

PCSK1N siRNA (m): sc-152119

BACKGROUND

PCSK1N (proprotein convertase subtilisin/kexin type 1 inhibitor), also known as SAAS or PROSAAS, is a 260 amino acid protein that is both secreted and localized to the *trans*-Golgi network. Expressed in pancreas and brain, PCSK1N is thought to play a role in the control of the neuroendocrine secretory pathway and may also be involved in PCSK1 inhibition. The gene encoding PCSK1N maps to human chromosome X, which contains nearly 153 million base pairs and houses over 1,000 genes. In conjunction with chromosome Y, chromosome X is responsible for sex determination, as an X and a Y chromosome lead to normal male development, while two copies of an X chromosome lead to normal female development. There are a number of conditions related to an abnormal number and combination of sex chromosomes, some of which include Turner's syndrome, color blindness, hemophilia and Duchenne muscular dystrophy.

REFERENCES

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2. Basak, A., et al. 2001. Inhibitory specificity and potency of PROSAAS-derived peptides toward proprotein convertase 1. *J. Biol. Chem.* 276: 32720-32728.
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4. Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 300399. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Kikuchi, K., et al. 2003. An N-terminal fragment of PROSAAS (a granin-like neuroendocrine peptide precursor) is associated with Tau inclusions in Pick's disease. *Biochem. Biophys. Res. Commun.* 308: 646-654.
6. Wada, M., et al. 2004. A human granin-like neuroendocrine peptide precursor (PROSAAS) immunoreactivity in Tau inclusions of Alzheimer's disease and Parkinsonism-dementia complex on Guam. *Neurosci. Lett.* 356: 49-52.
7. Chakraborty, T.R., et al. 2006. Quantification of VGF- and PROSAAS-derived peptides in endocrine tissues and the brain, and their regulation by diet and cold stress. *Brain Res.* 1089: 21-32.

CHROMOSOMAL LOCATION

Genetic locus: Pcsk1n (mouse) mapping to X A1.1.

PRODUCT

PCSK1N 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 PCSK1N shRNA Plasmid (m): sc-152119-SH and PCSK1N shRNA (m) Lentiviral Particles: sc-152119-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

PCSK1N siRNA (m) is recommended for the inhibition of PCSK1N 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.

GENE EXPRESSION MONITORING

PCSK1N (D-11): sc-398295 is recommended as a control antibody for monitoring of PCSK1N gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

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) 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor PCSK1N gene expression knockdown using RT-PCR Primer: PCSK1N (m)-PR: sc-152119-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.