# SANTA CRUZ BIOTECHNOLOGY, INC.

# Twinfilin-2 (N-13): sc-100215



### 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  $\zeta$ . 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

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- Palmgren, S., Vartiainen, M. and Lappalainen, P. 2002. Twinfilin, a molecular mailman for Actin monomers. J. Cell Sci. 115: 881-886.
- Vartiainen, M.K., Sarkkinen, E.M., Matilainen, T., Salminen, M. and Lappalainen, P. 2003. Mammals have two twinfilin isoforms whose subcellular localizations and tissue distributions are differentially regulated. J. Biol. Chem. 278: 34347-34355.
- 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/
- Nevalainen, E.M., Skwarek-Maruszewska, A., Braun, A., Moser, M. and Lappalainen, P. 2009. Two biochemically distinct and tissue-specific Twinfilin isoforms are generated from the mouse Twf2 gene by alternative promoter usage. Biochem. J. 417: 593-600.

#### CHROMOSOMAL LOCATION

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

### SOURCE

Twinfilin-2 (N-13) 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  $\mu g$  IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-100215 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

#### APPLICATIONS

Twinfilin-2 (N-13) 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  $\mu$ 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with Twinfilin-1.

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.

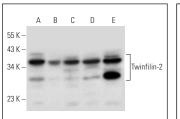
Molecular Weight of Twinfilin-2: 40 kDa.

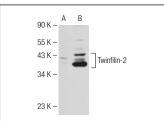
Positive Controls: Twinfilin-2 (h2): 293T Lysate: sc-112319, NIH/3T3 whole cell lysate: sc-2210 or HeLa whole cell lysate: sc-2200.

# **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<sup>™</sup> compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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<sup>™</sup> Mounting Medium: sc-24941.

# DATA





Twinfilin-2 (N-13): sc-100215. Western blot analysis of Twinfilin-2 expression in HeLa (A), NIH/3T3 (B), PANC-1 (C), RT-4 (D) and U-251-MG (E) whole cell lysates

Twinfilin-2 (N-13): sc-100215. Western blot analysis of Twinfilin-2 expression in non-transfected: sc-117752 (**A**) and human Twinfilin-2 transfected: sc-112319 (**B**) 293T whole cell lysates.

#### **STORAGE**

Store at 4° C, \*\*D0 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.