SANTA CRUZ BIOTECHNOLOGY, INC.

MT-MMP-1 (L-15): sc-12367

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.

CHROMOSOMAL LOCATION

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

SOURCE

MT-MMP-1 (L-15) is available as either goat (sc-12367) or rabbit (sc-12367-R) polyclonal affinity purified antibody raised against a peptide mapping near the C-terminus 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-12367 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MT-MMP-1 (L-15) 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), immunohistochemistry (including paraffin-embedded sections) (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 (L-15) 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.

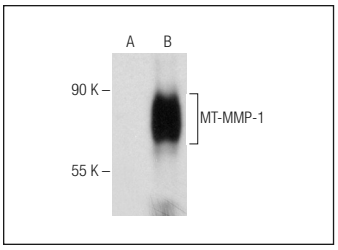
Molecular Weight of MT-MMP-1: 63 kDa.

Positive Controls: MT-MMP-1 (h): 293T Lysate: sc-116661 or MIA PaCa-2 cell lysate: sc-2285.

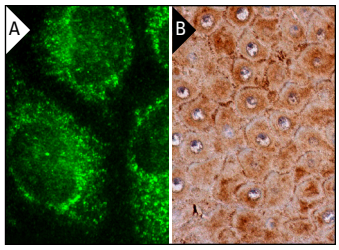
STORAGE

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

DATA



MT-MMP-1 (L-15)-R: sc-12367-R. 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 (L-15): sc-12367. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human oral mucosa tissue showing membane and cytoplasmic staining of squamous epithelial cells (**B**).

SELECT PRODUCT CITATIONS

1. Harrison, G.M., et al. 2006. The influence of CD44v3-v10 on adhesion, invasion and MMP-14 expression in prostate cancer cells. Oncol. Rep. 15: 199-206.
2. Morikawa, A., et al. 2008. Selective progesterone receptor modulator asoprisnil down-regulates collagen synthesis in cultured human uterine leiomyoma cells through up-regulating extracellular matrix metalloproteinase inducer. Hum. Reprod. 23: 944-951.
3. Sehdev, V., et al. 2009. Biochanin A modulates cell viability, invasion, and growth promoting signaling pathways in HER-2-positive breast cancer cells. J. Oncol. 2009: 121458.
4. Mano, Y., et al. 2009. Tocilizumab inhibits interleukin-6-mediated matrix metalloproteinase-2 and -9 secretions from human amnion cells in preterm premature rupture of membranes. Gynecol. Obstet. Invest. 68: 145-153.

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.