NEW ENGLAND BioLabs® Inc.

240 County Road
Ipswich, MA 01938-2723

Tel 978-927-5054
Fax 978-921-1350

www.neb.com
info@neb.com

New England Biolabs
Product Specification

Product Name:	*PaqCI*
Catalog #:	*R0745S/L*
Concentration:	*10,000 units/ml*
Unit Definition:	*One unit is defined as the amount of enzyme required to digest 1 µg of Lambda DNA incubated for 1 hour at 37°C in a total reaction volume of 50 µl.*
Shelf Life:	*18 months*
Storage Temp:	*-20°C*
Storage Conditions:	*300 mM NaCl , 10 mM Tris-HCl , 1 mM DTT , 0.1 mM EDTA , 50 % Glycerol , 500 µg/ml BSA, (pH 7.4 @ 25°C)*
Specification Version:	*PS-R0745S/L v1.0*
Effective Date:	*01 Dec 2020*

Assay Name/Specification (minimum release criteria)
Endonuclease Activity (Nicking) - A 50 µl reaction in CutSmart® Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 30 units of PaqCI incubated for 4 hours at 37°C results in <20% conversion to the nicked form as determined by agarose gel electrophoresis.
Exonuclease Activity (Radioactivity Release) - A 50 ul reaction in CutSmart® Buffer containing 1 µg of a mixture of single and double -stranded [^{3}H] *E. coli* DNA and a minimum of 100 units of PaqCI incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.
Functional Testing (15 minute Digest) - A 50 µl reaction in CutSmart® Buffer containing 1 µg of Lambda DNA and 1 µl of PaqCI incubated for 15 minutes at 37°C results in complete digestion as determined by agarose gel electrophoresis.
Ligation and Recutting (Terminal Integrity) - After a 10-fold over-digestion of Lambda DNA with PaqCI, >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 PaqCI.
Non-Specific DNase Activity (16 Hour) - A 50 µl reaction in CutSmart® Buffer containing 1 µg of Lambda DNA and a minimum of 30 units of PaqCI incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.
Protein Purity Assay (SDS-PAGE) - PaqCI is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.

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.

Date 01 Dec 2020

Derek Robinson
Director, Quality Control

nqa ISO 9001 Registered Quality Management
nqa ISO 14001 Registered Environmental Management
nqa ISO 13485 Registered Medical Devices