SANTA CRUZ BIOTECHNOLOGY, INC.

MMP-7 (G-20): sc-12346

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-7 (also designated Pump-1, matrilysin or uterine metalloproteinase) degrades casein, fibronectin and gelatin types I, III, IV and V. MMP-7 mRNA is produced exclusively by epithelial cells in mouse and expression is restricted to specific organs, suggesting that in addition to matrix degradation and remodeling, MMP-7 may be involved in the differentiated function of these organs.

REFERENCES

1. Muller, D., et al. 1988. The collagenase gene family in humans consists of at least four members. Biochem. J. 253: 187-192.
2. Birkedal-Hansen, H., et al. 1993. Matrix metalloproteinases: a review. Crit. Rev. Oral Biol. Med. 4: 197-250.
3. 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.

CHROMOSOMAL LOCATION

Genetic locus: Mmp7 (mouse) mapping to 9 A1.

SOURCE

MMP-7 (G-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of MMP-7 of mouse 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-12346 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MMP-7 (G-20) is recommended for detection of MMP-7 of mouse and rat 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for MMP-7 siRNA (m): sc-41554, MMP-7 siRNA (r): sc-108053, MMP-7 shRNA Plasmid (m): sc-41554-SH, MMP-7 shRNA Plasmid (r): sc-108053-SH, MMP-7 shRNA (m) Lentiviral Particles: sc-41554-V and MMP-7 shRNA (r) Lentiviral Particles: sc-108053-V.

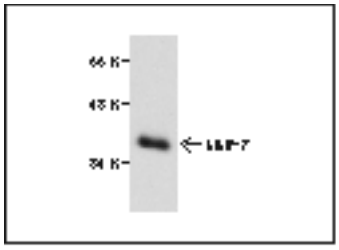
Molecular Weight of pro-MMP-7: 30 kDa.

Molecular Weight of MMP-7 active form: 20 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



SELECT PRODUCT CITATIONS

1. Kaya, G., et al. 2006. Hyaluronate fragments reverse skin atrophy by a CD44-dependent mechanism. PLoS Medicine 3: e493.
2. Barnes, L., et al. 2010. Synergistic effect of hyaluronate fragments in retinaldehyde-induced skin hyperplasia which is a Cd44-dependent phenomenon. PLoS ONE 5: e14372.

STORAGE

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

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.