Data Sheet (Cat.No.TMPY-03269)

TargetMol

Prolyl Endopeptidase Protein, Mouse, Recombinant (His)

General Information

Synonyms:	PEP;AI450383;AI047692;D10Wsu136e;prolyl endopeptidase;Pop
Protein Construction:	A DNA sequence encoding the mature form of mouse PREP (Q9QUR6) (Leu2-Gln710) was expressed, with a polyhistidine tag at the N-terminus. Predicted N terminal: His
Species:	Mouse
Expression Host:	Baculovirus Insect Cells
Accession:	Q9QUR6
Molecular Weight:	82.9 kDa (predicted); 79-83 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95 % 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 20 mM Tris, 500 mM NaCl, pH 7.4, 10% glycerol, 3 mM DTT. 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

Prolyl endopeptidase, also known as PREP, belongs to a distinct class of serine peptidases. It is a large cytosolic enzyme which was first described in the cytosol of rabbit brain as an oligopeptidase. Prolyl endopeptidase degrades the nonapeptide bradykinin at the Pro-Phe bond. It is involved in the maturation and degradation of peptide hormones and neuropeptides such as alpha-melanocyte-stimulating hormone, luteinizing hormone-releasing hormone (LH-RH), thyrotropin-releasing hormone, angiotensin, neurotensin, oxytocin, substance P and

vasopressin. Prolyl endopeptidase's activity is confined to action on oligopeptides of less than 10 kD and it has an absolute requirement for the trans-configuration of the peptide bond preceding proline. It cleaves peptide bonds at the C-terminal side of proline residues.

Reference

Oliveira EB,et al. (1976) Isolation of brain endopeptidases: Influence of size and sequence of substrates structurally related to bradykinin. Biochemistry. 15(9):1967-74.
Stepniak D,et al. (2006) Highly efficient gluten degradation with a newly identified prolyl endoprotease: implications for celiac disease. Am J Physiol Gastrointest Liver Physiol. 291(4): G621-9.
Jarho EM,et al. (2007) 2(S)-(Cycloalk-1-enecarbonyl)-1-(4-phenyl-butanoyl)pyrrolidines and 2(S)-(aroyl)-1-(4-phenylbutanoyl)pyrrolidines as prolyl oligopeptidase inhibitors. Bioorg Med Chem. 15(5):2024-31.

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