

**Anti- $\alpha$ -Actinin 4 (N-terminal) Antibody**  
Catalog # AN1618**Specification****Anti- $\alpha$ -Actinin 4 (N-terminal) Antibody - Product Information**

Primary Accession	<a href="#">O43707</a>
Reactivity	Bovine
Host	Rabbit
Clonality	Rabbit Polyclonal
Isotype	IgG
Calculated MW	104854

**Anti- $\alpha$ -Actinin 4 (N-terminal) Antibody - Additional Information**

Gene ID	81
<b>Other Names</b>	
a-actinin 4, actinin alpha4	

**Target/Specificity**

$\alpha$ -Actinins are widely expressed cytoskeletal proteins that cross-link actin filaments through anti-parallel homodimers of the rod domains. Four  $\alpha$ -actinin genes have been discovered in humans with  $\alpha$ -actinin 1 and 4 being widely expressed in non-muscle cells.  $\alpha$ -Actinins contain three conserved domains that include an N-terminal actin binding domain, four spectrin-like repeats in the central region, and a C-terminal calmodulin binding domain.  $\alpha$ -Actinin cross-links the actin filament networks and associates the network to focal adhesion sites through binding of talin and vinculin.  $\alpha$ -Actinin 1 is phosphorylated at Tyr-12 by FAK, while  $\alpha$ -actinin 4 can be phosphorylated at Tyr-4 and Tyr-31 after EGF treatment. Tyr-4 and Tyr-31 phosphorylation inhibit actin binding and reduces actin-filament driven multi-nucleation in rat kidney cells. Thus, phosphorylation in  $\alpha$ -actinins may be important for regulating actin binding and actin cytoskeletal remodeling.

**Format**

Antigen Affinity Purified

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**Anti- $\alpha$ -Actinin 4 (N-terminal) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.**Shipping**

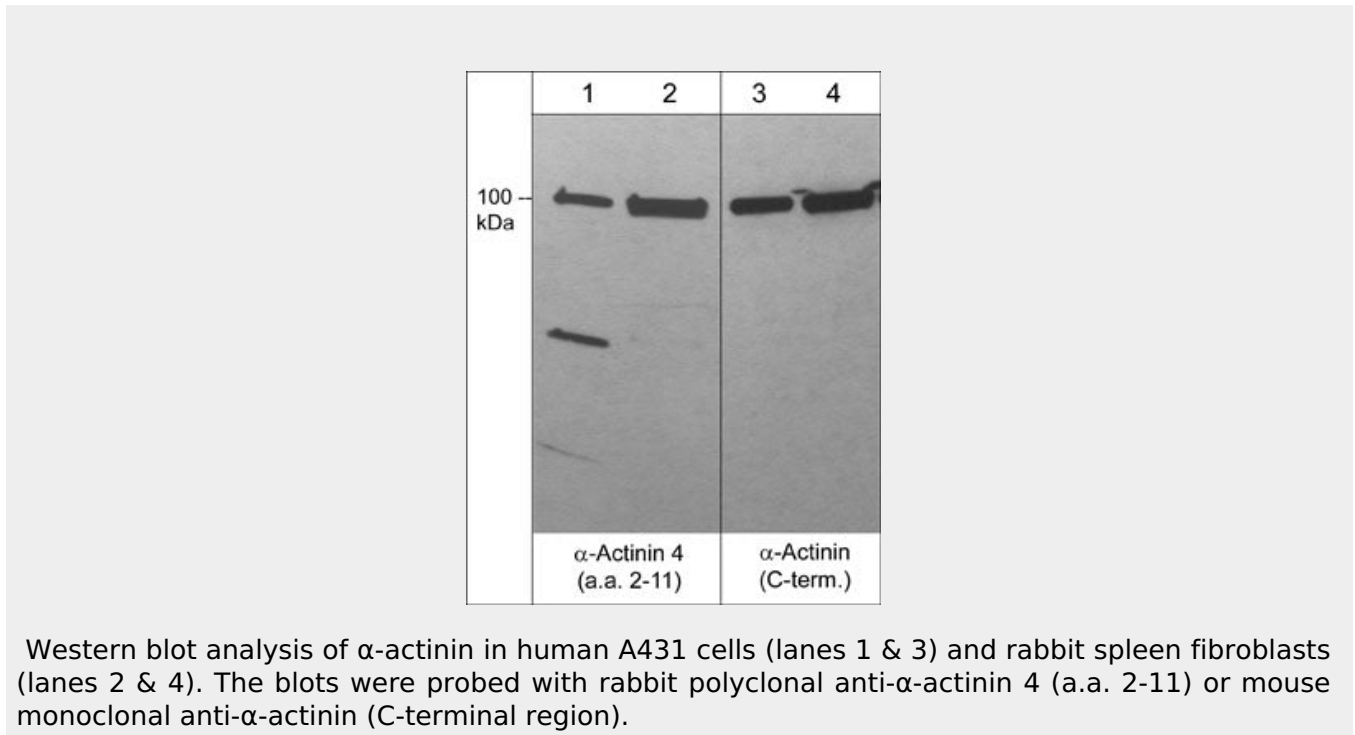
Blue Ice

**Anti- $\alpha$ -Actinin 4 (N-terminal) Antibody - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### Anti- $\alpha$ -Actinin 4 (N-terminal) Antibody - Images



Western blot analysis of  $\alpha$ -actinin in human A431 cells (lanes 1 & 3) and rabbit spleen fibroblasts (lanes 2 & 4). The blots were probed with rabbit polyclonal anti- $\alpha$ -actinin 4 (a.a. 2-11) or mouse monoclonal anti- $\alpha$ -actinin (C-terminal region).

### Anti- $\alpha$ -Actinin 4 (N-terminal) Antibody - Background

$\alpha$ -Actinins are widely expressed cytoskeletal proteins that cross-link actin filaments through anti-parallel homodimers of the rod domains. Four  $\alpha$ -actinin genes have been discovered in humans with  $\alpha$ -actinin 1 and 4 being widely expressed in non-muscle cells.  $\alpha$ -Actinins contain three conserved domains that include an N-terminal actin binding domain, four spectrin-like repeats in the central region, and a C-terminal calmodulin binding domain.  $\alpha$ -Actinin cross-links the actin filament networks and associates the network to focal adhesion sites through binding of talin and vinculin.  $\alpha$ -Actinin 1 is phosphorylated at Tyr-12 by FAK, while  $\alpha$ -actinin 4 can be phosphorylated at Tyr-4 and Tyr-31 after EGF treatment. Tyr-4 and Tyr-31 phosphorylation inhibit actin binding and reduces actin-filament driven multi-nucleation in rat kidney cells. Thus, phosphorylation in  $\alpha$ -actinins may be important for regulating actin binding and actin cytoskeletal remodeling.