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## New England Biolabs Certificate of Analysis

Product Name: AvrII
Catalog Number: R0174L
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: 10079973 Expiration Date: 07/2022 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				
<b>NEB Part Number</b>	Component Description	Lot Number	Individual QC Result	
R0174LVIAL	AvrII	10077061	Pass	
B7204SVIAL	CutSmart® Buffer	10078752	Pass	
B7024AVIAL	Gel Loading Dye, Purple (6X)	10082183	Pass	

Assay Name/Specification	Lot # 10079973
Blue-White Screening (Terminal Integrity)	Pass
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.	
Endonuclease Activity (Nicking)	Pass
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.	
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Exonuclease Activity (Radioactivity Release)	Pass
A 50 μl reaction in CutSmart™ Buffer containing 1 μg of a mixture of single and	
double-stranded [3H] E. coli DNA and a minimum of 50 units of AvrII incubated for 4 nours at 37°C releases <0.1% of the total radioactivity.	
iours at 37 °C releases <0.176 or the total radioactivity.	
Ligation and Recutting (Terminal Integrity)	Pass
After a 50-fold over-digestion of Lambda HindIII DNA with AvrII, >95% of the DNA	



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Assay Name/Specification	Lot # 10079973
fragments can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments, >95% can be recut with AvrII.	
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.	Pass
Protein Purity Assay (SDS-PAGE) AvrII is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	Pass

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

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Penghua Zhang Production Scientist 28 Aug 2020 Michael Tonello

Packaging Quality Control Inspector

28 Aug 2020



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