

New England Biolabs Certificate of Analysis

Product Name: AcuI
Catalog #: R0641S/L
Concentration: 5,000 units/ml
Unit Definition: One unit is defined as the amount of enzyme required to digest 1 µg of Lambda DNA in 1 hour at 37°C in a total reaction volume of 50 µl.
Lot #: 0101412
Assay Date: 12/2014
Expiration Date: 12/2016
Storage Temp: -20 °C
Storage Conditions: 100 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-R0641S/L v1.0
Effective Date: 18 Jun 2014

| Assay Name/Specification (minimum release criteria) | Lot #0101412 |
|---|--------------|
| Endonuclease Activity (Nicking) - A 50 µl reaction in CutSmart™ Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 5 units of AcuI incubated for 4 hours at 37°C results in <50% 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 25 units of AcuI 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 Lambda DNA with AcuI, ~50% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments, ~75% can be recut with AcuI. | Pass |
| Non-Specific DNase Activity (16 Hour) - A 50 µl reaction in CutSmart™ Buffer containing 1 µg of Lambda DNA and a minimum of 5 Units of AcuI 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) - AcuI 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.



Authorized by
Derek Robinson
18 Jun 2014



Inspected by
Kerri Sakowski
31 Dec 2014

