NEW ENGLAND BioLabs Inc.
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New England Biolabs
Certificate of Analysis

Product Name:	*LunaScript® RT SuperMix*
Catalog Number:	*M3010L*
Concentration:	*5 X Concentrate*
Packaging Lot Number:	*10157441*
Expiration Date:	*02/2024*
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	10135650	**Pass**

Assay Name/Specification	**Lot # 10157441**
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.	**Pass**
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.	**Pass**
RNase Activity Assay (4 Hour Digestion) A 10 µl reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA 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.	**Pass**
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.	**Pass**

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Assay Name/Specification	Lot # 10157441
Protein Purity Assay (SDS-PAGE) Luna® Reverse Transcriptase is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	**Pass**
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.	**Pass**
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.	**Pass**

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

Christie Vazquez
Production Scientist
30 Jun 2022

Michael Tonello
Packaging Quality Control Inspector
30 Jun 2022