

#8461 Store at -20C

Twinfilin-1 Antibody

**Cell Signaling**
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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB	H M R Mk	Endogenous	40	Rabbit	#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 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	<ol style="list-style-type: none"> Goode, B.L. et al. (1998) <i>J Cell Biol</i> 142, 723-33. Nevalainen, E.M. et al. (2009) <i>Biochem J</i> 417, 593-600. Palmgren, S. et al. (2002) <i>J Cell Sci</i> 115, 881-6. Vartiainen, M. et al. (2000) <i>Mol Cell Biol</i> 20, 1772-83. Helfer, E. et al. (2006) <i>EMBO J</i> 25, 1184-95. Meacham, C.E. et al. (2009) <i>Nat Genet</i> 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	WB: Western Blotting	
Cross-Reactivity Key	H: human M: mouse R: rat Hm: hamster Mk: monkey Vir: virus Mi: mink C: chicken Dm: D. melanogaster X: Xenopus Z: zebrafish B: bovine Dg: dog Pg: pig Sc: S. cerevisiae Ce: C. elegans Hr: horse GP: Guinea Pig Rab: rabbit All: all species expected	
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