

New England Biolabs Certificate of Analysis

Product Name: LunaScript[®] RT SuperMix
Catalog Number: M3010X
Concentration: 5 X Concentrate
Packaging Lot Number: 10185446
Expiration Date: 06/2024
Storage Temperature: -20°C
Specification Version: PS-M3010S/L/X/E v2.0
Composition (1X): Proprietary

LunaScript [®] RT SuperMix Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M3010LVIAL	LunaScript [®] RT SuperMix	10151266	Pass

Assay Name/Specification	Lot # 10185446
<p>Endonuclease Activity (Nicking) A 50 µl reaction in ThermoPol[®] Reaction Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 100 units of Luna[®] Reverse Transcriptase incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.</p>	Pass
<p>Functional Testing (Two-Step RT-qPCR) The LunaScript[®] RT SuperMix is functionally tested in two-step RT-qPCR with human RNA template, resulting in a standard curve with a calculated qPCR efficiency of 90-110%, and a dynamic range of 7 orders of magnitude.</p>	Pass
<p>Phosphatase Activity (pNPP) A 200 µl reaction in 1M Diethanolamine, pH 9.8, 0.5 mM MgCl₂ containing 2.5 mM p-Nitrophenyl Phosphate (pNPP) and a minimum of 100 units of Luna[®] Reverse Transcriptase incubated for 4 hours at 37°C yields <0.0001 unit of alkaline phosphatase activity as determined by spectrophotometric analysis.</p>	Pass
<p>Protein Purity Assay (SDS-PAGE) Luna[®] Reverse Transcriptase is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p>	Pass
<p>RNase Activity Assay (4 Hour Digestion) A 10 µl reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA</p>	Pass

Assay Name/Specification	Lot # 10185446
<p>and a minimum of 100 units of Luna® Reverse Transcriptase is incubated at 37°C. After incubation for 4 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.</p>	
<p>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 250 units of Luna® Reverse Transcriptase incubated for 16 hours at 37°C yields <5% degradation as determined by capillary electrophoresis.</p>	Pass
<p>qPCR DNA Contamination (E. coli Genomic) A minimum of 1 µl of LunaScript® RT SuperMix 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

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

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Production Scientist
28 Jun 2022



Michael Tonello
Packaging Quality Control Inspector
07 Apr 2023