

MMP-19 (F-15): sc-26891

BACKGROUND

Matrix metalloproteinases (MMPs) are zinc-binding endopeptidases that degrade various components of the extracellular matrix. MMP-19 (RASI-1, MMP-18) is a 508 amino acid peptide, originally isolated as an autoantigen from the synovium of a patient suffering from rheumatoid arthritis (RA). Its presence on the surface of activated PBMCs, TH1 lymphocytes, and Jurkat T lymphoma cells in the synovium of acute RA patients, suggests that MMP-19 plays a role in RA-associated joint tissue destruction. MMP-19 exists in the smooth muscle cells of the tunica media of large blood vessels of the RA patient, but not in the endothelial cell layer. Acutely inflamed tissue synovial capillaries strongly express MMP-19 in the cytoplasm. Regulated induction of MMP-19 in capillary endothelial cells during acute inflammation suggest a role in angiogenesis. MMP-19 is a single 2.7kb transcript found in mammary gland, placenta, lung, pancreas, ovary, small intestine, spleen, thymus, prostate, testis, colon, and heart. MMP-19 is undetected in brain, skeletal muscle, liver, kidney, and peripheral blood leukocytes. The human MMP-19 gene maps to chromosome 12q14.

REFERENCES

1. Cossins, J. Dudgeon, T. J., Catlin, G., Gearing, A.J. and Clements, J.M. 1996. Identification of MMP-18, a putative novel human matrix metalloproteinase. *Biochem. Biophys. Res. Commun.* 2: 494-498.
2. Pendas, A.M., Knauper, V., Puente, X.S., Llano, E., Mattei, M.G., Apte, S., Murphy, G. and Lopez-Otin, C. 1997. Identification and characterization of a novel human matrix metalloproteinase with unique structural characteristics, chromosomal location, and tissue distribution. *J. Biol. Chem.* 7: 4281-4286.
3. Sedlacek, R., Mauch, S., Kolb, B., Schatzlein, D., Eibel, H., Peter, H.H., Schmitt, J. and Krawinkel, U. 1998. Matrix metalloproteinase MMP-19 (RASI-1) is expressed on the surface of activated peripheral blood mononuclear cells and is detected as a n autoantigen in rheumatoid arthritis. *Immunobiology* 4: 408-423.
4. Kolb, C., Krawinkel, U. and Sedlacek, R. 1999. Matrix metalloproteinase-19 in capillary endothelial cells: expression in acutely, but not in the chronically, inflamed synovium. *Exp. Cell Res.* 1: 122-130.

CHROMOSOMAL LOCATION

Genetic locus: MMP19 (human) mapping to 12q13.2; Mmp19 (mouse) mapping to 10 D3.

SOURCE

MMP-19 (F-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of MMP-19 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-26891 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MMP-19 (F-15) is recommended for detection of matrix metalloproteinase-19 precursor and mature chain 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).

MMP-19 (F-15) is also recommended for detection of matrix metalloproteinase-19 precursor and mature chain in additional species, including canine and porcine.

Suitable for use as control antibody for MMP-19 siRNA (h): sc-106229, MMP-19 siRNA (m): sc-149478, MMP-19 shRNA Plasmid (h): sc-106229-SH, MMP-19 shRNA Plasmid (m): sc-149478-SH, MMP-19 shRNA (h) Lentiviral Particles: sc-106229-V and MMP-19 shRNA (m) Lentiviral Particles: sc-149478-V.

Molecular Weight of MMP-19: 57 kDa.

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.