

α-Actinin (D6F6) XP[®] Rabbit mAb



Orders ■ 877-616-CELL (2355)
 orders@cellsignaling.com
Support ■ 877-678-TECH (8324)
 info@cellsignaling.com
Web ■ www.cellsignaling.com

rev. 06/25/18

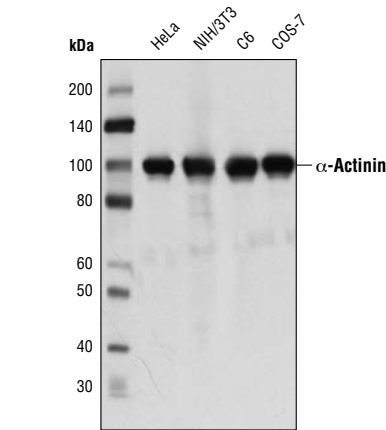
For Research Use Only. Not For Use In Diagnostic Procedures.

Applications W, IF-IC Endogenous	Species Cross-Reactivity* H, M, R, Mk	Molecular Wt. 100 kDa	Isotype Rabbit IgG**
--	--	--------------------------	-------------------------

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 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.



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

Entrez-Gene ID #87
 UniProt ID #P12814

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.

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

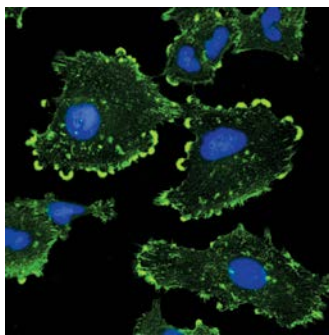
Western blotting	1:1000
Immunofluorescence (IF-IC)	1:100
Fixative:	100% Methanol

For product specific protocols and a complete listing of recommended companion products please see the product web page at www.cellsignaling.com.

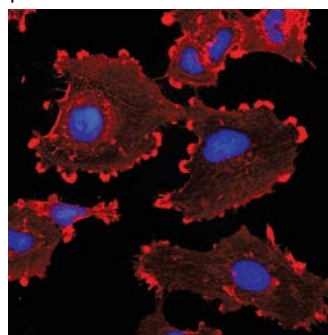
Background References:

- (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.

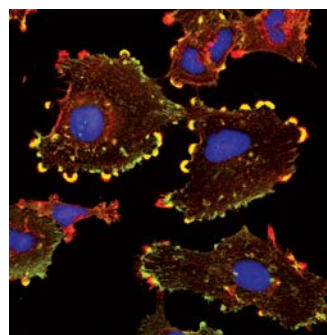
α-Actinin



β-Actin



Merge



Confocal immunofluorescent analysis of SNB19 cells using α-Actinin (D6F6) XP[®] Rabbit mAb (green) showing colocalization with actin filaments that were labeled with β-Actin (8H10D10) Mouse mAb #3700 (red). Blue pseudocolor = DRAQ5[®] #4084 (fluorescent DNA dye).

DRAQ5 is a registered trademark of Biostatus Limited.
 Tween is a registered trademark of ICI Americas, Inc.

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.

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey 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 All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.