

## Recombinant Human Trypsin-3/PRSS3 Protein (His Tag)

Catalog Number: PKSH030980

**Note:** Centrifuge before opening to ensure complete recovery of vial contents.

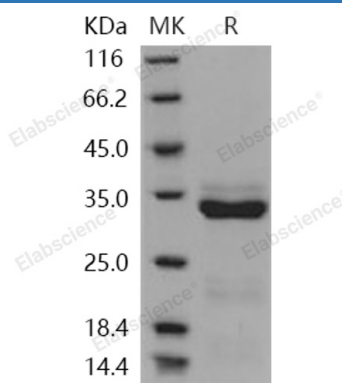
### Description

<b>Species</b>	Human
<b>Source</b>	HEK293 Cells-derived Human Trypsin-3/PRSS3 protein Met 1-Ser 247, with an C-terminal His
<b>Calculated MW</b>	26.6 kDa
<b>Observed MW</b>	33 kDa
<b>Accession</b>	P35030-3
<b>Bio-activity</b>	Measured by its ability to cleave the fluorogenic peptide substrate, Mca-RPKPVE-Nval-WRK(Dnp)-NH <sub>2</sub> (AnaSpec, Catalog#27114). The specific activity is > 4,000 pmoles/min/μg. (Activation description: The proenzyme needs to be activated by enteropeptidase for an activated form)

### Properties

<b>Purity</b>	> 95 % as determined by reducing SDS-PAGE.
<b>Endotoxin</b>	< 1.0 EU per μg of the protein as determined by the LAL method.
<b>Storage</b>	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
<b>Shipping</b>	This product is provided as lyophilized powder which is shipped with ice packs.
<b>Formulation</b>	Lyophilized from sterile 50mM MES, 0.6M NaCl, pH 5.0 Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
<b>Reconstitution</b>	Please refer to the printed manual for detailed information.

### Data



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### Background

#### For Research Use Only

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Trypsin-3, also known as Trypsin III, brain trypsinogen, Serine protease 3 and PRSS3, is a secreted protein which belongs to the peptidase S1 family. Trypsin-3 / PRSS3 is expressed in pancreas and brain. It contains one peptidase S1 domain. Trypsin-3 / PRSS3 can degrade intrapancreatic trypsin inhibitors that protect against CP. Genetic variants that cause higher mesotrypsin activity might increase the risk for chronic pancreatitis (CP). A sustained imbalance of pancreatic proteases and their inhibitors seems to be important for the development of CP. The trypsin inhibitor-degrading activity qualified PRSS3 as a candidate for a novel CP susceptibility gene. Trypsin-3 / PRSS3 has been implicated as a putative tumor suppressor gene due to its loss of expression, which is correlated with promoter hypermethylation, in esophageal squamous cell carcinoma and gastric adenocarcinoma.

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