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New England Biolabs
Certificate of Analysis

Product Name:	*E.coli RNA Polymerase, Core Enzyme*
Catalog Number:	*M0550S*
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 in the presence of sigma factor 70.*
Packaging Lot Number:	*10262099*
Expiration Date:	*08/2026*
Storage Temperature:	*-20°C*
Storage Conditions:	*20 mM Tris-HCl, 100 mM NaCl, 1 mM DTT, 0.1 mM EDTA, 50 % Glycerol, (pH 7.5 @ 25°C)*
Specification Version:	*PS-M0550S v1.0*

E.coli RNA Polymerase, Core Enzyme Component List			
NEB Part Number	**Component Description**	**Lot Number**	**Individual QC Result**
M0550SVIAL	E.coli RNA Polymerase, Core Enzyme	10249740	**Pass**
B0550AVIAL	5X E. coli RNA Polymerase Reaction Buffer	10230761	**Pass**

Assay Name/Specification	**Lot # 10262099**
Endonuclease Activity (Nicking) 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, Core Enzyme incubated for 4 hours at 37ºC results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	**Pass**
Exonuclease Activity (Radioactivity Release) A 50 µl reaction in NEBuffer 4 containing 1 µg of a mixture of single and double-stranded [^{3}H] E. coli DNA and a minimum of 5 units of E. coli RNA Polymerase, Core Enzyme incubated for 4 hours at 37ºC releases <0.1% of the total radioactivity.	**Pass**
RNase Activity (Extended Digestion) 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, Core Enzyme is incubated at 37ºC. After incubation for 4 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.	**Pass**

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

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12 Sep 2024

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17 Oct 2024