

New England Biolabs Certificate of Analysis

Product Name: DpnI
Catalog Number: R0176S
Concentration: 20,000 U/ml
Unit Definition: One unit is defined as the amount of enzyme required to digest 1 µg of pBR322 DNA (dam methylated) in 1 hour at 37°C in a total reaction volume of 50 µl.
Packaging Lot Number: 10186552
Expiration Date: 03/2025
Storage Temperature: -20°C
Storage Conditions: 400 mM NaCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 200 µg/ml BSA
Specification Version: PS-R0176S/L v1.0

DpnI Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0176SVIAL	DpnI	10178809	Pass
B7024AVIAL	Gel Loading Dye, Purple (6X)	10175294	Pass
B6004SVIAL	rCutSmart™ Buffer	10181134	Pass

Assay Name/Specification	Lot # 10186552
Endonuclease Activity (Nicking) A 50 µl reaction in CutSmart™ Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 20 units of DpnI 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 CutSmart™ Buffer containing 1 µg of a mixture of single and double-stranded [³ H] E. coli DNA and a minimum of 200 units of DpnI incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	Pass
Ligation and Recutting (Terminal Integrity) After a 20-fold over-digestion of pBR322 DNA with DpnI, ~25% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments, >95% can be recut with DpnI.	Pass
Non-Specific DNase Activity (16 Hour) A 50 µl reaction in CutSmart™ Buffer containing 1 µg of pBR322 DNA and a minimum of	Pass

Assay Name/Specification	Lot # 10186552
<p>100 units of DpnI incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.</p> <p>Protein Purity Assay (SDS-PAGE) DpnI is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.</p>	<p>Pass</p>

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.



Stephanie Cornelio
Production Scientist
08 Mar 2023



Josh Hersey
Packaging Quality Control Inspector
17 Apr 2023