

α-Actinin (E7U1O) Mouse mAb

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP, IF-IC	H M R Mk	Endogenous	100	Mouse IgG1	#P12814	87

Product Usage Information**Application**

Western Blotting
Immunoprecipitation
Immunofluorescence (Immunocytochemistry)

Dilution

1:1000
1:100
1:50 - 1:200

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

α-Actinin (E7U1O) Mouse mAb recognizes endogenous levels of total α-Actinin protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus of human α-Actinin-1 protein.

Background

α-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 α-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 α-actinin with intercellular adhesion molecule-5 (ICAM-5) helps to promote neurite outgrowth (2). In osteoblasts, interaction of α-actinin with integrins stabilizes focal adhesions and may protect cells from apoptosis (3). The cytoskeletal α-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 nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation **IF-IC:** Immunofluorescence (Immunocytochemistry)

Cross-Reactivity Key

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

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