SANTA CRUZ BIOTECHNOLOGY, INC.

MT-MMP-3 (C-18): sc-8846

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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

1. Steiner, D.F., et al. 1992. The new enzymology of precursor processing endoproteases. J. Biol. Chem. 267: 23435-23438.
2. Birkedal-Hansen, H., et al. 1993. Matrix metalloproteinases: a review. Crit. Rev. Oral Biol. Med. 4: 197-250.
3. Reinemer, P., et al. 1994. Structural implications for the role of the N terminus in the "superactivation" of collagenases. A crystallographic study. FEBS Lett. 338: 227-233.
4. Vassalli, J.D. and Pepper, M.S. 1994. Tumour biology. Membrane proteases in focus. Nature 370: 14-15.
5. Sato, H., et al. 1994. A matrix metalloproteinase expressed on the surface of invasive tumour cells. Nature 370: 61-65.
6. Pei, D. and Weiss, S.J. 1995. Furin-dependent intracellular activation of the human stromelysin-3 zymogen. Nature 375: 244-247.
7. Machein, U. and Conca, W. 1997. Expression of several matrix metalloproteinase genes in human monocytic cells. Adv. Exp. Med. Biol. 421: 247-251.

CHROMOSOMAL LOCATION

Genetic locus: MMP16 (human) mapping to 8q21.3; Mmp16 (mouse) mapping to 4 A3.

SOURCE

MT-MMP-3 (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of MT-MMP-3 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-8846 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MT-MMP-3 (C-18) is recommended for detection of MT-MMP-3 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-3 (C-18) is also recommended for detection of MT-MMP-3 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for MT-MMP-3 siRNA (h): sc-41569, MT-MMP-3 siRNA (m): sc-41570, MT-MMP-3 shRNA Plasmid (h): sc-41569-SH, MT-MMP-3 shRNA Plasmid (m): sc-41570-SH, MT-MMP-3 shRNA (h) Lentiviral Particles: sc-41569-V and MT-MMP-3 shRNA (m) Lentiviral Particles: sc-41570-V.

Molecular Weight of MT-MMP-3 pro-form: 62 kDa.

Molecular Weight of mature MT-MMP-3: 55 kDa.

Positive Controls: rat placenta extract: sc-364808.

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.

SELECT PRODUCT CITATIONS

1. Astarci, E., et al. 2012. Matrix metalloprotease 16 expression is down-regulated by microRNA-146a in spontaneously differentiating Caco-2 cells. Dev. Growth Differ. 54: 216-226.

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.