NEW ENGLAND BioLabs Inc.
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240 County Road
Ipswich, MA 01938-2723
Tel 978-927-5054
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New England Biolabs
Certificate of Analysis

Product Name:	*ApoI-HF®*
Catalog Number:	*R3566S*
Concentration:	*20,000 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 degrees C in a total reaction volume of 50 µL*
Packaging Lot Number:	*10063403*
Expiration Date:	*01/2022*
Storage Temperature:	*-20°C*
Storage Conditions:	*200 mM NaCl, 10 mM Tris-HCl, 1 mM DTT, 0.1 mM EDTA, 50 % Glycerol, 200 µg/ml BSA, (pH 7.4 @ 25°C)*
Specification Version:	*PS-R3566S/L v1.0*

ApoI-HF® Component List

NEB Part Number	Component Description	Lot Number	Individual QC Result
R3566SVIAL	ApoI-HF®	10063402	**Pass**
B7204SVIAL	CutSmart® Buffer	10064406	**Pass**
B7024SVIAL	Gel Loading Dye, Purple (6X)	10064412	**Pass**

Assay Name/Specification	Lot # 10063403
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 100 units of ApoI-HF incubated for 4 hours at 37ºC releases <0.1% of the total radioactivity.	**Pass**
Ligation and Recutting (Terminal Integrity) After a 20-fold over-digestion of Lambda DNA with ApoI-HF, >95% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16ºC. Of these ligated fragments, >95% can be recut with ApoI-HF.	**Pass**
Blue-White Screening (Terminal Integrity) A sample of pUC19 vector linearized with a 10-fold excess of ApoI-HF, religated and transformed into an E. coli strain expressing the LacZ beta fragment gene results in <1% white colonies.	**Pass**
Functional Testing (15 minute Digest) A 50 µl reaction in CutSmart® Buffer containing 1 µg of Lambda DNA and 1 µl of	**Pass**

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Assay Name/Specification	Lot # 10063403
ApoI-HF incubated for 15 minutes at 37ºC results in complete digestion as determined by agarose gel electrophoresis.	
Non-Specific DNase Activity (16 Hour) A 50 µl reaction in CutSmart® Buffer containing 1 µg of Lambda DNA and a minimum of 100 units of ApoI-HF incubated for 16 hours at 37ºC results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	**Pass**
Protein Purity Assay (SDS-PAGE) ApoI-HF 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.

Anthony Francis
Production Scientist
07 Jan 2020

Jay Minichiello
Packaging Quality Control Inspector
07 Feb 2020