SANTA CRUZ BIOTECHNOLOGY, INC.

secretin siRNA (m): sc-39535

BACKGROUND

Secretin is a 27-amino acid hormone produced by specific endocrine cells, S cells, located in the mucosa of the proximal small intestine. Secretin is known to be a potent stimulus for the secretion of bicarbonate-rich pancreatic juice. Secretion of secretin is stimulated by the presence of either acidic pH or fatty acids in the duodenum. Secretin is synthesized as a larger precursor. The deduced amino acid sequence includes a signal peptide, an amino-terminal peptide, secretin itself, and a 72-amino acid carboxy-terminal peptide. Secretin stimulates ductal bile secretion by directly interacting with cholangiocytes. It stimulates exocytosis in cholangiocytes, which transport water mainly via the water channel aquaporin-1. Secretin deficiency may be implicated in autistic syndrome, suggesting that the hormone could have a neuroendocrine function in addition to its role in digestion. The gene which encodes secretin maps to human chromosome 11p15.5.

REFERENCES

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3. Kopin, A.S., Wheeler, M.B. and Leiter, A.B. 1990. Secretin: structure of the precursor and tissue distribution of the mRNA. Proc. Natl. Acad. Sci. USA 87: 2299-2303.
4. Marinelli, R.A., Pham, L., Agre, P. and LaRusso, N.F. 1997. Secretin promotes osmotic water transport in rat cholangiocytes by increasing aquaporin 1 water channels in plasma membrane. Evidence for a secretin-induced vesicular translocation of aquaporin 1. J. Biol. Chem. 272: 12984-12988.
5. Whitmore, T.E., Holloway, J.L., Lofton-Day, C.E., Maurer, M.F., Chen, L., Quinton, T.J., Vincent, J.B., Scherer, S.W. and Lok, S. 2000. Human secretin (SCT): gene structure, chromosome location, and distribution of mRNA. Cytogenet. Cell Genet. 90: 47-52.

CHROMOSOMAL LOCATION

Genetic locus: Sct (mouse) mapping to 7 F5.

PRODUCT

secretin siRNA (m) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see secretin shRNA Plasmid (m): sc-39535-SH and secretin shRNA (m) Lentiviral Particles: sc-39535-V as alternate gene silencing products.

For independent verification of secretin (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-39535A, sc-39535B and sc-39535C.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support 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 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

secretin siRNA (m) is recommended for the inhibition of secretin 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 µM in 66 µl. 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 secretin gene expression knockdown using RT-PCR Primer: secretin (m)-PR: sc-39535-PR (20 µl). 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.