

New England Biolabs Certificate of Analysis

Product Name: DpnII
Catalog Number: R0543M
Concentration: 50,000 U/ml
Unit Definition: One unit is defined as the amount of enzyme required to digest 1 µg of Lambda DNA (dam-) in NEBuffer DpnII in 1 hour at 37°C in a total reaction volume of 50 µl.
Packaging Lot Number: 10183011
Expiration Date: 12/2024
Storage Temperature: -20°C
Storage Conditions: 10 mM Tris-HCl, 300 mM NaCl, 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 500 µg/ml rAlbumin (pH 7.4 @ 25°C)
Specification Version: PS-R0543T/M v2.0

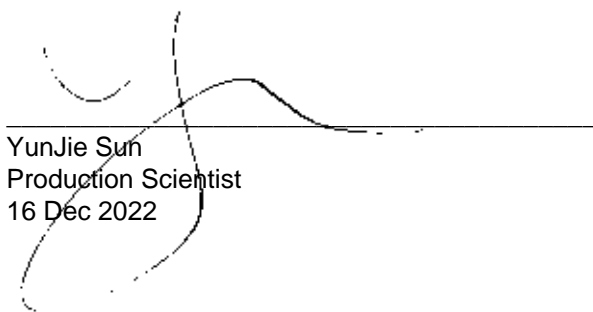
DpnII Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0543M VIAL	DpnII	10174824	Pass
B7024A VIAL	Gel Loading Dye, Purple (6X)	10182168	Pass
B0543S VIAL	NEBuffer™ DpnII	10175575	Pass

Assay Name/Specification	Lot # 10183011
Endonuclease Activity (Nicking) A 50 µl reaction in NEBuffer DpnII containing 1 µg of supercoiled PhiX174 DNA and a minimum of 30 Units of DpnII 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 DpnII containing 1 µg of a mixture of single and double-stranded [³ H] E. coli DNA and a minimum of 100 units of DpnII incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	Pass
Functional Testing (15 minute Digest) A 50 µl reaction in NEBuffer DpnII containing 1 µg of Lambda dam- DNA and 1 µl of DpnII incubated for 15 minutes at 37°C results in complete digestion as determined by agarose gel electrophoresis.	Pass
Ligation and Recutting (Terminal Integrity) After a 20-fold over-digestion of Lambda dam- DNA with DpnII, >95% of the DNA	Pass

Assay Name/Specification	Lot # 10183011
<p>fragments can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments, >95% can be recut with DpnII.</p>	
<p>Non-Specific DNase Activity (16 Hour) A 50 µl reaction in NEBuffer DpnII containing 1 µg of Lambda dam- DNA and a minimum of 100 units of DpnII incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.</p>	Pass
<p>Protein Purity Assay (SDS-PAGE) DpnII is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.</p>	Pass
<p>qPCR DNA Contamination (E. coli Genomic) A minimum of 10 units of DpnII 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.</p>	Pass

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

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YunJie Sun
Production Scientist
16 Dec 2022



Michael Tonello
Packaging Quality Control Inspector
18 Apr 2023