

FXYD3 (m): 293T Lysate: sc-126876

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 PFXVD 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. Mat8, 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, OMIMTM. 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 (Mat8), a new regulator of Na,K-ATPase. *Mol. Biol. Cell* 16: 2363-2371.
6. Arimochi, J., Kobayashi, A. and Maeda, M. 2005. Stable expression and visualization of Mat8 (FXVD3) tagged with a fluorescent protein in Chinese hamster ovary (CHO)-K1 cells. *Biotechnol. Lett.* 27: 1017-1024.
7. Kayed, H., Kleeff, J., Kolb, A., Ketterer, K., Keleg, S., Felix, K., Giese, T., Penzel, R., Zentgraf, H., Büchler, 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.

PRODUCT

FXVD3 (m): 293T Lysate represents a lysate of mouse FXYD3 transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

FXVD3 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive FXYD3 antibodies. Recommended use: 10-20 μ l per lane.

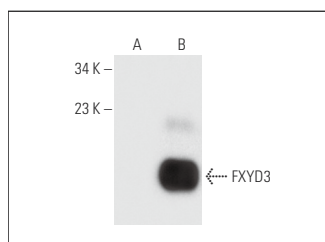
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

FXVD3 (A-3): sc-271629 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse FXYD3 expression in FXYD3 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

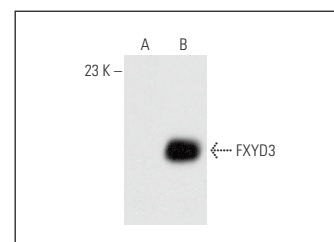
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz MarkerTM Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



FXVD3 (A-3): sc-271629. Western blot analysis of FXYD3 expression in non-transfected: sc-117752 (A) and mouse FXYD3 transfected: sc-126876 (B) 293T whole cell lysates.



FXVD3 (B-8): sc-271628. Western blot analysis of FXYD3 expression in non-transfected: sc-117752 (A) and mouse FXYD3 transfected: sc-126876 (B) 293T whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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