

# Actin (C-11): sc-1615

## 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.  $\alpha$  Actin expression is limited to various types of muscle, whereas  $\beta$  and  $\gamma$  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 (C-11) is available as either goat (sc-1615) or rabbit (sc-1615-R) polyclonal affinity purified antibody raised against a peptide mapping at the C-terminus of Actin of human origin.

## PRODUCT

Each vial contains either 100  $\mu$ g (sc-1615) or 200  $\mu$ g (sc-1615-R) IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for ChIP application, sc-1615 X, 200  $\mu$ g/0.1 ml.

Actin (C-11) is available conjugated to agarose (sc-1615 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-1615 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; and to either phycoerythrin (sc-1615 PE, 200  $\mu$ g/ml), fluorescein (sc-1615 FITC, 200  $\mu$ g/ml), Alexa Fluor<sup>®</sup> 488 (sc-1615 AF488, 200  $\mu$ g/ml) or Alexa Fluor<sup>®</sup> 647 (sc-1615 AF647, 200  $\mu$ g/ml), for IF, IHC(P) and FCM.

In addition, Actin (C-11) is available conjugated to either TRITC (sc-1615 TRITC, 200  $\mu$ g/ml) or Alexa Fluor<sup>®</sup> 405 (sc-1615 AF405), 100  $\mu$ g/2 ml, for IF, IHC(P) and FCM.

Blocking peptide available for competition studies, sc-1615 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Actin (C-11) is recommended for detection of a broad range of Actin isoforms of mouse, rat, human, *Xenopus laevis*, zebrafish and *Caenorhabditis elegans* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), flow cytometry (1  $\mu$ g per  $1 \times 10^6$  cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Actin (C-11) is also recommended for detection of a broad range of Actin isoforms in additional species, including equine, canine, bovine, porcine and avian.

Actin (C-11) X TransCruz antibody is recommended for ChIP assays.

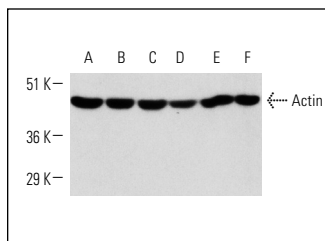
Molecular Weight of Actin: 43 kDa.

Positive Controls: C32 whole cell lysate: sc-2205, Sol8 cell lysate: sc-2249 or HeLa whole cell lysate: sc-2200.

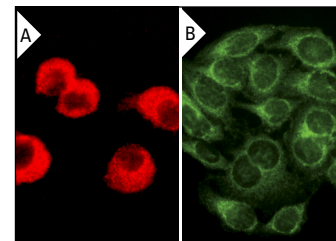
## STORAGE

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

## DATA



Actin (C-11): sc-1615. Western blot analysis of Actin expression in C32 (A), BC<sub>3</sub>H1 (B), Sol8 (C), HeLa (D), KNRK (E) and NIH/3T3 (F) whole cell lysates.



Actin (C-11): sc-1615. Immunofluorescence staining of methanol-fixed KNRK cells showing cytoplasmic localization using indirect Rhodamine (A) staining and HeLa cells using direct Alexa Fluor<sup>®</sup> 488 (B) staining.

## SELECT PRODUCT CITATIONS

- Yip-Schneider, M.T., et al. 2000. Cyclooxygenase-2 expression in human pancreatic adenocarcinomas. *Carcinogenesis* 21: 139-146.
- Li, B. and Dou, Q.P. 2000. Bax degradation by the ubiquitin/proteasome-dependent pathway: involvement in tumor survival and progression. *Proc. Natl. Acad. Sci. USA* 97: 3850-3855.
- Vijayalingam, S., et al. 2015. The cellular protein complex associated with a transforming region of E1A contains c-MYC. *J. Virol.* 90: 1070-1079.
- Melehani, J.H., et al. 2015. *Staphylococcus aureus* Leukocidin A/B (LukAB) kills human monocytes via host NLRP3 and ASC when extracellular, but not intracellular. *PLoS Pathog.* 11: e1004970.
- Callaway, J.B., et al. 2015. Spleen tyrosine kinase (Syk) mediates IL-1 $\beta$  induction by primary human monocytes during antibody-enhanced dengue virus infection. *J. Biol. Chem.* 290: 17306-17320.
- Myklebust, L.M., et al. 2015. Biochemical and cellular analysis of Ogdan syndrome reveals downstream Nt-acetylation defects. *Hum. Mol. Genet.* 24: 1956-1976.
- Nagamatsu, K., et al. 2015. Dysregulation of *Escherichia coli*  $\alpha$ -hemolysin expression alters the course of acute and persistent urinary tract infection. *Proc. Natl. Acad. Sci. USA* 112: E871-E880.

## RESEARCH USE

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

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Try  **$\beta$ -Actin (C4): sc-47778** or **Actin (C-2): sc-8432**, our highly recommended monoclonal alternatives to Actin (C-11). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see  **$\beta$ -Actin (C4): sc-47778**.