

## New England Biolabs Certificate of Analysis

**Product Name:** ProtoScript® II Reverse Transcriptase  
**Catalog Number:** M0368S  
**Concentration:** 200,000 U/ml  
**Unit Definition:** One unit is defined as the amount of enzyme that will incorporate 1 nmol of dTTP into an acid-insoluble form in 10 minutes at 37°C.  
**Packaging Lot Number:** 10064596  
**Expiration Date:** 08/2021  
**Storage Temperature:** -20°C  
**Storage Conditions:** 20 mM Tris-HCl, 100 mM NaCl, 1 mM DTT, 0.1 mM EDTA, 0.01 % IGEPAL® CA-630, 50 % Glycerol, (pH 7.5 @ 25°C)  
**Specification Version:** PS-M0368S/L/X v2.0

ProtoScript® II Reverse Transcriptase Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M0368SVIAL	ProtoScript® II Reverse Transcriptase	10062062	Pass
B1034AVIAL	10X DTT	10049196	Pass
B0368SVIAL	ProtoScript® II Reverse Transcriptase Reaction Buffer	10032872	Pass

Assay Name/Specification	Lot # 10064596
<p><b>Endonuclease Activity (Nicking)</b>            A 50 µl reaction in ProtoScript® II Reverse Transcriptase Reaction Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 200 units of ProtoScript® II Reverse Transcriptase incubated for 4 hours at 37°C results in &lt;10% conversion to the nicked form as determined by agarose gel electrophoresis.</p>	Pass
<p><b>Exonuclease Activity (Radioactivity Release)</b>            A 50 µl reaction in ProtoScript® II Reverse Transcriptase Reaction Buffer containing 1 µg of a mixture of single and double-stranded [<sup>3</sup>H] E. coli DNA and a minimum of 200 units of ProtoScript® II Reverse Transcriptase incubated for 4 hours at 37°C releases &lt;0.1% of the total radioactivity.</p>	Pass
<p><b>Non-Specific DNase Activity (16 Hour)</b>            A 50 µl reaction in NEBuffer 2 containing 1 µg of T3 or T7 DNA in addition to a reaction containing Lambda-HindIII DNA and a minimum of 200 units of ProtoScript® II Reverse Transcriptase incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.</p>	Pass

Assay Name/Specification	Lot # 10064596
<p><b>Protein Purity Assay (SDS-PAGE)</b> ProtoScript® II Reverse Transcriptase is ≥ 99% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p>	<b>Pass</b>
<p><b>qPCR DNA Contamination (E. coli Genomic)</b> A minimum of 200 units of ProtoScript® II Reverse Transcriptase 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>	<b>Pass</b>
<p><b>RNase Activity Assay (4 Hour Digestion)</b> A 10 µl reaction in ProtoScript® II Reverse Transcriptase Reaction Buffer containing 40 ng of a 300 base single-stranded RNA and a minimum of 1 µl of ProtoScript® II Reverse Transcriptase is incubated at 37°C. After incubation for 4 hours, &gt;90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.</p>	<b>Pass</b>

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



Christie Vazquez  
Production Scientist  
06 Aug 2019



Jay Minichiello  
Packaging Quality Control Inspector  
19 Feb 2020