



Proteinase K

Product description

Proteinase K is a serine protease with wide cleavage activity, which can cleave the carboxyl terminal peptide bond of aliphatic and aromatic amino acids. Its relative molecular weight is about 29.3 kDa. Proteinase K is widely used in the preparation of chromosomal DNA for pulse electrophoresis, Western blotting, and the removal of nuclease from DNA and RNA preparation. Denaturant such as SDS (1%) can improve its activity. In addition, the common working concentration is 50-100 $\mu\text{g}/\text{mL}$ and the specific working concentration according to whether the buffer contains SDS, urea, pH, temperature and other factors.

Components

Components No.	Name	10401ES60	10401ES80	10401ES90	10401ES98
10401	Proteinase K	100 mg	1 g	5 g	100 g

Specifications

Source	Yeast
Specific Activity	≥ 30 U/mg
Unit Definition	One unit is defined as the amount of proteinase K that will liberate $1\mu\text{mol}$ tyrosine per minute at 37°C @ pH 7.5.
Purification	Ni column affinity purification
Reaction Condition	The reaction buffer should be incubated at 37°C - 70°C for 1h, and the recommended reaction temperature is 70°C .
Inactivation method	The reaction system can be inactivated by adding PMSF or DFP inhibitor, and partially inactivated by incubation at 65°C for 10-15 min.
Activity Range	It has activity in a wide range of pH (4.0-12.0) and the optimal pH range is 7.5-9.0.
RNase and DNase	None

Shipping and Storage

The product is shipped with ice packs and can be stored at 2°C ~ 8°C for three years.

Instructions

1. Preparation of 20-40 mg/mL proteinase K storage solution.

1.1 Dissolve the dry powder in the diluent buffer to prepare 40-80 mg/mL stock solution;

Note: Diluent buffer: 20 mmol/L Tris HCl (pH 7.4), 1 mmol/L CaCl_2 .

1.2 Use 0.22 μm filter with low protein adsorption to sterilize;

1.3 Add equal volume of sterile glycerin to prepare the proteinase K storage solution;

Note: Proteinase K solution is stored at 4°C for 1 year. If it needs to be used repeatedly, we suggest to be stored separately.

2. Add the specified amount of proteinase K storage solution according to the instructions for nucleic acid extraction.



Notes

1. Please wear the necessary PPE, such lab coat and gloves, to ensure your health and safety.
2. For research use only.