

# Proteinase K

Shipping: On Dry/Blue Ice

Catalog numbers

Batch No.: See vial

BIO-37037: 100 mg

BIO-37039: 1000 mg

Store at **-20°C**

**meridian** BIOSCIENCE™

## Storage and stability:

Proteinase K is shipped on dry/blue ice. On arrival store at -20°C for optimum stability.

## Expiry:

When stored under the recommended conditions and handled correctly, full activity is retained until the expiry date on the outer box label.

## Safety precautions:

Harmful if swallowed. Irritating to eyes, respiratory system and skin. Please refer to the material safety data sheet for further information.

## CAS Number:

39450-01-6



Xn: HARMFUL

## Quality control specifications:

Proteinase K is extensively tested for activity prior to release.

## Notes:

For research or further manufacturing use only.

## Trademark:

HyperLadder is a trademark of Bioline Reagents Ltd.

## 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 (20 mg/mL). Proteinase K solution is stabilized with a specially formulated buffer, and can be used directly from the freezer.

## 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

## Characteristics

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:	50 mM Tris-HCl, 2 mM calcium acetate, pH 8.0
Contaminants:	<b>RNase Activity:</b> No detectable ribonuclease activity detected with MS2RNA after 6-hour incubation at 37 °C
	<b>DNase Activity:</b> 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 1.0 μmol of tyrosine per minute at 37 °C, pH 7.5.

## Recommendations for Use:

- Dissolve to 20 mg/mL in 50 mM Tris-HCl, 2 mM 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 5 mg/mL

## Associated products

Product Name	Pack size	Cat. No.
HyperLadder™ 1kb	200 Lanes	BIO-33025
ISOLATE II Genomic DNA Kit	50 Prep	BIO-52066

## Citations:

1. Thaler, A. D., *et al. Cons. Gene. Res.* **2(1)**, 101-103 (2010).
2. Teague, B., *et al. PNAS* **107(24)**, 10848-10853 (2010).
3. Rolfmeier, M. L., *et al. J. Bacteriol.* **192(19)**, 4954-4962 (2010).
4. Arpanahi, A., *et al. Genome Res.* **19**, 1338-1349 (2009).
5. Schwenkenbecher, J.M., *et al. J. Medical Entomol.* **46(3)**, 610-614 (2009).
6. Jo, K., *et al. Meth. Mol. Biol.* **544**, 29-42 (2009).

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