Proteinase K for NGS (lyophilized powder)

Cat.No.: HYC113

Product Description

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. Evidence from crystal and molecular structure studies indicates the enzyme belongs to the subtilisin family with an active site catalytic triad (Asp^{39}-His^{69}-Ser^{224}). The predominant site of cleavage is the peptide bond adjacent to the carboxyl group of aliphatic and aromatic amino acids with blocked alpha amino groups. It is commonly used for its broad specificity.

Components

Components	Size-1	Size-2	Size-3	Size-4
Proteinase K for NGS (lyophilized powder)	0.1 g	1 g	10 g	100 g

Storage

Dry powder status -25 ~ -15 ℃ valid for 36 months; the enzyme powder should be dissolved into the appropriate volume, 2 ~ 8 ℃ short-term storage away from light, -25 ~ -15 ℃ long-term storage away from light.

Specification

Appearance	White to off-white amorphous lyophilized powder
Enzyme powder specific activity	≥40 U/mg
Protein specific activity	≥45 U/mg
DNase	None detected
RNase	None detected
Nickase	None detected
Bioburden	≤50 CFU/g solid
Nucleic acid residue	<5 pg/mg solid

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 12 months
Activators	SDS, Urea
Inhibitors	Diisopropyl fluorophosphate (DFP) 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.

Notes

1. 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.
2. For research use only!