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# Matrilin-2 siRNA (m): sc-45448

## BACKGROUND

The matrilin family proteins are secreted extracellular matrix proteins. 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

1. Deak, F., et al. 1999. The matrilins: a novel family of oligomeric extracellular matrix proteins. *Matrix Biol.* 18: 55-64.
2. Strusberg, I., et al. 2002. Association analysis of genotypic frequencies of Matrilin-1 gene in patients with osteoarthritis. *Clin. Exp. Rheumatol.* 20: 543-545.
3. 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.
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. Mann H.H., et al. 2004. Interactions between the cartilage oligomeric matrix protein and matrilins. Implications for matrix assembly and the pathogenesis of chondrodysplasias. *J. Biol. Chem.* 279: 25294-25298.

## CHROMOSOMAL LOCATION

Genetic locus: *Matn2* (mouse) mapping to 15 B3.1.

## PRODUCT

Matrilin-2 siRNA (m) 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Matrilin-2 shRNA Plasmid (m): sc-45448-SH and Matrilin-2 shRNA (m) Lentiviral Particles: sc-45448-V as alternate gene silencing products.

For independent verification of Matrilin-2 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-45448A, sc-45448B and sc-45448C.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support 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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

Matrilin-2 siRNA (m) is recommended for the inhibition of Matrilin-2 expression in mouse 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  $\mu$ M in 66  $\mu$ 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-2 gene expression knockdown using RT-PCR Primer: Matrilin-2 (m)-PR: sc-45448-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.