

New England Biolabs Certificate of Analysis

Product Name: WarmStart[®] RTx Reverse Transcriptase
Catalog Number: M0380S
Concentration: 15,000 U/ml
Unit Definition: One unit is defined as the amount of enzyme that will incorporate 1 nmol of dTTP into acid-insoluble material in 20 minutes at 50°C.
Packaging Lot Number: 10073333
Expiration Date: 03/2022
Storage Temperature: -20°C
Storage Conditions: 10 mM Tris-HCl , 100 mM KCl , 1 mM DTT , 0.1 mM EDTA , 50 % Glycerol, (pH 7.4 @ 25°C)
Specification Version: PS-M0380S/L v3.0

WarmStart [®] RTx Reverse Transcriptase Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M0380SVIAL	WarmStart [®] RTx Reverse Transcriptase	10072050	Pass
B1003SVIAL	Magnesium Sulfate (MgSO ₄) Solution	10068556	Pass
B0537SVIAL	Isothermal Amplification Buffer	10071018	Pass

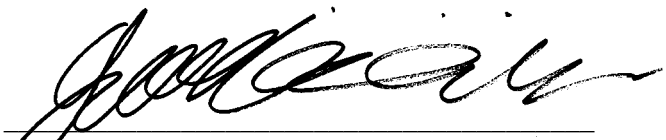
Assay Name/Specification	Lot # 10073333
Protein Purity Assay (SDS-PAGE) RTx Reverse Transcriptase is ≥ 99% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	Pass
RNase Activity Assay (4 Hour Digestion) A 10 µl reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 1 µl of WarmStart [®] RTx 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
Exonuclease Activity (Radioactivity Release) A 50 µl reaction in Isothermal Amplification Buffer containing 1 µg of a mixture of single and double-stranded [³ H] E. coli DNA and a minimum of 15 units of RTx Reverse Transcriptase incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	Pass
Endonuclease Activity (Nicking) A 50 µl reaction in Isothermal Amplification Buffer containing 1 µg of supercoiled	Pass

Assay Name/Specification	Lot # 10073333
<p>PhiX174 DNA and a minimum of 15 units of RTx Reverse Transcriptase incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.</p>	
<p>qPCR DNA Contamination (E. coli Genomic) A minimum of 15 units of WarmStart® RTx 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>	Pass
<p>Non-Specific DNase Activity (16 Hour) 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 15 units of WarmStart® RTx 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

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



Christie Vazquez
Production Scientist
15 Apr 2020



Jay Minichiello
Packaging Quality Control Inspector
15 Apr 2020