

## New England Biolabs Certificate of Analysis

*Product Name:* LongAmp<sup>®</sup> Taq DNA Polymerase  
*Catalog #:* M0323S/L  
*Concentration:* 2,500 units/ml  
*Unit Definition:* One unit is defined as the amount of enzyme that will incorporate 10 nmol of dNTP into acid insoluble material in 30 minutes at 75°C.  
*Lot #:* 0171612  
*Assay Date:* 12/2016  
*Expiration Date:* 12/2018  
*Storage Temp:* -20°C  
*Storage Conditions:* 10 mM Tris-HCl, 100 mM KCl, 1 mM DTT, 0.1 mM EDTA, 0.5 % Tween<sup>®</sup> 20, 0.5 % IGEPAL<sup>®</sup> CA-630, 50 % Glycerol, (pH 7.4 @ 25°C)  
*Specification Version:* PS-M0323S/L v1.0  
*Effective Date:* 08 Dec 2016

Assay Name/Specification (minimum release criteria)	Lot #0171612
<p><b>Non-Specific DNase Activity (16 Hour)</b> - 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 2.5 units of LongAmp<sup>®</sup> Taq DNA Polymerase incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.</p>	<b>Pass</b>
<p><b>PCR Amplification (30 kb Human Genomic DNA)</b> - A 25 µl reaction in LongAmp<sup>®</sup> Taq Reaction Buffer in the presence of 300 µM dNTPs and 0.4 µM primers containing 500 ng Human Genomic DNA with 2.5 units of LongAmp<sup>®</sup> Taq DNA Polymerase for 28 cycles of PCR amplification results in the expected 30 kb product.</p>	<b>Pass</b>
<p><b>PCR Amplification (30 kb Lambda DNA)</b> - A 25 µl reaction in LongAmp<sup>®</sup> Taq Reaction Buffer in the presence of 300 µM dNTPs and 0.4 µM primers containing 1 ng Lambda DNA with 2.5 units of LongAmp<sup>®</sup> Taq DNA Polymerase for 28 cycles of PCR amplification results in the expected 30 kb product.</p>	<b>Pass</b>
<p><b>qPCR DNA Contamination (E. coli Genomic)</b> - A minimum of 2.5 units of LongAmp<sup>®</sup> Taq DNA Polymerase is screened for the presence of E. coli genomic DNA using SYBR<sup>®</sup> 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>	<b>Pass</b>



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Assay Name/Specification (minimum release criteria)	Lot #0171612
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 LongAmp <sup>®</sup> Taq DNA Polymerase 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



Authorized by  
Karen Moreira  
08 Dec 2016



Inspected by  
Tony Spear-Alfonso  
04 May 2017

