

New England Biolabs Certificate of Analysis

Product Name: DpnII
Catalog Number: R0543S
Concentration: 10,000 U/ml
Unit Definition: One unit is defined as the amount of enzyme required to digest 1 µg of Lambda DNA (dam-) in 1 hour at 37°C in a total reaction volume of 50 µl.
Packaging Lot Number: 10175255
Expiration Date: 12/2024
Storage Temperature: -20°C
Storage Conditions: 300 mM NaCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 500 µg/ml BSA
Specification Version: PS-R0543S/L v1.0

DpnII Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0543SVIAL	DpnII	10170411	Pass
B7024AVIAL	Gel Loading Dye, Purple (6X)	10156427	Pass
B0543SVIAL	NEBuffer™ DpnII	10146004	Pass

Assay Name/Specification	Lot # 10175255
Protein Purity Assay (SDS-PAGE) DpnII is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.	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
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.	Pass
Ligation and Recutting (Terminal Integrity) After a 20-fold over-digestion of Lambda dam- DNA with DpnII, >95% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated	Pass


Assay Name/Specification	Lot # 10175255
<p>fragments, >95% can be recut with DpnII.</p> <p>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.</p>	<p>Pass</p>

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

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YunJie Sun
Production Scientist
02 Dec 2022



Mary Neal
Packaging Quality Control Inspector
14 Dec 2022