SANTA CRUZ BIOTECHNOLOGY, INC.

FXYD4 (C-15): sc-323897

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The human FXYD4 (CHIF, channel-inducing factor) (pronounced fix-id) gene maps to chromosome 10q11.1 and encodes a modulator of Na^+,K^+-ATPase (NKA) function in renal tissue. The mammalian FXYD family FXYD1-FXYD7 maintains Na^+ and K^+ gradients between the intracellular and extracellular milieus of cells in processes such as renal Na^+-reabsorption, muscle contraction, and neuronal excitability. FXYDs are single-span membrane proteins that share a 35-amino acid signature domain, beginning with the sequence PFXYD and containing 7 invariant and 6 conserved amino acids. Other members of the FXYD family include FXYD1 (PLM, phospholemman), FXYD2 (γ), FXYD3 (Mat8, mammary tumor protein), and FXYD5 (RIC).

REFERENCES

1. Sweadner, K.J., et al. 2000. The FXYD gene family of small ion transport regulators or channels: cDNA sequence, protein signature sequence, and expression. Genomics 68: 41-56.
2. Beguin, P., et al. 2001. CHIF, a member of the FXYD protein family, is a regulator of Na,K-ATPase distinct from the gamma-subunit. EMBO J. 20: 3993-4002.
3. Crambert, G., et al. 2002. Phospholemman (FXYD1) associates with Na,K-ATPase and regulates its transport properties. Proc. Natl. Acad. Sci. USA 99: 11476-11481.
4. Crambert, G., et al. 2003. FXYD proteins: new tissue-specific regulators of the ubiquitous Na,K-ATPase. Sci. STKE 2003: RE1.
5. Lindzen, M., et al. 2003. Structure-function relations of interactions between Na, K-ATPase, the γ subunit and CHIF. J. Biol. Chem. 278: 18738-18743.
6. Crowell, K.J., et al. 2003. Expression and characterization of the FXYD ion transport regulators for NMR structural studies in lipid micelles and lipid bilayers. Biochim. Biophys. Acta 1645: 15-21.
7. LocusLink Report (LocusID: 486). http://www.ncbi.nlm.nih.gov/LocusLink/

CHROMOSOMAL LOCATION

Genetic locus: FXYD4 (human) mapping to 10q11.21.

SOURCE

FXYD4 (C-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of FXYD4 of human origin.

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-323897 P, (100 µg 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

FXYD4 (C-15) is recommended for detection of FXYD4 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with other FXYD family members.

Suitable for use as control antibody for FXYD4 siRNA (h): sc-90337, FXYD4 shRNA Plasmid (h): sc-90337-SH and FXYD4 shRNA (h) Lentiviral Particles: sc-90337-V.

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) 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.

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.