

New England Biolabs Product Specification

Product Name:	<i>mRNA Cap 2'-O-Methyltransferase</i>
Catalog #:	M0366L
Concentration:	50,000 units/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.
Shelf Life:	24 months
Storage Temp:	-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
Effective Date:	08 Jan 2024

Assay Name/Specification (minimum release criteria)

Endonuclease Activity (Nicking) - 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.

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

Protein Purity Assay (SDS-PAGE) - mRNA Cap 2'-O-Methyltransferase is ≥ 99% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.

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 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.

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Date 08 Jan 2024

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Quality Approver

