

Sg III siRNA (h): sc-39383

BACKGROUND

Chromogranins (secretogranins) are acidic glycoproteins that localize within secretory granules of endocrine, neuroendocrine and neuronal tissue. Family members include chromogranin A, chromogranin B (secretogranin I) chromogranin C and secretogranin III (SCG3, Sg III). High levels of chromogranin A expression is a characteristic of neuro-endocrine tumors. Pancreastatin is a peptide derived from chromogranin A which inhibits Insulin secretion, exocrine pancreatic secretion and gastric acid secretion. Sg III is an acidic secretory protein expressed in neuronal and endocrine cells. In the anterior lobe of the rat pituitary gland, Sg III is present in mammatropes and thyrotropes, moderately in gonadotropes and corticotropes, though not in somatotropes. Sg III and carboxypeptidase E (CPE) bind specifically to cholesterol-rich secretory granule (SG) membranes.

REFERENCES

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2. Robberecht, P., et al. 1993. Current status on chromogranin A and pancreastatin. *Acta Gastroenterol. Belg.* 56: 261-263.
3. Schmid, K.W., et al. 1993. Chromogranin A, secretogranin II and vasoactive intestinal peptide in pheochromocytomas and ganglioneuromas. *Histopathology* 22: 527-533.
4. Bauer, J.W., et al. 1993. Histamine induces a gene-specific synthesis regulation of secretogranin II but not of chromogranin A and B in chromaffin cells in a calcium-dependent manner. *J. Biol. Chem.* 268: 1586-1589.
5. Schmid, K.W., et al. 1994. Immunohistochemical demonstration of chromogranin A, chromogranin B, and secretogranin II in extra-adrenal paragangliomas. *Mod. Pathol.* 7: 347-353.
6. Stridsberg, M., et al. 1995. Measurements of chromogranin A, chromogranin B (secretogranin I), chromogranin C (secretogranin II) and pancreastatin in plasma and urine from patients with carcinoid tumours and endocrine pancreatic tumours. *J. Endocrinol.* 144: 49-59.

CHROMOSOMAL LOCATION

Genetic locus: SCG3 (human) mapping to 15q21.2.

PRODUCT

Sg III siRNA (h) 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Sg III shRNA Plasmid (h): sc-39383-SH and Sg III shRNA (h) Lentiviral Particles: sc-39383-V as alternate gene silencing products.

For independent verification of Sg III (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-39383A, sc-39383B and sc-39383C.

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

Sg III siRNA (h) is recommended for the inhibition of Sg III expression in human 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

Sg III (C-2): sc-271750 is recommended as a control antibody for monitoring of Sg III 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 Sg III gene expression knockdown using RT-PCR Primer: Sg III (h)-PR: sc-39383-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.

PROTOCOLS

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