

# PRSS16 (D-7): sc-515700

## BACKGROUND

PRSS16, also known as serine protease 16 or TSSP (thymus-specific serine protease), is a 514 amino acid protein involved in the alternative antigen presenting pathway of T-cell positive selection. Localizing to lysosomal or endosomal cytoplasmic vesicles, PRSS16 is abundantly expressed in cortical thymic epithelial cells and is a member of the peptidase S28 family. The gene encoding PRSS16 maps to human chromosome 6, in a large histone gene cluster near the major histocompatibility complex (MHC) class I region. PRSS16 may also be linked to Insulin dependent diabetes mellitus (IDDM) susceptibility and autoimmunity.

## REFERENCES

- Gruen, J.R., et al. 1996. A transcription map of the major histocompatibility complex (MHC) class I region. *Genomics* 36: 70-85.
- Bowlus, C.L., et al. 1999. Cloning of a novel MHC-encoded serine peptidase highly expressed by cortical epithelial cells of the thymus. *Cell. Immunol.* 196: 80-86.
- Lie, B.A., et al. 2002. Polymorphisms in the gene encoding thymus-specific serine protease in the extended HLA complex: a potential candidate gene for autoimmune and HLA-associated diseases. *Genes Immun.* 3: 306-312.
- Cheunsuk, S., et al. 2002. Expression, genomic structure and mapping of the thymus specific protease prss16: a candidate gene for Insulin dependent diabetes mellitus susceptibility. *J. Autoimmun.* 18: 311-316.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607169. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Luther, C., et al. 2005. Alternatively spliced transcripts of the thymus-specific protease PRSS16 are differentially expressed in human thymus. *Genes Immun.* 6: 1-7.
- Lie, B.A., et al. 2007. Association analysis in type 1 diabetes of the PRSS16 gene encoding a thymus-specific serine protease. *Hum. Immunol.* 68: 592-598.
- Viken, M.K., et al. 2009. Reproducible association with type 1 diabetes in the extended class I region of the major histocompatibility complex. *Genes Immun.* 10: 323-333.

## CHROMOSOMAL LOCATION

Genetic locus: PRSS16 (human) mapping to 6p22.1; Prss16 (mouse) mapping to 13 A3.1.

## SOURCE

PRSS16 (D-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 365-382 within an internal region of PRSS16 of human origin.

## PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

PRSS16 (D-7) is recommended for detection of PRSS16 of mouse, rat and 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PRSS16 siRNA (h): sc-95229, PRSS16 siRNA (m): sc-152523, PRSS16 shRNA Plasmid (h): sc-95229-SH, PRSS16 shRNA Plasmid (m): sc-152523-SH, PRSS16 shRNA (h) Lentiviral Particles: sc-95229-V and PRSS16 shRNA (m) Lentiviral Particles: sc-152523-V.

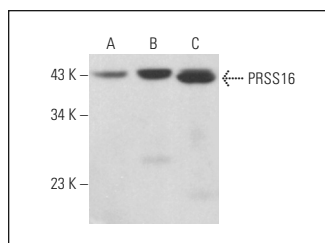
Molecular Weight of PRSS16: 55 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, NIH/3T3 whole cell lysate: sc-2210 or human thymus whole cell lysate.

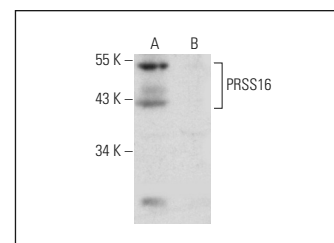
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



PRSS16 (D-7): sc-515700. Western blot analysis of PRSS16 expression in Hep G2 (A) and NIH/3T3 (B) whole cell lysates and human fetal thymus tissue extract (C).



PRSS16 (D-7): sc-515700. Western blot analysis of PRSS16 expression in human thymus (A) and human testis (B) whole cell lysates. Note specificity in thymus.

## SELECT PRODUCT CITATIONS

- Mae, S.I., et al. 2020. Expansion of human iPSC-derived ureteric bud organoids with repeated branching potential. *Cell Rep.* 32: 107963.

## 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.