SANTA CRUZ BIOTECHNOLOGY, INC.

Statherin siRNA (h): sc-106576

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The Power to Question

BACKGROUND

Human Statherin (STT) is a low-Mr acidic phosphoprotein comprised of 43 amino acids. It is secreted mainly by salivary glands and acts as an inhibitor of precipitation of calcium phosphate salts in the oral cavity. Statherin is one of the major components of human submandibular-sublingual saliva. Statherin inhibits precipitation of calcium phosphate salts in the oral cavity. Fractions of Statherin-containing saliva exhibit a strong tendency to boundary lubrication. It is the amphipathic nature of Statherin which enables it to function as a lubricant on tooth enamel.

REFERENCES

1. Sabatini, L., et al. 1990. Structure and sequence determination of the gene encoding human salivary Statherin. Gene 89: 245-251.
2. Ramasubbu, N., et al. 1991. Large-scale purification and characterization of the major phosphoproteins and mucins of human submandibular-sublingual saliva. Biochem. J. 280: 341-352.
3. Douglas, W., et al. 1991. Statherin: a major boundary lubricant of human saliva. Biochem. Biophys. Res. Commun. 180: 91-97.
4. Raj, P.A., et al. 1992. Salivary Statherin. Dependence on sequence, charge, hydrogen bonding potency, and helical conformation for adsorption to hydroxyapatite and inhibition of mineralization. J. Biol. Chem. 267: 5968-5976.
5. Amano, A., et al. 1996. Structural domains of *Porphyromonas gingivalis* recombinant fimbrillin that mediate binding to salivary proline-rich protein and Statherin. Infect. Immun. 64: 1631-1637.
6. Sekine, S., et al. 2004. Active domains of salivary Statherin on apatitic surfaces for binding to *Fusobacterium nucleatum* cells. Microbiology 150: 2373-2379.

CHROMOSOMAL LOCATION

Genetic locus: STATH (human) mapping to 4q13.3.

PRODUCT

Statherin siRNA (h) 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Statherin shRNA Plasmid (h): sc-106576-SH and Statherin shRNA (h) Lentiviral Particles: sc-106576-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 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

Statherin siRNA (h) is recommended for the inhibition of Statherin 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 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 Statherin gene expression knockdown using RT-PCR Primer: Statherin (h)-PR: sc-106576-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.

PROTOCOLS

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