α-Actinin-4 polyclonal antibody

α-Actinin-4 is an actin-bundling protein of ~100kDa that is associated with cell motility, endocytosis, and cancer invasion. The α-actinin family comprises two non-muscle isoforms (α-actinin-1 and -4) and two skeletal muscle isoforms (α-actinin-2 and -3), with α-actinin-2 being also expressed in cardiac muscle. While α-actinin-4 is almost ubiquitously expressed, particularly high concentrations are found in glomeruli. On the subcellular level it is associated with actin stress fibers, but in certain cells it also localizes to the nucleus. Mutations in the α-actinin-4 gene cause an autosomal-dominant form of familial focal segmental glomerulosclerosis (FSGS), which is thought to result from a defect in glomerular podocyte function. A point mutation in the α-actinin-4 gene was found to generate an antigenic peptide that is recognized by autologous cytolytic T lymphocytes (CTL) on a human lung carcinoma. α-actinin-4 interacts with a variety of proteins, including the ring finger protein BERP, the PDZ-LIM protein CLP-36, the hemidesmosomal and cell-cell contact protein BP180, and the tight junction protein MAGI-1. Moreover, α-actinin-4 forms a ternary complex with Ca^{2+}/ Calmodulin-dependent protein kinase II and Densin-180, a protein of postsynaptic densities in CNS neurons. Ca^{2+}-dependent association of α-actinin-4 with E3KARP is required for Ca^{2+}-dependent inhibition of the Na^{+}/ H^{+}exchanger 3 (NHE3).

This antibody is covered by our Worry-Free Guarantee.

Citations: 27 View Online »

Ordering Information

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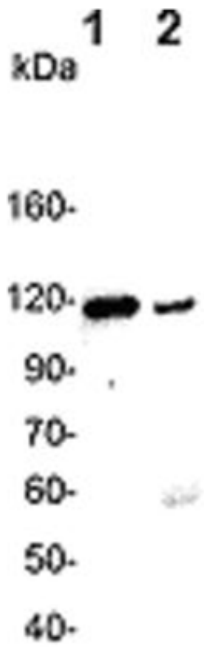
ALX-210-356-C050	50µg

Manuals, SDS & CofA

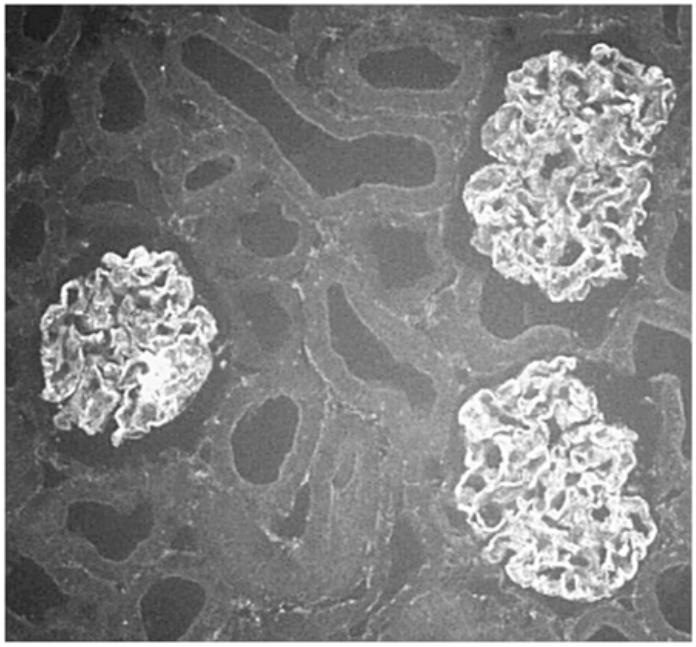
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Isoform and species cross-reactivity in immunoblots determined with solid phase bound synthetic peptides.
Spot 1: QTNDYMQPEEDWD – Actinin-1 (human, mouse, rat, chicken)
Spot 2: DEDEYMIQEEEWD – Actinin-2 (human, mouse)
Spot 3: GGGEYMEQEEDWD – Actinin-3 (human, mouse, rat)
Spot 4: SMGDYMAQEDDWD – Actinin-4 (human, mouse, rat)
Spot 5: GMGDYMRPGGDWD- Actinin-4 variant (rat)
Spot 6: MDAWYSDEQMDGD – Control scrambled Actinin-4 peptide



Western blot of mouse kidney (lane 1) and brain (lane 2) using PAb to α-Actinin-4 (Prod. No. ALX-210-356).



Immunohistochemistry of actinin-4 distribution in rat kidney using PAb to α-Actinin-4 (Prod. No. ALX-210-356).

Handling & Storage

Handling	Avoid freeze/thaw cycles.
Short Term Storage	+4°C
Long Term Storage	-20°C
Shipping	Blue Ice

Regulatory Status

RUO - Research Use Only

Product Details

Application	IHC (FS), IHC (PS), IP, WB
Crossreactivity	Does not cross-react with actinin-1, -2 or -3.
Formulation	Liquid. In PBS containing 1mg/ml BSA and 0.01% sodium azide.
Host	Rabbit
Immunogen	Synthetic peptide corresponding to aa 28-38 (M28GDYMAQEDDW38) of human and rat actinin-4 and to aa 29-39 of mouse actinin-4.
Purity Detail	Epitope-affinity purified.
Recommendation Dilutions/Conditions	Immunohistochemistry (frozen sections, 1µg/ml)Immunoprecipitation (25µg/ml)Western Blot (0.1-0.25µg/ml). The recommended dilutions refer to the analysis of mouse cells and tissues with intermediate levels of actinin-4 expression and must be viewed as approximateSuggested dilutions/conditions may not be available for all applications.Optimal conditions must be determined individually for each application.
Species Reactivity	Chinese hamster, Human, Mouse, Porcine, Rat
UniProt ID	O43707 (human)
Worry-free Guarantee	**This antibody is covered by our Worry-Free Guarantee .**

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