

## New England Biolabs Certificate of Analysis

**Product Name:** ShortCut RNase III  
**Catalog Number:** M0245L  
**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:** 10250141  
**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
M0245LVIAL	ShortCut® RNase III	10233304	Pass
B1564SVIAL	Glycogen RNase-free	10234157	Pass
B0786AVIAL	MnCl <sub>2</sub>	10247210	Pass
B0255AVIAL	10X EDTA	10233306	Pass
B0245SVIAL	ShortCut Reaction Buffer	10233305	Pass

Assay Name/Specification	Lot # 10250141
<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 # 10250141
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.

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Production Scientist  
15 Apr 2024



Josh Hersey  
Packaging Quality Control Inspector  
03 Jul 2024