

## New England Biolabs Certificate of Analysis

**Product Name:** NaeI  
**Catalog Number:** R0190L  
**Concentration:** 10,000 U/ml  
**Unit Definition:** One unit is defined as the amount of enzyme required to digest 1 µg pXba DNA in 1 hour at 37°C in a total reaction volume of 50 µl.  
**Packaging Lot Number:** 10172454  
**Expiration Date:** 12/2024  
**Storage Temperature:** -20°C  
**Storage Conditions:** 50 mM NaCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 200 µg/ml BSA  
**Specification Version:** PS-R0190S/L v1.0

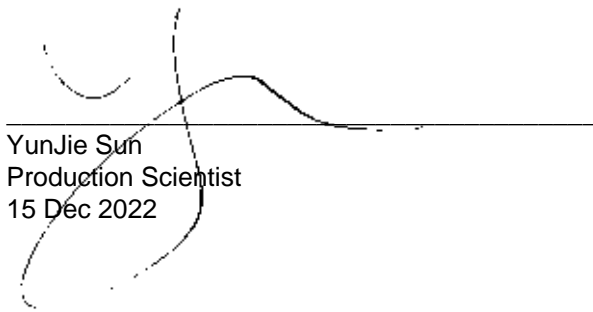
NaeI Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0190LVIAL	NaeI	10172453	Pass
B6004SVIAL	rCutSmart™ Buffer	10173161	Pass

Assay Name/Specification	Lot # 10172454
<b>Protein Purity Assay (SDS-PAGE)</b> NaeI is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.	Pass
<b>Ligation and Recutting (Terminal Integrity)</b> After a 10-fold over-digestion of pXba DNA with NaeI, ~75% 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 NaeI.	Pass
<b>Non-Specific DNase Activity (16 Hour)</b> A 50 µl reaction in CutSmart™ Buffer containing 1 µg of pXba DNA and a minimum of 100 Units of NaeI incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	Pass
<b>Exonuclease Activity (Radioactivity Release)</b> A 50 µl reaction in CutSmart™ Buffer containing 1 µg of a mixture of single and double-stranded [ <sup>3</sup> H] E. coli DNA and a minimum of 50 units of NaeI incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	Pass
<b>Endonuclease Activity (Nicking)</b>	Pass

Assay Name/Specification	Lot # 10172454
A 50 µl reaction in CutSmart™ Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 50 units of NaeI incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	

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

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15 Dec 2022



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16 Dec 2022