



Proteinase K

Application:

- Digestion of proteins

Description:

Proteinase K is a serine protease that exhibits a very broad cleavage specificity. The Protein with a molecular weight 28.900 kD cleaves peptide bonds adjacent to the carboxylic group of aliphatic and aromatic amino acids. Proteinase K is not inactivated by chelating reagents such as EDTA or detergents such as SDS and is active over a wide range of pH (4-12.5).

Activity: > 30 units/mg protein (haemoglobin, pH 7.5, 37°C)

Unit definition:

Unit definition One unit is the amount of enzyme which releases at 37°C in 1 min as many folin-positive amino acids and peptides from haemoglobin as 1 µmol of tyrosine.

Features:

Proteinase K is a highly active and stable protease with low cutting specificity. The enzyme belongs to the group of subtilisine-related serine proteases and is strongly inhibited by PMSF.

Usage:

In presence of 0.5 – 1 % SDS Proteinase K inactivates DNases and RNases in eucaryotic and microbiological cell cultures. The use of Proteinase K during lysis of the cells allows the isolation of intact highly-molecular nucleic acids.

Source:

Proteinase K is cloned from fungus *Engyodontium album* and produced in *Pichia pastoris*

Quality:

- purified by chromatography and lyophilised
- RNases: not detectable
- DNases: not detectable
- Exonucleases: not detectable

Each batch of Proteinase K is tested for the presence of fungal and bacterial DNA. Moreover, the specific activity assay of each batch of the enzyme is performed. The COA document, according to the customer preferences, is issued for each batch of the enzyme.

Protocol:

Preparation: add appropriate amount of sterile water (not included) or recommended storage buffer (20 mM Tris pH 7.5, 1 mM CaCl₂, 0.02% sodium azide, 50% glycerol (v/v) not included)

Storage:

4 °C or -20 °C for at least 24 months

Ordering information:

Cat.-no	Description	Amount
405-002	Proteinase K	200 mg
405-010	Proteinase K	1000 mg

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