

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 #: *0101602*
Assay Date: *02/2016*
Expiration Date: *2/2018*
Storage Temp: *-20°C*
Storage Buffer: *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 v2.0*
Effective Date: *18 Jun 2014*

Assay Name/Specification (minimum release criteria)	Lot #0101602
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

* 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
Penghua Zhang
10 Feb 2016

