

Active Recombinant Human PRSS1, His-tagged

Cat. No. PRSS1-1047H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human PRSS1 (Ala16-Ser247) fused with 10*his tag at C-terminal was expressed in Mouse NSO Cells.
Species	Human
Source	Mammalian Cells
ProteinLength	16-247 a.a.
Description	Human Trypsin 1, encoded by the PRSS1 gene, is also known as cationic trypsinogen. Constituting approximately twothirds of the total trypsin content in normal pancreatic juice, it is the most abundant trypsin isoform produced by the pancreas. It contains a signal peptide (residues 115), a pro region (residues 1623), and a mature chain (residues 24247). Trypsin 1 is synthesized in the pancreas and secreted into the duodenum lumen, where it is activated by enterokinase. Its major physiologic function is to digest food and to activate other proenzymes. Mutations in the PRSS1 gene can cause hereditary pancreatitis.
Molecular Mass	The recombinant human PRSS1 predicts a molecular mass of 26 kDa. It migrates as 32 kDa and 36 kDa band in SDS-PAGE under reducing conditions.
N-terminal Sequence	Ala16
Structure	Pro form

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Formulation	Supplied as a 0.2 µm filtered solution in HCl and NaCl.
Purity	>95%, by SDS-PAGE under reducing conditions and visualized by silver stain.
Activity	Measured by its ability to cleave the fluorogenic peptide substrate, Mca-RPKPVE-Nval-WRK(Dnp)-NH ₂ . The specific activity is >3,000 pmol/min/µg, as measured under the described conditions.
Endotoxin Level	<1.0 EU per 1 µg of the protein by the LAL method.
Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 6 months from date of receipt, -20 to -70°C as supplied. 3 months, -20 to -70°C under sterile conditions after opening.
Official Symbol	PRSS1

GENE INFORMATION

Gene Name	PRSS1 protease, serine, 1 (trypsin 1) [Homo sapiens]
Synonyms	PRSS1; protease, serine, 1 (trypsin 1); TRP1; TRY1; TRY4; TRYP1; trypsin-1; beta-trypsin; trypsinogen 1; trypsinogen A; digestive zymogen; cationic trypsinogen; nonfunctional trypsin 1; EC 3.4.21.4; EC 3.4.21; Alpha-trypsin chain 2; TRY1_HUMAN
Gene ID	5644
mRNA Refseq	NM_002769

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Protein Refseq	NP_002760
MIM	276000
UniProt ID	P07477
Chromosome Location	7q34
Pathway	Activation of Matrix Metalloproteinases; Degradation of the extracellular matrix; Extracellular matrix org; Influenza A; Neuroactive ligand-receptor interaction; Pancreatic secretion; Protein digestion and absorption
Function	metal ion binding; serine-type endopeptidase activity
PDBrendering based on 1trn.	