

α-Actinin (D6F6) XP[®] Rabbit mAb (HRP Conjugate)



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Entrez-Gene ID #87
UniProt ID #P12814

Applications W Endogenous	Species Cross-Reactivity* H, M, R, Mk, (Z)	Molecular Wt. 100 kDa	Isotype Rabbit IgG
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Description: This Cell Signaling Technology[®] antibody is conjugated to the carbohydrate groups of horseradish peroxidase (HRP) via its amine groups. The HRP conjugated antibody is expected to exhibit the same species cross-reactivity as the unconjugated α-Actinin (D6F6) XP[®] Rabbit mAb #6487.

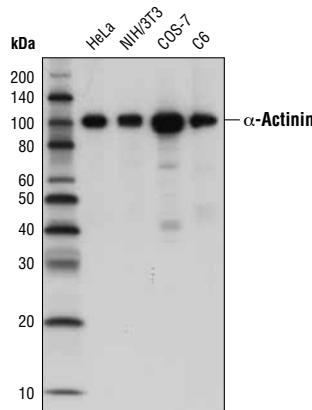
Background: α-Actinin belongs to the spectrin family of cytoskeletal proteins. It was first recognized as an actin cross-linking protein, forming an antiparallel homodimer with an actin binding head at the amino terminus of each monomer. The α-actinin protein interacts with a large number of proteins 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).

Specificity/Sensitivity: α-Actinin (D6F6) XP[®] Rabbit mAb (HRP Conjugate) recognizes endogenous levels of total α-actinin protein.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Phe316 of human α-actinin protein.

Background References:

- (1) Otey, C.A. and Carpen, O. (2004) *Cell Motil. Cytoskeleton* 58, 104-111.
- (2) Nyman-Huttunen, H. et al. (2006) *J. Cell Sci.* 119, 3057-3066.
- (3) Triplett, J.W. and Pavalko, F.M. (2006) *Am. J. Physiol. Cell Physiol.* 291, C909-921.



Western blot analysis of extracts from various cell lines using α-Actinin (D6F6) XP[®] Rabbit mAb (HRP Conjugate).

Storage: Supplied in 136 mM NaCl, 2.6 mM KCl, 12 mM sodium phosphate (pH 7.4) dibasic, 2 mg/ml BSA, and 50% glycerol. Store at -20°C. Do not aliquot the antibodies.

***Species cross-reactivity is determined by western blot.**

HRP conjugated antibodies do not require incubation with a secondary antibody.

Recommended Antibody Dilutions:

Western blotting 1:1000

For product specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

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