

New England Biolabs Certificate of Analysis

Product Name: PaqCI[®]
Catalog Number: R0745S
Concentration: 10,000 U/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.
Packaging Lot Number: 10171800
Expiration Date: 06/2024
Storage Temperature: -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

PaqCI [®] Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
S0532SVIAL	PaqCI [®] Activator	10174170	Pass
R0745SVIAL	PaqCI [®]	10171797	Pass
B6004SVIAL	rCutSmart [™] Buffer	10168651	Pass

Assay Name/Specification	Lot # 10171800
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 100 units of PaqCI [®] incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	Pass
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.	Pass
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.	Pass
Ligation and Recutting (Terminal Integrity) After a 10-fold over-digestion of Lambda DNA with PaqCI [®] , >95% of the DNA fragments	Pass


Assay Name/Specification	Lot # 10171800
<p>can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments, >95% can be recut with PaqCI® .</p>	
<p>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.</p>	Pass
<p>Protein Purity Assay (SDS-PAGE) PaqCI® is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p>	Pass

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.



YunJie Sun
Production Scientist
13 Dec 2022



Michael Tonello
Packaging Quality Control Inspector
14 Dec 2022