

## 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:** 10201090  
**Expiration Date:** 03/2025  
**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	10183390	Pass
B9003SVIAL	S-adenosylmethionine (SAM)	10193027	Pass
B2080AVIAL	10X Capping Buffer	10182783	Pass

Assay Name/Specification	Lot # 10201090
<b>Endonuclease Activity (Nicking)</b> A 50 µl reaction in Capping Buffer containing 1 µg of supercoiled PhiX174 DNA and a 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.	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>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	Pass

Assay Name/Specification	Lot # 10201090
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.	

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](http://www.neb.com/trademarks) for additional information.



Jessica Cane  
Production Scientist  
22 Mar 2023



Josh Hersey  
Packaging Quality Control Inspector  
01 Aug 2023