Technisches Datenblatt

Artikel Nr. 8433

Proteinase K, lyophilized, Molecular Biology Grade

For laboratory use.

Proteinase K, recombinant from *Parengyodontium album* (*Tritirachium album*). This subtilisin-related serine protease is a broad spectrum endopeptidase with very high specific activity. The enzyme is widely used for digestion of proteins, including DNases and RNases, during nucleic acid preparations without compromising integrity of isolated DNA or RNA.

Proteinase K is active under a wide range of reaction conditions, including elevated temperatures and presence of SDS.

The enzyme is expressed in *Pichia pastoris*, and undergoes extensive purification to yield the highest quality product.

Parameter	Wert
Solubility in water	≥ 20 mg/ml
Stock solution preparation	50 mM Tris-HCl, pH = 7.8, 3 mM $CaCl_2$ for immediate use, or 50 mM Tris-HCl, pH = 7.8, 3 mM $CaCl_2$, 50% glycerol for long-term storage at -20 ˚C.
Activity	≥ 30 U/mg lyophilizate ≥ 40 U/mg protein One unit of Proteinase K hydrolyzes urea-denaturated 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 % Protein content is determined by measuring absorbance at 280 nm.
DNA content	≤ 10 pg/mg by qPCR

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Amtsgericht Stuttgart / HRB-Nr. 252035
Geschäftsführer: Lutz-Alexander Geyer /
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Exonucleases	1 µg of HindIII-digested λ DNA is incubated with 50 µg Proteinase K for 16 h at 37 ˚C. No DNA degradation is detectable.
Endonucleases	1 µg of pUC19 DNA is incubated with 40 µg Proteinase K for 16 h at 37 ˚C. No DNA degradation is detectable.
Ribonucleases	2 µg of rRNA from *E. coli* is incubated with 20 µg Proteinase K for 4 h at 37 ˚C. No RNA degradation is detectable.
Stability	The powder maintains full activity for at least 24 months from the release date.

Long term storage	-20 °C (as a powder, or as a stock solution in 50% glycerol, prepared as described above under “Stock solution preparation”)
Shipping conditions	Ambient temperature

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