



PRODUCT INFORMATION

Proteinase K

Isolated from *Tritirachium album* (fungal origin)

Catalogue Number: PB0451 (DB0451)

Activity:

>30 units/mg protein (hemoglobin, pH7.5, 37°C)

Unit definition:

It is the amount of enzyme which releases at 37 °C in 1 min as many folin-positive amino acid and peptides from hemoglobin as 1umol of tyrosine.

Features:

Proteinase K is a highly active and stable protease with low cutting specificity. The enzyme belongs to the group of subtilisine-related serine proteases and is strongly inhibited by PMSF.

Usage:

In presence of 0.5-1.0% SDS Proteinase K inactivates DNases and RNases in eukaryotic and microbiological cell cultures. The use of Proteinase K during lysis of the cells allows the isolation of intact highly-molecular nucleic acids.

Preparation Instructions:

This product is soluble in double distilled water (1 mg/ml), yielding a clear colorless solution.

Quality:

Purified by chromatography and lyophilized
RNases: Not detectable
DNases: Not detectable
Exonucleases: Not detectable

Attention:

Proteinase K can cause irritation of eyes, respiration tract and of skin.

Storage/Stability:



BBI recommends storage at -20°C , though others have claimed stability at $2-8^{\circ}\text{C}$. When stored at -20°C , the product retains activity for about 3 years.

Proteinase K Activity in Commonly Used Buffers

Buffer	Application Example	Activity (%)
20 mM Tris-HCl, pH 8.0	Reference	100
10 mM Tris-HCl, 1 mM EDTA, 0.5 % SDS, pH 8.0	Bacterial genomic DNA isolation	108
10 mM Tris-HCl, 100 mM NaCl, 25 mM EDTA, 1 % SDS, pH 8.0	Genomic DNA isolation from mammalian tissues	171
100 mM Tris-HCl, 100 mM EDTA, 250 mM NaCl, 1% Sarkosyl, pH 8.0	Plant tissue genomic DNA isolation	118
10 mM Tris-HCl, 50 mM NaCl, 1 mM DTT, 5 mM EDTA, 0.5 % SDS, pH 7.9	Inactivation of Calf Intestinal Alkaline Phosphatase	104
50 mM Tris-HCl, 1 mM CaCl_2 , 3 mM DTT, 2 M Urea, pH 8.0	Denaturation of proteins	66
10 mM Tris-HCl, 1.5 mM MgCl_2 , 50 mM KCl, 0.1 % Triton X-100, pH 8.8	PCR buffer	158