

# PRSS16 (D-14): sc-169054

## 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

1. Gruen, J.R., et al. 1996. A transcription map of the major histocompatibility complex (MHC) class I region. *Genomics* 36: 70-85.
2. 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.
3. 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.
4. 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.
5. 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/>
6. 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.
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.
8. 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-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of PRSS16 of human origin.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## 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-169054 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

PRSS16 (D-14) is recommended for detection of PRSS16 of mouse, rat and 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); non cross-reactive with other PRSS family members.

PRSS16 (D-14) is also recommended for detection of PRSS16 in additional species, including equine, canine, bovine and porcine.

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.

## 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.