PRODUCT INFORMATION

Pyroglutamate Aminopeptidase (*P. furiosus*, recombinant)

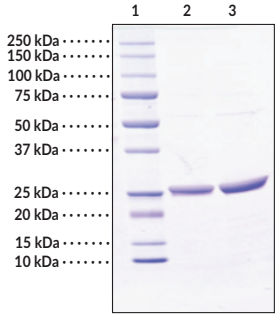
Item No. 44452

Overview and Properties

Synonyms:	5-Oxoprolyl-peptidase, PGP-1, PGP-I, Pyrase, Pyroglutamyl-peptidase I, Pyrrolidone-carboxylate Peptidase
Source:	Active recombinant *P. furiosus* N-terminal His-tagged pyroglutamate aminopeptidase expressed in *E. coli*
Amino Acids:	1-208
Uniprot No.:	O73944
Molecular Weight:	25 kDa
Storage:	-80°C (as supplied)
Stability:	≥1 year
Purity:	≥90% estimated by SDS-PAGE
Supplied in:	50 mM sodium phosphate buffer (pH 7.0) with 1 mM DTT and 1 mM EDTA
Bioactivity:	See figures for details
Unit Definition:	One unit is defined as the amount of enzyme required to hydrolyze 1 µmol of pyroglutamic acid *p*-nitroanilide per minute at 37°C in 50 mM sodium phosphate buffer, pH 7.0, containing 10 mM DTT and 1 mM EDTA

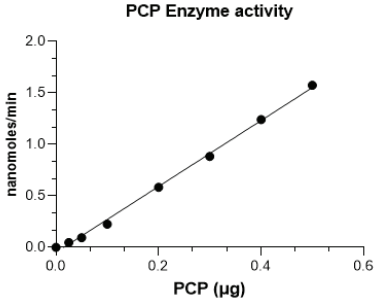
Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Image



Lane 1: MW Markers
Lane 2: Pyroglutamate Aminopeptidase (2) µg
Lane 3: Pyroglutamate Aminopeptidase (4 µg)

SDS-PAGE Analysis of Pyroglutamate Aminopeptidase (*P. furiosus*), recombinant.



Pyroglutamate aminopeptidase activity was determined by measuring the increase in absorbance at 405 nm at 37°C using 1.5 mM pyroglutamic acid p-nitroaniline in 50 mM sodium phosphate buffer, pH 7.0, containing 10 mM DTT and 1 mM EDTA..

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent *via* email to your institution.

WARRANTY AND LIMITATION OF REMEDY
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Description

Pyroglutamate aminopeptidase is a cysteine peptidase that cleaves pyroglutamic acid (pGlu) from the N-terminus of proteins and peptides.[1] It is specific for L-pGlu-L-amino acid isomers and does not typically cleave pGlu-Pro bonds. Pyroglutamate aminopeptidase has been found in various species, including bacteria, mammals, fish, and birds and exists as a multimer in bacteria.[1,2] Pyroglutamate aminopeptidase has commonly been used to remove pGlu from the N-terminus of peptides and proteins prior to Edman degradation and sequencing.[3] Cayman's Pyroglutamate Aminopeptidase (*P. furiosus*, recombinant) protein can be used for Edman degradation and protein sequencing applications.

References

1. Cummins, P.M., and O'Connor, B. Pyroglutamyl peptidase: An overview of the three known enzymatic forms. *Biochim. Biophys. Acta* **1429(1)**, 1-17 (1998).
2. Dando, P.M., Fortunato, M., Strand, G.B., *et al*. Pyroglutamyl-peptidase I: Cloning, sequencing, and characterisation of the recombinant human enzyme. *Protein Expr. Purif.* **28(1)**, 111-119 (2003).
3. Mozdzanowski, J., Bongers, J., and Anumula, K. High-yield deblocking of amino termini of recombinant immunoglobulins with pyroglutamate aminopeptidase. *Anal. Biochem.* **260(2)**, 183-187 (1998).

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