

New England Biolabs Certificate of Analysis

Product Name: *Vaccinia Capping System*
Catalog Number: *M2080S*
Concentration: *10,000 U/ml*
Unit Definition: *One unit of Vaccinia Capping Enzyme is defined as the amount of enzyme required to incorporate 10 pmol of ($\alpha^{32}P$) GTP into an 80 nt transcript in 1 hour at 37°C.*
Packaging Lot Number: *10142467*
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-M2080S v1.0*

Vaccinia Capping System Component List

| NEB Part Number | Component Description | Lot Number | Individual QC Result |
|-----------------|----------------------------|------------|----------------------|
| N2080AVIAL | GTP | 10134549 | Pass |
| M2080SVIAL | Vaccinia Capping System | 10120090 | Pass |
| B9003SVIAL | S-adenosylmethionine (SAM) | 10131977 | Pass |
| B2080AVIAL | 10X Capping Buffer | 10120094 | Pass |

| Assay Name/Specification | Lot # 10142467 |
|---|----------------|
| Endonuclease Activity (Nicking) A 50 µl reaction in Capping Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 10 units of Vaccinia Capping System incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis. | Pass |
| 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 10 units of Vaccinia Capping System 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 |
| Exonuclease Activity (Radioactivity Release) 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 10 units of Vaccinia Capping System incubated for 4 hours at 37°C releases <0.1% of the total radioactivity. | Pass |

| Assay Name/Specification | Lot # 10142467 |
|--|----------------|
| Protein Purity Assay (SDS-PAGE) Vaccinia Capping System is $\geq 95\%$ pure as determined by SDS-PAGE analysis using Coomassie Blue detection. | Pass |

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

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Bhairavi Jani
Production Scientist
24 Feb 2022



Josh Hersey
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24 Feb 2022