SANTA CRUZ BIOTECHNOLOGY, INC.

Matrilin-3 siRNA (h): sc-106205

BACKGROUND

The matrilin family of secreted extracellular matrix proteins is comprised of Matrilin-1 through Matrilin-4. Matrilin-1 is a homotrimer that binds to collagen and is a component of the extracellular matrix of nonarticular cartilage. It is secreted primarily by chondrocytes in a characteristic spatial, temporal and developmental stage-specific pattern during skeletogenesis. Matrilin-2 is a secreted protein involved in matrix assembly. Matrilin-3 is a secreted protein expressed solely in cartilaginous tissues. It is important in the extracellular matrix of cartilage and in the formation of extracellular filamentous networks. Matrilin-4, expressed in embryonic kidney, lung and placenta, is a secreted protein important to the extracellular matrix of cartilage.

REFERENCES

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5. Ohno, S., et al. 2003. Immunohistochemical study of Matrilin-1 in arthritic articular cartilage of the mandibular condyle. J. Oral Pathol. Med. 32: 237-242.
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7. Karcagi, I., et al. 2004. Functional analysis of the regulatory regions of the Matrilin-1 gene in transgenic mice reveals modular arrangement of tissue-specific control elements. Matrix Biol. 22: 605-618.
8. Hansson, A.S., et al. 2004. Critical role of the major histocompatibility complex and IL-10 inmatrilin-1-induced relapsing polychondritis in mice. Arthritis Res. Ther. 6: 484-491.
9. Hansson, A.S., et al. 2004. Relapsing polychondritis, induced in mice with Matrilin-1, is an antibody- and complement-dependent disease. Am. J. Pathol. 164: 959-966.

CHROMOSOMAL LOCATION

Genetic locus: MATN3 (human) mapping to 2p24.1.

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.

PRODUCT

Matrilin-3 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Matrilin-3 shRNA Plasmid (h): sc-106205-SH and Matrilin-3 shRNA (h) Lentiviral Particles: sc-106205-V as alternate gene silencing products.

For independent verification of Matrilin-3 (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-106205A, sc-106205B and sc-106205C.

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

Matrilin-3 siRNA (h) is recommended for the inhibition of Matrilin-3 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 Matrilin-3 gene expression knockdown using RT-PCR Primer: Matrilin-3 (h)-PR: sc-106205-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.