

New England Biolabs Certificate of Analysis

Product Name: PaqCI®
Catalog Number: R0745L
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: 10205489
Expiration Date: 02/2025
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
S0532LVIAL	PaqCI® Activator	10205495	Pass
R0745LVIAL	PaqCI®	10205493	Pass
B6004SVIAL	rCutSmart™ Buffer	10198645	Pass

Assay Name/Specification	Lot # 10205489
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
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.	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 # 10205489
<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> <p>Protein Purity Assay (SDS-PAGE) PaqCI® is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p>	<p style="text-align: center;">Pass</p> <p style="text-align: center;">Pass</p>

This product has been tested and shown to be in compliance with all specifications.

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YunJie Sun
Production Scientist
24 Aug 2023



Josh Hersey
Packaging Quality Control Inspector
25 Aug 2023