

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: 10191043
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	10190551	Pass
B1564SVIAL	Glycogen RNase-free	10174472	Pass
B0786AVIAL	MnCl ₂	10190555	Pass
B0255AVIAL	10X EDTA	10191049	Pass
B0245SVIAL	ShortCut Reaction Buffer	10174473	Pass

Assay Name/Specification	Lot # 10191043
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
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 37°C 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
RNase Activity (Extended Digestion)	Pass

Assay Name/Specification	Lot # 10191043
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 for additional information.



Bo Wu
Production Scientist
20 Dec 2022



Michael Tonello
Packaging Quality Control Inspector
17 Jul 2023