

New England Biolabs Certificate of Analysis

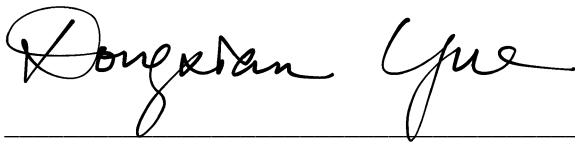
Product Name: T7 RNA Polymerase
Catalog Number: M0251L
Concentration: 50,000 U/ml
Unit Definition: One unit is defined as the amount of enzyme that will incorporate 1 nmol ATP into acid-insoluble material in a total reaction volume of 50 µl in 1 hour at 37°C in 1X RNA Polymerase Reaction Buffer.
Packaging Lot Number: 10066792
Expiration Date: 02/2022
Storage Temperature: -20°C
Storage Conditions: 100 mM NaCl , 50 mM Tris-HCl (pH 7.9), 1 mM EDTA , 20 mM BME , 0.1 % Triton X-100 , 50 % Glycerol
Specification Version: PS-M0251S/L v3.0

T7 RNA Polymerase Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M0251LVIAL	T7 RNA Polymerase	10066714	Pass
B9012SVIAL	RNAPol Reaction Buffer	10051065	Pass

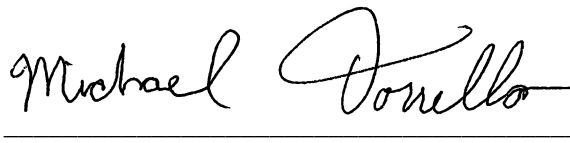
Assay Name/Specification	Lot # 10066792
Non-Specific DNase Activity (16 Hour) A 50 µl reaction in RNAPol Reaction Buffer containing 1 µg of Lambda DNA and a minimum of 250 units of T7 RNA Polymerase incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	Pass
Endonuclease Activity (Nicking) A 50 µl reaction in RNAPol Reaction Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 150 units of T7 RNA Polymerase incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	Pass
Protein Purity Assay (SDS-PAGE) T7 RNA Polymerase is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	Pass
Promoter Specificity A 50 µl reaction in RNAPol Reaction Buffer in the presence of 2 mM NTPs containing 1	Pass

Assay Name/Specification	Lot # 10066792
<p>µg of Lambda DNA as a template and a minimum of 200 units of T7 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 T7 DNA as a template.</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 150 units of T7 RNA Polymerase incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.</p>	Pass
<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 50 units of T7 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

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



Dongxian Yue
Production Scientist
06 Feb 2020



Michael Tonello
Packaging Quality Control Inspector
06 Feb 2020