

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: 10077601
Expiration Date: 06/2022
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	10076066	Pass
B7204SVIAL	CutSmart® Buffer	10075570	Pass
B7024SVIAL	Gel Loading Dye, Purple (6X)	10075964	Pass

Assay Name/Specification	Lot # 10077601
Protein Purity Assay (SDS-PAGE) DpnI is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.	Pass
Non-Specific DNase Activity (16 Hour) A 50 µl reaction in CutSmart™ Buffer containing 1 µg of pBR322 DNA and a minimum of 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.	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
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

Assay Name/Specification	Lot # 10077601
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

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



Penghua Zhang
Production Scientist
16 Jul 2020



Michael Tonello
Packaging Quality Control Inspector
16 Jul 2020