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#8461

## Twinfilin-1 Antibody

For Research Use Only. Not for Use in Diagnostic Procedures.

<b>Applications:</b> W	<b>Reactivity:</b> H M R Mk	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 40	<b>Source/Isotype:</b> Rabbit	<b>UniProt ID:</b> #Q12792	<b>Entrez-Gene Id:</b> 5756
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### Product Usage Information

#### Application

Western Blotting

#### Dilution

1:1000

### 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.

### 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

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).

### 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.

### Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

### Western Blot Buffer

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

### Applications Key

**W:** Western Blotting

### Cross-Reactivity Key

**H:** Human **M:** Mouse **R:** Rat **Mk:** Monkey

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