

## 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.  
**Lot Number:** 10036715  
**Expiration Date:** 02/2021  
**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	10035492	Pass
B1564SVIAL	Glycogen RNase-free	10035499	Pass
B0786AVIAL	MnCl <sub>2</sub>	10035498	Pass
B0255AVIAL	10X EDTA	10035496	Pass
B0245SVIAL	ShortCut Reaction Buffer	10035495	Pass

Assay Name/Specification	Lot # 10036715
<p><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.</p>	Pass
<p><b>Protein Purity Assay (SDS-PAGE)</b>            ShortCut® RNase III is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p>	Pass
<p><b>RNase Activity (Extended Digestion)</b>            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, &gt;90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.</p>	Pass

Assay Name/Specification	Lot # 10036715
<p><b>Exonuclease Activity (Radioactivity Release)</b> A 50 µl reaction in ShortCut<sup>®</sup> 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<sup>®</sup> RNase III incubated for 4 hours at 37°C releases &lt;0.1% of the total radioactivity.</p>	<b>Pass</b>

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




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Tim Meixsell  
Production Scientist  
06 Feb 2019




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Michael Tonello  
Packaging Quality Control Inspector  
08 Feb 2019