

## FXYD3 (P-18): sc-50232

### BACKGROUND

The mammalian FXYD family maintains Na<sup>+</sup> and K<sup>+</sup> gradients between the intracellular and extracellular milieu of cells in processes such as renal Na<sup>+</sup>-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  $\gamma$  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 (rat) mapping to 1q21.

### SOURCE

FXYD3 (P-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of FXYD3 of rat origin.

### STORAGE

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

### PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-50232 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

FXYD3 (P-18) is recommended for detection of FXYD3 of rat 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); may cross-react with FXYD4, 5 and 6.

FXYD3 (P-18) is also recommended for detection of FXYD3 in additional species, including equine, canine, bovine and porcine.

Molecular Weight of FXYD3: 8 kDa.

### 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.

### RESEARCH USE

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

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.


 MONOS  
Satisfation  
Guaranteed

Try **FXYD3 (B-3): sc-393639** or **FXYD3 (B-8): sc-271628**, our highly recommended monoclonal alternatives to FXYD3 (P-18).