



Catalog Number: 81412-R08H

## General Information

### Gene Name Synonym:

PRSS8

### Protein Construction:

A DNA sequence encoding the rat Prss8 (NP\_620191.1) (Met1-Arg322) was expressed with a polyhistidine tag at the C-terminus.

**Source:** Rat

**Expression Host:** HEK293 Cells

## QC Testing

**Purity:** > 95 % as determined by SDS-PAGE.

### Endotoxin:

< 1.0 EU per  $\mu$ g protein as determined by the LAL method.

### Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

**Predicted N terminal:** Ala 30

### Molecular Mass:

The recombinant rat Prss8 consists of 304 amino acids and predicts a molecular mass of 32.9 kDa.

### Formulation:

Lyophilized from sterile PBS, pH 7.4.

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

## Usage Guide

### Storage:

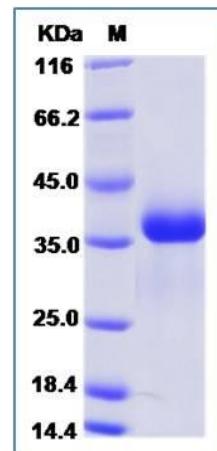
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

### Reconstitution:

Detailed reconstitution instructions are sent along with the products.

## SDS-PAGE:



## Protein Description

Prostasin (Prss8), also known as channel activating protease 1 (CAP1), is a trypsinlike serine peptidase, and plays important roles in epithelial physiology. It is originally purified as an active, soluble enzyme from human seminal fluid and is highly expressed in prostate, lung, kidney, salivary gland and pancreas. Prostasin is expressed as a glycosyl-phosphatidylinositol (GPI)-anchored membrane protein in prostate epithelial cells, and also exists as a secreted proteolytic enzyme possibly via tryptic cleavage of its COOH-terminal hydrophobic domain. Prostasin is found to activate the epithelial sodium channel (ENaC) which is tightly regulated and is critical for maintaining salt and fluid balance in the lung and kidney in both normal and pathological conditions. Accordingly, prostasin has been proposed as a target for therapeutic inhibition in cystic fibrosis. In addition, prostasin inhibits prostate and breast cancer cell invasion in vitro, suggesting a functional role as a suppressor of tumor invasion, as well as a regulator of gene expression during inflammation.

## References

- 1.Yu J.X., et al.,(1995), Molecular cloning, tissue-specific expression, and cellular localization of human prostasin mRNA. *J. Biol. Chem.* 270:13483-13489.
- 2.Ota T., et al., (2004), Complete sequencing and characterization of 21,243 full-length human cDNAs. *Nat. Genet.* 36:40-45.
- 3.Martin J., et al.,(2004), The sequence and analysis of duplication-rich human chromosome 16. *Nature* 432:988-994.