

New England Biolabs Certificate of Analysis

Product Name: WarmStart® RTx Reverse Transcriptase
Catalog Number: M0380L
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: 10213897
Expiration Date: 07/2025
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

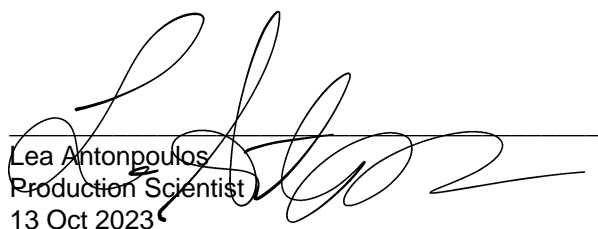
NEB Part Number	Component Description	Lot Number	Individual QC Result
M0380LVIAL	WarmStart® RTx Reverse Transcriptase	10208832	Pass
B1003SVIAL	Magnesium Sulfate (MgSO ₄) Solution	10210679	Pass
B0537SVIAL	Isothermal Amplification Buffer	10201499	Pass

Assay Name/Specification	Lot # 10213897
Endonuclease Activity (Nicking) A 50 µl reaction in Isothermal Amplification Buffer containing 1 µg of supercoiled 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.	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
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.	Pass

Assay Name/Specification	Lot # 10213897
Protein Purity Assay (SDS-PAGE) RTx Reverse Transcriptase is $\geq 99\%$ pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	Pass
RNase Activity Assay (4 Hour Digestion) A 10 μ l reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 1 μ l 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
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.	Pass

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

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Lea Antonopoulos
Production Scientist
13 Oct 2023


Josh Hersey
Packaging Quality Control Inspector
06 Nov 2023