

MT-MMP-2 (N-19): sc-8843

BACKGROUND

The matrix metalloproteinases (MMP) are a family of peptidase enzymes responsible for the degradation of extracellular matrix components, including collagen, gelatin, Fibronectin, Laminin and proteoglycan. Transcription of MMP genes is differentially activated by phorbol ester, lipopolysaccharide (LPS) or staphylococcal enterotoxin B (SEB). MMP catalysis requires both calcium and zinc. Membrane-type matrix metalloproteinases, including MT-MMP-1, MT-MMP-2, MT-MMP-3 and MT-MMP-4, are type I membrane proteins that function to activate other MMPs. MT-MMP activation appears to be mediated by members of the proprotein convertase family, suggesting that a proprotein convertase/MT-MMP/MMP cascade may be involved in the regulation of ECM turnover. MT-MMP-2, also designated MMP-15, is a 669 amino acid protein that is preferentially synthesized in testis, liver, intestine, colon and placenta.

REFERENCES

- Will, H. and Hinzmann, B. 1995. cDNA sequence and mRNA tissue distribution of a novel human matrix metalloproteinase with a potential *trans*-membrane segment. *Eur. J. Biochem.* 231: 602-608.
- Takino, T., Sato, H., Shinagawa, A. and Seiki, M. 1995. Identification of the second membrane-type matrix metalloproteinase (MT-MMP-2) gene from a human placenta cDNA library. MT-MMPs form a unique membrane-type subclass in the MMP family. *J. Biol. Chem.* 270: 23013-23020.
- d'Ortho, M.P., Will, H., Atkinson, S., Butler, G., Messent, A., Gavrilovic, J., Smith, B., Timpl, R., Zardi, L. and Murphy, G. 1997. Membrane-type matrix metalloproteinases 1 and 2 exhibit broad-spectrum proteolytic capacities comparable to many matrix metalloproteinases. *Eur. J. Biochem.* 250: 751-757.
- Sato, H., Tanaka, M., Takino, T., Inoue, M. and Seiki, M. 1997. Assignment of the human genes for membrane-type-1, -2, and -3 matrix metalloproteinases (MMP14, MMP15, and MMP16) to 14q12.2, 16q12.2-q21, and 8q21, respectively, by *in situ* hybridization. *Genomics* 39: 412-413.
- Mattei, M.G., Roedel, N., Olsen, B.R. and Apte, S.S. 1997. Genes of the membrane-type matrix metalloproteinase (MT-MMP) gene family, MMP14, MMP15, and MMP16, localize to human chromosomes 14, 16, and 8, respectively. *Genomics* 40: 168-169.
- Tyagi, S.C., Lewis, K., Pikes, D., Marcello, A., Mujumdar, V.S., Smiley, L.M. and Moore, C.K. 1998. Stretch-induced membrane type matrix metalloproteinase and tissue plasminogen activator in cardiac fibroblast cells. *J. Cell. Physiol.* 176: 374-382.
- Online Mendelian Inheritance in Man, OMIM[™]. 1998. Johns Hopkins University, Baltimore, MD. MIM Number: 602261. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATIONS

Genetic locus: MMP15 (human) mapping to 16q21; Mmp15 (mouse) mapping to 8 D1.

RESEARCH USE

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

SOURCE

MT-MMP-2 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of MT-MMP-2 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-8843 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MT-MMP-2 (N-19) is recommended for detection of MT-MMP-2 (membrane type matrix metalloproteinase-2) 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).

MT-MMP-2 (N-19) is also recommended for detection of MT-MMP-2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for MT-MMP-2 siRNA (h): sc-41567, MT-MMP-2 siRNA (m): sc-41568, MT-MMP-2 shRNA Plasmid (h): sc-41567-SH, MT-MMP-2 shRNA Plasmid (m): sc-41568-SH, MT-MMP-2 shRNA (h) Lentiviral Particles: sc-41567-V and MT-MMP-2 shRNA (m) Lentiviral Particles: sc-41568-V.

Molecular Weight of MT-MMP-2: 64 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

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.


 MONOS
 Satisfaction
 Guaranteed

Try **MT-MMP-2 (YZ-12): sc-80213**, our highly recommended monoclonal alternative to MT-MMP-2 (N-19).