

FXYD3 (M-20): sc-50231

BACKGROUND

The mammalian FXYD family maintains Na⁺ and K⁺ gradients between the intracellular and extracellular milieu 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. 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 2 cysteine residues). It contains no consensus phosphorylation sites in the cytoplasmic domain.

REFERENCES

- 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.
- 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.
- 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.
- 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/>
- 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.
- Arimochi, J., Kobayashi, A. and Maeda, M. 2005. Stable expression and visualization of Mat-8 (FXYD-3) tagged with a fluorescent protein in Chinese hamster ovary (CHO)-K1 cells. *Biotechnol. Lett.* 27: 1017-1024.
- Kayed, H., Kleeff, J., Kolb, A., Ketterer, K., Keleg, S., Felix, K., Giese, T., Penzel, R., Zentgraf, H., Buchler, M.W., Korc, M. and Friess, H. 2006. FXYD3 is overexpressed in pancreatic ductal adenocarcinoma and influences pancreatic cancer cell growth. *Int. J. Cancer* 118: 43-54.

CHROMOSOMAL LOCATION

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

SOURCE

FXYD3 (M-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of FXYD3 of mouse origin.

RESEARCH USE

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

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-50231 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

FXYD3 (M-20) is recommended for detection of FXYD3 of mouse 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) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500); may cross-react with FXYD4.

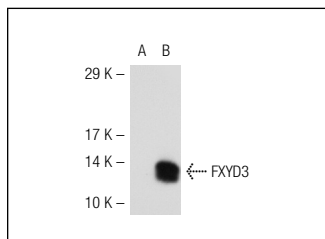
FXYD3 (M-20) is also recommended for detection of FXYD3 in additional species, including porcine.

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.

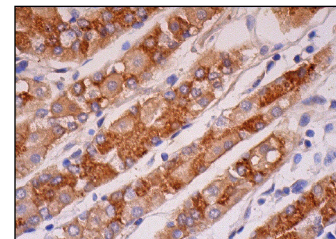
Molecular Weight of FXYD3: 8 kDa.

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

DATA



FXYD3 (M-20): sc-50231. Western blot analysis of FXYD3 expression in non-transfected: sc-117752 (A) and mouse FXYD3 transfected: sc-126876 (B) 293T whole cell lysates.



FXYD3 (M-20): sc-50231. Immunoperoxidase staining of formalin fixed, paraffin-embedded lower stomach tissue showing cytoplasmic and membrane staining of glandular 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
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Try **FXYD3 (B-3): sc-393639** or **FXYD3 (B-8): sc-271628**, our highly recommended monoclonal alternatives to FXYD3 (M-20).