

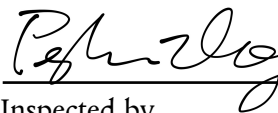
New England Biolabs Certificate of Analysis

Product Name: ApoI-HF
Catalog #: R3566S/L
Concentration: 20,000 units/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 #: 0021602
Assay Date: 02/2016
Expiration Date: 2/2018
Storage Temp: -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
Effective Date: 06 Jan 2016

Assay Name/Specification (minimum release criteria)	Lot #0021602
Blue-White Screening (Terminal Integrity) - A sample of pUC19 vector linearized with a 10-fold excess of ApoI-HF, religated and transformed into an <i>E. coli</i> 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] <i>E. coli</i> DNA and a minimum of 100 units of ApoI-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 ApoI-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 ApoI-HF, >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 ApoI-HF.	Pass
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 37°C 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



Authorized by
Derek Robinson
06 Jan 2016



Inspected by
Penghua Zhang
17 Feb 2016

