

New England Biolabs Certificate of Analysis

Product Name: Hemo KlenTaq®
Catalog Number: M0332S
Unit Definition: N/A
Lot Number: 10014223
Expiration Date: 07/2020
Storage Temperature: -20°C
Storage Conditions: 10 mM Tris-HCl, 100 mM KCl, 1 mM DTT, 0.1 mM EDTA, 0.5 % Tween® 20, 0.5 % IGEPAL® CA-630, 50 % Glycerol, (pH 7.4 @ 25°C)
Specification Version: PS-M0332S/L v1.0

Hemo KlenTaq® Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M0332SVIAL	Hemo KlenTaq®	10009980	Pass
B0332SVIAL	Hemo KlenTaq® Reaction Buffer	0031801	Pass

Assay Name/Specification	Lot # 10014223
Endonuclease Activity (Nicking) A 50 µl reaction in Hemo KlenTaq® Reaction Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 8 µl of Hemo KlenTaq® incubated for 4 hours at either 37°C or 75°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	Pass
Non-Specific DNase Activity (16 Hour) A 50 µl reaction in NEBuffer 2 containing 1 µg of T3 DNA in addition to a reaction containing Lambda-HindIII DNA and a minimum of 1 µl of Hemo KlenTaq® incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	Pass
PCR Amplification (0.5 kb Whole Blood DNA) A 50 µl reaction in Hemo KlenTaq® Reaction Buffer in the presence of 200 µM dNTPs and 0.3 µM primers containing 10% whole blood treated with sodium heparin, sodium EDTA, potassium EDTA or sodium citrate with 4 µl of Hemo KlenTaq® for 35 cycles of PCR amplification results in the expected 0.5 kb product.	Pass
Phosphatase Activity (pNPP) A 200 µl reaction in 1M Diethanolamine, pH 9.8, 0.5 mM MgCl ₂ containing 2.5 mM p-Nitrophenyl Phosphate (pNPP) and a minimum of 2 µl Hemo KlenTaq® incubated for 4	Pass

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<p>hours at 37°C yields <0.0001 unit of alkaline phosphatase activity as determined by spectrophotometric analysis.</p>	
<p>Protein Purity Assay (SDS-PAGE) Hemo KlenTaq[®] is ≥ 99% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p>	Pass
<p>qPCR DNA Contamination (E. coli Genomic) A minimum of 1 µl of Hemo KlenTaq[®] is screened for the presence of E. coli genomic DNA using SYBR[®] Green qPCR with primers specific for the E. coli 16S rRNA locus. Results are quantified using a standard curve generated from purified E. coli genomic DNA. The measured level of E. coli genomic DNA contamination is ≤ 1 E. coli genome.</p>	Pass
<p>RNase Activity (Extended Digestion) A 10 µl reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 1 µl of Hemo KlenTaq[®] 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.</p>	Pass
<p>Single Stranded DNase Activity (FAM-Labeled Oligo) A 20 µl reaction in Hemo KlenTaq[®] Reaction Buffer containing a 10 nM solution of a fluorescent internal labeled oligonucleotide and a minimum of 8 µl of Hemo KlenTaq[®] incubated for 30 minutes at either 37°C or 75°C yields <10% degradation as determined by capillary electrophoresis.</p>	Pass

This product has been tested and shown to be in compliance with all specifications.



Tony Spear-Alfonso
Production Scientist
25 Jul 2018



Michael Tonello
Packaging Quality Control Inspector
01 Aug 2018