

New England Biolabs Certificate of Analysis

Product Name: Proteinase K, Molecular Biology Grade
Catalog #: P8107S
Concentration: 800 units/ml
Unit Definition: One unit will digest urea-denatured hemoglobin at 37°C (pH 7.5) per minute to produce equal absorbance as 1.0 µmol L-tyrosine using Folin & Ciocalteu's phenol reagent.
Lot #: 0171803
Assay Date: 03/2018
Expiration Date: 03/2020
Storage Temp: -20°C
Storage Conditions: 20 mM Tris-HCl, 1 mM CaCl₂, 50% Glycerol, (pH 7.4 @ 25°C)
Specification Version: PS-P8107S v1.0
Effective Date: 08 Feb 2018

Assay Name/Specification (minimum release criteria)	Lot #0171803
Endonuclease Activity (Nicking) - A 50 µl reaction in CutSmart® Buffer containing 1 µg of supercoiled PhiX174 RF I DNA and a minimum of 0.8 units of Proteinase K, Molecular Biology Grade incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	Pass
Exonuclease Activity (Radioactivity Release) - A 50 µl reaction in CutSmart® Buffer containing 1 µg of a mixture of single and double-stranded [³ H] <i>E. coli</i> DNA and a minimum of 8 units of Proteinase K, Molecular Biology Grade incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	Pass
Non-Specific DNase Activity (16 Hour) - A 50 µl reaction in CutSmart® Buffer containing 1 µg of Lambda-HindIII DNA and a minimum of 0.8 units of Proteinase K, Molecular Biology Grade incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	Pass
qPCR DNA Contamination (Eukaryotic Genomic) - A minimum of 1.6 units of Proteinase K, Molecular Biology Grade is screened for the presence of eukaryotic genomic DNA using SYBR® Green qPCR with universal primers for the 18S rRNA locus. Results are quantified using a standard curve generated from purified <i>E. album</i> genomic DNA. The measured level of eukaryotic genomic DNA contamination is ≤ 2.5 pg DNA/µl.	Pass
RNase Activity (Extended Digestion) - A 10 µl reaction in NEBuffer 4 containing 40 ng of fluorescein labeled RNA transcript and a minimum of 0.8 units of Proteinase K, Molecular Biology Grade is incubated at 37°C. After incubation for 16 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.	Pass



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Assay Name/Specification (minimum release criteria)	Lot #0171803
Single Stranded DNase Activity (FAM-Labeled Oligo) - A 50 µl reaction in CutSmart® Buffer containing a 20 nM solution of a fluorescent internal labeled oligonucleotide and a minimum of 4 units of Proteinase K, Molecular Biology Grade incubated for 16 hours at 37°C yields <5% degradation as determined by capillary electrophoresis.	Pass



Authorized by
Derek Robinson
08 Feb 2018



Inspected by
Beth Paschal
27 Feb 2018

