

# ▶ TMPRSS2 (N-13): sc-19686

## 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. The TMPRSS2 gene encodes a 492 amino acid multimeric serine protease, which is mainly expressed in the mouse prostate and kidney, and is also expressed in the human small intestine, prostate, colon, stomach and salivary gland. TMPRSS2 contains several domains, including a serine protease domain of the S1 family, a scavenger receptor cysteine-rich domain of group A, an LDL receptor class A domain and a transmembrane domain. TMPRSS2 is expressed as a full length form and a cleaved protease domain and its expression is increased by androgenic hormones. TMPRSS2 is also expressed in prostate carcinoma, suggesting that it may play a role in prostate carcinogenesis.

## REFERENCES

1. Tanimoto, H., et al. 1997. Hepsin, a cell surface serine protease identified in hepatoma cells, is overexpressed in ovarian cancer. *Cancer Res.* 57: 2884-2887.
2. Paoloni-Giacobino, A., et al. 1997. Cloning of the TMPRSS2 gene, which encodes a novel serine protease with transmembrane, LDLRA, and SRCR domains and maps to 21q22.3. *Genomics* 44: 309-320.
3. Lin, B., et al. 1999. Prostate-localized and androgen-regulated expression of the membrane-bound serine protease TMPRSS2. *Cancer Res.* 59: 4180-4184.
4. Vaarala, M.H., et al. 2001. Expression of transmembrane serine protease TMPRSS2 in mouse and human tissues. *J. Pathol.* 193: 134-140.
5. Afar, D.E., et al. 2001. Catalytic cleavage of the androgen-regulated TMPRSS2 protease results in its secretion by prostate and prostate cancer epithelia. *Cancer Res.* 61: 1686-1692.

## CHROMOSOMAL LOCATION

Genetic locus: TMPRSS2 (human) mapping to 21q22.3.

## SOURCE

TMPRSS2 (N-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of TMPRSS2 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-19686 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

TMPRSS2 (N-13) is recommended for detection of TMPRSS2 of human 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).

Suitable for use as control antibody for TMPRSS2 siRNA (h): sc-41658, TMPRSS2 shRNA Plasmid (h): sc-41658-SH and TMPRSS2 shRNA (h) Lentiviral Particles: sc-41658-V.

Molecular Weight of TMPRSS2: 70 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

## 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.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **TMPRSS2 (P5H9-A3): sc-101847**, our highly recommended monoclonal alternative to TMPRSS2 (N-13).