

New England Biolabs Product Specification

<i>Product Name:</i>	<i>ShortCut[®] RNase III</i>
<i>Catalog #:</i>	<i>M0245S/L</i>
<i>Concentration:</i>	<i>2,000 units/ml</i>
<i>Unit Definition:</i>	<i>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.</i>
<i>Shelf Life:</i>	<i>24 months</i>
<i>Storage Temp:</i>	<i>-20°C</i>
<i>Storage Conditions:</i>	<i>10 mM Tris-HCl, 500 mM NaCl, 1 mM DTT, 0.5 mM EDTA, 50% Glycerol, (pH 8.0 @ 25°C)</i>
<i>Specification Version:</i>	<i>PS-M0245S/L v1.0</i>
<i>Effective Date:</i>	<i>01 May 2018</i>

Assay Name/Specification (minimum release criteria)

Exonuclease Activity (Radioactivity Release) - A 50 µl reaction in ShortCut[®] Reaction Buffer containing 1 µg of a mixture of single and double-stranded [³H] *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.

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.

Protein Purity Assay (SDS-PAGE) - ShortCut[®] RNase III is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.

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.



Date 01 May 2018

Derek Robinson
Director of Quality Control

