

New England Biolabs Certificate of Analysis

Product Name: *AvrII*
Catalog Number: *R0174S*
Concentration: *5,000 U/ml*
Unit Definition: *One unit is defined as the amount of enzyme required to digest 1 µg of Lambda DNA (HindIII digest) in 1 hour at 37°C in a total reaction volume of 50 µl.*
Packaging Lot Number: *10063203*
Expiration Date: *11/2021*
Storage Temperature: *-20°C*
Storage Conditions: *300 mM NaCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 500 µg/ml BSA*
Specification Version: *PS-R0174S/L v1.0*

AvrII Component List

| NEB Part Number | Component Description | Lot Number | Individual QC Result |
|-----------------|------------------------------|------------|----------------------|
| R0174SVIAL | AvrII | 10060593 | Pass |
| B7204SVIAL | CutSmart® Buffer | 10061302 | Pass |
| B7024SVIAL | Gel Loading Dye, Purple (6X) | 10059229 | Pass |

| Assay Name/Specification | Lot # 10063203 |
|--|----------------|
| Blue-White Screening (Terminal Integrity) A sample of Litmus28i vector linearized with a 10-fold excess of AvrII, religated and transformed into an E. coli 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 PhiX174 DNA and a minimum of 50 Units of AvrII 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] E. coli DNA and a minimum of 50 units of AvrII incubated for 4 hours at 37°C releases <0.1% of the total radioactivity. | Pass |
| Ligation and Recutting (Terminal Integrity) After a 50-fold over-digestion of Lambda HindIII DNA with AvrII, >95% of the DNA | Pass |

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|---|---|
| <p>fragments can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments, >95% can be recut with AvrII.</p> <p>Non-Specific DNase Activity (16 Hour) A 50 µl reaction in CutSmart™ Buffer containing 1 µg of Lambda HindIII DNA and a minimum of 50 Units of AvrII incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.</p> <p>Protein Purity Assay (SDS-PAGE) AvrII is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p> | <p style="text-align: center;">Pass</p> <p style="text-align: center;">Pass</p> |

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



Anthony Francis
Production Scientist
22 Nov 2019



Jay Minichiello
Packaging Quality Control Inspector
30 Jan 2020