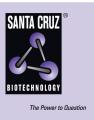
SANTA CRUZ BIOTECHNOLOGY, INC.

TMPRSS4 (T-14): sc-66603



BACKGROUND

Extracellular proteases mediate the digestion of neighboring extracellular matrix components in initial tumor growth, allow desquamation of tumor cells into the surrounding environment, provide the basis for invasion of basement membranes in targeted metastatic organs and are required for release and activation of many growth and angiogenic factors. TMPRSS4 (transmembrane protease, serine 4) also known as MT-SP2 (membrane-type serine protease 2) and initially referred to as TMPRSS3, is a single-pass type II membrane protein with one SRCR domain, one LDL-receptor class A domain and one peptidase S1 domain. Localizing to the cell surface, TMPRSS4 is a member of the peptidase S1 family and is weakly expressed in normal tissues but is highly expressed in gastric, pancreatic, ampullary and colorectal cancer. TMPRSS4 plays a role in metastasis formation and tumor invasion.

REFERENCES

- Tanimoto, H., Yan, Y., Clarke, J., Korourian, S., Shigemasa, K., Parmley, T.H., Parham, G.P. and O'Brien, T.J. 1997. Hepsin, a cell surface serine protease identified in hepatoma cells, is overexpressed in ovarian cancer. Cancer Res. 57: 2884-2887.
- Magee, J.A., Araki, T., Patil, S., Ehrig, T., True, L., Humphrey, P.A., Catalona, W.J., Watson, M.A. and Milbrandt, J. 2001. Expression profiling reveals hepsin overexpression in prostate cancer. Cancer Res. 61: 5692-2696.
- Kebebew, E., Peng, M., Reiff, E., Duh, Q.Y., Clark, O.H. and McMillan, A. 2005. ECM1 and TMPRSS4 are diagnostic markers of malignant thyroid neoplasms and improve the accuracy of fine needle aspiration biopsy. Ann. Surg. 242: 353-361.
- Jarzab, B., Wiench, M., Fujarewicz, K., Simek, K., Jarzab, M., Oczko-Wojciechowska, M., Wloch, J., Czarniecka, A., Chmielik, E., Lange, D., Pawlaczek, A., Szpak, S., Gubala, E. and Swierniak, A. 2005. Gene expression profile of papillary thyroid cancer: sources of variability and diagnostic implications. Cancer Res. 65: 1587-1597.
- Yamada, H., Shinmura, K., Tsuneyoshi, T. and Sugimura, H. 2005. Effect of splice-site polymorphisms of the TMPRSS4, NPHP4 and ORCTL4 genes on their mRNA expression. J. Genet. 84: 131-136.
- Kebebew, E., Peng, M., Reiff, E. and McMillan, A. 2006. Diagnostic and extent of disease multigene assay for malignant thyroid neoplasms. Cancer 106: 2592-2597.
- Jung, H., Lee, K.P., Park, S.J., Park, J.H., Jang, Y.S., Choi, S.Y., Jung, J.G., Jo, K., Park, D.Y., Yoon, J.H., Park, J.H., Lim, D.S., Hong, G.R., Choi, C., Park, Y.K., Lee, J.W., Hong, H.J., Kim, S. and Park, Y.W. 2007. TMPRSS4 promotes invasion, migration and metastasis of human tumor cells by facilitating an epithelial-mesenchymal transition. Oncogene 27: 2635-2647.

CHROMOSOMAL LOCATION

Genetic locus: Tmprss4 (mouse) mapping to 9 A5.2.

SOURCE

TMPRSS4 (T-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of TMPRSS4 of mouse origin.

PRODUCT

Each vial contains 200 μg lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-66603 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TMPRSS4 (T-14) is recommended for detection of TMPRSS4 of mouse and rat 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).

TMPRSS4 (T-14) is also recommended for detection of TMPRSS4 in additional species, including canine and porcine.

Suitable for use as control antibody for TMPRSS4 siRNA (m): sc-63138, TMPRSS4 shRNA Plasmid (m): sc-63138-SH and TMPRSS4 shRNA (m) Lentiviral Particles: sc-63138-V.

Molecular Weight of TMPRSS4: 48 kDa.

Molecular Weight of glycosylated TMPRSS4: 55 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) Immunofluo-rescence: use 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.

MONOS Satisfation Guaranteed Try **TMPRSS4 (A-3): sc-376415**, our highly recommended monoclonal alternative to TMPRSS4 (T-14).