SANTA CRUZ BIOTECHNOLOGY, INC.

ANKFN1 (Y-13): sc-103385

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Ankyrins are membrane adaptor molecules that play important roles in coupling integral membrane proteins to the spectrin-based cytoskeleton network. Mutations of ankyrin genes lead to severe genetic diseases such as fatal cardiac arrhythmias and hereditary spherocytosis. The fibronectin type III domain (FNIII) is a small autonomous folding unit which occurs in many mammalian proteins involving in ligand binding. Tandem repeats of the FNIII domain contain binding sites for DNA, heparin and the cell surface. ANKFN1 (ankyrin repeat and fibronectin type-III domain-containing protein 1) is a 763 amino acid protein that contains 2 ANK repeats and one fibronectin type-III domain.

REFERENCES

1. Bennett, V., Baines, A.J. and Davis, J.Q. 1985. Ankyrin and synapsin: spectrin-binding proteins associated with brain membranes. J. Cell. Biochem. 29: 157-169.
2. Koide, A., Bailey, C.W., Huang, X. and Koide, S. 1998. The fibronectin type III domain as a scaffold for novel binding proteins. J. Mol. Biol. 284: 1141-1151.
3. Hryniewicz-Jankowska, A., Czogalla, A., Bok, E. and Sikorsk, A.F. 2002. Ankyrins, multifunctional proteins involved in many cellular pathways. Folia Histochem. Cytobiol. 40: 239-249.
4. Hopitzan, A.A., Baines, A.J. and Kordeli, E. 2006. Molecular evolution of ankyrin: gain of function in vertebrates by acquisition of an Obscurin/Titin-binding-related domain. Mol. Biol. Evol. 23: 46-55.
5. Cai, X. and Zhang, Y. 2006. Molecular evolution of the ankyrin gene family. Mol. Biol. Evol. 23: 550-558.
6. Siggers, K., Soto, C. and Palmer, A.G. 2007. Conformational dynamics in loop swap mutants of homologous fibronectin type III domains. Biophys. J. 93: 2447-2456.
7. Zheng, Z., Zheng, H. and Yan, W. 2007. FANK1 is a testis-specific gene encoding a nuclear protein exclusively expressed during the transition from the meiotic to the haploid phase of spermatogenesis. Gene Expr. Patterns 7: 777-783.

CHROMOSOMAL LOCATION

Genetic locus: ANKFN1 (human) mapping to 17q22; Ankfn1 (mouse) mapping to 11 C.

SOURCE

ANKFN1 (Y-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of ANKFN1 of human origin.

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.

PRODUCT

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

Blocking peptide available for competition studies, sc-103385 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ANKFN1 (Y-13) is recommended for detection of ANKFN1 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

ANKFN1 (Y-13) is also recommended for detection of ANKFN1 in additional species, including equine, canine, porcine and avian.

Suitable for use as control antibody for ANKFN1 siRNA (h): sc-94060, ANKFN1 siRNA (m): sc-105062, ANKFN1 shRNA Plasmid (h): sc-94060-SH, ANKFN1 shRNA Plasmid (m): sc-105062-SH, ANKFN1 shRNA (h) Lentiviral Particles: sc-94060-V and ANKFN1 shRNA (m) Lentiviral Particles: sc-105062-V.

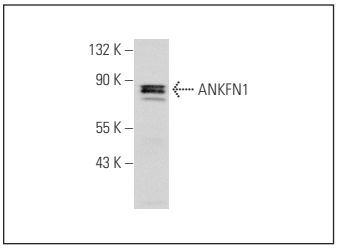
Molecular Weight of ANKFN1: 87 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

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.

DATA



ANKFN1 (Y-13): sc-103385. Western blot analysis of ANKFN1 expression in HeLa whole cell lysate.

PROTOCOLS

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