240 County Road
Ipswich, MA 01938-2723
Tel 978-927-5054
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New England Biolabs
Certificate of Analysis

Product Name:	*RNase 4*
Catalog Number:	*M1284L*
Concentration:	*50,000 U/ml*
Unit Definition:	*One unit of RNase 4 is defined as the amount of enzyme required to cleave 1.8 pmol of a 45-mer RNA substrate containing a single U/A cut site in 60 minutes at 25°C.*
Packaging Lot Number:	*10244589*
Expiration Date:	*05/2026*
Storage Temperature:	*-20°C*
Storage Conditions:	*50 mM Sodium Acetate, 100 mM Sodium Chloride, 200 µg/ml rAlbumin, 50% Glycerol (pH 6.0 @ 25°C)*
Specification Version:	*PS-M1284L v1.0*

RNase 4 Component List			
NEB Part Number	**Component Description**	**Lot Number**	**Individual QC Result**
M1284LVIAL	RNase 4	10241458	**Pass**
B6001SVIAL	NEBuffer™ r1.1	10241732	**Pass**

Assay Name/Specification	**Lot # 10244589**
Endonuclease Activity (Nicking) A 50 µl reaction in NEBuffer™ r1.1 containing 1 µg of supercoiled PhiX174 RF I DNA and a minimum of 50 units of RNase 4 incubated for 4 hours at 37°C 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™ r1.1 containing 1 µg of a mixture of single and double-stranded [^{3}H] E. coli DNA and a minimum of 50 units of RNase 4 incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	**Pass**
Non-Specific DNase Activity (16 Hour) A 50 µl reaction in NEBuffer™ r1.1 containing 1 µg of PhiX174-HaeIII DNA and a minimum of 50 units of RNase 4 incubated for 16 hours at 37ºC results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	**Pass**
Phosphatase Activity (pNPP) A 200 µl reaction in 1M Diethanolamine, pH 9.8, 0.5 mM MgCl2 containing 2.5 mM	**Pass**

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Assay Name/Specification	Lot # 10244589
p-Nitrophenyl Phosphate (pNPP) and a minimum of 50 units of RNase 4 incubated for 16 hours at 37°C yields <0.0001 unit of alkaline phosphatase activity as determined by spectrophotometric analysis.	
Protein Purity (Microfluidic Electrophoresis) RNase 4 is ≥95% pure as determined by microfluidic electrophoresis.	**Pass**
qPCR DNA Contamination (E. coli Genomic) A minimum of 50 units of RNase 4 is screened for the presence of E. coli genomic DNA using SYBR® Green qPCR with primers specific for the E. coli 16S rRNA locus. Results are quantified using a standard curve generated from purified E. coli genomic DNA. The measured level of E. coli genomic DNA contamination is ≤ 1 E. coli genome.	**Pass**

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

One or more products referenced in this document may be covered by a 3rd-party trademark. Please visit www.neb.com/trademarks for additional information.

Bo Wu
Production Scientist
21 May 2024

Michael Tonello
Packaging Quality Control Inspector
14 Jun 2024