

MT-MMP-1 (P-17): sc-26703

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 (also designated MMP-14), MT-MMP-2 (also designated MMP-15), MT-MMP-3 (also designated MMP-16) and MT-MMP-4 (also designated MMP-17) 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.

REFERENCES

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- Reinemer, P., Grams, F., Huber, R., Kleine, T., Schnierer, S., Piper, M., Tschesche, H. and Bode, W. 1994. Structural implications for the role of the N terminus in the "superactivation" of collagenases. A crystallographic study. *FEBS Lett.* 338: 227-233.
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CHROMOSOMAL LOCATION

Genetic locus: MMP14 (human) mapping to 14q11.2; Mmp14 (mouse) mapping to 14 C2.

SOURCE

MT-MMP-1 (P-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of MT-MMP-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-26703 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

MT-MMP-1 (P-17) is recommended for detection of MT-MMP-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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-1 (P-17) is also recommended for detection of MT-MMP-1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for MT-MMP-1 siRNA (h): sc-41565, MT-MMP-1 siRNA (m): sc-41566, MT-MMP-1 shRNA Plasmid (h): sc-41565-SH, MT-MMP-1 shRNA Plasmid (m): sc-41566-SH, MT-MMP-1 shRNA (h) Lentiviral Particles: sc-41565-V and MT-MMP-1 shRNA (m) Lentiviral Particles: sc-41566-V.

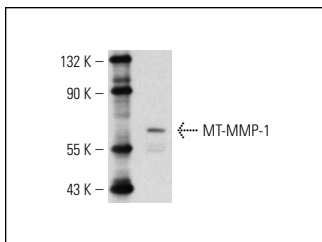
Molecular Weight of MT-MMP-1: 63 kDa.

Positive Controls: MIA PaCa-2 cell lysate: sc-2285.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/ 2.0 ml). 3) 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.

DATA



MT-MMP-1 (P-17): sc-26703. Western blot analysis of MT-MMP-1 expression in CHO whole cell lysate.

RESEARCH USE

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

MONOS
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Try **MT-MMP-1 (C-9): sc-373908** or **MT-MMP-1 (C-7): sc-377097**, our highly recommended monoclonal alternatives to MT-MMP-1 (P-17).