

New England Biolabs Certificate of Analysis

Product Name: mRNA Decapping Enzyme
Catalog Number: M0608S
Concentration: 100,000 U/ml
Unit Definition: One unit is defined as the amount of mRNA Decapping Enzyme required to convert 50% of a 500 nM m7G-capped substrate to a 5'-monophosphorylated form in a total reaction volume of 20 µl in 1 hour at 37°C.
Packaging Lot Number: 10080779
Expiration Date: 07/2022
Storage Temperature: -20°C
Storage Conditions: 10 mM Tris-HCl , 300 mM NaCl , 1 mM DTT , 0.1 mM EDTA , 50 % Glycerol, (pH 7.4 @ 25°C)
Specification Version: PS-M0608S v1.0

mRNA Decapping Enzyme Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result

Assay Name/Specification	Lot # 10080779
<p>Endonuclease Activity (Nicking) A 50 µl reaction in 1X mRNA Decapping Enzyme Reaction Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 2000 units of mRNA Decapping Enzyme incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.</p>	Pass
<p>Exonuclease Activity (Radioactivity Release) A 50 µl reaction in 1X mRNA Decapping Enzyme Reaction Buffer containing 1 µg of a mixture of single and double-stranded [³H] E. coli DNA and a minimum of 2000 units of mRNA Decapping Enzyme incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.</p>	Pass
<p>Phosphatase Activity (pNPP) A 200 µl reaction in 1M Diethanolamine, pH 9.8, 0.5 mM MgCl₂ containing 2.5 mM p-Nitrophenyl Phosphate (pNPP) and a minimum of 2,000 units of mRNA Decapping Enzyme incubated for 4 hours at 37°C yields <0.00001 unit of alkaline phosphatase activity as determined by spectrophotometric analysis.</p>	Pass
<p>Protein Purity Assay (SDS-PAGE) mRNA Decapping Enzyme is ≥ 95% pure as determined by SDS-PAGE analysis using</p>	Pass

Assay Name/Specification	Lot # 10080779
<p>Coomassie Blue detection.</p> <p>RNase Activity (Extended Digestion) A 10 µl reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 2,000 units of mRNA Decapping Enzyme is incubated at 37°C. After incubation for 16 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.</p>	<p>Pass</p>

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

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Production Scientist
27 Jul 2020



Michael Tonello
Packaging Quality Control Inspector
27 Jul 2020