SANTA CRUZ BIOTECHNOLOGY, INC.

MMP-1/8 (H-300): sc-30069

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. MMP-9 (also designated 92 kDa type IV collagenase or gelatinase B) has been shown to degrade bone collagens in concert with MMP-1 (also designated interstitial collagenase, fibroblast collagenase or collagenase-1) and cysteine proteases, and may play a role in bone osteoclastic resorption. MMP-1 is downregulated by p53, and abnormality of p53 expression may contribute to joint degradation in rheumatoid arthritis by regulating MMP-1 expression. MMP-8 (also designated neutrophil collagenase, PMNL collagenase or collagenase-2) degrades fibrillar collagen types I, II and III. Unlike other members of the MMP family, MMP-8 is expressed exclusively in inflammatory conditions. MMP-8 is highly expressed in the postpartum uterus, and it is thought to be involved in the postpartum involution of the uterus. MMP-8 is also the predominant collagenase expressed in ulcers and healing wounds.

CHROMOSOMAL LOCATION

Genetic locus: MMP1/MMP8 (human) mapping to 11q22.2; Mmp1a/Mmp8 (mouse) mapping to 9 A1.

SOURCE

MMP-1/8 (H-300) is a rabbit polyclonal antibody raised against amino acids 100-399 mapping within an internal region of 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.

APPLICATIONS

MMP-1/8 (H-300) is recommended for detection of MMP-1 of human origin and MMP-8 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); partially cross reactive with other MMP family members.

MMP-1/8 (H-300) is also recommended for detection of MMP-1 and MMP-8 in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for MMP-8 siRNA (m): sc-35950, MMP-8 shRNA Plasmid (m): sc-35950-SH and MMP-8 shRNA (m) Lentiviral Particles: sc-35950-V.

Molecular Weight of MMP-1: 52 kDa.

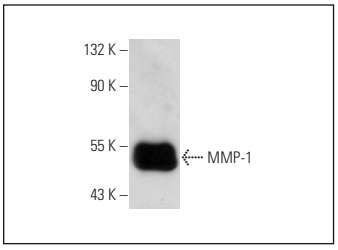
Molecular Weight of latent MMP-8: 65 kDa.

Molecular Weight of active MMP-8: 50 kDa.

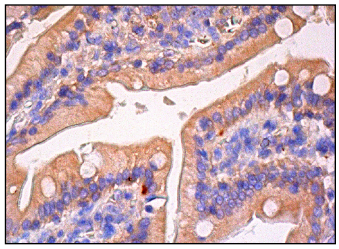
STORAGE

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

DATA



MMP-1/8 (H-300): sc-30069. Western blot analysis of human recombinant MMP-1.



MMP-1/8 (H-300): sc-30069. Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Fini, M.A., et al. 2008. Migratory activity of human breast cancer cells is modulated by differential expression of xanthine oxidoreductase. J. Cell. Biochem. 105: 1008-1026.
2. Menchén, L., et al. 2009. Matrix metalloproteinase 9 is involved in Crohn's disease-associated platelet hyperactivation through the release of soluble CD40 ligand. Gut 58: 920-928.
3. Hu, F., et al. 2011. δEF1 promotes osteolytic metastasis of MDA-MB-231 breast cancer cells by regulating MMP-1 expression. Biochim. Biophys. Acta 1809: 200-210.
4. Grivas, T.B., et al. 2011. Expression of matrix metalloproteinase-1 (MMP-1) in Wistar rat's intervertebral disc after experimentally induced scoliotic deformity. Scoliosis 6: 9.
5. Sun, D.X., et al. 2012. Nanoparticle-mediated local delivery of an antisense TGF-β1 construct inhibits intimal hyperplasia in autogenous vein grafts in rats. PLoS ONE 7: e41857.
6. Lewandowska, U., et al. 2013. Procyanidins from evening primrose *(Oenothera paradoxa)* defatted seeds inhibit invasiveness of breast cancer cells and modulate the expression of selected genes involved in angiogenesis, metastasis, and apoptosis. Nutr. Cancer 65: 1219-1231.

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.