



Matrilin-1 siRNA (h): sc-60038

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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2. Segat, D., et al. 2000. Expression of Matrilin-1, -2 and -3 in developing mouse limbs and heart. *Matrix Biol.* 19: 649-655.
3. Strusberg, I., et al. 2002. Association analysis of genotypic frequencies of Matrilin-1 gene in patients with osteoarthritis. *Clin. Exp. Rheumatol.* 20: 543-545.
4. Wiberg, C., et al. 2003. Complexes of Matrilin-1 and Biglycan or Decorin connect Collagen VI microfibrils to both Collagen II and aggrecan. *J. Biol. Chem.* 278: 37698-37704.
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.
6. 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.
7. Hansson, A.S., et al. 2004. Critical role of the major histocompatibility complex and IL-10 in Matrilin-1-induced relapsing polychondritis in mice. *Arthritis Res. Ther.* 6: 484-491.

CHROMOSOMAL LOCATION

Genetic locus: MATN1 (human) mapping to 1p35.2.

PRODUCT

Matrilin-1 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 Matrilin-1 shRNA Plasmid (h): sc-60038-SH and Matrilin-1 shRNA (h) Lentiviral Particles: sc-60038-V as alternate gene silencing products.

For independent verification of Matrilin-1 (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-60038A, sc-60038B and sc-60038C.

RESEARCH USE

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

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

Matrilin-1 siRNA (h) is recommended for the inhibition of Matrilin-1 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 Matrilin-1 gene expression knockdown using RT-PCR Primer: Matrilin-1 (h)-PR: sc-60038-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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