

## 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:** 10062758  
**Expiration Date:** 12/2021  
**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	10062757	Pass
B7204SVIAL	CutSmart® Buffer	10061300	Pass

Assay Name/Specification	Lot # 10062758
<b>Endonuclease Activity (Nicking)</b> 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
<b>Exonuclease Activity (Radioactivity Release)</b> A 50 µl reaction in CutSmart™ Buffer containing 1 µg of a mixture of single and double-stranded [ <sup>3</sup> 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
<b>Ligation and Recutting (Terminal Integrity)</b> 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
<b>Non-Specific DNase Activity (16 Hour)</b> 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 # 10062758
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.



Stephanie Cornelio  
Production Scientist  
19 Dec 2019



Jay Minichiello  
Packaging Quality Control Inspector  
14 Jan 2020