NEW ENGLAND BioLabs Inc.
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240 County Road
Ipswich, MA 01938-2723
Tel 978-927-5054
Fax 978-921-1350
www.neb.com
info@neb.com

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.*
Lot Number:	*10048615*
Expiration Date:	*06/2021*
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	10048616	**Pass**
B7204SVIAL	CutSmart® Buffer	10043914	**Pass**

Assay Name/Specification	**Lot # 10048615**
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 37ºC 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 37ºC 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 16ºC. 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 37ºC results in a DNA	**Pass**

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Assay Name/Specification	Lot # 10048615
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.

Ben Penta
Production Scientist
20 Jun 2019

Michael Tonello
Packaging Quality Control Inspector
03 Jul 2019