

New England Biolabs Certificate of Analysis

Product Name: *XhoI*
Catalog #: R0146S/L
Concentration: 20,000 units/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 #: 0581601
Assay Date: 01/2016
Expiration Date: 1/2018
Storage Temp: -20°C
Storage Buffer: 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 v1.0
Effective Date: 12 Apr 2013

| Assay Name/Specification (minimum release criteria) | Lot #0581601 |
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| Blue-White Screening (Terminal Integrity) - A sample of Litmus 28i vector linearized with a 10-fold excess of <i>XhoI</i> , religated and transformed into an <i>E. coli</i> 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 <i>XhoI</i> 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] <i>E. coli</i> DNA and a minimum of 100 units of <i>XhoI</i> 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 pAd2-BsaBI DNA with <i>XhoI</i> , >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 <i>XhoI</i> . | Pass |
| Non-Specific DNase Activity (16 Hour) - A 50 µl reaction in CutSmart™ Buffer containing 1 µg of Lambda <i>HindIII</i> DNA and a minimum of 100 Units of <i>XhoI</i> 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) - <i>XhoI</i> is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection. | Pass |



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* The BSA in this product has been granted an EDQM "Certificate of Suitability" from the European Directorate for the Quality of Medicines (# R1-CEP-2003-204-Rev00) and has been granted a USDA Certificate for Export of Bovine Blood Plasma/Serum for Manufacture into Pharmaceutical Products.

M. W. Southworth

Authorized by
Maurice Southworth
12 Apr 2013

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Inspected by
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16 Jan 2016

