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Anti-α-Actinin 4 (N-terminal) Antibody

Catalog # AN1618

Product Information

Application	WB
Primary Accession	O43707
Host	Rabbit
Clonality	Rabbit Polyclonal
Isotype	IgG
Calculated MW	104854

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.
Dilution	WB~~1:1000
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-α-Actinin 4 (N-terminal) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.
Shipping	Blue Ice

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.