SANTA CRUZ BIOTECHNOLOGY, INC.

SSTR3 siRNA (h): sc-42273



BACKGROUND

SSTRs (for somatostatin receptors) represent a family of G protein-coupled receptors which mediate the diverse biological actions of somatostatin (SST). There are five distinct subtypes of SSTRs that bind two natural ligands, SST-14 and SST-28. SSTR2 gives rise to spliced variants, SSTR2A and 2B. SSTRs share common signaling pathways such as the ability to inhibit adenylyl cyclase via GTP binding proteins. Some of the subtypes are also coupled to tyrosine phosphatase (SSTR1,2), Ca²⁺ channels (SSTR2), Na⁺/H⁺ exchanger (SSTR1), PLA-2 (SSTR4), and MAP kinase (SSTR4). Individual target cells typically express more than one SSTR subtype and often all five isoforms. Subtypes of SSTR can form functional homo- and heterodimers.

REFERENCES

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- 3. Patel, Y.C. 1999. Somatostatin and its receptor family. Front. Neuroendocrinol. 20: 157-198.
- 4. Sharma, K., et al. 1999. C-terminal region of human somatostatin receptor 5 is required for induction of Rb and G_1 cell cycle arrest. Mol. Endocrinol. 13: 82-90.
- Kumar, U., et al. 1999. Subtype-selective expression of the five somatostatin receptors (hSSTR1-5) in human pancreatic islet cells: a quantitative double-label immunohistochemical analysis. Diabetes 48: 77-85.
- Rocheville, M., et al. 2000. Receptors for dopamine and somatostatin: formation of hetero-oligomers with enhanced functional activity. Science 288: 154-157.
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CHROMOSOMAL LOCATION

Genetic locus: SSTR3 (human) mapping to 22q13.1.

PRODUCT

SSTR3 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 SSTR3 shRNA Plasmid (h): sc-42273-SH and SSTR3 shRNA (h) Lentiviral Particles: sc-42273-V as alternate gene silencing products.

For independent verification of SSTR3 (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-42273A, sc-42273B and sc-42273C.

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

SSTR3 siRNA (h) is recommended for the inhibition of SSTR3 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor SSTR3 gene expression knockdown using RT-PCR Primer: SSTR3 (h)-PR: sc-42273-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.