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FXYP7 siRNA (m): sc-145281

BACKGROUND

The mammalian FXYP 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. FXYPs are single-span membrane proteins that share a 35 amino acid signature domain, beginning with the sequence PFXYP and containing seven invariant and six conserved amino acids. Members of the FXYP family include phospholemman (FXYP1), FXYP2 (the γ subunit of the Na⁺/K⁺-ATPase), FXYP3 (Mat8 or mammary tumor protein), FXYP4 (CHIF) and Dysadherin (FXYP5). FXYP7 (FXYP domain containing ion transport regulator 7) is an 80 amino acid single-pass membrane protein that likely functions as an ion channel. FXYP7 may also have a regulatory function in brain, which is where it is primarily expressed. FXYP7 contains two conserved glycine residues and a transmembrane (TM) domain important for interaction with Na⁺/K⁺-ATPase.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Fxyd7 (mouse) mapping to 7 B1.

PROTOCOLS

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

PRODUCT

FXYP7 siRNA (m) is a target-specific 19-25 nt siRNA designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see FXYP7 shRNA Plasmid (m): sc-145281-SH and FXYP7 shRNA (m) Lentiviral Particles: sc-145281-V as alternate gene silencing products.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

FXYP7 siRNA (m) is recommended for the inhibition of FXYP7 expression in mouse cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 μ M in 66 μ l. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor FXYP7 gene expression knockdown using RT-PCR Primer: FXYP7 (m)-PR: sc-145281-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

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