



# Actinin- $\alpha$ 2 Monoclonal Antibody

<b>Catalog No</b>	BYab-16841
<b>Isotype</b>	IgG
<b>Reactivity</b>	Human;Rat;Bovine;Chicken;Dog;Pig;Zebrafish
<b>Applications</b>	WB;IF
<b>Gene Name</b>	ACTN2/ACTN3
<b>Protein Name</b>	Alpha-actinin-2
<b>Immunogen</b>	Purified recombinant human Actinin- $\alpha$ 2 (C-terminus) protein fragments expressed in E.coli.
<b>Specificity</b>	Actinin- $\alpha$ 2 Monoclonal Antibody detects endogenous levels of Actinin- $\alpha$ 2 protein.
<b>Formulation</b>	Purified mouse monoclonal in buffer containing 0.1M Tris-Glycine (pH 7.4, 150 mM NaCl) with 0.2% sodium azide, 50% glycerol.
<b>Source</b>	Monoclonal, Mouse
<b>Purification</b>	Affinity purification
<b>Dilution</b>	Western Blot: 1/1000 - 1/2000. Immunofluorescence: 1/100 - 1/500. Not yet tested in other applications.
<b>Concentration</b>	1 mg/ml
<b>Purity</b>	$\geq 90\%$
<b>Storage Stability</b>	-20°C/1 year
<b>Synonyms</b>	ACTN2; Alpha-actinin-2; Alpha-actinin skeletal muscle isoform 2; F-actin cross-linking protein
<b>Observed Band</b>	
<b>Cell Pathway</b>	Cytoplasm, myofibril, sarcomere, Z line . Colocalizes with MYOZ1 and FLNC at the Z-lines of skeletal muscle.
<b>Tissue Specificity</b>	Expressed in both skeletal and cardiac muscle.
<b>Function</b>	disease:Defects in ACTN2 are the cause of cardiomyopathy dilated type 1AA (CMD1AA) [MIM:612158]. Dilated cardiomyopathy is a disorder characterized by ventricular dilation and impaired systolic function, resulting in congestive heart failure and arrhythmia. Patients are at risk of premature death.,function:F-actin cross-linking protein which is thought to anchor actin to a variety of intracellular structures. This is a bundling protein.,similarity:Belongs to the alpha-actinin family.,similarity:Contains 1 actin-binding domain.,similarity:Contains 2 CH (calponin-homology) domains.,similarity:Contains 2 EF-hand domains.,similarity:Contains 4 spectrin repeats.,subcellular location:Colocalizes with MYOZ1 and FLNC at the Z-lines of skeletal muscle.,subunit:Homodimer;

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antiparallel. Also forms heterodimers with ACTN3. Interacts with ADAM12, MYOZ1, MYOZ2 and MYOZ3. Interacts via its C-terminal r

#### Background

Alpha actinins belong to the spectrin gene superfamily which represents a diverse group of cytoskeletal proteins, including the alpha and beta spectrins and dystrophins. Alpha actinin is an actin-binding protein with multiple roles in different cell types. In nonmuscle cells, the cytoskeletal isoform is found along microfilament bundles and adherens-type junctions, where it is involved in binding actin to the membrane. In contrast, skeletal, cardiac, and smooth muscle isoforms are localized to the Z-disc and analogous dense bodies, where they help anchor the myofibrillar actin filaments. This gene encodes a muscle-specific, alpha actinin isoform that is expressed in both skeletal and cardiac muscles. Several transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, May 2013],

#### matters needing attention

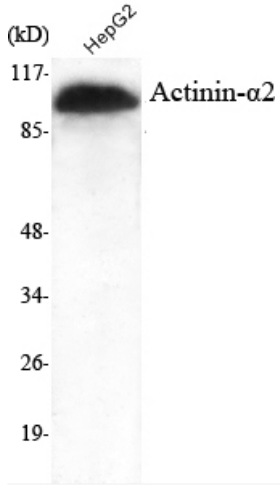
Avoid repeated freezing and thawing!

#### Usage suggestions

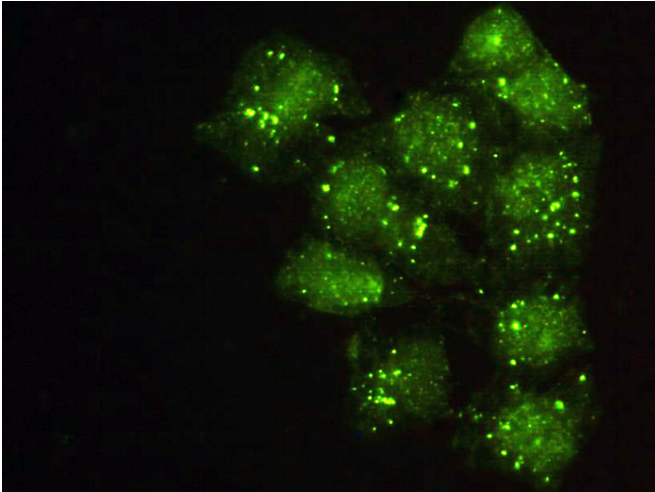
This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.



## Products Images



Western Blot analysis using Actinin- $\alpha$ 2 Monoclonal Antibody against HepG2 cell lysate.



Immunofluorescence analysis of HeLa cells using Actinin- $\alpha$ 2 Monoclonal Antibody.