



**LD Biopharma, Inc.**  
9924 Mesa Rim Road Suite B  
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Tel: 858-876-8266  
<http://www.ldbiopharma.com>

## - PRODUCT DATA SHEET -

**Name of Product:** Recombinant Human Trypsin-3 Protein  
**Catalog Number:** hRP-1260  
**Manufacturer:** LD Biopharma, Inc.

### Introduction

Human trypsin-3 (PRSS3) gene encodes a trypsinogen, which is a member of the trypsin family of serine proteases. This enzyme is expressed in the brain and pancreas and is resistant to common trypsin inhibitors. It is active on peptide linkages involving the carboxyl group of lysine or arginine. This gene is localized to the locus of T cell receptor beta variable orphans on chromosome 9. Four transcript variants encoding different isoforms have been described for this gene.

Full-length mature form of human Trypsin-3 cDNA (81 – 304 aa, derived from BC069476) was constructed with codon optimization and expressed with a small T7-His-TEV cleavage site Tag (29aa) fusion at its N-terminal. This protein is expressed in E.coli as inclusion bodies. The final product was refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified.

**Gene Symbol:** PRSS3 (MTG; PRSS4;T9;TRY3;TRY4)  
**Accession Number:** NP\_002762  
**Species:** Human  
**Size:** 50 µg / Vial  
**Composition:** 0.5 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, arginine, DTT and Sucrose.  
**Storage:** In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 30 days.

### Key References

Hayashi,H., et al., *Characterization of dsRNA-induced pancreatitis model reveals the regulatory role of IFN regulatory factor 2 (Irf2) in trypsinogen5 gene transcription.* Proc. Natl.



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Acad. Sci. U.S.A. 108 (46), 18766-18771 (2011)

Jiang,G., et al., *PRSS3 promotes tumour growth and metastasis of human pancreatic cancer*. Gut 59 (11), 1535-1544 (2010)

Hockla,A., et al., *Mesotrypsin promotes malignant growth of breast cancer cells through shedding of CD109*. Breast Cancer Res. Treat. 124 (1), 27-38 (2010)

## **Applications**

1. May be used for in vitro PRSS3 protein mediated pancreatic cancer cell differentiation and metastasis regulation study with this protein as either coating matrix protein or as soluble factor.
2. May be used for PPSS3 protein – protein interaction assay.
3. May be used for specific antibody production.

## **Quality Control**

Purity: > 90% by SDS-PAGE.

## **Recombinant Protein Sequence**

MASMTGGQQMGRGHHHHHENLYFQGGFELIVGGYTCEENSLPYQVSLNSGSHFCGGSLISEQ  
WVVSAAHCYKTRIQVRLGEHNIKVLEGNEQFINAAKIIRHPKYNRDITLDNDIMLIKLSPPAVIN  
ARVSTISLPTAPPAAGTECLISGWGNTLSFGADYPDELKCLDAPVLTQAECKASYPGKITNSMF  
CVGFLEGGKDSCQRDSGGPVVCNGQLQGVVSWGHCAGKWRPVGVTYTKVYNYVDWIKDTIAANS