

## New England Biolabs Certificate of Analysis

**Product Name:** mRNA Cap 2'-O-Methyltransferase  
**Catalog Number:** M0366S  
**Concentration:** 50,000 U/ml  
**Unit Definition:** One unit is defined as the amount of enzyme required to methylate 10 pmoles of 80 nt long capped RNA transcript in 1 hour at 37°C.  
**Packaging Lot Number:** 10139349  
**Expiration Date:** 09/2023  
**Storage Temperature:** -20°C  
**Storage Conditions:** 100 mM NaCl, 20 mM Tris-HCl (pH 8.0), 1 mM DTT, 0.1 mM EDTA, 50 % Glycerol, 0.1 % Triton®X-100  
**Specification Version:** PS-M0366S v1.0

mRNA Cap 2'-O-Methyltransferase Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M0366SVIAL	mRNA Cap 2'-O-Methyltransferase	10139348	Pass
B9003SVIAL	S-adenosylmethionine (SAM)	10131977	Pass
B2080AVIAL	10X Capping Buffer	10120094	Pass

Assay Name/Specification	Lot # 10139349
<b>Protein Purity Assay (SDS-PAGE)</b> mRNA Cap 2'-O-Methyltransferase is ≥ 99% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	Pass
<b>RNase Activity (Extended Digestion)</b> A 10 µl reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 50 units of mRNA Cap 2'-O-Methyltransferase is incubated at 37°C. After incubation for 4 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.	Pass
<b>Exonuclease Activity (Radioactivity Release)</b> A 50 µl reaction in Capping Buffer containing 1 µg of a mixture of single and double-stranded [ <sup>3</sup> H] E. coli DNA and a minimum of 50 units of mRNA Cap 2'-O-Methyltransferase incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	Pass
<b>Endonuclease Activity (Nicking)</b> A 50 µl reaction in Capping Buffer containing 1 µg of supercoiled PhiX174 DNA and a	Pass

Assay Name/Specification	Lot # 10139349
minimum of 50 units of mRNA Cap 2'-O-Methyltransferase incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	

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

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14 Mar 2022



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