SANTA CRUZ BIOTECHNOLOGY, INC.

MMP-12 (H-9): sc-390284

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. MMP-12 (also designated macrophage metalloelastase) is produced in alveolar macrophages and degrades elastin. MMP-12 may contribute to elastin degradation occurring in granulomatous skin diseases and may also participate in macrophage migration through the epidermal and vascular basement membranes in inflammatory disorders.

REFERENCES

1. Shapiro, S.D., et al. 1992. Molecular cloning, chromosomal localization, and bacterial expression of a murine macrophage metalloelastase. J. Biol. Chem. 267: 4664-4671.
2. Birkedal-Hansen, H., et al. 1993. Matrix metalloproteinases: a review. Crit. Rev. Oral Biol. Med. 4: 197-250.
3. Shapiro, S.D., et al. 1993. Cloning and characterization of a unique elastolytic metalloproteinase produced by human alveolar macrophages. J. Biol. Chem. 268: 23824-23829.
4. Reinemer, P., et al. 1994. Structural implications for the role of the N terminus in the "superactivation" of collagenases. A crystallographic study. FEBS Lett. 338: 227-233.
5. Machein, U. and Conca, W. 1997. Expression of several matrix metalloproteinase genes in human monocytic cells. Adv. Exp. Med. Biol. 421: 247-251.
6. Vaalamo, M., et al. 1999. Enhanced expression of human metalloelastase (MMP-12) in cutaneous granulomas and macrophage migration. J. Invest. Dermatol. 112: 499-505.

CHROMOSOMAL LOCATION

Genetic locus: Mmp12 (mouse) mapping to 9 A1.

SOURCE

MMP-12 (H-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 429-463 near the C-terminus of MMP-12 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-390284 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

MMP-12 (H-9) is recommended for detection of MMP-12 of mouse and rat origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for MMP-12 siRNA (m): sc-41558, MMP-12 shRNA Plasmid (m): sc-41558-SH and MMP-12 shRNA (m) Lentiviral Particles: sc-41558-V.

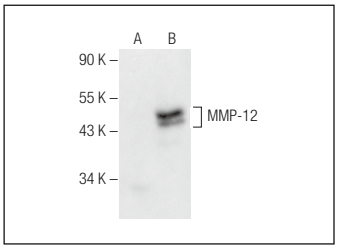
Molecular Weight of MMP-12: 48 kDa.

Positive Controls: MMP-12 (m): 293T Lysate: sc-121694.

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, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



MMP-12 (H-9): sc-390284. Western blot analysis of MMP-12 expression in non-transfected: sc-117752 (**A**) and mouse MMP-12 transfected: sc-121694 (**B**) 293T whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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