

New England Biolabs Certificate of Analysis

Product Name: *MluI-HF*[®]
Catalog Number: R3198S
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°C in a total reaction volume of 50 µl.
Lot Number: 10046968
Expiration Date: 03/2021
Storage Temperature: -20°C
Storage Conditions: 200 mM NaCl , 10 mM Tris-HCl (pH 7.4), 1 mM DTT , 0.1 mM EDTA , 50 % Glycerol , 200 µg/ml BSA
Specification Version: PS-R3198S/L v1.0

MluI-HF [®] Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R3198SVIAL	MluI-HF [®]	10037490	Pass
B7204SVIAL	CutSmart [®] Buffer	10043914	Pass
B7024SVIAL	Gel Loading Dye, Purple (6X)	10043349	Pass


Assay Name/Specification	Lot # 10046968
<p>Ligation and Recutting (Terminal Integrity) After a 20-fold over-digestion of Lambda DNA with MluI-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 MluI-HF.</p>	Pass
<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 MluI-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) MluI-HF is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p>	Pass
<p>Endonuclease Activity (Nicking) A 50 µl reaction in CutSmart[™] Buffer containing 1 µg of supercoiled pUC19 DNA and a minimum of 60 units of MluI-HF incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.</p>	Pass

Assay Name/Specification	Lot # 10046968
<p>Exonuclease Activity (Radioactivity Release) A 50 µl reaction in CutSmart™ Buffer containing 1 µg of a mixture of single and double-stranded [³H] E. coli DNA and a minimum of 100 units of Mlul-HF incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.</p>	Pass
<p>Functional Test (15 minute Digest) A 50 µl reaction in CutSmart™ Buffer containing 1 µg of Lambda DNA and 1 µl of Mlul-HF incubated for 15 minutes at 37°C results in complete digestion as determined by agarose gel electrophoresis.</p>	Pass

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



Stephanie Cornelio
Production Scientist
26 Feb 2019



Jay Minichiello
Packaging Quality Control Inspector
25 Jun 2019