

## 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:** 10240975  
**Expiration Date:** 03/2026  
**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	10233303	Pass
B1564SVIAL	Glycogen RNase-free	10234157	Pass
B0786AVIAL	MnCl <sub>2</sub>	10234158	Pass
B0255AVIAL	10X EDTA	10233306	Pass
B0245SVIAL	ShortCut Reaction Buffer	10233305	Pass

Assay Name/Specification	Lot # 10240975
<b>Exonuclease Activity (Radioactivity Release)</b> A 50 µl reaction in ShortCut® Reaction Buffer containing 1 µg of a mixture of single and double-stranded [ <sup>3</sup> 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
<b>Non-Specific DNase Activity (16 Hour)</b> 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 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	Pass
<b>Protein Purity Assay (SDS-PAGE)</b> ShortCut® RNase III is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	Pass
<b>RNase Activity (Extended Digestion)</b>	Pass

Assay Name/Specification	Lot # 10240975
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.	

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](http://www.neb.com/trademarks) for additional information.



Bo Wu  
Production Scientist  
15 Apr 2024



Michael Tonello  
Packaging Quality Control Inspector  
22 Apr 2024