Product Data Sheet

Product Name:	PROK Tritirachium album
Cat. No.:	GP22163
Batch No.:	1

Product Data

Purity	>98%	Source	Yeast
Phycical Appearance	solid	Shipping Condition	Shipped at Room temp.
Synonyms	Proteinase K (EC:3.4.21.64); Endopeptidase K; Tritirachium alkaline proteinase; PROK.		
Solubility	It is recommended to reconstitute the lyophilized Proteinase-K in 20mM Tris-HCl (pH 7.4~8.0), 1mM CaCl2, 50% glycerol not less than 100µg/ml, which can then be further diluted to other aqueous solutions.		
Formulation	The Proteinase-K was lyophilized without any additives.		

Introduction

The Proteinase K enzyme is a member of the Peptidase family S8. Proteinase K is a broad-spectrum serine protease. Proteinase K is capable of digesting hair (keratin), henceforth, the name "Proteinase K". Proteinase K is activated by calcium, the enzyme digests proteins especially after hydrophobic amino acids (aliphatic, aromatic and other hydrophobic amino acids). Proteinase K is frequently utilized in molecular biology to digest protein and remove contamination from preparations of nucleic acid. Addition of Proteinase K to nucleic acid preparations rapidly inactivates nucleases which may otherwise degrade the DNA or RNA during purification. Proteinase K is greatly fitting to this application as the enzyme is active in the presence of chemicals which denature proteins, such as SDS and urea, chelating agents such as EDTA, sulfhydryl reagents, as well as trypsin or chymotrypsin inhibitors. Proteinase K is utilized for the destruction of proteins in cell lysates (tissue, cell culture cells) and for the release of nucleic acids, given that it quite effectively inactivates DNases and RNases.

Biological Activity

34 Units/mg protein.One unit is defined as the amount of enzyme that will hydrolyze urea-denatured hemoglobin to produce color equivalent to 1.0 mol tyrosine per min at

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37°C , pH 7.5 (color by Folin-Ciocalteu reagent).

Stability

Recombinant Proteinase-K although stable at room temp for 1 week, should be stored desiccated below -18°C . For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).Please prevent freeze-thaw cycles.

Background

Recombinant Tritirachium album Proteinase-K expressed in yeastcontaining 285 amino acids having a Mw of 29.3 kDa is purified by standardchromatography techniques.

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