

Matriptase (H-270): sc-48830

BACKGROUND

Matriptase (also known as MT-SP1, ST14, prostamin and epithin) is a tumor-associated type II transmembrane serine protease that is highly expressed in many human cancer-derived cell lines and is implicated in extracellular matrix re-modeling, tumor growth and metastasis. Matriptase performs pleiotropic functions in the development of the epidermis, hair follicles and cellular immune system. Sphingosine 1-phosphate (S1P, SPP), present in serum-derived lipoproteins, activates Matriptase, while Matriptase activates both urokinase-type plasminogen activator and hepatocyte growth factor (HGF). Hepatocyte growth factor activator inhibitor type 1 (HAI-1) is a Kunitz-type serine protease inhibitor identified as a strong inhibitor of Matriptase and HGF. Advanced-stage ovarian tumors that express Matriptase are more likely to do so in the absence of its inhibitor, HAI-1, indicating that an imbalance in the Matriptase: HAI-1 ratio could be important in the development of advanced disease.

CHROMOSOMAL LOCATION

Genetic locus: ST14 (human) mapping to 11q24.3; St14 (mouse) mapping to 9 A4.

SOURCE

Matriptase (H-270) is a rabbit polyclonal antibody raised against amino acids 81-350 mapping within an N-terminal extracellular domain of Matriptase 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.

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.

APPLICATIONS

Matriptase (H-270) is recommended for detection of Matriptase 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).

Suitable for use as control antibody for Matriptase siRNA (h): sc-43911, Matriptase siRNA (m): sc-60068, Matriptase shRNA Plasmid (h): sc-43911-SH, Matriptase shRNA Plasmid (m): sc-60068-SH, Matriptase shRNA (h) Lentiviral Particles: sc-43911-V and Matriptase shRNA (m) Lentiviral Particles: sc-60068-V.

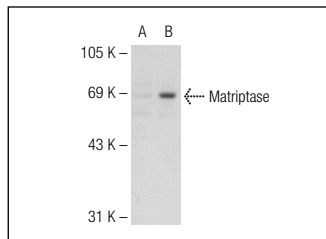
Molecular Weight of Matriptase: 70 kDa.

Positive Controls: Matriptase (h3): 293T Lysate: sc-170663.

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



Matriptase (H-270): sc-48830. Western blot analysis of Matriptase expression in non-transfected: sc-117752 (A) and human Matriptase transfected: sc-170663 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Lee, S.L., et al. 2010. Matriptase/epithin participates in mammary epithelial cell growth and morphogenesis through HGF activation. *Mech. Dev.* 127: 82-95.
- Kim, S.B., et al. 2010. Soluble epithin/PRSS14 secreted from cancer cells contains active angiogenic potential. *Mol. Cells* 29: 617-623.

PROTOCOLS

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



Try **Matriptase (D-7): sc-365482**, our highly recommended monoclonal alternative to Matriptase (H-270).