



32753

**Proteinase K ex. Pichia Pastoris (Type D -  
Recombinant) for molecular biology & PCR,  
30U/mg**

Part B

CAS : 39450-01-6

Specifications

Appearance (Colour)	White
Appearance (Form)	Crystalline powder
Activity	min. 30 units/mg protein
Protein content	min. 70%
Unit Definition	One unit will hydrolyze casein to produce color equivalent to 1.0 micromole (181 µg) of tyrosine per minute at pH 7.5 at 37 °C (color by Folin & Ciocalteus reagent).
Enzyme solution for activity determination	Prepared in cold 10mM sodium acetate buffer, pH 7.5.
Not for medicinal use	.

Other Information

Recombinant Proteinase K from *Tritirachium album* is a subtilisin-related serine protease. It is an endopeptidase with a very high specific activity and a broad spectrum of action. The enzyme is a 28.9 kDa protein expressed in *Pichia Pastoris*. It is widely used for digestion of proteins, including DNases and RNases during nucleic acid preparations without compromising the integrity of the isolated DNA or RNA. It is active in a wide range of reaction conditions. Proteinase K, produced by the fungus *Tritirachium album* Limber, is a serine protease with very broad cleavage specificity. It cleaves peptide bonds adjacent to the carboxylic group of aliphatic and aromatic amino acids and is useful for general digestion of protein in biological samples (1). It has been purified to be free of RNase and DNase activities. The stability of Proteinase K in urea and SDS and its ability to digest native proteins make it useful for a variety of applications, including preparation of chromosomal DNA for pulsed-field gel electrophoresis (2), protein fingerprinting (3,4) and removal of nucleases from preparations of DNA (5) and RNA (6,7). A typical working concentration for Proteinase K is 50-100  $\mu$ g/ml

#### Application

#### Features:

- Broad-spectrum serine protease
- High activity and exceptional purity
- Active at high temperatures (up to 56  $^{\circ}$ C) and denaturing conditions
- Molecular biology grade
- Next Gen sequencing compatible

#### Applications:

- Inactivation of RNases/DNases during nucleic acid extraction for Next Gen Sequencing or molecular biology applications
- Protein modifications
- General protein digestions
- Determination of enzyme localization
- Removal of nucleases for in situ hybridization
- Improving cloning efficiency of PCR products

#### Recommended Usage:

Reconstitute the lyophilizate in double-distilled water or in 50mM Tris-HCl (pH 8.0), 2mM CaCl<sub>2</sub> at the concentration of 20 mg/ml protein and store in aliquots at -20  $^{\circ}$ C. For longer storage the master solution may also be mixed with glycerol (1:1, v/v), and stored at -20  $^{\circ}$ C as a liquid. Proteinase K can be used for protein digestion at 56  $^{\circ}$ C for up to 4 hours, or at 37  $^{\circ}$ C o/n. For maximum activity maintain the pH between 7.5 and 12.0 during digestions.

### General Information

Storage	-20 $^{\circ}$ C (Blue/Dry Ice)
Shelf Life	60 Months
IMDG Identification	Not Regulated for Transport (Non-Haz)
HSN Code	
1 Gms	35079099 (GST 18%)

10 Mg	35079099 (GST 18%)
100 Mg	35079099 (GST 18%)
25 Mg	35079099 (GST 18%)
500 Mg	35079099 (GST 18%)

### Available Packages

25 Mg
100 Mg
500 Mg
1 Gms
5 Gms

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#### Disclaimer

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