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Product Specification

Product Name:

T7 RNA Polymerase – recombinant, expressed in *E. coli*, buffered aqueous solution

Product Number: R0884
CAS Number: 9014-24-8
MDL: MFCD00132197

Storage Temperature: -20 °C

TEST	Specification
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units/ml	10000 - 50000
Unit Definition: One unit is the amount of T7 RNA Polymerase required to catalyze the incorporation of 1 nmol of nucleoside triphosphate into acid-insoluble material in 60 minutes at 37°C.	
Test of Function	Conforms
> 50% of the label is incorporated into RNA in 30 minutes at 37 deg C under standard assay conditions (typical labeled transcription reaction conditions include 20 units of T7 RNA Polymerase, 500 µM ATP, CTP & GTP, 50 µCi [alpha-32P]UTP, 1 µg template DNA, 0.1-1.0 U/µL RNase inhibitor, and 2 µL 10X transcription buffer, and nuclease-free water to achieve a final reaction volume of 20 µL)	
Endonuclease	Conforms
Meets or exceeds specification when a sample is incubated for 14-16 hours with 300 ng supercoiled plasmid DNA and analyzed by agarose gel electrophoresis.	
Exonuclease	Conforms
Meets or exceeds specification when a sample is incubated for 14-16 hours with 40 ng 32P-labeled Sau3A fragments of pUC19 and analyzed by PAGE.	
RNase Activity	Conforms
Meets or exceeds specification when a sample is incubated for 14-16 hours with 25 ng 32P-labeled RNA and analyzed by PAGE.	

Specification: PRD.1.ZQ5.10000009349

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.