

#6487 Store at -20°C

## $\alpha$ -Actinin (D6F6) XP® Rabbit mAb



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

<b>Product Usage Information</b>	<b>Application</b> Western Blotting Immunofluorescence (Immunocytochemistry)	<b>Dilution</b> 1:1000 1:100 - 1:200
<b>Storage</b>	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. <i>Do not aliquot the antibody.</i>	
<b>Specificity / Sensitivity</b>	$\alpha$ -Actinin (D6F6) XP® Rabbit mAb recognizes endogenous levels of total $\alpha$ -actinin protein.	
<b>Species predicted to react based on 100% sequence homology:</b>	Zebrafish	
<b>Source / Purification</b>	Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Phe316 of human $\alpha$ -actinin-1 protein.	
<b>Background</b>	$\alpha$ -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).	
<b>Background References</b>	1. Otey, C.A. and Carpen, O. (2004) <i>Cell Motil Cytoskeleton</i> 58, 104-11. 2. Nyman-Huttunen, H. et al. (2006) <i>J Cell Sci</i> 119, 3057-66. 3. Triplett, J.W. and Pavalko, F.M. (2006) <i>Am J Physiol Cell Physiol</i> 291, C909-21.	

<b>Species Reactivity</b>	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
<b>Western Blot Buffer</b>	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.
<b>Applications Key</b>	<b>WB:</b> Western Blotting <b>IF-IC:</b> Immunofluorescence (Immunocytochemistry)
<b>Cross-Reactivity Key</b>	<b>H:</b> human <b>M:</b> mouse <b>R:</b> rat <b>Hm:</b> hamster <b>Mk:</b> monkey <b>Vir:</b> virus <b>Mi:</b> mink <b>C:</b> chicken <b>Dm:</b> D. melanogaster <b>X:</b> Xenopus <b>Z:</b> zebrafish <b>B:</b> bovine <b>Dg:</b> dog <b>Pg:</b> pig <b>Sc:</b> S. cerevisiae <b>Ce:</b> C. elegans <b>Hr:</b> horse <b>GP:</b> Guinea Pig <b>Rab:</b> rabbit <b>All:</b> all species expected
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