SANTA CRUZ BIOTECHNOLOGY, INC.

TMPRSS11D (P-14): sc-104706

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The Power to Question

BACKGROUND

TMPRSS11D (transmembrane protease, serine 11D), also known as HAT, is a 418 amino acid single-pass type II membrane protein that contains one SEA domain and one peptidase S1 domain. Expressed in bronchi and trachea, TMPRSS11D functions as a monomer that cleaves the C-terminal side of arginine residues at the P1 position of certain peptides and, via this catalytic activity, plays a role in the host defense system. TMPRSS11D is inhibited by diisopropyl fluorophosphate, leupeptin, antipain and aprotinin and is subject to post-translational cleavage which results in the formation of an active, secreted peptide. The gene encoding TMPRSS11D maps to human chromosome 4, which encodes nearly 6% of the human genome and has the largest gene deserts (regions of the genome with no protein encoding genes) of all of the human chromosomes.

REFERENCES

1. Yasuoka, S., et al. 1997. Purification, characterization, and localization of a novel Trypsin-like protease found in the human airway. Am. J. Respir. Cell Mol. Biol. 16: 300-308.
2. Yamaoka, K., et al. 1998. Cloning and characterization of the cDNA for human airway Trypsin-like protease. J. Biol. Chem. 273: 11895-11901.
3. Takahashi, M., et al. 2001. Localization of human airway Trypsin-like protease in the airway: an immunohistochemical study. Histochem. Cell Biol. 115: 181-187.
4. Miki, M., et al. 2003. Effect of human airway Trypsin-like protease on intracellular free Ca^{2+} concentration in human bronchial epithelial cells. J. Med. Invest. 50: 95-107.
5. Iwakiri, K., et al. 2004. Human airway Trypsin-like protease induces PAR-2-mediated IL-8 release in psoriasis vulgaris. J. Invest. Dermatol. 122: 937-944.
6. Chokki, M., et al. 2005. Human airway Trypsin-like protease induces amphiregulin release through a mechanism involving protease-activated receptor-2-mediated ERK activation and TNF α-converting enzyme activity in airway epithelial cells. FEBS J. 272: 6387-6399.

CHROMOSOMAL LOCATION

Genetic locus: Tmprss11d (mouse) mapping to 5 E1.

SOURCE

TMPRSS11D (P-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of TMPRSS11D of mouse 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-104706 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TMPRSS11D (P-14) is recommended for detection of TMPRSS11D of mouse and rat 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).

Suitable for use as control antibody for TMPRSS11D siRNA (m): sc-106622, TMPRSS11D shRNA Plasmid (m): sc-106622-SH and TMPRSS11D shRNA (m) Lentiviral Particles: sc-106622-V.

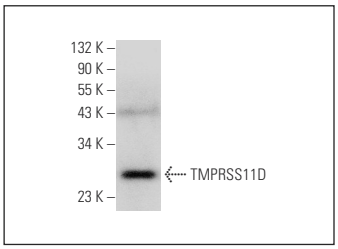
Molecular Weight of TMPRSS11D: 46 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214.

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



TMPRSS11D (P-14): sc-104706. Western blot analysis of TMPRSS11D expression in KNRK whole cell lysate.

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.