

β-Actin (9): sc-130301

BACKGROUND

All eukaryotic cells express Actin, which often constitutes as much as 50% of total cellular protein. Actin filaments can form both stable and labile structures and are crucial components of microvilli and the contractile apparatus of muscle cells. While lower eukaryotes, such as yeast, have only one Actin gene, higher eukaryotes have several isoforms encoded by a family of genes. At least six types of Actin are present in mammalian tissues and fall into three classes. α-Actin expression is limited to various types of muscle, whereas β- and γ-Actin are the principle constituents of filaments in other tissues. Members of the small GTPase family regulate the organization of the Actin cytoskeleton. Rho controls the assembly of Actin stress fibers and focal adhesion, Rac regulates Actin filament accumulation at the plasma membrane and Cdc42 stimulates formation of filopodia.

CHROMOSOMAL LOCATION

Genetic locus: ACTB (human) mapping to 7p22.1; Actb (mouse) mapping to 5 G2.

SOURCE

β-Actin (9) is a mouse monoclonal antibody raised against recombinant β-Actin of human origin.

PRODUCT

Each vial contains 200 μg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

β-Actin (9) is recommended for detection of β-Actin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μg per 100-500 μg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for β-Actin siRNA (h): sc-108069, β-Actin siRNA (m): sc-108070, β-Actin siRNA (r): sc-156106, β-Actin shRNA Plasmid (h): sc-108069-SH, β-Actin shRNA Plasmid (m): sc-108070-SH, β-Actin shRNA Plasmid (r): sc-156106-SH, β-Actin shRNA (h) Lentiviral Particles: sc-108069-V, β-Actin shRNA (m) Lentiviral Particles: sc-108070-V and β-Actin shRNA (r) Lentiviral Particles: sc-156106-V.

Molecular Weight of β-Actin: 43 kDa.

Molecular Weight of β-Actin C-terminal region: 15 kDa.

Positive Controls: C32 whole cell lysate: sc-2205, HeLa whole cell lysate: sc-2200 or IMR-32 cell lysate: sc-2409.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

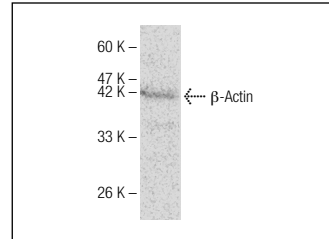
PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



β-Actin (9): sc-130301. Western blot analysis of ACTB expression in HeLa whole cell lysate.

SELECT PRODUCT CITATIONS

- Zhang, S.P., et al. 2009. Effect of liquiritigenin, a flavanone existed from *Radix Glycyrrhizae* on pro-apoptotic in SMMC-7721 cells. *Food Chem. Toxicol.* 47: 693-701.
- Kim, M.H., et al. 2009. Dexamethasone differentially regulates renal and duodenal calcium-processing genes in calbindin-D9k and -D28k knockout mice. *Exp. Physiol.* 94: 138-151.
- Fu, J., et al. 2015. *In vitro* inhibitory effects of terpenoids from *Chloranthus multistachys* on epithelial-mesenchymal transition via down-regulation of Runx2 activation in human breast cancer. *Phytomedicine* 22: 165-172.
- Wu, X., et al. 2015. Antitumor effect of COOH-terminal polypeptide of human TERT is associated with the declined expression of hTERT and NFκB p65 in HeLa cells. *Oncol. Rep.* 34: 2909-2916.
- Meneghini, V., et al. 2016. Pervasive supply of therapeutic lysosomal enzymes in the CNS of normal and Krabbe-affected non-human primates by intracerebral lentiviral gene therapy. *EMBO Mol. Med.* 8: 489-510.
- Jin, J., et al. 2016. Aldo-keto reductase family 1 member B 10 mediates liver cancer cell proliferation through sphingosine-1-phosphate. *Sci. Rep.* 6: 22746.
- Qiao, Y.F., et al. 2016. Melatonin attenuates hypertension-induced renal injury partially through inhibiting oxidative stress in rats. *Mol. Med. Rep.* 13: 21-26.
- Li, N., et al. 2016. Sika deer antler collagen type I-accelerated osteogenesis in bone marrow mesenchymal stem cells via the smad pathway. *Evid. Based Complement. Altern. Med.* 2016: 13.



See **β-Actin (C4): sc-47778** for β-Actin antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647.