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Tel 978-927-5054
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# New England Biolabs
# Certificate of Analysis

| | |
|---|---|
| *Product Name:* | *mRNA Cap 2'-O-Methyltransferase* |
| *Catalog Number:* | *M0366L* |
| *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:* | *10256377* |
| *Expiration Date:* | *08/2026* |
| *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-M0366L v1.0* |

**mRNA Cap 2'-O-Methyltransferase Component List**

| NEB Part Number | Component Description | Lot Number | Individual QC Result |
|---|---|---|---|
| M0366LVIAL | mRNA Cap 2'-O-Methyltransferase | 10254518 | **Pass** |
| B9003SVIAL | S-adenosylmethionine (SAM) | 10233985 | **Pass** |
| B2080AAVIAL | 10X Capping Buffer | 10254519 | **Pass** |

| Assay Name/Specification | Lot # 10256377 |
|---|---|
| **Endonuclease Activity (Nicking)**<br>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 37ºC results in <10% conversion to the nicked form as determined by agarose gel electrophoresis. | **Pass** |
| **Exonuclease Activity (Radioactivity Release)**<br>A 50 µl reaction in Capping Buffer containing 1 µg of a mixture of single and double-stranded [ $^3$H] E. coli DNA and a minimum of 50 units of mRNA Cap 2'-O-Methyltransferase incubated for 4 hours at 37ºC releases <0.1% of the total radioactivity. | **Pass** |
| **Protein Purity Assay (SDS-PAGE)**<br>mRNA Cap 2'-O-Methyltransferase is ≥ 99% pure as determined by SDS-PAGE analysis using Coomassie Blue detection. | **Pass** |
| **RNase Activity (Extended Digestion)**<br>A 10 µl reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA | **Pass** |

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| Assay Name/Specification | Lot # 10256377 |
|---|---|
| and a minimum of 50 units of mRNA Cap 2'-O-Methyltransferase is incubated at 37ºC. 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.



Jessica Cane
Production Scientist
23 Aug 2024

Michael Tonello
Packaging Quality Control Inspector
23 Aug 2024