

MT-MMP-2 (MM0028-5D11): sc-101452

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., Smeekens, S.P., Ohagi, S. and Chan, S.J. 1992. The new enzymology of precursor processing endoproteases. *J. Biol. Chem.* 267: 23435-23438.
2. Birkedal-Hansen, H., Moore, W.G., Bodden, M.K., Windsor, L.J., Birkedal-Hansen, B., DeCarlo, A. and Engler, J.A. 1993. Matrix metalloproteinases: a review. *Crit. Rev. Oral Biol. Med.* 4: 197-250.
3. 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.
4. Vassalli, J.D. and Pepper M.S. 1994. Tumour biology. Membrane proteases in focus. *Nature* 370: 14-15.
5. Sato, H., Takino, T., Okada, Y., Cao, J., Shinagawa, A., Yamamoto, E. and Seiki, M. 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: MMP15 (human) mapping to 16q13.

SOURCE

MT-MMP-2 (MM0028-5D11) is a mouse monoclonal antibody raised against recombinant MT-MMP-2 of human origin.

PRODUCT

Each vial contains 100 µg IgG₁ in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

MT-MMP-2 (MM0028-5D11) is recommended for detection of MT-MMP-2 of 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

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

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

STORAGE

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

PROTOCOLS

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