

New England Biolabs Certificate of Analysis

Product Name: PaeR7I
Catalog Number: R0177S
Concentration: 20,000 U/ml
Unit Definition: One unit is defined as the amount of enzyme required to digest 1 µg of Lambda DNA (HindIII Digest) in 1 hour at 37°C in a total reaction volume of 50 µl.
Packaging Lot Number: 10076660
Expiration Date: 06/2022
Storage Temperature: -20°C
Storage Conditions: 50 mM KCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 200 µg/ml BSA
Specification Version: PS-R0177S/L v1.0

PaeR7I Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0177SVIAL	PaeR7I	10076659	Pass
B7204SVIAL	CutSmart® Buffer	10077115	Pass

Assay Name/Specification	Lot # 10076660
Endonuclease Activity (Nicking) A 50 µl reaction in CutSmart™ Buffer containing 1 µg of supercoiled pBR322 DNA and a minimum of 20 Units of PaeR7I 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 60 units of PaeR7I incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	Pass
Ligation and Recutting (Terminal Integrity) After a 10-fold over-digestion of Lambda-HindIII DNA with PaeR7I, >95% 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 PaeR7I.	Pass
Non-Specific DNase Activity (16 Hour) A 50 µl reaction in CutSmart™ Buffer containing 1 µg of Lambda-HindIII DNA and a minimum of 60 units of PaeR7I incubated for 16 hours at 37°C results in a DNA	Pass

Assay Name/Specification	Lot # 10076660
pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	

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.



Penghua Zhang
Production Scientist
10 Aug 2020



Josh Hersey
Packaging Quality Control Inspector
10 Aug 2020