

New England Biolabs Certificate of Analysis

Product Name: Acul
Catalog Number: R0641L
Concentration: 5,000 U/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 Number: 10010810
Expiration Date: 06/2020
Storage Temperature: -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 v2.0

| Acul Component List | | | |
|---------------------|----------------------------|------------|----------------------|
| NEB Part Number | Component Description | Lot Number | Individual QC Result |
| R0641LVIAL | Acul | 10010811 | Pass |
| B9003SVIAL | S-adenosylmethionine (SAM) | 10008707 | Pass |
| B7204SVIAL | CutSmart® Buffer | 3081804 | Pass |

| Assay Name/Specification | Lot # 10010810 |
|---|----------------|
| Endonuclease Activity (Nicking) A 50 µl reaction in CutSmart™ Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 5 units of Acul 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] E. coli DNA and a minimum of 25 units of Acul 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 Acul, ~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 Acul. | 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 Acul incubated for 16 hours at 37°C results in a DNA pattern free of | Pass |

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|--|--------------------|
| <p>detectable nuclease degradation as determined by agarose gel electrophoresis.</p> <p>Protein Purity Assay (SDS-PAGE) Acul is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.</p> | <p>Pass</p> |

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



Ben Penta
Production Scientist
06 Jun 2018



Michael Tonello
Packaging Quality Control Inspector
20 Jun 2018