

FXYD3 (A-8): sc-271808

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 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

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- 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.
- 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 (Mat8), a new regulator of Na,K-ATPase. *Mol. Biol. Cell* 16: 2363-2371.

CHROMOSOMAL LOCATION

Genetic locus: FXYD3 (human) mapping to 19q13.12.

SOURCE

FXYD3 (A-8) is a mouse monoclonal antibody raised against amino acids 1-87 representing full length FXYD3 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

FXYD3 (A-8) is available conjugated to agarose (sc-271808 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271808 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271808 PE), fluorescein (sc-271808 FITC), Alexa Fluor® 488 (sc-271808 AF488), Alexa Fluor® 546 (sc-271808 AF546), Alexa Fluor® 594 (sc-271808 AF594) or Alexa Fluor® 647 (sc-271808 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271808 AF680) or Alexa Fluor® 790 (sc-271808 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

FXYD3 (A-8) is recommended for detection of FXYD3 of human origin by Western Blotting (starting dilution 1:100, 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for FXYD3 siRNA (h): sc-60665, FXYD3 shRNA Plasmid (h): sc-60665-SH and FXYD3 shRNA (h) Lentiviral Particles: sc-60665-V.

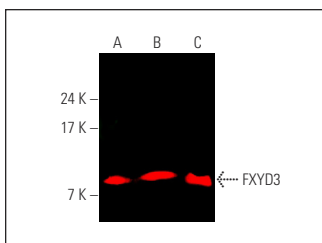
Molecular Weight of FXYD3: 8 kDa.

Positive Controls: SK-BR-3 cell lysate: sc-2218, A-431 whole cell lysate: sc-2201 or MCF7 whole cell lysate: sc-2206.

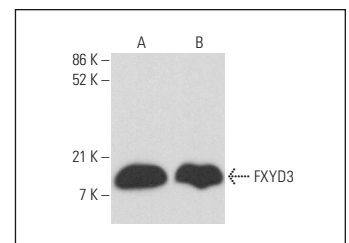
RECOMMENDED SUPPORT REAGENTS

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 Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



FXYD3 (A-8): sc-271808. Near-infrared western blot analysis of FXYD3 expression in MCF7 (A), LNCaP (B) and A-431 (C) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgG κ BP-CFL 790: sc-516181.



FXYD3 (A-8): sc-271808. Western blot analysis of FXYD3 expression in A-431 (A) and SK-BR-3 (B) 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.

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.

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