

#3134 Store at -20C

# $\alpha$ -Actinin 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, IF-IC	H M R Hm Mk	Endogenous	100	Rabbit	#P12814	87

**Product Usage Information****Application**Western Blotting  
Immunofluorescence (Immunocytochemistry)**Dilution**1:1000  
1:25**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** $\alpha$ -Actinin Antibody detects endogenous levels of total  $\alpha$ -actinin protein.**Source / Purification**Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to carboxy-terminal residues of human  $\alpha$ -actinin-1.**Background**

$\alpha$ -Actinin belongs to the spectrin family of cytoskeletal proteins. It was first recognized as an actin cross-linking protein, forming an antiparallel homodimer with an actin binding head at the amino terminus of each monomer. The  $\alpha$ -actinin protein interacts with a large number of proteins involved in signaling to the cytoskeleton, including those involved in cellular adhesion, migration, and immune cell targeting (1). The interaction of  $\alpha$ -actinin with intercellular adhesion molecule-5 (ICAM-5) helps to promote neurite outgrowth (2). In osteoblasts, interaction of  $\alpha$ -actinin with integrins stabilizes focal adhesions and may protect cells from apoptosis (3). The cytoskeletal  $\alpha$ -actinin isoforms 1 and 4 (ACTN1, ACTN4) are non-muscle proteins that are present in stress fibers, sites of adhesion and intercellular contacts, filopodia, and lamellipodia. The muscle isoforms 2 and 3 (ACTN2, ACTN3) localize to the Z-discs of striated muscle and to dense bodies and plaques in smooth muscle (1).

**Background References**

1. Otey, C.A. and Carpen, O. (2004) *Cell Motil Cytoskeleton* 58, 104-11.
2. Nyman-Huttunen, H. et al. (2006) *J Cell Sci* 119, 3057-66.
3. Triplett, J.W. and Pavalko, F.M. (2006) *Am J Physiol Cell Physiol* 291, C909-21.

**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 **IF-IC:** Immunofluorescence (Immunocytochemistry)**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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