

Actin (I-19): sc-1616

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 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 (I-19) is available as either goat (sc-1616) or rabbit (sc-1616-R) polyclonal affinity purified antibody raised against a peptide mapping at the C-terminus 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.

Blocking peptide available for competition studies, sc-1616 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as agarose conjugate for immunoprecipitation, sc-1616 AC, 500 μ g/0.25 ml agarose in 1 ml.

Available as HRP conjugate for Western blotting, sc-1616 HRP, 200 μ g/1 ml.

Available as rhodamine (sc-1616 TRITC) conjugate for immunofluorescence, 200 μ g/1 ml.

Available as phycoerythrin (sc-1616 PE) or fluorescein (sc-1616 FITC) conjugates for flow cytometry, 100 tests.

Available as biotin conjugate, sc-1616 B, 200 μ g/1 ml.

Available as Alexa Fluor® 405 (sc-1616 AF405), Alexa Fluor® 488 (sc-1616 AF488) or Alexa Fluor® 647 (sc-1616 AF647) conjugates for flow cytometry or immunofluorescence; 100 μ g/2 ml.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA.

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.

PROTOCOLS

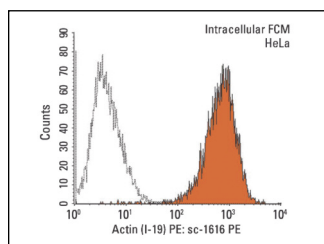
See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

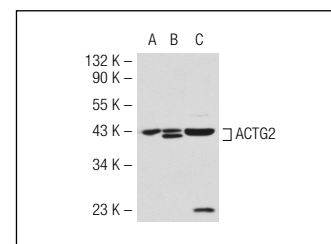
Actin (I-19) is recommended for detection of a broad range of Actin isoforms of mouse, rat, human, zebrafish, *C. elegans*, *Drosophila*, *S. cerevisiae* and *Xenopus* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), flow cytometry (1 μ g per 1 x 10⁶ cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

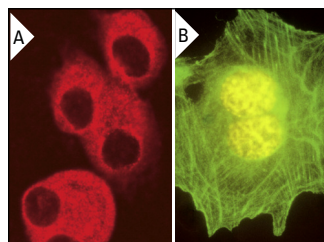
DATA



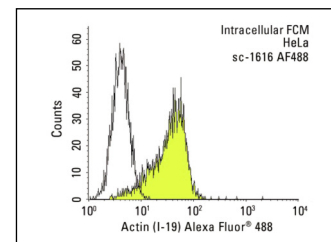
Actin (I-19) PE: sc-1616 PE. Intracellular FCM analysis of fixed and permeabilized HeLa cells. Black line histogram represents the isotype control, normal goat IgG: sc-3992.



Actin (I-19): sc-1616. Western blot analysis of ACTG2 expression in non-transfected 293T: sc-117752 (A), human ACTG2 transfected 293T: sc-176378 (B) and C32 (C) whole cell lysates.



Actin (I-19): sc-1616. Immunofluorescence staining of methanol-fixed KNRK cells showing cytoplasmic staining (A) and methanol-fixed NIH/3T3 cells showing cytoskeletal fluorescein immunostaining of Actin filaments. Note nuclear rhodamine immunostaining with PCNA (PC-10): sc-56 (B).



Actin (I-19) AF488: sc-1616 AF488. Intracellular FCM analysis of fixed and permeabilized HeLa cells. Black line histogram represents the isotype control, normal goat IgG: sc-45067.

SELECT PRODUCT CITATIONS

- Wang, S.S., et al. 1998. Alterations of the PPP2R1B gene in human lung and colon cancer. *Science* 282: 284-287.
- Scheeren, F.A., et al. 2005. Stat5 regulates the self-renewal capacity and differentiation of human memory B cells and controls Bcl-6 expression. *Nat. Immunol.* 6: 303-313.
- Ulanova, M., et al. 2005. Syk tyrosine kinase participates in β 1-integrin signaling and inflammatory responses in airway epithelial cells. *Am. J. Physiol. Lung Cell Mol. Physiol.* 288: L497-L507.
- Yang, Z.F., et al. 2007. The Ets transcription factor GABP is required for cell-cycle progression. *Nat. Cell Biol.* 9: 339-346.