SANTA CRUZ BIOTECHNOLOGY, INC.

MMP-7 (FL-267): sc-30071

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.

CHROMOSOMAL LOCATION

Genetic locus: MMP7 (human) mapping to 11q22.2; Mmp7 (mouse) mapping to 9 A1.

SOURCE

MMP-7 (FL-267) is a rabbit polyclonal antibody raised against amino acids 1-267 representing full length MMP-7 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-7 (FL-267) is recommended for detection of MMP-7 of human and, to a lesser extent, mouse and rat 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); may cross-react with other MMP family members.

Suitable for use as control antibody for MMP-7 siRNA (h): sc-41553, MMP-7 siRNA (m): sc-41554, MMP-7 siRNA (r): sc-108053, MMP-7 shRNA Plasmid (h): sc-41553-SH, MMP-7 shRNA Plasmid (m): sc-41554-SH, MMP-7 shRNA Plasmid (r): sc-108053-SH, MMP-7 shRNA (h) Lentiviral Particles: sc-41553-V, 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.

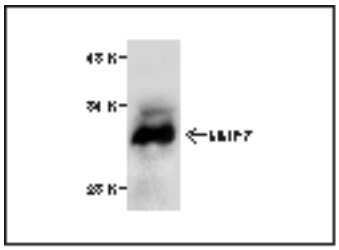
Molecular Weight of MMP-7 active form: 20 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



SELECT PRODUCT CITATIONS

1. Shi, M.D., et al. 2009. Andrographolide could inhibit human colorectal carcinoma Lovo cells migration and invasion via down-regulation of MMP-7 expression. Chem. Biol. Interact. 180: 344-352.
2. Souda, M., et al. 2009. Gene expression profiling during rat mammary carcinogenesis induced by 7,12-dimethylbenz[a]anthracene. Int. J. Cancer 125: 1285-1297.
3. Tsai, C.F., et al. 2014. Osthole suppresses the migratory ability of human glioblastoma multiforme cells via inhibition of focal adhesion kinase-mediated matrix metalloproteinase-13 expression. Int. J. Mol. Sci. 15: 3889-3903.

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.