

New England Biolabs Certificate of Analysis

Product Name: *Faustovirus Capping Enzyme*
Catalog Number: *M2081L*
Concentration: *25,000 U/ml*
Unit Definition: *One unit of Faustovirus Capping Enzyme is defined as the amount of enzyme required to convert 75 pmol of a 20-mer transcript to Cap-0 RNA in 30 minutes at 37°C.*
Packaging Lot Number: *10238194*
Expiration Date: *02/2026*
Storage Temperature: *-20°C*
Storage Conditions: *40 mM Tris-HCl, 100 mM NaCl, 50 mM Arginine, 0.1 mM TCEP, 50% Glycerol, (pH 8.0 @ 25°C)*
Specification Version: *PS-M2081S/L v1.0*

Faustovirus Capping Enzyme Component List

| NEB Part Number | Component Description | Lot Number | Individual QC Result |
|-----------------|----------------------------|------------|----------------------|
| N2080AAVIAL | GTP | 10229241 | Pass |
| M2081LVIAL | Faustovirus Capping Enzyme | 10229239 | Pass |
| B9003SVIAL | S-adenosylmethionine (SAM) | 10233985 | Pass |
| B2181AVIAL | FCE Capping Buffer | 10229240 | Pass |

| Assay Name/Specification | Lot # 10238194 |
|---|----------------|
| Endonuclease Activity (Nicking) A 50 µl reaction in FCE Capping Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 25 units of Faustovirus Capping Enzyme incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis. | Pass |
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| Exonuclease Activity (Radioactivity Release) A 50 µl reaction in FCE Capping Buffer containing 1 µg of a mixture of single and double-stranded [³ H] E. coli DNA and a minimum of 25 units of Faustovirus Capping Enzyme incubated for 4 hours at 37°C releases <0.1% of the total radioactivity. | Pass |

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| <p>Protein Purity Assay (SDS-PAGE) Faustovirus Capping Enzyme is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p> | Pass |
| <p>Protein Purity Assay (SDS-PAGE) Faustovirus Capping Enzyme is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p> | Pass |
| <p>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 25 units of Faustovirus Capping Enzyme 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.</p> | Pass |
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| <p>qPCR DNA Contamination (E. coli Genomic) A minimum of 25 units of Faustovirus Capping Enzyme is screened for the presence of E. coli genomic DNA using SYBR® Green qPCR with primers specific for the E. coli 16S rRNA locus. Results are quantified using a standard curve generated from purified E. coli genomic DNA. The measured level of E. coli genomic DNA contamination is ≤ 1 E. coli genome.</p> | Pass |
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This product has been tested and shown to be in compliance with all specifications.

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Jessica Cane
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29 Feb 2024



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02 Apr 2024