

## New England Biolabs Certificate of Analysis

**Product Name:** DNase I (RNase-free)  
**Catalog Number:** M0303S  
**Concentration:** 2,000 U/ml  
**Unit Definition:** One unit is defined as the amount of enzyme which will completely degrade 1 µg of pBR322 DNA in 10 minutes at 37°C in DNase I Reaction Buffer. Complete degradation is defined as the reduction of the majority of DNA fragments to tetranucleotides or smaller.  
**Packaging Lot Number:** 10200633  
**Expiration Date:** 05/2025  
**Storage Temperature:** -20°C  
**Storage Conditions:** 10 mM Tris-HCl (pH 7.6), 2 mM CaCl<sub>2</sub>, 50 % Glycerol  
**Specification Version:** PS-M0303S/L v1.0

DNase I (RNase-free) Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M0303SVIAL	DNase I (RNase-free)	10185549	Pass
B0303SVIAL	DNase I Reaction Buffer	10176771	Pass

Assay Name/Specification	Lot # 10200633
<b>Protein Purity Assay (SDS-PAGE)</b> DNase I (RNase-free) is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	Pass
<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 2 units of DNase I (RNase-free) is incubated at 37°C. After incubation for 16 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.	Pass
<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 2 units of DNase I (RNase-free) is incubated at 37°C. After incubation for 16 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.	Pass
<b>RNase Activity (ds RNA)</b> A 50 µl reaction in DNase I Reaction Buffer containing 10 µg of a dsRNA Ladder and a	Pass

Assay Name/Specification	Lot # 10200633
minimum of 100 units of DNase I (RNase-free) is incubated at 37°C. After incubation for 4 hours, >90% of the substrate RNA remains intact as determined by fluorescent detection.	

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](http://www.neb.com/trademarks) for additional information.



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03 May 2023



Josh Hersey  
Packaging Quality Control Inspector  
27 Jul 2023