



Proteinase K

Store at 2°C to 8°C

Cat. No.	Description	Quantity
G029	Proteinase K	1.0 ml; 20 mg/ml

Product Description

Proteinase K is a serine protease often used to digest protein and to remove contamination in nucleic acid preparations. It does so by inactivating nucleases which could otherwise cause the break down of DNA and/or RNA. It is an endopeptidase with very high specific activity and with a broad spectrum of action.

Features

- Free of DNase and RNase activity.
- Broad substrate specificity.

Applications

- Inactivation of RNases and DNases during DNA or RNA isolation from tissues, cell lines, or cultured cells.
- Removal of protein impurities.
- Improve cloning efficiency of PCR products.

Storage Conditions

Upon arrival, store between 2°C to 8°C. For long term storage, store at -20°C for up to a year.

Notes for Consideration

- Enzyme is typically used at 50 - 200 µg/ml in nucleic acid preparations (pH 7.5 - 8.5, and temperatures 37°C-55°C). Incubation time may vary (30 minutes to 18 hours) depending on application.
- Proteinase K cleaves proteins behind hydrophobic amino acids. Smallest peptide to be hydrolyzed is tetrapeptide.
- Working pH range: 4.0 to 12.0. Optimal activity is at pH 7.5 to 8.5. Full activity is maintained over several hours over pH ranges 6.5 to 10.0.
- Working temperature range: 20°C to 65°C, with optimal activity at 50°C to 56°C.
- The enzyme is not inactivated by chelating agents (e.g. EDTA), chaotropic salts, detergents (e.g. 1% SDS, 14 M urea), metal ions, thiol reagents or trypsin-specific inhibitors.