

Matriptase (C-16): sc-25235

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 remodeling, 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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4. List, K., Haudenschild, C.C., Szabo, R., Chen, W., Wahl, S.M., Swaim, W., Engelholm, L.H., Behrendt, N. and Bugge, T.H. 2002. Matriptase/MT-SP1 is required for postnatal survival, epidermal barrier function, hair follicle development, and thymic homeostasis. *Oncogene* 21: 3765-3779.
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CHROMOSOMAL LOCATION

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

SOURCE

Matriptase (C-16) 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-25235 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Matriptase (C-16) is recommended for detection of Matriptase of human, rat and, to a lesser extent, mouse 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).

Matriptase (C-16) is also recommended for detection of Matriptase in additional species, including equine and canine.

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.

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.

SELECT PRODUCT CITATIONS

1. Kim, S.B., Lee, D., Jeong, J.W., Kim, C., Park, D. and Kim, M.G. 2010. Soluble epithin/PRSS14 secreted from cancer cells contains active angiogenic potential. *Mol. Cells* 29: 617-623.

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.



Try **Matriptase (D-7): sc-365482**, our highly recommended monoclonal alternative to Matriptase (C-16).