

Twinfilin-1 Antibody

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

Applications W Endogenous	Species Cross-Reactivity* H, M, R, Mk	Molecular Wt. 40 kDa	Source Rabbit**
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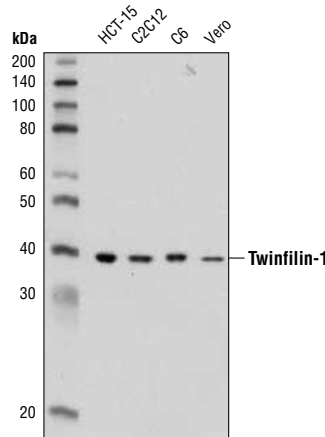
Background: Twinfilin is an actin monomer-binding protein found in all eukaryotes (1). Mammals have three isoforms. Twinfilin-1 and twinfilin-2a are expressed in most non-muscle cell types, whereas twinfilin-2b is the main isoform in adult heart and skeletal muscle (2). Twinfilins are composed of two 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 Antibody recognizes endogenous levels of total twinfilin-1 protein.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human twinfilin-1 protein. Antibodies are purified by protein A and peptide affinity chromatography.

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 Antibody.

Entrez-Gene ID #5756
Swiss-Prot Acc. #Q12792

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. 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 application 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 companion products.

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