

# Twinfilin-2 (B-6): sc-398673

## 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 two 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

Twinfilin-2 (B-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 36-61 within an internal region of Twinfilin-2 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Twinfilin-2 (B-6) is available conjugated to agarose (sc-398673 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398673 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398673 PE), fluorescein (sc-398673 FITC), Alexa Fluor<sup>®</sup> 488 (sc-398673 AF488), Alexa Fluor<sup>®</sup> 546 (sc-398673 AF546), Alexa Fluor<sup>®</sup> 594 (sc-398673 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-398673 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-398673 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-398673 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398673 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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## APPLICATIONS

Twinfilin-2 (B-6) is recommended for detection of Twinfilin-2 of mouse, rat and 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 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.

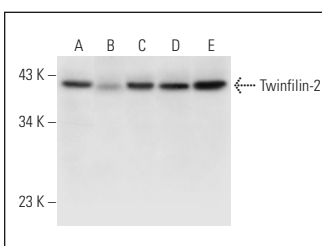
Molecular Weight of Twinfilin-2: 40 kDa.

Positive Controls: Twinfilin-2 (m): 293T Lysate: sc-124375, HeLa whole cell lysate: sc-2200 or RT-4 whole cell lysate: sc-364257.

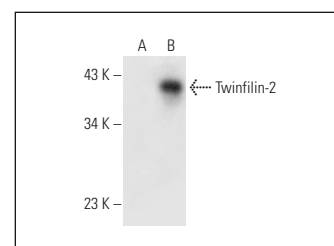
## RECOMMENDED SUPPORT REAGENTS

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<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



Twinfilin-2 (B-6): sc-398673. 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 (B-6): sc-398673. Western blot analysis of Twinfilin-2 expression in non-transfected: sc-117752 (A) and mouse Twinfilin-2 transfected: sc-124375 (B) 293T whole cell lysates.

## 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](http://www.scbt.com) for detailed protocols and support products.