Data Sheet (Cat.No.TMPY-01580)

TargetMol

PRSS2 Protein, Mouse, Recombinant (His)

General Information

Synonyms: Tesp4;protease, serine 2;Try2;Ta;TRY8;TRYP;Prss2

Protein Construction: A DNA sequence encoding the mouse PRSS2 (NP_033456.1) precursor (Met 1-Asn 246) was expressed, with a C-terminal polyhistidine tag. Predicted N terminal: Phe 16

Species: Mouse

Expression Host: HEK293 Cells

Accession: P07146

Molecular Weight: 26.2 kDa (predicted); 32 kDa (reducing conditions)

QC Testing

Biological Activity: Measured by its ability to cleave the fluorogenic peptide substrate, Mca-RPKPVE-Nval-WRK (Dnp)-NH2. The specific activity is >1500 pmoles/min/μg. (Activation description: The proenzyme needs to be activated by enteropeptidase for an activated form)

Purity: > 92 % as determined by SDS-PAGE

Endotoxin: < 1.0 EU/μg of the protein as determined by the LAL method.

Formulation: Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.5. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Trypsin-2, also known as Trypsin II, Anionic trypsinogen, Serine protease 2, PRSS2 and TRY2, is a secreted protein that belongs to the trypsin serine protease family including Trypsin, PRSS1, PRSS2 and PRSS3. It consists of a signal peptide (residues 1-15), a pro region (residues 16-23), and a proteolytically active mature chain (residues 24-247). PRSS2 contains one peptidase S1 domain. It is secreted into the duodenum, hydrolysing peptides into their smaller

building blocks, which is necessary for the uptake of protein in the food. It is secreted by the pancreas in the form of inactive zymogen, trypsinogen and cleaved to its active form in the small intestine when the pancreas is stimulated by cholecystokinin through the common activation mechanism.

Reference

Rawlings, N.D. et al.,1994, Meth. Enzymol. 244: 19-61.
Noone, P.G. et al., 2001, Gastroenterology. 121 (6): 1310-9.
Leiros, H.K. et al., 2004, Protein Sci. 13 (4): 1056-70.
Rónai,Z. et al., 2009, Biochem J. 418 (1):155-61.

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