

New England Biolabs Certificate of Analysis


Product Name: *NaeI*
Catalog Number: R0190S
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.
Lot Number: 10046702
Expiration Date: 06/2021
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
R0190SVIAL	NaeI	10046703	Pass
B7204SVIAL	CutSmart® Buffer	10043912	Pass

Assay Name/Specification	Lot # 10046702
Ligation and Recutting (Terminal Integrity) 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
Non-Specific DNase Activity (16 Hour) 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
Protein Purity Assay (SDS-PAGE) NaeI is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.	Pass
Endonuclease Activity (Nicking) 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.	Pass
Exonuclease Activity (Radioactivity Release)	Pass

Assay Name/Specification	Lot # 10046702
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 50 units of NaeI incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	

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


Green Duquette
Production Scientist
23 May 2019


Michael Tonello
Packaging Quality Control Inspector
17 Jun 2019