

MT-MMP-6 (MM0029-2B5): sc-101453

BACKGROUND

The matrix metalloproteinases (MMPs) are a family of peptidase enzymes responsible for the degradation of extracellular matrix components, including collagen, gelatin, Fibronectin, Laminin and proteoglycan. MMP catalysis requires both calcium and zinc. Membrane-type matrix metalloproteinases 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-6 (also known as MMP-25, MT6-MMP or Leukolysin) is the second GPI-anchored proteinase in the MMP family. Similar to MMP-3, MT-MMP-6 is able to cleave type IV collagen, Fibronectin, fibrin and gelatin. However, MT-MMP-6 cannot cleave Laminin-1 or activate progelatinase B. MT-MMP 6 is expressed in leukocytes, lung and spleen.

REFERENCES

1. Pei, D. 1999. Leukolysin/MMP25/MT6-MMP: a novel matrix metalloproteinase specifically expressed in the leukocyte lineage. *Cell Res.* 9: 291-303.
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3. Kojima, S., Itoh, Y., Matsumoto, S., Masuho, Y. and Seiki, M. 2000. Membrane-type 6 matrix metalloproteinase (MT6-MMP, MMP-25) is the second glycosyl-phosphatidyl inositol (GPI)-anchored MMP. *FEBS Lett.* 480: 142-146.
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5. Nie, J. and Pei, D. 2003. Direct activation of pro-matrix metalloproteinase-2 by leukolysin/membrane-type 6 matrix metalloproteinase/matrix metalloproteinase 25 at the Asn¹⁰⁹-Tyr bond. *Cancer Res.* 63: 6758-6762.
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8. Sohail, A., Sun, Q., Zhao, H., Bernardo, M.M., Cho, J.A. and Fridman, R. 2008. MT4-(MMP17) and MT6-MMP (MMP25), A unique set of membrane-anchored matrix metalloproteinases: properties and expression in cancer. *Cancer Metastasis Rev.* 27: 289-302.

CHROMOSOMAL LOCATION

Genetic locus: MMP25 (human) mapping to 16p13.3.

RESEARCH USE

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

SOURCE

MT-MMP-6 (MM0029-2B5) is a mouse monoclonal antibody raised against recombinant MT-MMP-6 of human origin.

PRODUCT

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

APPLICATIONS

MT-MMP-6 (MM0029-2B5) is recommended for detection of MT-MMP-6 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-6 siRNA (h): sc-41573, MT-MMP-6 shRNA Plasmid (h): sc-41573-SH and MT-MMP-6 shRNA (h) Lentiviral Particles: sc-41573-V.

Molecular Weight of MT-MMP-6: 63 kDa.

SELECT PRODUCT CITATIONS

1. Sakata, K., Shigemasa, K., Nagai, N. and Ohama, K. 2000. Expression of matrix metalloproteinases (MMP-2, MMP-9, MT1-MMP) and their inhibitors (TIMP-1, TIMP-2) in common epithelial tumors of the ovary. *Int. J. Oncol.* 17: 673-681.
2. Zhang, L., Zheng, C., Sun, Z., Wang, H. and Wang, F. 2019. Long non-coding RNA urothelial cancer associated 1 can regulate the migration and invasion of colorectal cancer cells (SW480) via myocardin-related transcription factor-A. *Oncol. Lett.* 18: 4185-4193.

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.