

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.
Lot Number: 10043540
Expiration Date: 12/2020
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 v2.0

| WarmStart® RTx Reverse Transcriptase Component List | | | |
|---|---|------------|----------------------|
| NEB Part Number | Component Description | Lot Number | Individual QC Result |
| M0380LVIAL | WarmStart® RTx Reverse Transcriptase | 10029518 | Pass |
| B1003SVIAL | Magnesium Sulfate (MgSO ₄) Solution | 0021701 | Pass |
| B0537SVIAL | Isothermal Amplification Buffer | 10035085 | Pass |

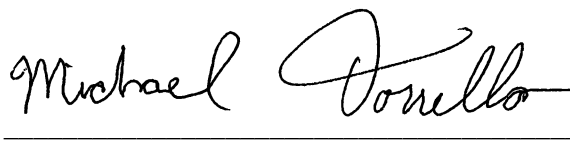
| Assay Name/Specification | Lot # 10043540 |
|---|----------------|
| <p>Endonuclease Activity (Nicking) A 50 µl reaction in Isothermal Amplification Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 15 units of RTx Reverse Transcriptase incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.</p> | Pass |
| <p>Exonuclease Activity (Radioactivity Release) A 50 µl reaction in Isothermal Amplification Buffer containing 1 µg of a mixture of single and double-stranded [³H] 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.</p> | Pass |
| <p>Non-Specific DNase Activity (16 Hour) A 50 µl reaction in NEBuffer 2 containing 1 µg of T3 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 |

| Assay Name/Specification | Lot # 10043540 |
|---|----------------|
| <p>Protein Purity Assay (SDS-PAGE) RTx Reverse Transcriptase is $\geq 99\%$ pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p> | Pass |
| <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>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.</p> | Pass |

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



Christie Vazquez
Production Scientist
20 Dec 2018



Michael Tonello
Packaging Quality Control Inspector
29 Apr 2019