

## New England Biolabs Certificate of Analysis

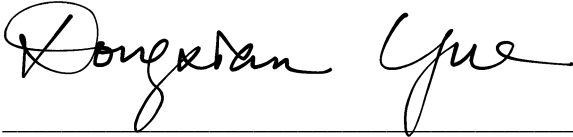
**Product Name:** *E.coli RNA Polymerase, Holoenzyme*  
**Catalog Number:** M0551S  
**Concentration:** 1,000 U/ml  
**Unit Definition:** One unit is defined as the amount of enzyme required to incorporate 1 nmole NTP into RNA in 10 minutes at 37°C.  
**Packaging Lot Number:** 10227249  
**Expiration Date:** 11/2025  
**Storage Temperature:** -20°C  
**Storage Conditions:** 100 mM NaCl, 20 mM Tris-HCl, 1 mM DTT, 0.1 mM EDTA, 50 % Glycerol, (pH 7.5 @ 25°C)  
**Specification Version:** PS-M0551S v1.0

E.coli RNA Polymerase, Holoenzyme Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M0551SVIAL	E.coli RNA Polymerase, Holoenzyme	10213851	Pass
B0550AVIAL	5X E. coli RNA Polymerase Reaction Buffer	10163206	Pass

Assay Name/Specification	Lot # 10227249
<p><b>Endonuclease Activity (Nicking)</b>            A 50 µl reaction in NEBuffer 4 containing 1 µg of supercoiled PhiX174 DNA and a minimum of 5 units of E. coli RNA Polymerase, Holoenzyme incubated for 4 hours at 37°C results in &lt;10% conversion to the nicked form as determined by agarose gel electrophoresis.</p>	Pass
<p><b>Exonuclease Activity (Radioactivity Release)</b>            A 50 µl reaction in NEBuffer 4 containing 1 µg of a mixture of single and double-stranded [<sup>3</sup>H] E. coli DNA and a minimum of 5 units of E. coli RNA Polymerase, Holoenzyme incubated for 4 hours at 37°C releases &lt;0.1% of the total radioactivity.</p>	Pass
<p><b>RNase Activity (Extended Digestion)</b>            A 10 µl reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 1 unit of E. coli RNA Polymerase, Holoenzyme is incubated at 37°C. After incubation for 4 hours, &gt;90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.</p>	Pass

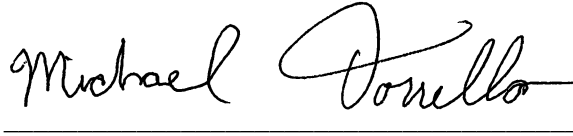
This product has been tested and shown to be in compliance with all specifications.

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Dongxian Yue  
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09 Jan 2024



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Michael Tonello  
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16 Jan 2024