Proteinase K (liquid)

Cat.No.:HYJ413

Product Description

Proteinase K is a serine protease with high enzymatic activity and broad substrate specificity. It preferentially cleaves ester and peptide bonds adjacent to the C-termini of hydrophobic, sulfur-containing, and aromatic amino acids. It is often used to degrade proteins to produce short peptides. It possesses the typical catalytic triad Asp^{39}-His^{69}-Ser^{224}, characteristic of serine proteases, and two Ca^{2+} binding sites surrounding the active center enhance its stability, enabling it to maintain high enzymatic activity under a wider range of conditions.

Components

Components	Size-1	Size-2
Proteinase K（liquid）	1 mL	10 mL

Storage

Store at 2-8℃.

Specification

Appearance	Colorless to light brown liquid
Specific Activity	≥800 U/ml
Protein concentration	≥20 mg/ml
DNase	None detected
RNase	None detected
Nickase	None detected

Properties

Source	Recombinant from Tritirachium album
EC number	3.4.21.64
Molecular weight	29 kDa (SDS - PAGE)
Isoelectric point	7.81

Optimum pH	7.0- 12.0
Optimum temperature	65 ℃
pH stability	pH 4.5- 12.5 (25 ℃, 16 h)
Thermal stability	Below 50 ℃ (pH 8.0, 30 min)
Storage stability	Over 90% activity stored at 25℃ for 12months
Activators	SDS, Urea
Inhibitors	Diisopropyl fluorophosphate（DFIP） Phenylmethylsulfonyl fluoride（PMSF）

Unit definition

One unit (U) of Proteinase K is defined as the amount of enzyme required to hydrolyze casein to produce 1 μmol tyrosine per minute under standard determination conditions.

Applications

Genetic diagnostic kit; RNA and DNA extraction kits; Extraction of non-protein components from tissues, degradation of protein impurities, such as DNA vaccines and preparation of heparin; Preparation of chromosome DNA by pulsed electrophoresis; Western blot; Enzymatic glycosylated albumin reagents in vitro diagnosis.

Notes

Wear protective gloves and goggles when using or weighing, and keep well ventilated after use. This product may cause skin allergic reaction and serious eye irritation. If inhaled, it may cause allergy or asthma symptoms or dyspnea. May cause respiratory irritation.