

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.
Lot Number: 10039728
Expiration Date: 04/2021
Storage Temperature: -20°C
Storage Conditions: 50 mM Tris-HCl, 100 mM NaCl, 20 mM βME, 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	10039729	Pass
B9012SVIAL	RNAPol Reaction Buffer	0181804	Pass

Assay Name/Specification	Lot # 10039728
<p>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.</p>	Pass
<p>Protein Purity Assay (SDS-PAGE) SP6 RNA Polymerase is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p>	Pass
<p>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.</p>	Pass
<p>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</p>	Pass

Assay Name/Specification	Lot # 10039728
<p>results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.</p> <p>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 Polymerase incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.</p> <p>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.</p>	<p style="text-align: center;">Pass</p> <p style="text-align: center;">Pass</p>

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



Bhairavi Jani
Production Scientist
02 Apr 2019



Michael Tonello
Packaging Quality Control Inspector
02 Apr 2019