

Matriptase-2 (S-20): sc-54240

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 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

1. Velasco, G., et al. 2002. Matriptase-2, a membrane-bound mosaic serine proteinase predominantly expressed in human liver and showing degrading activity against extracellular matrix proteins. *J. Biol. Chem.* 277: 37637-37646.
2. Hooper, J.D., et al. 2003. Mouse Matriptase-2: identification, characterization and comparative mRNA expression analysis with mouse Hepsin in adult and embryonic tissues. *Biochem. J.* 373: 689-702.
3. Szabo, R., et al. 2005. Matriptase-3 is a novel phylogenetically preserved membrane-anchored serine protease with broad serpin reactivity. *Biochem. J.* 390: 231-242.
4. Hartikainen, J.M., et al. 2006. Refinement of the 22q12-q13 breast cancer—associated region: evidence of TMPRSS6 as a candidate gene in an eastern Finnish population. *Clin. Cancer Res.* 12: 1454-1462.

CHROMOSOMAL LOCATION

Genetic locus: TMPRSS6 (human) mapping to 22q12.3; Tmprss6 (mouse) mapping to 15 E2.

SOURCE

Matriptase-2 (S-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Matriptase-2 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-54240 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

Matriptase-2 (S-20) is recommended for detection of Matriptase-2 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).

Matriptase-2 (S-20) is also recommended for detection of Matriptase-2 in additional species, including canine and bovine.

Suitable for use as control antibody for Matriptase-2 siRNA (h): sc-106207, Matriptase-2 siRNA (m): sc-149299, Matriptase-2 shRNA Plasmid (h): sc-106207-SH, Matriptase-2 shRNA Plasmid (m): sc-149299-SH, Matriptase-2 shRNA (h) Lentiviral Particles: sc-106207-V and Matriptase-2 shRNA (m) Lentiviral Particles: sc-149299-V.

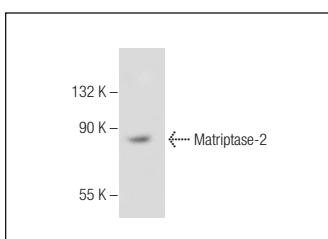
Molecular Weight of Matriptase-2: 70 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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



Matriptase-2 (S-20): sc-54240. Western blot analysis of Matriptase-2 expression in MCF7 whole cell lysate.

RESEARCH USE

For research use only, not for use in diagnostic procedures.



Try **Matriptase-2 (H-1): sc-514973**, our highly recommended monoclonal alternative to Matriptase-2 (S-20).