

Twinfilin-1 (D7C6J) Rabbit mAb

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| Applications: | Reactivity: | Sensitivity: | MW (kDa): | Source/Isotype: | UniProt ID: | Entrez-Gene Id: |
|---------------|-------------|--------------|-----------|-----------------|-------------|-----------------|
| W | H M R Mk | Endogenous | 40 | Rabbit IgG | #Q12792 | 5756 |

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, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

Twinfilin-1 (D7C6J) Rabbit mAb recognizes endogenous levels of total twinfilin protein. In some cell lines, this antibody also recognizes a 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.

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 nonfat dry milk, 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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