

New England Biolabs Product Specification

Product Name:	<i>Faustovirus Capping Enzyme</i>
Catalog #:	M2081S/L
Concentration:	25,000 units/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.
Shelf Life:	24 months
Storage Temp:	-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
Effective Date:	17 Jun 2022

Assay Name/Specification (minimum release criteria)

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.

Endonuclease Activity (Nicking) - A 50 μ l reaction in FCE Capping Buffer containing 1 μ g 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.

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

Protein Purity Assay (SDS-PAGE) - Faustovirus Capping Enzyme is $\geq 95\%$ pure as determined by SDS-PAGE analysis using Coomassie Blue detection.

RNase Activity (Extended Digestion) - A 10 μ l 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.

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Please visit www.neb.com/trademarks for additional information.



Date 17 Jun 2022

Derek Robinson
Quality Approver

