

## ***Manual***

# **Proteinase K (lyophilisate)**

Enzyme for digesting proteins in biological samples. Activity  $\geq 30$  U/mg.

<b>catalog #</b>	<b>size</b>
1019-25L	25 mg
1019-100L	100 mg
1019-250L	250 mg
1019-1L	1 g

For research use only.

### **Guarantee**

A&A Biotechnology provides guarantee on this product.

The company does not guarantee correct performance of this kit in the event of:

- not adhering to the supplied protocol
- use of not recommended equipment or materials
- use of other reagents than recommended or which are not a component of the product
- use of expired or improperly stored product or its components

# Description

**Proteinase K** (EC 3.4.21.64) is a broad-spectrum serine protease. 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.

Proteinase K is inactivated by diisopropyl fluorophosphate (DFP) or phenyl methane sulfonyl fluoride (PMSF).

It's a recombinant enzyme cloned from fungus *Engyodontium album* and produced in *Pichia pastoris*.

# Application

- extremely effective proteolytic degradation of biological material
- inactivation of endogenous DNAses and RNAses during nucleic acid purification

# Contents

	1019-25L	1019-100L	1019-250L	1019-1L	storage
proteinaza K, recombinant, lyophilisate	25 mg	100 mg	250 mg	1 g	2-8 °C

# Unit definition

1 U of proteinase K releases 1  $\mu$ mole of Folin positive amino acid in 1 min at 37 °C, pH 7.5, using denatured hemoglobin as a substrate.

# References

1. Burkiewicz A., Dąbrowski S., Barski P., *Polska rekombinowana Proteinaza K*, (2007) *Postępy Biochemii* 53(4): 327-328
2. Ebeling W., Hennrich N., Klockow M., Metz H., Orth H.D., Lang H., (1974) *Eur. J. Biochem.* 47(1):91-97
3. Hilz H., Wiegiers U., Adamietz P., (1975) *Eur. J. Biochem.* 56(1):03-08
4. Betzel C., Sigh T.P., Visanji M., et al., (July 1993) *J. Biol. Chem.* 268(21):15854-15858

## Protocol

To obtain proteinase K solution add appropriate amount of sterile water (not included) or recommended storage buffer: 20 mM Tris, pH 7.5, 1 mM CaCl<sub>2</sub>, 0.02% sodium azide, 50% glicerol (v/v) (not included) and dissolve whole content.

Store prepared solution at 2–8 °C.

## Safety information

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**DANGER**

### Proteinase K

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335 May cause respiratory irritation.

P261 Avoid breathing dust.

P305+P351+P338 If in eyes: rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P342+P311 If experiencing respiratory symptoms call a Poison Center or doctor/physician.

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