

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: *10249666*
Expiration Date: *02/2026*
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	10241999	Pass
M2080SVIAL	Vaccinia Capping System	10239810	Pass
B9003SVIAL	S-adenosylmethionine (SAM)	10233985	Pass
B2080AVIAL	10X Capping Buffer	10228128	Pass

Assay Name/Specification	Lot # 10249666
Endonuclease Activity (Nicking) A 50 μ l reaction in Capping Buffer containing 1 μ g 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
Exonuclease Activity (Radioactivity Release) A 50 μ l reaction in Capping Buffer containing 1 μ g of a mixture of single and double-stranded [3H] 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
Protein Purity Assay (SDS-PAGE) Vaccinia Capping System is \geq 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	Pass
RNase Activity (Extended Digestion) A 10 μ l reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA	Pass

Assay Name/Specification	Lot # 10249666
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.	

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

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Production Scientist
14 Feb 2024



Josh Hersey
Packaging Quality Control Inspector
17 Jul 2024