

New England Biolabs Certificate of Analysis

Product Name: XmaI
Catalog #: R0180S/L
Concentration: 10,000 units/ml
Unit Definition: One unit is defined as the amount of enzyme required to digest 1 µg pXba in 1 hour at 37°C in a total reaction volume of 50 µl.
Lot #: 0661406
Assay Date: 06/2014
Expiration Date: 6/2016
Storage Temp: -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-R0180S/L v1.0
Effective Date: 19 Jun 2014

Assay Name/Specification (minimum release criteria)	Lot #0661406
Endonuclease Activity (Nicking) - A 50 µl reaction in CutSmart™ Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 50 Units of XmaI 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 50 units of XmaI incubated for 4 hours at 37°C releases <0.2% of the total radioactivity.	Pass
Ligation and Recutting (Terminal Integrity) - After a 10-fold over-digestion of pXba DNA with XmaI, >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 XmaI.	Pass
Non-Specific DNase Activity (16 Hour) - A 50 µl reaction in CutSmart™ Buffer containing 1 µg of pXba DNA and a minimum of 10 Units of XmaI 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) - XmaI is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.	Pass

* 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.



Authorized by
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19 Jun 2014



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19 Jun 2014

