

Catalogue Numbers:

BIO-37037 100mg
 BIO-37039 1000mg

Features

- Broad-spectrum serine protease
- Active under denaturing conditions
- Stable at high temperatures
- Molecular biology grade
- Available as powder and stabilized stock solution

Applications

- Inactivation of RNases/DNases during nucleic acid extraction
- Protein modification
- General protein digestion
- Determination of enzyme localization

Description

Proteinase K is an enzyme used to digest most proteins in molecular-biological techniques. The enzyme may be used at 56°C for up to 4 hours, or 37°C for overnight incubations. Proteinase K is available as a powder or as a stabilized stock solution (20mg/ml). Proteinase K solution is stabilized with a specially formulated buffer, and can be used directly from the freezer.

Recommendations for Use:

- Dissolve to 20mg/ml in 50mM Tris-HCl, 2mM calcium acetate, pH 8.0
- Proteinase K may be used at 56°C for up to 4 hours, or 37°C for overnight incubations
- Proteinase K has an optimal pH of 7.5-12.0
- To remove common contaminants from nucleic acid preparations use at a working concentration of 5µg/ml

Reference:

1. Sambrook, J., and Russel, D. (2001) *Molecular cloning: A laboratory manual*, 3rd Ed., Cold Spring Harbr Laboratory Press, Cold Spring Harbor, NY

Product Citations:

1. Zou, J., et al. *C. Eur. J. Biochem.* 271, 1913-1923 (2004).
2. Gillespie, K. M., et al. *Tissue Antigens* 56(6), 530-538 (2000).
3. Tiwari, J. et al. *Veterinary Parasitology* 138(3,4), 301-307 (2006).

Notes

1. This product insert is a declaration of analysis at the time of manufacture.
2. Research Use Only.

Product specifications
Storage Conditions:

Proteinase K can be stored for 12 months at -20°C.

Shipping Conditions:

On Dry Ice or Blue Ice

Safety Precautions:

Irritating to eyes, respiratory system and skin. May cause sensitization by inhalation. Please refer to the material safety data sheet for information regarding hazards and safe handling practice.



Xn: HARMFUL

CAS Number:

39450-01-6

EC Number:

3.4.21.14

Physical Appearance:

Lyophilized Powder. Lyophilized from calcium acetate

Molecular Weight:

28,500

Activity (Dry Weight):

≥30.0 units/mg

Specific Activity:

≥40.0 units/mg protein

Solubility:

50mM Tris-HCl, 2mM calcium acetate, pH 8.0

Contaminants:

RNase Activity: No detectable ribonuclease activity detected with MS2RNA after 6-hour incubation at 37°C

DNase Activity: No detectable nicking activity detected with pBR322 after 6-hour incubation at 37°C

Unit definition:

One unit is defined as the amount of enzyme that will liberate 1.0µmol of tyrosine per minute at 37°C, pH 7.5.

Associated Products

| Product Name | Pack Size | Cat No |
|--------------------|--------------|-----------|
| Quick-Stick Ligase | 50 Reactions | BIO-27027 |
| T4 DNA Ligase | 500 Units | BIO-27026 |
| Thermo DNA Ligase | 500 Units | BIO-27045 |
| Hyper Ladder I | 200 Lanes | BIO-33025 |