

Actin (H-300): sc-10731

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.

SOURCE

Actin (H-300) is a rabbit polyclonal antibody raised against amino acids 76-375 of Actin of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Actin (H-300) is available conjugated to phycoerythrin (sc-10731 PE), 200 μ g/ml, for IF, IHC(P) and FCM.

APPLICATIONS

Actin (H-300) is recommended for detection of a broad range of Actin isoforms of mouse, rat, human, *Drosophila melanogaster*, *Xenopus laevis*, zebrafish and *Caenorhabditis elegans* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), flow cytometry (1 μ g per 1×10^6 cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Actin (H-300) is also recommended for detection of a broad range of Actin isoforms in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Actin siRNA (h): sc-29191, Actin siRNA (m): sc-29192, Actin shRNA Plasmid (h): sc-29191-SH, Actin shRNA Plasmid (m): sc-29192-SH, Actin shRNA (h) Lentiviral Particles: sc-29191-V and Actin shRNA (m) Lentiviral Particles: sc-29192-V.

Molecular Weight of Actin: 43 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Sol8 cell lysate: sc-2249 or A-431 whole cell lysate: sc-2201.

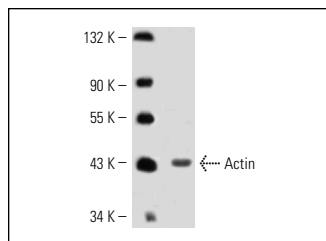
STORAGE

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

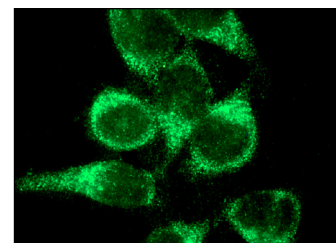
RESEARCH USE

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

DATA



Actin (H-300): sc-10731. Western blot analysis of Actin expression in Sol8 whole cell lysate.



Actin (H-300): sc-10731. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Schmitt-Ney, M., et al. 2004. Cell-density-dependent regulation of actin gene expression due to changes in actin treadmilling. *Exp. Cell Res.* 295: 236-244.
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- Eisfeld, A.J., et al. 2011. Human immunodeficiency virus rev-binding protein is essential for influenza A virus replication and promotes genome trafficking in late-stage infection. *J. Virol.* 85: 9588-9598.
- Harusato, A., et al. 2011. Suppression of indomethacin-induced apoptosis in the small intestine due to Bach1 deficiency. *Free Radic. Res.* 45: 717-727.
- Surco-Laos, F., et al. 2011. Effects of O-methylated metabolites of quercetin on oxidative stress, thermotolerance, lifespan and bioavailability on *Caenorhabditis elegans*. *Food Funct.* 2: 445-456.
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- Zhu, Q.J., et al. 2012. SUMOylation of the kainate receptor subunit GluK2 contributes to the activation of the MLK3-JNK3 pathway following kainate stimulation. *FEBS Lett.* 586: 1259-1264.
- Vogel, R., et al. 2012. Adeno-associated virus type 2 modulates the host DNA damage response induced by herpes simplex virus 1 during coinfection. *J. Virol.* 86: 143-155.

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Try **β -Actin (C4): sc-47778** or **Actin (C-2): sc-8432**, our highly recommended monoclonal alternatives to Actin (H-300). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **β -Actin (C4): sc-47778**.