

*be* INSPIRED *drive* DISCOVERY *stay* GENUINE

240 County Road Ipswich, MA 01938-2723 Tel 978-927-5054 Fax 978-921-1350 www.neb.com info@neb.com

## New England Biolabs Certificate of Analysis

Product Name:	Avall
Catalog Number:	R0153M
Concentration:	50,000 U/ml
Unit Definition:	One unit is defined as the amount of enzyme required to digest 1 μg of Lambda DNA in rCutSmart Buffer in 1 hour at 37°C in a total reaction volume of 50 μl.
Packaging Lot Number:	10149254
Expiration Date:	05/2024
Storage Temperature:	-20°C
Storage Conditions:	10 mM Tris-HCl, 50 mM KCl, 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 200 μg/ml rAlbumin (pH 7.4 @ 25°C)
Specification Version:	PS-R0153T/M v2.0

Avall Component List				
NEB Part Number	Component Description	Lot Number	Individual QC Result	
R0153MVIAL	Avall	10149253	Pass	
B6004SVIAL	rCutSmart™ Buffer	10144738	Pass	

Assay Name/Specification	Lot # 10149254
<b>Ligation and Recutting (Terminal Integrity)</b> After a 20-fold over-digestion of Lambda DNA with Avall, >95% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments, >95% can be recut with Avall.	Pass
Exonuclease Activity (Radioactivity Release) A 50 µl reaction in rCutSmart <sup>™</sup> Buffer containing 1 µg of a mixture of single and double-stranded [ <sup>3</sup> H] E. coli DNA and a minimum of 100 units of AvaII incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	Pass
<b>Protein Purity Assay (SDS-PAGE)</b> Avall is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	Pass
<b>qPCR DNA Contamination (E. coli Genomic)</b> A minimum of 10 units of Avall is screened for the presence of E. coli genomic DNA using SYBR® Green qPCR with primers specific for the E. coli 16S rRNA locus. Results are quantified using a standard curve generated from purified E. coli genomic DNA.	Pass





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Assay Name/Specification	Lot # 10149254
The measured level of E. coli genomic DNA contamination is $\leq$ 1 E. coli genome.	
Functional Testing (15 minute Digest) A 50 µl reaction in rCutSmart <sup>™</sup> Buffer containing 1 µg of Lambda DNA and 1 µl of Avall incubated for 15 minutes at 37°C results in complete digestion as determined by agarose gel electrophoresis.	Pass
Non-Specific DNase Activity (16 Hour) A 50 µl reaction in rCutSmart <sup>™</sup> Buffer containing 1 µg of Lambda DNA and a minimum of 100 units of Avall incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	Pass

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

One or more products referenced in this document may be covered by a 3rd-party trademark. Please visit www.neb.com/trademarks for additional information.

Penghua Zhang

Penghua Zhang Production Scientist 06 Jun 2022

Michae

Michael Tonello Packaging Quality Control Inspector 06 Jun 2022

