

New England Biolabs Certificate of Analysis

Product Name: *Pcil*
Catalog Number: *R0655S*
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: *10161997*
Expiration Date: *08/2024*
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
R0655SVIAL	Pcil	10161946	Pass
B7024AVIAL	Gel Loading Dye, Purple (6X)	10156431	Pass
B6003SVIAL	NEBuffer™ r3.1	10146827	Pass

Assay Name/Specification	Lot # 10161997
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 [³ H] 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
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 to the nicked form as determined by agarose gel electrophoresis.	Pass
qPCR DNA Contamination (E. coli Genomic) A minimum of 10 units of Pcil is screened for the presence of E. coli genomic DNA	Pass

Assay Name/Specification	Lot # 10161997
<p>using SYBR® Green qPCR with primers specific for the E. coli 16S rRNA locus. Results are quantified using a standard curve generated from purified E. coli genomic DNA. The measured level of E. coli genomic DNA contamination is ≤ 1 E. coli genome.</p>	
<p>Protein Purity Assay (SDS-PAGE) Pcil is $\geq 95\%$ pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p>	Pass
<p>Non-Specific DNase Activity (16 Hour) A 50 μl reaction in NEBuffer™ r3.1 containing 1 μg of pXba DNA and a minimum of 50 units of Pcil 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

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.



Penghua Zhang
Production Scientist
12 Sep 2022



Michael Tonello
Packaging Quality Control Inspector
11 Oct 2022