recommended Dilutions:

WB	1:5,000-1:80,000

Storage Buffer: PBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). Store at -20℃ long term.

Purity: Protein A affinity purified.

Images

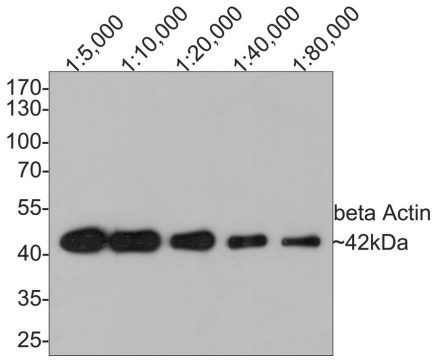

Fig1: Western blot analysis of beta Actin on HepG2 cell lysates with Mouse anti-beta Actin antibody (HA601082) at different dilutions.

Lysates/proteins at 10 µg/Lane.

Predicted band size: 42 kDa
Observed band size: 42 kDa
Exposure time: 5 minutes;
10% 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 (HA601082) at different dilutions was used in 5% NFDM/TBST at room temperature for 2 hours. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1/100,000 dilution was used for 1 hour at room temperature.

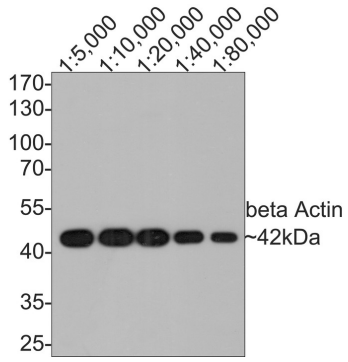

Fig2: Western blot analysis of beta Actin on NIH/3T3 cell lysates with Mouse anti-beta Actin antibody (HA601082) at different dilutions.

Lysates/proteins at 10 µg/Lane.

Predicted band size: 42 kDa
Observed band size: 42 kDa

Exposure time: 5 minutes;

10% 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 (HA601082) at different dilutions was used in 5% NFDM/TBST at room temperature for 2 hours. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1:100,000 dilution was used for 1 hour at room temperature.

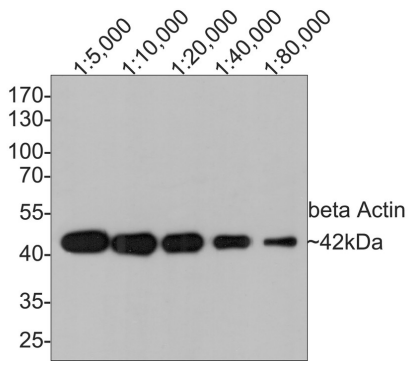

Fig3: Western blot analysis of beta Actin on PC-12 cell lysates with Mouse anti-beta Actin antibody (HA601082) at different dilutions.

Lysates/proteins at 10 µg/Lane.

Predicted band size: 42 kDa
Observed band size: 42 kDa

Exposure time: 1 minute;

10% 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 (HA601082) at different dilutions was used in 5% NFDM/TBST at room temperature for 2 hours. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1:100,000 dilution was used for 1 hour at room temperature.

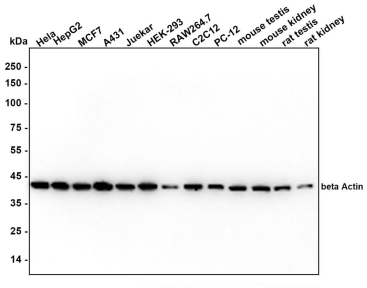

Fig4: Western blot analysis of beta Actin on different lysates with Mouse anti-beta Actin antibody (HA601082) at 1/20,000 dilution.

Lane 1: Hela (Human cervical adenocarcinoma cell) cell lysate
Lane 2: HepG2 (Human hepatocellular carcinoma cell) cell lysate
Lane 3: MCF-7 (Human breast cancer cell) cell lysate
Lane 4: A431 (Human epidermoid carcinoma skin squamous cell) cell lysate
Lane 5: Jurkat (Human T-lymphoblastic cells) cell lysate
Lane 6: HEK-293 (Human embryonic kidney cell) cell lysate
Lane 7: RAW264.7 (Mouse monocytic macrophage leukemia cell) cell lysate
Lane 8: C2C12 (Mouse myoblast) cell lysate
Lane 9: PC-12 (Rat pheochromocytoma cell (undifferentiated)) cell lysate
Lane 10: mouse testis tissue lysate
Lane 11: mouse kidney tissue lysate
Lane 12: mouse testis tissue lysate
Lane 13: mouse kidney tissue lysate

Lysates/proteins at 10 µg/Lane.
Exposure time: 20 seconds; ECL: K1801

Blocking: 5% NFDM/TBST, 1 hour at room temperature
Primary antibody: HA601082, 1/20,000 in primary antibody dilution buffer (K1803), overnight at 4 ℃
Secondary antibody: Goat anti-Rabbit IgG-HRP (HA1006), 1/100,000 in 5% NFDM/TBST, 1 hour at room temperature

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

Background References

1. Fujiki R et al. GlcNAcylation of a histone methyltransferase in retinoic-acid-induced granulopoiesis. Nature 459:455-459 (2009).