

New England Biolabs Certificate of Analysis


Product Name: XhoI
Catalog Number: R0146S
Concentration: 20,000 U/ml
Unit Definition: One unit is defined as the amount of enzyme required to digest 1 µg of Lambda DNA (HindIII digest) fragments in 1 hour at 37°C in a total reaction volume of 50 µl.
Lot Number: 10041790
Expiration Date: 12/2020
Storage Temperature: -20°C
Storage Conditions: 50 mM KCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 200 µg/ml BSA
Specification Version: PS-R0146S/L v2.0

| XhoI Component List | | | |
|---------------------|------------------------------|------------|----------------------|
| NEB Part Number | Component Description | Lot Number | Individual QC Result |
| R0146SVIAL | XhoI | 10032181 | Pass |
| B7204SVIAL | CutSmart® Buffer | 10036668 | Pass |
| B7024SVIAL | Gel Loading Dye, Purple (6X) | 10038709 | Pass |

| Assay Name/Specification | Lot # 10041790 |
|--|----------------|
| Blue-White Screening (Terminal Integrity) A sample of Litmus 28i vector linearized with a 10-fold excess of XhoI, religated and transformed into an E. coli strain expressing the LacZ beta fragment gene results in <1% white colonies. | Pass |
| Endonuclease Activity (Nicking) A 50 µl reaction in CutSmart™ Buffer containing 1 µg of supercoiled pBR322 DNA and a minimum of 100 Units of XhoI 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) 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 100 units of XhoI incubated for 4 hours at 37°C releases <0.1% of the total radioactivity. | Pass |
| Ligation and Recutting (Terminal Integrity) After a 10-fold over-digestion of pXba DNA with XhoI, >95% of the DNA fragments can | Pass |

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| <p>be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments, >95% can be recut with XhoI.</p> <p>Non-Specific DNase Activity (16 Hour) A 50 µl reaction in CutSmart™ Buffer containing 1 µg of Lambda HindIII DNA and a minimum of 100 Units of XhoI incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.</p> <p>Protein Purity Assay (SDS-PAGE) XhoI is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.</p> | <p style="text-align: center;">Pass</p> <p style="text-align: center;">Pass</p> |

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



Anthony Francis
Production Scientist
27 Dec 2018



Michael Tonello
Packaging Quality Control Inspector
26 Apr 2019