

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.
Packaging Lot Number: 10116143
Expiration Date: 08/2023
Storage Temperature: -20°C
Storage Conditions: 10 mM Tris-HCl, 50 mM NaCl, 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 200 µg/ml BSA, (pH 7.4 @ 25°C)
Specification Version: PS-R0145S/L/V v2.0

XbaI Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0145SVIAL	XbaI	10116146	Pass
B7024AVIAL	Gel Loading Dye, Purple (6X)	10105819	Pass
B6004SVIAL	rCutSmart™ Buffer	10111605	Pass

Assay Name/Specification	Lot # 10116143
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
Protein Purity Assay (SDS-PAGE) XbaI is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.	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
Ligation and Recutting (Terminal Integrity) After a 10-fold over-digestion of pBC4XS 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.	Pass

Assay Name/Specification	Lot # 10116143
<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>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.</p>	Pass

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

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Production Scientist
10 Aug 2021



Michael Tonello
Packaging Quality Control Inspector
10 Aug 2021