## SANTA CRUZ BIOTECHNOLOGY, INC.

# Matriptase (D-7): sc-365482



### BACKGROUND

Matriptase (also known as MT-SP1, ST14, prostamin and epithin) is a tumorassociated 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 Kunitztype 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.

#### SOURCE

Matriptase (D-7) is a mouse monoclonal antibody raised against amino acids 81-350 mapping within an N-terminal extracellular domain of Matriptase of human origin.

#### PRODUCT

Each vial contains 200  $\mu$ g lgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Matriptase (D-7) is available conjugated to agarose (sc-365482 AC), 500  $\mu$ g/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-365482 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365482 PE), fluorescein (sc-365482 AF542, AF548), Alexa Fluor<sup>®</sup> 488 (sc-365482 AF488), Alexa Fluor<sup>®</sup> 546 (sc-365482 AF546), Alexa Fluor<sup>®</sup> 594 (sc-365482 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-365482 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-365482 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-365482 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

## **APPLICATIONS**

Matriptase (D-7) is recommended for detection of Matriptase of human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (start-ing 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 shRNA Plasmid (h): sc-43911-SH and Matriptase shRNA (h) Lentiviral Particles: sc-43911-V.

Molecular Weight of Matriptase: 70 kDa.

Positive Controls: Raji whole cell lysate: sc-364236 or BJAB whole cell lysate: sc-2207.

## STORAGE

Store at 4° C, \*\*D0 NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## DATA





Matriptase (D-7): sc-365482. Western blot analysis of Matriptase expression in Raji ( $\bf{A}$ ) and BJAB ( $\bf{B}$ ) whole cell lysates.

Matriptase (D-7): sc-365482. Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine (**A**) and human colon (**B**) tissue showing membrane and cytoplasmic staining of glandular cells.

#### **SELECT PRODUCT CITATIONS**

- Ye, F., et al. 2019. 3-CI-AHPC inhibits pro-HGF maturation by inducing Matriptase/HAI-1 complex formation. J. Cell. Mol. Med. 23: 155-166.
- 2. Li, C., et al. 2019. MSP-RON signaling is activated in the transition from pancreatic intraepithelial neoplasia (PanIN) to pancreatic ductal adenocarcinoma (PDAC). Front. Physiol. 10: 147.
- Steiro, I., et al. 2022. The serine protease matriptase inhibits migration and proliferation in multiple myeloma cells. Oncotarget 13: 1175-1186.
- Chen, M., et al. 2023. Comparative site-specific N-glycoproteome analysis reveals aberrant N-glycosylation and gives insights into mannose-6-phosphate pathway in cancer. Commun. Biol. 6: 48.
- Chen, L.M. and Chai, K.X. 2023. Exosome-mediated activation of the prostasin-matriptase serine protease cascade in B lymphoma cells. Cancers 15: 3848.

#### **RESEARCH USE**

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

#### **PROTOCOLS**

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

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