

New England Biolabs Certificate of Analysis

Product Name: XbaI
Catalog Number: R0145S
Concentration: 20,000 U/ml
Unit Definition: One unit is defined as the amount of enzyme required to digest 1 µg of Lambda DNA (dam-/HindIII digest) in 1 hour at 37°C in a total reaction volume of 50 µl.
Lot Number: 10011431
Expiration Date: 03/2020
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-R0145S/L v1.0

XbaI Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0145SVIAL	XbaI	0431803	Pass
B7204SVIAL	CutSmart® Buffer	3071804	Pass
B7024SVIAL	Gel Loading Dye, Purple (6X)	0241804	Pass

Assay Name/Specification	Lot # 10011431
Protein Purity Assay (SDS-PAGE) XbaI is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.	Pass
Exonuclease Activity (Radioactivity Release) 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 200 units of XbaI incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	Pass
Endonuclease Activity (Nicking) A 50 µl reaction in CutSmart™ Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 100 Units of XbaI incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	Pass
Blue-White Screening (Terminal Integrity) A sample of pUC19 vector linearized with a 10-fold excess of XbaI, religated and transformed into an E. coli strain expressing the LacZ beta fragment gene results in <1% white colonies.	Pass

Assay Name/Specification	Lot # 10011431
<p>Non-Specific DNase Activity (16 Hour) A 50 µl reaction in CutSmart™ Buffer containing 1 µg of Lambda HindIII dam- DNA and a minimum of 200 Units of XbaI 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
<p>Ligation and Recutting (Terminal Integrity) After a 10-fold over-digestion of Adenovirus-2 DNA with XbaI, >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 XbaI.</p>	Pass

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



Stephanie Cornelio
Production Scientist
05 Jun 2018



Michael Tonello
Packaging Quality Control Inspector
05 Jun 2018