

Anti- α -Actinin 4 (Tyr-4), Phosphospecific Antibody
Catalog # AN1619**Specification****Anti- α -Actinin 4 (Tyr-4), Phosphospecific Antibody - Product Information**

Primary Accession	O43707
Reactivity	Bovine
Host	Rabbit
Clonality	Rabbit Polyclonal
Isotype	IgG
Calculated MW	104854

Anti- α -Actinin 4 (Tyr-4), Phosphospecific Antibody - Additional Information

Gene ID	81
Other Names	
a-actinin 4, actinin alpha4	

Target/Specificity

α -Actinins are widely expressed cytoskeletal proteins that cross-link actin filaments through anti-parallel homodimers of the rod domains. Four α -actinin genes have been discovered in humans with α -actinin 1 and 4 being widely expressed in non-muscle cells. α -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. α -Actinin cross-links the actin filament networks and associates the network to focal adhesion sites through binding of talin and vinculin. α -Actinin 1 is phosphorylated at Tyr-12 by FAK, while α -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 α -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.

PrecautionsAnti- α -Actinin 4 (Tyr-4), Phosphospecific Antibody is for research use only and not for use in diagnostic or therapeutic procedures.**Shipping**

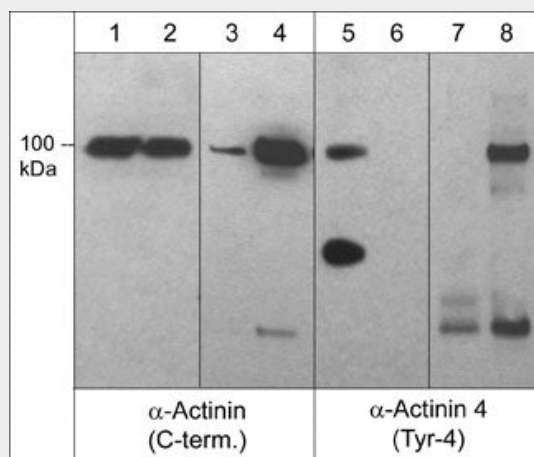
Blue Ice

Anti- α -Actinin 4 (Tyr-4), Phosphospecific 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- α -Actinin 4 (Tyr-4), Phosphospecific Antibody - Images



Western blot analysis of α -actinin 4 in A431 cells stimulated with pervanadate (1 mM) for 30 min (lanes 1,2,5,6) or after immunoprecipitation using α -actinin (C-terminal region) antibody in the absence (lanes 3 & 7) or presence of pervanadate-treated A431 cell lysate (lanes 4 & 8). Some lanes of the blot were treated with alkaline phosphatase (lanes 2 & 6). The blots were probed with anti- α -actinin (C-terminal region) or anti- α -actinin 4 (Tyr-4).

Anti- α -Actinin 4 (Tyr-4), Phosphospecific Antibody - Background

α -Actinins are widely expressed cytoskeletal proteins that cross-link actin filaments through anti-parallel homodimers of the rod domains. Four α -actinin genes have been discovered in humans with α -actinin 1 and 4 being widely expressed in non-muscle cells. α -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. α -Actinin cross-links the actin filament networks and associates the network to focal adhesion sites through binding of talin and vinculin. α -Actinin 1 is phosphorylated at Tyr-12 by FAK, while α -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 α -actinins may be important for regulating actin binding and actin cytoskeletal remodeling.