

Quick Details of Proteinase K with cas 39450-01-6

CAS No.:39450-01-6

Other Names:Proteinase K,

ProteinaseK,PowderAndSolutionAvailable;ProteinaseK,fromTritirachiumalbumLimber;Proteinase KfromTritirachiumalbumca.8DMC-U/mg;PROTEINASEK,LYOPHILIZEDPOWDER,BChemicalbookIOT ECHGRADE;ProteinaseKfortritirachiumalbumserine.

MF:C29H27N2O12P

EINECS No.:254-457-8

Specification of Proteinase K with cas 39450-01-6

| No.1 liquid | |
|---------------------------|---|
| | Protein specific activity>800U/mL, the concentration is 20mg/mL, no Nickase residue |
| No.2 powder | |
| Appearance | White lyophilized powder |
| Electrophoretic purity | ≥95% |
| Enzyme activity | ≥30U/mg |
| Nucleic acid residue | Invisible |
| Deoxyribonuclease residue | Invisible |
| Ribonuclease residue | Invisible |
| Cart No. | G1205-10ML |
| Storage | When stored at -20 °C, the product retains activity for at least 1 years, ice bag transportation. |



What is Proteinase K

Proteinase K is a serine protease belonging to the subtilisin family with efficient enzymatic activity and broad substrate specificity, which preferentially decomposes ester bonds and peptides adjacent to the C-terminus of hydrophobic amino acids, sulfur-containing amino acids, and aromatic amino acids bonds, which are often used to degrade proteins to produce short peptides. Proteinase K has the characteristic of the typical catalytic triad Asp39-His69-Ser224 unique to serine proteases and has two Ca²⁺ binding sites around the active center to increase its stability and maintain high enzymatic activity under a wider range of conditions.

Usage

1. Genetic diagnosis kit
2. RNA and DNA extraction kits

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3. Extract non-protein components in tissues and degrade protein impurities (such as preparation of DNA vaccines and heparin)
 4. Preparation of Chromosomal DNA for Pulse Electrophoresis
 5. Western blotting
 6. Development and production of enzymatic glycosylated albumin reagents in the field of in vitro diagnostics

Packing of Proteinase K with cas 39450-01-6

- 1) 30mg/bottle 1g/bottle or 100g/bottle
- 2) 1kgs/foil bag

Usage

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. It is not activated by metal ions, chelating agents (for example, EDTA), sulfhydryl reagents, or by trypsin or chymotrypsin inhibitors. It is stable over a wide pH range (4–12.5), with optimal activity at pH 6.5–9.5. Activity can be stimulated by addition of denaturing agents (SDS and Urea). Rapid denaturation of the enzyme occurs at temperature above 70°C. Autolysis of the enzyme occurs increasingly at alkaline pH. However, Proteinase K is not completely inactivated by autolysis. Some enzyme fragments continue to maintain their complete proteolytic activity, even after extensive autolysis. Proteinase K is frequently used in molecular biology applications to digest unwanted proteins, such as nucleases in DNA or RNA preparations from microorganisms, cultured cells, and plants. 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.

A stable and highly reactive serine protease; used for protein and nucleic acid isolation. Proteinase K is used in the purification of RNA and DNA from tissues or cell lines.