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New England Biolabs Certificate of Analysis

Product Name: SP6 RNA Polymerase

Catalog Number: M0207S
Concentration: 20,000 U/ml

Unit Definition: One unit is defined as the amount of enzyme required to incorporate

1 nmol ATP into an acid-insoluble material in 1 hour at 37°C.

Packaging Lot Number: 10086517
Expiration Date: 10/2022
Storage Temperature: -20°C

Storage Conditions: 50 mM Tris-HCl, 100 mM NaCl, 20 mM \(\beta ME, 1 \) mM EDTA, 0.1 %

Triton®X-100, 50 % Glycerol, (pH 7.9 @ 25°C)

Specification Version: PS-M0207S/L v1.0

SP6 RNA Polymerase Component List				
NEB Part Number	Component Description	Lot Number	Individual QC Result	
M0207SVIAL	SP6 RNA Polymerase	10086516	Pass	
B9012SVIAL	RNAPol Reaction Buffer	10073286	Pass	

Assay Name/Specification	Lot # 10086517
Protein Purity Assay (SDS-PAGE) SP6 RNA Polymerase is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	Pass
RNase Activity (Extended Digestion) A 10 µl reaction in RNAPol Reaction Buffer containing 40 ng of a 300 base single-stranded RNA and a minimum of 20 units of SP6 RNA Polymerase 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
Endonuclease Activity (Nicking) A 50 μl reaction in RNAPol Reaction Buffer containing 1 μg of supercoiled PhiX174 DNA and a minimum of 100 units of SP6 RNA Polymerase 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 µl reaction in RNAPol Reaction Buffer containing 1 µg of a mixture of single and double-stranded [³H] E. coli DNA and a minimum of 100 units of SP6 RNA	Pass



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Assay Name/Specification	Lot # 10086517
Polymerase incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	
Non-Specific DNase Activity (16 Hour) A 50 µl reaction in RNAPol Reaction Buffer containing 1 µg of Lambda DNA and a minimum of 100 units of SP6 RNA Polymerase incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	Pass
Promoter Specificity A 50 µl reaction in RNAPol Reaction Buffer in the presence of 2 mM NTPs containing 1 µg of Lambda DNA as a template and a minimum of 100 units of SP6 RNA Polymerase incubated for 1 hour at 37°C results in <1.5% of the amount of product incorporated as compared to a control reaction using SP6 DNA as a template.	Pass

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

One or more products referenced in this document may be covered by a 3rd-party trademark. Please visit www.neb.com/trademarks for additional information.

Bhairavi Jani Production Scientist 15 Oct 2020 Michael Tonello

Packaging Quality Control Inspector

15 Oct 2020



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