

New England Biolabs Certificate of Analysis

Product Name: Apol-HF®
Catalog Number: R3566L
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
Lot Number: 10053571
Expiration Date: 07/2021
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

Apol-HF® Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R3566LVIAL	Apol-HF®	10050300	Pass
B7204SVIAL	CutSmart® Buffer	10046082	Pass
B7024SVIAL	Gel Loading Dye, Purple (6X)	10043911	Pass

Assay Name/Specification	Lot # 10053571
Blue-White Screening (Terminal Integrity) A sample of pUC19 vector linearized with a 10-fold excess of Apol-HF, religated and transformed into an E. coli strain expressing the LacZ beta fragment gene results in <1% white colonies.	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 100 units of Apol-HF 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 CutSmart® Buffer containing 1 µg of Lambda DNA and 1 µl of Apol-HF incubated for 15 minutes at 37°C results in complete digestion as determined by agarose gel electrophoresis.	Pass
Ligation and Recutting (Terminal Integrity) After a 20-fold over-digestion of Lambda DNA with Apol-HF, >95% of the DNA fragments	Pass

Assay Name/Specification	Lot # 10053571
<p>can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments, >95% can be recut with Apol-HF.</p>	
<p>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 Apol-HF incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.</p>	Pass
<p>Protein Purity Assay (SDS-PAGE) Apol-HF is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p>	Pass

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



Anthony Francis
Production Scientist
23 Jul 2019



Jay Minichiello
Packaging Quality Control Inspector
11 Sep 2019