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New England Biolabs Certificate of Analysis

Product Name: Pcil
Catalog Number: R0655L
Concentration: 10,000 U/ml

Unit Definition: One unit is defined as the amount of enzyme required to digest 1 µg

of pXba DNA in NEBuffer r3.1 in 1 hour at 37°C in a total reaction

volume of 50 μl.

Packaging Lot Number: 10176951
Expiration Date: 01/2025
Storage Temperature: -20°C

Storage Conditions: 10 mM Tris-HCl, 300 mM NaCl, 1 mM DTT, 0.1 mM EDTA, 50% Glycerol,

500 μg/ml rAlbumin (pH 7.4 @ 25°C)

Specification Version: PS-R0655S/L v2.0

Pcil Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0655LVIAL	Pcil	10176948	Pass
B7024AVIAL	Gel Loading Dye, Purple (6X)	10173660	Pass
B6003SVIAL	NEBuffer™ r3.1	10168652	Pass

Assay Name/Specification	Lot # 10176951
Ligation and Recutting (Terminal Integrity) After a 10-fold over-digestion of pXba DNA with Pcil, >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 Pcil.	Pass
Exonuclease Activity (Radioactivity Release) A 50 μl reaction in NEBuffer [™] r3.1 containing 1 μg of a mixture of single and double-stranded [³H] E. coli DNA and a minimum of 100 units of Pcil incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	Pass
Protein Purity Assay (SDS-PAGE) Pcil is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	Pass
Endonuclease Activity (Nicking) A 50 μl reaction in NEBuffer™ r3.1 containing 1 μg of supercoiled PhiX174 DNA and a minimum of 10 units of Pcil incubated for 4 hours at 37°C results in <20% conversion	Pass



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

detectable nuclease degradation as determined by agarose gel electrophoresis.

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
19 Jan 2023

Michael Tonello

Packaging Quality Control Inspector

30 Jan 2023

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