SANTA CRUZ BIOTECHNOLOGY, INC.

SCGN siRNA (m): sc-153255

BACKGROUND

SCGN, also known as secretagogin, CALBL, setagin or SECRET, is a 276 amino acid cytoplasmic protein that contains six EF-hand domains and is related to the calicium-binding proteins Calretinin and Calbindin D28K. Expressed in a variety of tissues including stomach, thyroid, colon, brain and neuroendocrine cells, SCGN is thought to be involved in cell proliferation and KCl (potassium chloride)-mediated calcium flux events. Through its interaction with KCl and its subsequent ability to modulate calcium storage pools within the cell, SCGN may function to negatively control growth and differentiation rates and, thus, indirectly inhibit cell replication.

REFERENCES

1. Wagner, L., et al. 2000. Cloning and expression of secretagogin, a novel neuroendocrine- and pancreatic islet of Langerhans-specific Ca^{2+}-binding protein. J. Biol. Chem. 275: 24740-24751.
2. Gartner, W., et al. 2001. Cerebral expression and serum detectability of secretagogin, a recently cloned EF-hand Ca^{2+}-binding protein. Cereb. Cortex. 11: 1161-1169.
3. Birkenkamp-Demtröder, K., et al. 2005. Secretagogin is a novel marker for neuroendocrine differentiation. Neuroendocrinology 82: 121-138.
4. Skovhus, K.V., et al. 2006. Identification and characterization of secretagogin promoter activity. Scand. J. Immunol. 64: 639-645.
5. Gartner, W., et al. 2007. New functional aspects of the neuroendocrine marker secretagogin based on the characterization of its rat homolog. Am. J. Physiol. Endocrinol. Metab. 293: E347-E354.

CHROMOSOMAL LOCATION

Genetic locus: Scgn (mouse) mapping to 13 A3.1.

PRODUCT

SCGN 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 SCGN shRNA Plasmid (m): sc-153255-SH and SCGN shRNA (m) Lentiviral Particles: sc-153255-V as alternate gene silencing products.

For independent verification of SCGN (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-153255A, sc-153255B and sc-153255C.

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

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

GENE EXPRESSION MONITORING

SCGN (F-9): sc-374355 is recommended as a control antibody for monitoring of SCGN 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-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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 SCGN gene expression knockdown using RT-PCR Primer: SCGN (m)-PR: sc-153255-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Hasegawa, K., et al. 2013. The hydrolase DDAH2 enhances pancreatic Insulin secretion by transcriptional regulation of secretagogin through a Sirt1-dependent mechanism in mice. FASEB J. 27: 2301-2315.
2. Alpár, A., et al. 2018. Hypothalamic CNTF volume transmission shapes cortical noradrenergic excitability upon acute stress. EMBO J. 37: e100087.

RESEARCH USE

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

PROTOCOLS

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