

Proteinase K MBG



version: 1.2021

Cat. No.: RP100B / RP101B / RP102B / RP103B

Product Specification

Product name	Proteinase K – Lyophilized powder, Molecular Biology Grade
Catalog numbers	RP100B, RP101B, RP102B, RP103B
Source	<i>Parengyodontium album (Tritirachium album)</i>
Host	<i>Komagataella phaffii (Pichia pastoris)</i>
Appearance	White lyophilized powder
Solubility in water	≥ 20 mg/ml
Activity	≥ 30 U/mg lyophilizate
Specific activity	≥ 40 U/mg protein
Unit definition	One unit of Proteinase K hydrolyzes urea-denatured hemoglobin producing color equivalent of 1 μmol tyrosine per 1 min at 37°C and pH 7.5 (Folin & Ciocalteu's method), 1 U = 1 mAnsonU.
Protein content	≥ 70%
DNA contamination	≤ 10 pg/mg
Storage conditions	-20°C
Shelf life	24 months when properly stored in its original, unopened container.
Stability	Proteinase K Lyophilized powder maintains activity ≥ 30 U/mg and specific activity ≥ 40 U/mg for at least 24 months, stored in its original, unopened container.
Shipping conditions	Ambient temperature
The product is made in Poland	

QC Assays

Activity assay: One unit of Proteinase K hydrolyzes urea-denatured hemoglobin producing color equivalent of 1 μmol tyrosine per 1 min at 37°C and pH 7.5 (Folin & Ciocalteu's method), 1U = 1 mAnsonU.

Exonuclease activity: Free of detectable exonucleases activity as judged by gel electrophoresis following incubation of 1 μg of HindIII-digested λ DNA with 50 μg of Proteinase K for 16 h at 37°C.

Endonuclease activity: Free of detectable endonucleases activity as judged by gel electrophoresis following incubation of 1 μg pUC19 DNA with 40 μg of Proteinase K for 16 h at 37°C.

RNase activity: Free of detectable RNase activities as judged by gel electrophoresis following incubation of 2 μg rRNA from *E. coli* with 20 μg of Proteinase K for 4 h at 37°C.

Protein content: Protein content is $\geq 70\%$, determined by measuring absorbance at 280 nm.

DNA content: DNA content is ≤ 10 pg/mg, which is determined by qPCR.