

## FXYP2 (M-14): sc-26100

### BACKGROUND

The human FXYP2 (pronounced fix-id) gene maps to chromosome 11q23 and encodes the  $\gamma$  subunit of Na/K-ATPase (NKA). FXYP2  $\gamma$  subunit modulates NKA activity by inducing ion channel activity. The mammalian FXYP family maintains Na<sup>+</sup> and K<sup>+</sup> gradients between the intracellular and extracellular milieus of cells in processes such as renal Na<sup>+</sup>-reabsorption, muscle contraction, and neuronal excitability. FXYPs are single-span membrane proteins that share a 35 amino acid signature domain, beginning with the sequence PFXYP and containing seven invariant and 6 conserved amino acids. Other members of the FXYP family include FXYP1 (PLM, phospholemman), FXYP3 (Mat8, mammary tumor protein 8), FXYP4 (CHIF) and FXYP5 (RIC).

### REFERENCES

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2. Beguin, P., Crambert, G., Guennoun, S., Garty, H., Horisberger, J.D. and Geering, K. 2001. CHIF, a member of the FXYP protein family, is a regulator of Na/K-ATPase distinct from the  $\gamma$  subunit. *EMBO J.* 20: 3993-4002.
3. Crambert, G., Fuzesi, M., Garty, H., Karlsh, S. and Geering, K. 2002. Phospholemman (FXYP1) associates with Na/K-ATPase and regulates its transport properties. *Proc. Natl. Acad. Sci. USA* 99: 11476-11481.
4. Crambert, G. and Geering, K. 2003. FXYP proteins: new tissue-specific regulators of the ubiquitous Na/K-ATPase. *Sci. STKE* 2003: RE1.
5. Crowell, K.J., Franzin, C.M., Koltay, A., Lee, S., Lucchese, A.M., Snyder, B.C. and Marassi, F.M. 2003. Expression and characterization of the FXYP ion transport regulators for NMR structural studies in lipid micelles and lipid bilayers. *Biochim. Biophys. Acta* 1645: 15-21.
6. Lindzen, M., M., Aizman, R., Lifshitz, Y., Lubarski, I., Karlsh, S.J. and Garty, H. 2003. Structure-function relations of interactions between Na/K-ATPase, the  $\gamma$  subunit and CHIF. *J. Biol. Chem.* 278: 18738-18743.
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### CHROMOSOMAL LOCATION

Genetic locus: Fxyd2 (mouse) mapping to 9 A5.2.

### SOURCE

FXYP2 (M-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of FXYP2 of mouse origin.

### 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-26100 P, (100  $\mu$ g 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

FXYP2 (M-14) is recommended for detection of FXYP2 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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).

FXYP2 (M-14) is also recommended for detection of FXYP2 in additional species, including canine.

Suitable for use as control antibody for FXYP2 siRNA (m): sc-42423, FXYP2 shRNA Plasmid (m): sc-42423-SH and FXYP2 shRNA (m) Lentiviral Particles: sc-42423-V.

Molecular Weight of FXYP2: 7 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<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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<sup>™</sup> Mounting Medium: sc-24941.

### 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](http://www.scbt.com) or our catalog for detailed protocols and support products.