



Matriptase (L-18): sc-25234

BACKGROUND

Matriptase (also known as MT-SP1, ST14, prostamin and epithin in mouse) 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.

REFERENCES

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2. Friedrich, R., et al. 2002. Catalytic domain structures of MT-SP1/matriptase, a matrix-degrading transmembrane serine proteinase. *J Biol Chem.*277: 2160-2168.
3. Oberst, M.D., et al. 2002. Expression of the serine protease matriptase and its inhibitor HAI-1 in epithelial ovarian cancer: correlation with clinical outcome and tumor clinicopathological parameters. *Clin Cancer Res.*8: 1101-1107.
4. List, K., et al. 2002. Matriptase/MT-SP1 is required for postnatal survival, epidermal barrier function, hair follicle development, and thymic homeostasis. *Oncogene.*21: 3765-3779.
5. Benaud, C., et al. 2002. Sphingosine 1-phosphate, present in serum-derived lipoproteins, activates matriptase. *J Biol Chem.*277: 10539-10546.
6. Ihara, S., et al. 2002. Prometastatic effect of N-acetylglucosaminyltransferase V is due to modification and stabilization of active matriptase by adding beta 1-6 GlcNAc branching. *J Biol Chem.*277: 16960-16967.
7. Denda, K., et al. 2002. Functional characterization of Kunitz domains in hepatocyte growth factor activator inhibitor type 1. *J Biol Chem.*277: 14053-14059.

SOURCE

Matriptase (L-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus 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.

Blocking peptide available for competition studies, sc-25234 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Matriptase (L-18) 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) and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

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.

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.