SANTA CRUZ BIOTECHNOLOGY, INC.

α-actinin-2 (A-25): sc-130928

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

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.

REFERENCES

1. Youssoufian, H., et al. 1990. Cloning and chromosomal localization of the human cytoskeletal α-actinin gene reveals linkage to the β-spectrin gene. Am. J. Hum. Genet. 47: 62-71.
2. Nishiyama, M., et al. 1990. Expression of human α-actinin in human hepatocellular carcinoma. Cancer Res. 50: 6291-6294.

CHROMOSOMAL LOCATION

Genetic locus: ACTN2 (human) mapping to 1q43; Actn2 (mouse) mapping to 13 A1.

SOURCE

α-actinin-2 (A-25) is a Protein A purified rabbit polyclonal antibody raised against synthetic α-actinin-2 peptide of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

APPLICATIONS

α-actinin-2 (A-25) is recommended for detection of α-actinin-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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). Suitable for use as control antibody for α-actinin-2 siRNA (h): sc-43097, α-actinin-2 siRNA (m): sc-43098, α-actinin-2 shRNA Plasmid (h): sc-43097-SH, α-actinin-2 shRNA Plasmid (m): sc-43098-SH, α-actinin-2 shRNA (h) Lentiviral Particles: sc-43097-V and α-actinin-2 shRNA (m) Lentiviral Particles: sc-43098-V.

Molecular Weight (predicted) of α-actinin-2: 103 kDa.

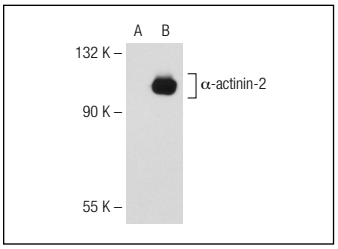
Molecular Weight (observed) of α-actinin-2: 100-113 kDa.

Positive Controls: α-actinin-2 (h2): 293T Lysate: sc-116257 or human fetal heart tissue.

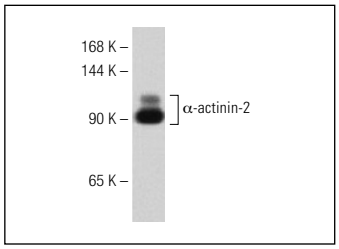
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



α-actinin-2 (A-25): sc-130928. Western blot analysis of α-actinin-2 expression in non-transfected: sc-117752 (**A**) and human α-actinin-2 transfected: sc-116257 (**B**) 293T whole cell lysates.



α-actinin-2 (A-25): sc-130928. Western blot analysis of α-actinin-2 expression in human fetal heart tissue extract.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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