NEW ENGLAND BioLabs Inc.
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240 County Road
Ipswich, MA 01938-2723
Tel 978-927-5054
Fax 978-921-1350
www.neb.com
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New England Biolabs
Certificate of Analysis

Product Name:	*ShortCut RNase III*
Catalog Number:	*M0245S*
Concentration:	*2,000 U/ml*
Unit Definition:	*One unit is the amount of enzyme required to digest 1 µg of dsRNA to siRNA in 20 minutes at 37°C in a total reaction volume of 50 µl.*
Packaging Lot Number:	*10176059*
Expiration Date:	*12/2024*
Storage Temperature:	*-20°C*
Storage Conditions:	*10 mM Tris-HCl, 500 mM NaCl, 1 mM DTT, 0.5 mM EDTA, 50% Glycerol, (pH 8.0 @ 25°C)*
Specification Version:	*PS-M0245S/L v1.0*

ShortCut RNase III Component List

NEB Part Number	Component Description	Lot Number	Individual QC Result
M0245SVIAL	ShortCut® RNase III	10174471	**Pass**
B1564SVIAL	Glycogen RNase-free	10174472	**Pass**
B0786AVIAL	$MnCl_2$	10174474	**Pass**
B0255AVIAL	10X EDTA	10174475	**Pass**
B0245SVIAL	ShortCut Reaction Buffer	10174473	**Pass**

Assay Name/Specification	Lot # 10176059
RNase Activity (Extended Digestion) A 10 µl reaction in ShortCut® Reaction Buffer containing 40 ng of a 300 base single-stranded RNA and a minimum of 2 units of ShortCut® RNase III is incubated at 37°C. After incubation for 1 hour, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.	**Pass**
Non-Specific DNase Activity (16 Hour) A 50 µl reaction in ShortCut® Reaction Buffer containing 1 µg of Lambda-HindIII DNA and a minimum of 6 units of ShortCut® RNase III incubated for 16 hours at 37ºC results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	**Pass**
Protein Purity Assay (SDS-PAGE) ShortCut® RNase III is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	**Pass**

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Assay Name/Specification	Lot # 10176059
Exonuclease Activity (Radioactivity Release) A 50 µl reaction in ShortCut® Reaction Buffer containing 1 µg of a mixture of single and double-stranded [^{3}H] E. coli DNA and a minimum of 10 units of ShortCut® RNase III incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	**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.

Bo Wu
Production Scientist
19 Dec 2022

Josh Hersey
Packaging Quality Control Inspector
16 Jan 2023