

Product No. 15679

Proteinase K (Recombinant) Solution

Features

This product is a ready-to-use solution. It is tested for the absence of DNase and RNase.

About Proteinase K

(Characteristics) - Proteinase K is a stable and highly active serine protease.

- Proteinase K is active in the presence of denaturing reagents such as urea (1 - 4 mol/L) or 0.5 % SDS.

- The optimal pH range is between pH 7.5 and pH 10.5 (using denatured hemoglobin as a substrate).
It is stable from pH 4.0 to pH 12.5.

- Proteinase K is inactivated by DFP (Diisopropyl fluorophosphate) and PMSF (Phenylmethylsulfonyl fluoride).
However, it is not inactivated by EDTA.

(Applications) - Proteinase K is useful for inactivation of nucleases during extraction of DNA or RNA, and treatment of paraffin embedded tissue sections to unmask antigens in immunohistochemistry detections.

- Proteinase K can digest various proteins rapidly.

Source

This proteinase K is a recombinant protein from *Pichia pastoris* cells with a cloned gene from *Tritirachium album*.

Composition

This solution contains Proteinase K (activity >600 U/mL, approx. 18 mg/mL), glycerol and calcium acetate in 10 mmol/L Tris-HCl buffer (pH 7.5),

(Unit definition : One unit of enzyme digests urea-denatured bovine hemoglobin to amino acids and peptides corresponding to 1 μ mol of tyrosine in 1 minute at 37 °C (color by folin reagent)).

Example of use

Extraction of DNA

1. Suspend the cells or the tissue in lysis buffer.

Composition of lysis buffer : 10 mmol/l Tris-HCl buffer (pH 8.0)

0.1 mol/l EDTA

0.5 % (w/v) SDS

Proteinase K (Recombinant) Solution : Add 0.5% (v/v) of the total volume.

Adjust the concentration as necessary.

2. Incubate at 37 - 50 °C for 3 hours to overnight.

3. Extract the DNA with phenol/chloroform followed by ethanol precipitation.

Unmasking antigens on paraffin-embedded tissue sections

1. Deparaffinize and hydrate tissue sections according to the standard protocols.

2. Treat with Proteinase K (Recombinant) Solution.

Incubate the sections with properly diluted Proteinase K (Recombinant) Solution for 6 to 15 minutes at room temperature.

(The optimal reaction concentration, time and temperature depend on the antigen. Optimization of these conditions is essential.)

3. Wash the section with TBS containing 0.1 % Tween[®] (or PBS containing 0.1 % Tween[®]).

4. Perform immunohistochemistry detection.

Attention

- Wear disposable gloves, mask, and goggles to protect contamination of nucleases.

- It is recommended performing preliminary experiments to optimize the reaction concentration, temperature and time when use Proteinase K (Recombinant) Solution.

Storage

Refrigerator

Expiration

Expiration date is stated on the product label.

Packing

2 mL (Product No.15679-06)

10 mL (Product No.15679-64)