

Twinfilin-2 (T-14): sc-100216

BACKGROUND

Twinfilin-2, also known as TWF2, A6r, A6RP or PTK9L, is a 349 amino acid protein that localizes to the perinuclear region of the cytoplasm, as well as to the cytoskeleton, and contains 2 ADF-H domains. Expressed ubiquitously, Twinfilin-2 functions as an Actin-binding protein that is able to both bind and sequester G-Actin and cap the barbed ends of Actin filaments, thereby inhibiting Actin polymerization and playing a role in Actin-related motile and morphological processes. Twinfilin-2 is subject to post-translational phosphorylation by PKC ζ . The gene encoding Twinfilin-2 maps to human chromosome 3, which houses over 1,100 genes, including a chemokine receptor (CKR) gene cluster and a variety of human cancer-related gene loci.

REFERENCES

1. Rohwer, A., Kittstein, W., Marks, F. and Gschwendt, M. 1999. Cloning, expression and characterization of an A6-related protein. *Eur. J. Biochem.* 263: 518-525.
2. Palmgren, S., Vartiainen, M. and Lappalainen, P. 2002. Twinfilin, a molecular mailman for Actin monomers. *J. Cell Sci.* 115: 881-886.
3. Vartiainen, M.K., Sarkkinen, E.M., Matilainen, T., Salminen, M. and Lappalainen, P. 2003. Mammals have two twinfilin isoforms whose sub-cellular localizations and tissue distributions are differentially regulated. *J. Biol. Chem.* 278: 34347-34355.
4. Yamada, S., Uchimura, E., Ueda, T., Nomura, T., Fujita, S., Matsumoto, K., Funeriu, D.P., Miyake, M. and Miyake, J. 2007. Identification of Twinfilin-2 as a factor involved in neurite outgrowth by RNAi-based screen. *Biochem. Biophys. Res. Commun.* 363: 926-930.
5. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 607433. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: TWF2 (human) mapping to 3p21.2; Twf2 (mouse) mapping to 9 F1.

SOURCE

Twinfilin-2 (T-14) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of Twinfilin-2 of human origin.

PRODUCT

Each vial contains 100 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-100216 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

Twinfilin-2 (T-14) is recommended for detection of Twinfilin-2 of mouse, rat and human 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with Twinfilin-1.

Twinfilin-2 (T-14) is also recommended for detection of Twinfilin-2 in additional species, including canine.

Suitable for use as control antibody for Twinfilin-2 siRNA (h): sc-78430, Twinfilin-2 siRNA (m): sc-154813, Twinfilin-2 shRNA Plasmid (h): sc-78430-SH, Twinfilin-2 shRNA Plasmid (m): sc-154813-SH, Twinfilin-2 shRNA (h) Lentiviral Particles: sc-78430-V and Twinfilin-2 shRNA (m) Lentiviral Particles: sc-154813-V.

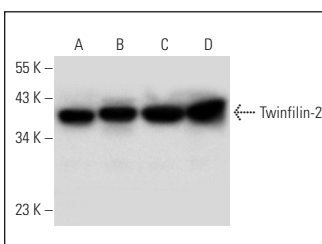
Molecular Weight of Twinfilin-2: 40 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, Twinfilin-2 (h2): 293T Lysate: sc-112319 or PANC-1 whole cell lysate: sc-364380.

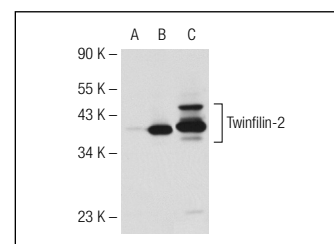
RECOMMENDED SECONDARY REAGENTS

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-2 (T-14): sc-100216. Western blot analysis of Twinfilin-2 expression in NIH/3T3 (A), PANC-1 (B), RT-4 (C) and U-251-MG (D) whole cell lysates.



Twinfilin-2 (T-14): sc-100216. Western blot analysis of Twinfilin-2 expression in non-transfected 293T: sc-117752 (A), human Twinfilin-2 transfected 293T: sc-112319 (B) and NIH/3T3 (C) whole cell lysates.

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.