

Proteinase K

| Catalogue number | Presentation |
|------------------|--------------|
| MB01901 | 100 mg |
| MB01902 | 500 mg |

Description

Recombinant Proteinase K is a stable serine protease with broad substrate specificity. It degrades many proteins in the native state even in the presence of detergents (1% Triton or 0.5% SDS). Proteinase K was isolated from a fungus (*Parengyodontium album album*, formerly *Tritirachium album*) and expressed in *Pichia pastoris*. Can grow on keratin and the enzyme can digest native keratin (hair), hence, the name "Proteinase K". NZYTech Proteinase K is a highly stable enzyme with an optimum temperature of 50-56 °C (activity range 20-65 °C) and optimum pH of 7.5-8.5 (activity range 4.0-12.0). Proteinase K is frequently used in molecular biology applications to digest unwanted proteins, such as nucleases from DNA or RNA preparations from microorganisms, cultured cells, and plants.

Shipping & Storage Conditions

This product can be shipped at a range of temperatures from dry ice to room temperature. After delivery, product should be stored at -30°C to -15°C. The product will remain stable till the expiry date if stored as specified.

Specifications

Molecular Weight: 28.9 kDa monomer

Activity: ≥ 30 U/mg lyophilizate
≥ 40 U/mg protein

One unit of Proteinase K hydrolyses urea-denaturated haemoglobin producing colour equivalent of 1 µmol tyrosine per min at 37 °C and pH 7.5.

Solubility in water: ≥ 20 mg/mL

Protein content: ≥ 70%

DNA contamination: ≤ 10 pg/mg

Technical Notes

For immediate use: 50 mM Tris-HCl, pH 7.8, 3 mM CaCl₂ or water, stable if stored at 2°C to 8°C up to 1 month.

For long-term storage: 50 mM Tris-HCl, pH 7.8, 3 mM CaCl₂, 50% glycerol (v/v), stable if stored at -30°C to -15°C up to 2 years.

The enzyme is typically used at 50–200 µg/mL in nucleic acid preparations at pH 7.5–8.0 and 37-55 °C. Incubation times vary from 30 minutes to 18 hours.

For life science research only. Not for use in diagnostic procedures.