

α -actinin-4 (K-14): sc-49332

BACKGROUND

The spectrin gene family encodes a diverse group of cytoskeletal proteins that include spectrins, dystrophins and α -actinins. There are four tissue-specific α -actinins, namely α -actinin-1, α -actinin-2, α -actinin-3 and α -actinin-4, which are localized to muscle and non-muscle cells, including skeletal, cardiac and smooth muscle cells, as well as within the cytoskeleton. Each α -actinin protein contains one actin-binding domain, two calponin-homology domains, two EF-hand domains and four spectrin repeats, through which they function as bundling proteins that can cross-link F-actin, thus anchoring actin to a variety of intracellular structures. Defects in the gene encoding α -actinin-4 are the cause of focal segmental glomerulosclerosis 1 (FSGS1), a common renal lesion characterized by decreasing kidney function and, ultimately, renal failure.

CHROMOSOMAL LOCATION

Genetic locus: ACTN4 (human) mapping to 19q13.2; Actn4 (mouse) mapping to 7 A3.

SOURCE

α -actinin-4 (K-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of α -actinin-4 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-49332 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

α -actinin-4 (K-14) is recommended for detection of α -actinin-4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

α -actinin-4 (K-14) is also recommended for detection of α -actinin-4 in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for α -actinin-4 siRNA (h): sc-43101, α -actinin-4 siRNA (m): sc-43102, α -actinin-4 shRNA Plasmid (h): sc-43101-SH, α -actinin-4 shRNA Plasmid (m): sc-43102-SH, α -actinin-4 shRNA (h) Lentiviral Particles: sc-43101-V and α -actinin-4 shRNA (m) Lentiviral Particles: sc-43102-V.

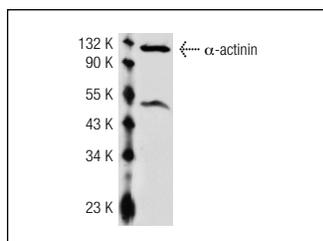
Molecular Weight of α -actinin-4: 105 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, HeLa whole cell lysate: sc-2200 or HeLa nuclear extract: sc-2120.

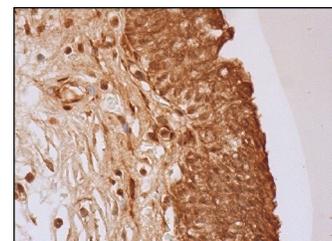
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



α -actinin-4 (K-14): sc-49332. Western blot analysis of α -actinin-4 expression in NIH/3T3 whole cell lysate.



α -actinin-4 (K-14): sc-49332. Immunoperoxidase staining of formalin fixed, paraffin-embedded human urinary bladder tissue showing cytoplasmic and nuclear staining of urothelial cells.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

MONOS
Satisfaction
Guaranteed

Try α -actinin-4 (G-4): sc-390205 or α -actinin-4 (D-3): sc-398088, our highly recommended monoclonal alternatives to α -actinin-4 (K-14).