

## 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:** 10106987  
**Expiration Date:** 12/2022  
**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                         | 10091827   | Pass                 |
| B7024AVIAL          | Gel Loading Dye, Purple (6X) | 10093123   | Pass                 |
| B6004SVIAL          | rCutSmart™ Buffer            | 10105818   | Pass                 |

| Assay Name/Specification   | Lot # 10106987 |
|--|----------------|
| <b>Ligation and Recutting (Terminal Integrity)</b><br>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.                                    | Pass           |
| <b>Exonuclease Activity (Radioactivity Release)</b><br>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 200 units of XbaI incubated for 4 hours at 37°C releases <0.1% of the total radioactivity. | Pass           |
| <b>Endonuclease Activity (Nicking)</b><br>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           |
| <b>Blue-White Screening (Terminal Integrity)</b><br>A sample of pUC19 vector linearized with a 10-fold excess of XbaI, religated and   | Pass           |

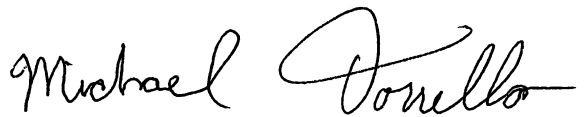
| Assay Name/Specification   | Lot # 10106987 |
|--|----------------|
| transformed into an E. coli strain expressing the LacZ beta fragment gene results in <1% white colonies.   |                |
| <p><b>Non-Specific DNase Activity (16 Hour)</b><br/>A 50 µl reaction in CutSmart™ Buffer containing 1 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> | <b>Pass</b>    |
| <p><b>Protein Purity Assay (SDS-PAGE)</b><br/>XbaI is &gt;95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.</p>  | <b>Pass</b>    |

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

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18 May 2021



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