SANTA CRUZ BIOTECHNOLOGY, INC.

FXYD3 (R-20): sc-50233

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The mammalian FXYD family 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 seven invariant and six conserved amino acids. Members of the FXYD family include FXYD1 (PLM, phospholemman), FXYD2 (the γ subunit of the Na/K-ATPase), FXYD3 (Mat8, mammary tumor protein), FXYD4 (CHIF) and FXYD5 (RIC). FXYD3, a 67 amino acid protein, may act as a chloride channel or as a chloride channel regulator. It is expressed in a subset of human breast tumors and shows partial homology to FXYD1. FXYD3 has a putative 20 amino acid leader sequence and a putative transmembrane domain (with two cysteine residues). It contains no consensus phosphorylation sites in the cytoplasmic domain.

REFERENCES

1. Morrison, B.W. and Leder, P. 1994. Neu and Ras initiate murine mammary tumors that share genetic markers generally absent in c-Myc and Int-2-initiated tumors. Oncogene 9: 3417-3426.
2. Morrison, B.W., Moorman, J.R., Kowdley, G.C., Kobayashi, Y.M., Jones, L.R. and Leder, P. 1995. Mat-8, a novel phospholemman-like protein expressed in human breast tumors, induces a chloride conductance in *Xenopus* oocytes. J. Biol. Chem. 270: 2176-2182.
3. Sweadner, K.J. and Rael, E. 2000. The FXYD gene family of small ion transport regulators or channels: cDNA sequence, protein signature sequence, and expression. Genomics 68: 41-56.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 604996. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Crambert, G., Li, C., Claeys, D. and Geering, K. 2005. FXYD3 (Mat-8), a new regulator of Na/K-ATPase. Mol. Biol. Cell 16: 2363-2371.

CHROMOSOMAL LOCATION

Genetic locus: Fxyd3 (mouse) mapping to 7 B1.

SOURCE

FXYD3 (R-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of FXYD3 of rat 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-50233 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

FXYD3 (R-20) is recommended for detection of FXYD3 of mouse and rat 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); may cross-react with FXYD4.

FXYD3 (R-20) is also recommended for detection of FXYD3 in additional species, including canine and porcine.

Suitable for use as control antibody for FXYD3 siRNA (m): sc-60666, FXYD3 shRNA Plasmid (m): sc-60666-SH and FXYD3 shRNA (m) Lentiviral Particles: sc-60666-V.

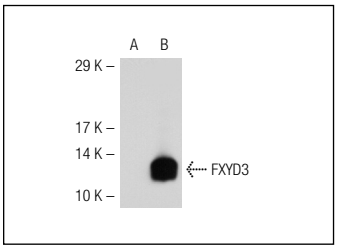
Molecular Weight of FXYD3: 8 kDa.

Positive Controls: FXYD3 (m): 293T Lysate: sc-126876.

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



FXYD3 (R-20): sc-50233. Western blot analysis of FXYD3 expression in non-transfected: sc-117752 (**A**) and mouse FXYD3 transfected: sc-126876 (**B**) 293T whole cell lysates.

STORAGE

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