

New England Biolabs Product Specification

<i>Product Name:</i>	<i>mRNA Cap 2' O Methyltransferase</i>
<i>Catalog #:</i>	<i>M0366S</i>
<i>Concentration:</i>	<i>50,000 units/ml</i>
<i>Unit Definition:</i>	<i>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.</i>
<i>Shelf Life:</i>	<i>24 months</i>
<i>Storage Temp:</i>	<i>-20 °C</i>
<i>Storage Conditions:</i>	<i>100 mM NaCl , 20 mM Tris-HCl (pH 8.0), 1 mM DTT , 0.1 mM EDTA , 50 % Glycerol , 0.1 % Triton®X-100</i>
<i>Specification Version:</i>	<i>PS-M0366S v1.0</i>
<i>Effective Date:</i>	<i>14 Nov 2013</i>

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.



Date 14 Nov 2013

Derek Robinson

Director of Quality Control

