SANTA CRUZ BIOTECHNOLOGY, INC.

MT-MMP-1 (h): 293T Lysate: sc-116661

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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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: MMP14 (human) mapping to 14q11.2.

PRODUCT

MT-MMP-1 (h): 293T Lysate represents a lysate of human MT-MMP-1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

RESEARCH USE

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

APPLICATIONS

MT-MMP-1 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive MT-MMP-1 antibodies. Recommended use: 10-20 µl per lane.

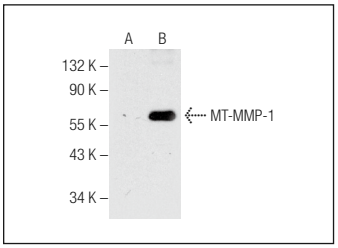
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

MT-MMP-1 (C-7): sc-377097 is recommended as a positive control antibody for Western Blot analysis of enhanced human MT-MMP-1 expression in MT-MMP-1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

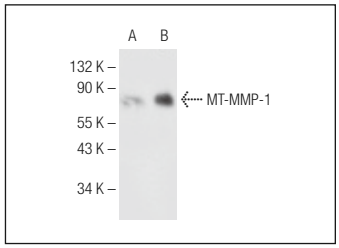
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



MT-MMP-1 (C-7): sc-377097. Western blot analysis of MT-MMP-1 expression in non-transfected: sc-117752 (**A**) and human MT-MMP-1 transfected: sc-116661 (**B**) 293T whole cell lysates.



MT-MMP-1 (C-9): sc-373908. Western blot analysis of MT-MMP-1 expression in non-transfected: sc-117752 (**A**) and human MT-MMP-1 transfected: sc-116661 (**B**) 293T whole cell lysates.

PROTOCOLS

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