

Proteinase K (recombinant, PCR grade)

Catalog No. 40109S: 1 mL

Catalog No. 40109L: 5 mL

Description

Proteinase K is a serine protease that exhibits broad protein cleavage activity. It is well-used for protein removal, PCR purification, nucleic acid extraction such as genomic DNA, RNA, and plasmid.

Proteinase K has higher proteolytic activity in the presence of SDS and urea. The recombinant proteinase K has high activity and works in a wide range of pH and temperature. The recommended Proteinase K working concentration is 50–100 µg/ml.

Features

- Ready-to-use solution format
- Optimal activity between 20 and 60°C. High activity between 50 to 55°C.
- Optimal activity in a pH range of 4.5-12.0; High activity in the pH range of 7.5-11.5.
- No detectable DNase, RNase, endonuclease, and exonuclease activities.

Applications

- Inactivation of DNases, RNases and other enzymes in reactions
- Removal of DNases and RNases for extraction of genomic DNA and RNA from tissues or cells
- Plasmid DNA extraction
- Enhancement of PCR fragment cloning efficiency
- PCR purification

Specification

Unit Definition

One unit of Proteinase K is defined as the enzyme activity that digests urea-denatured hemoglobin and produces 1 µmol tyrosine per 1 min at 37°C at pH 7.5.

Concentration

>600 U/ml (20 mg/ml)

Storage Buffer

10 mM Tris-HCl; 1 mM CaCl₂; 50% Glycerol. pH 7.4 @ 25°C

Storage Condition

Store at -20 °C. Stable up to 12 months.

Molecular Weight

28.9 kDa

Source

The recombinant Proteinase K is from yeast cells with a cloned gene from *Tritirachium album*.

Purity

Free of DNase, RNase, endonuclease, and exonuclease.

Inhibitors

The Proteinase K can be inactivated by DIFP or PMSF.

Component

Catalog No.	40109S	40109L
Proteinase K (20 mg/ml)	1 ml	5 ml

Note

- The recommended working concentration of Proteinase K is 50–100 µg/ml.
- The Proteinase K activity can be stimulated by 0.2 to 1% SDS or by 1 to 4 M urea.
- Calcium chloride protects Proteinase K from autolysis and increases thermal stability of the enzyme.

Quality Control

Reagent passed stringent functional quality test.

Product Use Limitation

This product is developed and sold for research purposes and *in vitro* use only. Please refer to biodynami.com for Material Safety Data Sheet of the product.

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