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FXYD7 Antibody

Catalog # ASC11369

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	P58549
Other Accession	AAH18619, 11612659
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	8524
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	FXYD7 antibody can be used for detection of FXYD7 by Western blot at 1 g/mL. Antibody can also be used for immunohistochemistry starting at 2.5 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	53822
Other Names	FXYD domain-containing ion transport regulator 7, FXYD7
Target/Specificity	FXYD7; FXYD7 antibody is human, mouse and rat reactive. FXYDY7 antibody is predicted to not react with other members of the FXDY protein family
Reconstitution & Storage	FXYD7 antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	FXYD7 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	FXYD7
Function	Associates with and regulates the activity of the sodium/potassium-transporting ATPase (NKA) which catalyzes the hydrolysis of ATP coupled with the exchange of Na(+) and K(+) ions across the plasma membrane (PubMed:33231612). Reduces the apparent affinity for external K(+), an effect that depends on the presence of external Na(+) and voltage (PubMed:33231612). Increases the apparent affinity for intracellular Na(+) (PubMed:33231612).
Cellular Location	Cell membrane {ECO:0000250|UniProtKB:P59648}; Single-pass type I

membrane protein {ECO:0000250|UniProtKB:P59648} Note=Able to translocate to the plasma membrane independent of its association with NKA (in vitro). {ECO:0000250|UniProtKB:P59649}

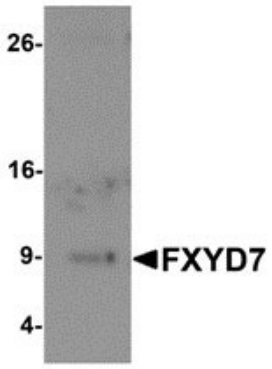
Background

FXYD7 Antibody: FXYD7 is a member of a family of small membrane proteins that share a 35-amino acid signature sequence domain, beginning with the sequence PFXYD and containing seven invariant and six highly conserved amino acids. The FXYD proteins are tissue-specific regulators of Na, K-ATPase, with FXYD7 initially identified as a brain-specific member. FXYD7 interacts with Na, K-ATPase through its transmembrane domain and is thought to influence the affinity of Na, K-ATPase for external K+ and Na+ ions. Other members of the FXDY family have similar functions: FXYD2 regulates the properties of Na, K-ATPase, while FXYD1 (phospholemman), FXYD3 (MAT-8), FXYD4 (CHIF), and FXYD5 (RIC) have been shown to induce channel activity in experimental expression systems.

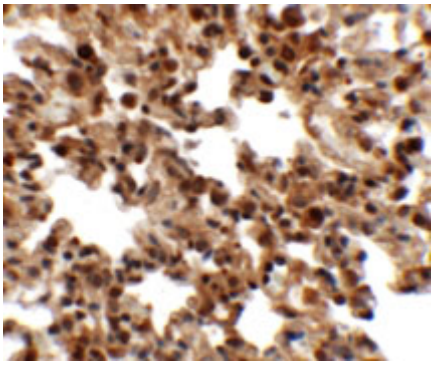
References

Beguin P, Crambert G, Monnet-Tschudi F, et al. FXYD7 is a brain-specific regulator of Na,K-ATPase alpha1-beta isozymes. EMBO J. 2002; 21:3264-73
Crambert G and Geering K. FXYD proteins: new tissue-specific regulators of the ubiquitous Na,K-ATPase. Sci. STKE 2003; 2003 (166):RE1.
Li C, Crambert G, Thuillard D, et al. role of the transmembrane domain of FXDY7 in structural and functional interactions with Na,K-ATPase. J. Biol. Chem. 2005; 280:42738-43.

Images

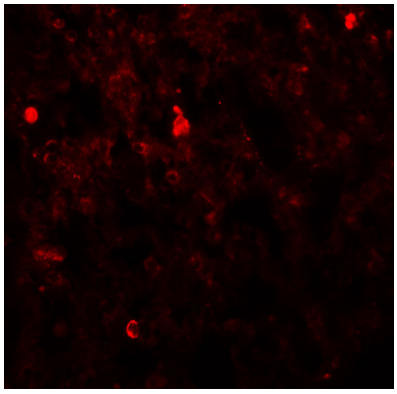


Western blot analysis of FXYD7 in human lung tissue lysate with FXYD7 antibody at 1 µg/mL.



Immunohistochemistry of FXYD7 in rat lung tissue with FXYD7 antibody at 2.5 µg/mL.

Immunofluorescence of FXYD4 in rat lung tissue with FXYD4 antibody at 20 µg/mL.



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