SANTA CRUZ BIOTECHNOLOGY, INC.

MT-MMP-1 (V-16): sc-12366

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 (V-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-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-12366 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

MT-MMP-1 (V-16) 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

MT-MMP-1 (V-16) 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.

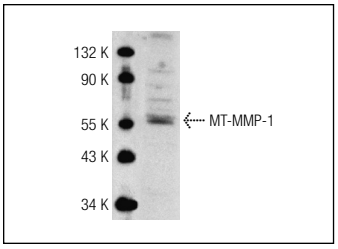
Molecular Weight of MT-MMP-1: 63 kDa.

Positive Controls: MIA PaCa-2 cell lysate: sc-2285.

RESEARCH USE

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

DATA



MT-MMP-1 (V-16): sc-12366. Western blot analysis of MT-MMP-1 expression in MIA PaCa-2 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Golubnitschaja, O., et al. 2004. Increased expression of matrix metalloproteinases in mononuclear blood cells of normal-tension glaucoma patients. J. Glaucoma 13: 66-72.
2. Trog, D., et al. 2006. Pro-invasive gene regulating effect of irradiation and combined temozolomide-radiation treatment on surviving human malignant glioma cells. Eur. J. Pharmacol. 542: 8-15.
3. Sakakura, Y., et al. 2007. Contributions of matrix metalloproteinases toward Meckel's cartilage resorption in mice: immunohistochemical studies, including comparisons with developing endochondral bones. Cell Tissue Res. 328: 137-151.
4. Manduca, P., et al. 2009. Role of MT1-MMP in the osteogenic differentiation. Bone 44: 251-265.
5. Remedi, M.M., et al. 2009. Polymorphonuclear cells stimulate the migration and metastatic potential of rat sarcoma cells. Int. J. Exp. Pathol. 90: 44-51.

PROTOCOLS

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