

Matrilin-1 (N-20): sc-27922

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

1. Deak, F., et al. 1999. The matrilins: a novel family of oligomeric extracellular matrix proteins. *Matrix Biol.* 18: 55-64.
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. 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.
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 in matrilin-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: MATN1 (human) mapping to 1p35.2; Matn1 (mouse) mapping to 4 D2.3.

SOURCE

Matrilin-1 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Matrilin-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-27922 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Matrilin-1 (N-20) is recommended for detection of Matrilin-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Matrilin-1 (N-20) is also recommended for detection of Matrilin-1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Matrilin-1 siRNA (h): sc-60038, Matrilin-1 siRNA (m): sc-60039, Matrilin-1 shRNA Plasmid (h): sc-60038-SH, Matrilin-1 shRNA Plasmid (m): sc-60039-SH, Matrilin-1 shRNA (h) Lentiviral Particles: sc-60038-V and Matrilin-1 shRNA (m) Lentiviral Particles: sc-60039-V.

Molecular Weight of Matrilin-1: 148 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, SK-N-SH cell lysate: sc-2410 or Jurkat whole cell lysate: sc-2204.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

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

PROTOCOLS

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