

Twinfilin-1 (H-62): sc-292576

BACKGROUND

Twinfilin is a highly conserved Actin monomer-binding protein that regulates cytoskeletal dynamics in organisms from yeast to mammals. Twinfilin is composed of two ADF-homology domains; it coordinates filament severing and monomer sequestering at sites of rapid Actin turnover, thus preventing assembly of the monomer into filaments. Twinfilin-1 is the mammalian homolog and is expressed in embryos and in most adult non-muscle cell types. Twinfilin-1 binds ADP-G-Actin and efficiently halts Actin filament assembly by inhibiting the nucleotide exchange on Actin monomers and directly interacting with the capping protein. Phosphatidylinositol (4,5)-bisphosphate inhibits the activity of Twinfilin-1 and Rac1 and Cdc42, two small GTPases, induce the redistribution of Twinfilin-1 to membrane ruffles and cell-cell contacts, respectively.

REFERENCES

1. Goode, B.L., et al. 1998. Regulation of the cortical Actin cytoskeleton in budding yeast by Twinfilin, a ubiquitous Actin monomer-sequestering protein. *J. Cell Biol.* 142: 723-733.
2. Vartiainen, M., et al. 2000. Mouse A6/Twinfilin is an Actin monomer-binding protein that localizes to the regions of rapid Actin dynamics. *Mol. Cell Biol.* 20: 1772-1783.

CHROMOSOMAL LOCATION

Genetic locus: TWF1 (human) mapping to 12q12; Twf1 (mouse) mapping to 15 E3.

SOURCE

Twinfilin-1 (H-62) is a rabbit polyclonal antibody raised against amino acids 175-236 mapping near the C-terminus of Twinfilin-1 of human origin.

PRODUCT

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

APPLICATIONS

Twinfilin-1 (H-62) is recommended for detection of Twinfilin-1 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Twinfilin-1 (H-62) is also recommended for detection of Twinfilin-1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Twinfilin-1 siRNA (h): sc-61738, Twinfilin-1 siRNA (m): sc-61739, Twinfilin-1 shRNA Plasmid (h): sc-61738-SH, Twinfilin-1 shRNA Plasmid (m): sc-61739-SH, Twinfilin-1 shRNA (h) Lentiviral Particles: sc-61738-V and Twinfilin-1 shRNA (m) Lentiviral Particles: sc-61739-V.

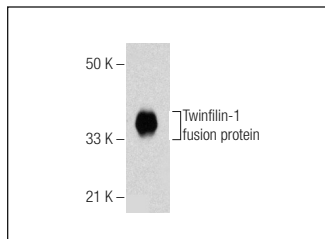
Molecular Weight of Twinfilin-1: 40 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Twinfilin-1 (H-62): sc-292576. Western blot analysis of human recombinant Twinfilin-1 fusion protein.

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.

MONOS
Satisfaction
Guaranteed

Try **Twinfilin-1 (E-4): sc-376539** or **Twinfilin-1 (B-7): sc-376468**, our highly recommended monoclonal alternatives to Twinfilin-1 (H-62).