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New England Biolabs
Certificate of Analysis

Product Name:	*Induro® Reverse Transcriptase*
Catalog Number:	*M0681L*
Concentration:	*200,000 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 a total reaction volume of 50 µl in 10 minutes at 55°C using poly(rA)•oligo(dT)18 as template.*
Packaging Lot Number:	*10246683*
Expiration Date:	*02/2026*
Storage Temperature:	*-20°C*
Storage Conditions:	*20 mM Tris-HCl, 300 mM NaCl, 0.1 mM EDTA, 50% Glycerol, (pH 7.5 @ 25°C)*
Specification Version:	*PS-M0681S/L/X v2.0*

Induro® Reverse Transcriptase Component List			
NEB Part Number	**Component Description**	**Lot Number**	**Individual QC Result**
M0681LVIAL	Induro® Reverse Transcriptase	10230846	**Pass**
B0681AVIAL	Induro® RT Reaction Buffer	10230844	**Pass**

Assay Name/Specification	**Lot # 10246683**
Endonuclease Activity (Nicking) A 50 µl reaction in NEBuffer 2 containing 1 µg of supercoiled PhiX174 DNA and a minimum of 200 units of Induro® Reverse Transcriptase incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	**Pass**
Functional Testing (RT-PCR, length) 200 units of Induro® Reverse Transcriptase is tested for performance in a 20 µl reaction containing 1X Induro® RT Reaction Buffer and 1 µg human total RNA. The length of the product is verified by amplification using 1 µl of the RT reaction and 33 cycles of PCR amplification resulting in the expected 9.3kb product as determined by agarose gel electrophoresis.	**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 200 units of Induro® Reverse	**Pass**

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Assay Name/Specification	Lot # 10246683
Transcriptase incubated for 16 hours at 37ºC results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	
Protein Purity Assay (SDS-PAGE) Induro® Reverse Transcriptase is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	**Pass**
RNase Activity (Extended Digestion) A 10 µl reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 200 units of Induro® 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 1X CutSmart® Buffer containing a 20 nM solution of a fluorescent internal labeled oligonucleotide and a minimum of 200 units of Induro® Reverse Transcriptase incubated for 16 hours at 37°C yields <10% degradation as determined by capillary electrophoresis.	**Pass**
qPCR DNA Contamination (E. coli Genomic) A minimum of 200 units of Induro® 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.

One or more products referenced in this document may be covered by a 3rd-party trademark. Please visit www.neb.com/trademarks for additional information.

Lea Antonopoulos
Production Scientist
01 Apr 2024

Michael Tonello
Packaging Quality Control Inspector
11 Jun 2024