

Mouse Anti-TMPRSS2 [H4]: MC0382, MC0382RTU7

Intended Use: For Research Use Only

Description: Transmembrane protease serine 2 (TMPRSS2) or Serine protease 10, is encoded by the TMPRSS2 or PRSS10 gene in human. TMPRSS2 is a single-pass type II membrane protein of the peptidase S1 family that is shown to proteolytically cleave and activate the viral spike glycoproteins, which facilitate virus-cell membrane fusions. It is shown to facilitate human SARS coronavirus (SARS-CoV) infection via two independent mechanisms, proteolytic cleavage of ACE2 that promotes viral uptake and cleavage of coronavirus spike glycoprotein, which activates the glycoprotein for cathepsin L-independent host cell entry. TMPRSS2 is highly expressed in the prostate tissue and lower expression levels are observed in the epithelia of the colon, stomach, epididymis and breast tissue. Some expression has also been reported in pancreatic acini, hepatic bile ducts, testicular Leydig cells and the kidney. Its expression levels are significantly elevated in both neoplastic prostate and in the epithelium of prostatic hyperplasia. TMPRSS2 has a cytoplasmic domain (aa 1-84), a transmembrane domain (aa 85-105), and an extracellular domain (aa 106-492). Its peptidase S1 domain is localized to amino acids 256-489. It is reported to be proteolytically processed by an autocatalytic mechanism generating the transmembrane protease serine 2 non-catalytic chain (1-255) and the transmembrane protease serine 2 catalytic chain (256-492). Two isoforms of TMPRSS2 have been described that are produced by alternative splicing.

Specifications

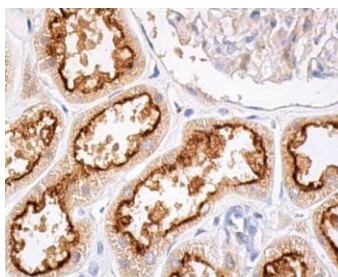
Clone: H4
 Source: Mouse
 Isotype: IgG1k
 Reactivity: Human, mouse, rat
 Immunogen: Amino acids 296-345 mapping within an internal region of human TMPRSS2
 Localization: Membrane, secreted
 Formulation: Antibody in PBS pH7.4, containing BSA and $\leq 0.09\%$ sodium azide (NaN₃)
 Storage: Store at 2°- 8°C
 Applications: IHC, ELISA, IF, IP, WB
 Package:

Description	Catalog No.	Size
TMPRSS2 Concentrated	MC0382	1 ml
TMPRSS2 Prediluted	MC0382RTU7	7 ml

IHC Procedure

Positive Control Tissue: Prostatic adenocarcinoma
 Concentrated Dilution: 50-200
 Pretreatment: Tris EDTA pH9.0, 15 minutes Pressure Cooker or 30-60 minutes water bath at 95°-99°C
 Incubation Time and Temp: 30-60 minutes @ RT
 Detection: Refer to the detection system manual

* Result should be confirmed by an established diagnostic procedure.



FFPE human kidney stained with anti-TMPRSS2 showing apical membrane staining of cells in tubules

References:

1. Non-human primate orthologues of TMPRSS2 cleave and activate the influenza virus hemagglutinin. Zmora P, et al. PLoS One 12:e0176597, 2017.
2. Expression profiling reveals hepsin overexpression in prostate cancer. Magee, J.A., et al. Cancer Res. 61: 5692-2696, 2001.

Doc. 100-MC0382
Rev. A