

# Twinfilin-2 (F-2): sc-514305

## 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

1. Rohwer, A., et al. 1999. Cloning, expression and characterization of an A6-related protein. *Eur. J. Biochem.* 263: 518-525.
2. Palmgren, S., et al. 2002. Twinfilin, a molecular mailman for Actin monomers. *J. Cell Sci.* 115: 881-886.
3. Vartiainen, M.K., et al. 2003. Mammals have two twinfilin isoforms whose subcellular localizations and tissue distributions are differentially regulated. *J. Biol. Chem.* 278: 34347-34355.
4. Yamada, S., et al. 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/>
6. Nevalainen, E.M., et al. 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.

## SOURCE

Twinfilin-2 (F-2) is a mouse monoclonal antibody raised against amino acids 176-235 mapping within an internal region of Twinfilin-2 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG $\kappa$  kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

## APPLICATIONS

Twinfilin-2 (F-2) is recommended for detection of Twinfilin-2 of human origin by Western Blotting (starting dilution 1:100, 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).

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

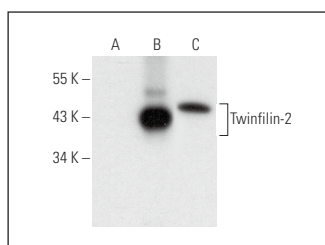
Molecular Weight of Twinfilin-2: 40 kDa.

Positive Controls: Twinfilin-2 (h2): 293T Lysate: sc-112319, U-251-MG whole cell lysate: sc-364176 or RT-4 whole cell lysate: sc-364257.

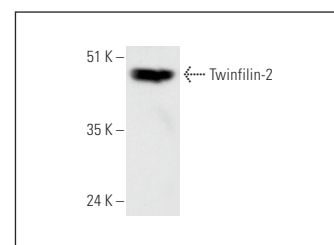
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



Twinfilin-2 (F-2): sc-514305. Western blot analysis of Twinfilin-2 expression in non-transfected 293T: sc-117752 (A), human Twinfilin-2 transfected 293T: sc-112319 (B) and RT-4 (C) whole cell lysates.



Twinfilin-2 (F-2): sc-514305. Western blot analysis of Twinfilin-2 expression in U-251-MG whole cell lysate.

## RESEARCH USE

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