

New England Biolabs Certificate of Analysis

Product Name: Apol-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
Lot Number: 10031780
Expiration Date: 12/2020
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
R3566SVIAL	Apol-HF®	10031781	Pass
B7204SVIAL	CutSmart® Buffer	10021122	Pass
B7024SVIAL	Gel Loading Dye, Purple (6X)	10021135	Pass

Assay Name/Specification	Lot # 10031780
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 # 10031780
<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.



Tony Spear-Alfonso
Production Scientist
08 Nov 2018



Michael Tonello
Packaging Quality Control Inspector
18 Dec 2018