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#14138

Twinfilin-1 (D7C6J) Rabbit mAb

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UniProt ID #Q12792

New 05/14

For Research Use Only. Not For Use In Diagnostic Procedures.

Applications W Endogenous	Species Cross-Reactivity* H, M, R, Mk	Molecular Wt. 40 kDa	Isotype Rabbit IgG**
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Background: Twinfilin is an actin monomer-binding protein found in all eukaryotes (1). Mammals have three isoforms. Twinfilin-1 and twinfilin-2a are expressed in most non-muscle cell types, whereas twinfilin-2b is the main isoform in adult heart and skeletal muscle (2). Twinfilins are composed of two ADF-homology domains connected by a 30 kDa linker region. All twinfilins have been shown to form a 1:1 complex with G-actin, but not F-actin (reviewed in 3). Twinfilin-1 was originally known as A6 protein tyrosine kinase and thought to be part of a novel class of protein kinases. However, the protein was renamed after further studies showed no evidence of tyrosine kinase activity (4). Twinfilin-1 helps to prevent the actin filament assembly by forming a complex with actin monomers and, in mammals, has been shown to cap the filament barbed ends. It has been suggested that this regulates cell motility (5). Suppression of twinfilin-1 has also been shown to slow lymphoma cell migration to lymph nodes (6).

Specificity/Sensitivity: Twinfilin-1 (D7C6J) Rabbit mAb recognizes endogenous levels of total twinfilin protein. In some cell lines, this antibody also recognizes 48 kDa band of unknown origin.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu222 of human twinfilin-1 protein.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

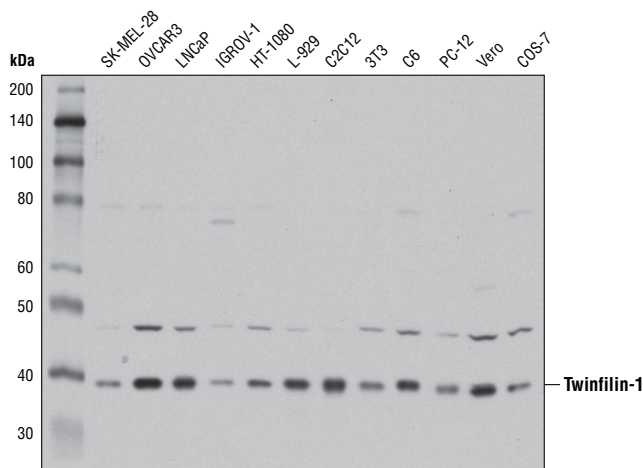
Western blotting 1:1000

For product specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended complementary products.

Background References:

- (1) Goode, B.L. et al. (1998) *J Cell Biol* 142, 723-33.
- (2) Nevalainen, E.M. et al. (2009) *Biochem J* 417, 593-600.
- (3) Palmgren, S. et al. (2002) *J Cell Sci* 115, 881-6.
- (4) Vartiainen, M. et al. (2000) *Mol Cell Biol* 20, 1772-83.
- (5) Helfer, E. et al. (2006) *EMBO J* 25, 1184-95.
- (6) Meacham, C.E. et al. (2009) *Nat Genet* 41, 1133-7.



Western blot analysis of extracts from various cell lines using Twinfilin-1 (D7C6J) Rabbit mAb.

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IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween®20 at 4°C with gentle shaking, overnight.

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Applications: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide Species Cross-Reactivity: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine Dg—dog Pg—pig S—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.