

New England Biolabs Certificate of Analysis

Product Name: Hemo KlenTaq[®]
Catalog #: M0332S/L
Concentration: 500 reactions/ml
Unit Definition: N/A
Lot #: 0151706
Assay Date: 06/2017
Expiration Date: 6/2019
Storage Temp: -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
Effective Date: 07 Jun 2016

Assay Name/Specification (minimum release criteria)	Lot #0151706
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 <i>p</i> -Nitrophenyl Phosphate (pNPP) and a minimum of 2 µl Hemo KlenTaq [®] incubated for 4 hours at 37°C yields <0.0001 unit of alkaline phosphatase activity as determined by spectrophotometric analysis.	Pass
Protein Purity Assay (SDS-PAGE) - Hemo KlenTaq [®] is ≥ 99% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	Pass



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<p>qPCR DNA Contamination (<i>E. coli</i> Genomic) - A minimum of 1 µl of Hemo KlenTaq[®] is screened for the presence of <i>E. coli</i> genomic DNA using SYBR[®] Green qPCR with primers specific for the <i>E. coli</i> 16S rRNA locus. Results are quantified using a standard curve generated from purified <i>E. coli</i> genomic DNA. The measured level of <i>E. coli</i> genomic DNA contamination is ≤ 1 <i>E. coli</i> 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

M. W. Southworth

Authorized by
Maurice Southworth
07 Jun 2016



Inspected by
Tony Spear-Alfonso
21 Jun 2017

