

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:	Aval
Catalog Number:	R0152M
Concentration:	50,000 U/mI
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:	10137127
Expiration Date:	01/2024
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-R0152T/M v2.0

Aval Component List				
NEB Part Number	Component Description	Lot Number	Individual QC Result	
R0152MVIAL	Aval	10137134	Pass	
B6004SVIAL	rCutSmart™ Buffer	10131975	Pass	

Assay Name/Specification	Lot # 10137127
Blue-White Screening (Terminal Integrity) A sample of pUC19 vector linearized with a 10-fold excess of Aval, religated and transformed into an E. coli strain expressing the LacZ beta fragment gene results in <1% white colonies.	Pass
Ligation and Recutting (Terminal Integrity) After a 20-fold over-digestion of Lambda DNA with Aval, >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 Aval.	Pass
Exonuclease Activity (Radioactivity Release) A 50 µl reaction in rCutSmart [™] Buffer containing 1 µg of a mixture of single and double-stranded [³ H] E. coli DNA and a minimum of 100 units of Aval incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	Pass
Functional Testing (15 minute Digest) A 50 µl reaction in rCutSmart™ Buffer containing 1 µg of Lambda DNA and 1 µl of Aval incubated for 15 minutes at 37°C results in complete digestion as determined by	Pass





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Assay Name/Specification	Lot # 10137127
agarose gel electrophoresis.	
Non-Specific DNase Activity (16 Hour) A 50 µl reaction in rCutSmart™ Buffer containing 1 µg of Lambda DNA and a minimum of 100 units of Aval 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) Aval 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.

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 04 Mar 2022

Josh Hersey

Packaging Quality Control Inspector 04 Mar 2022

