

New England Biolabs Certificate of Analysis

Product Name: *MluI-HF®*
Catalog Number: *R3198L*
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.*
Packaging Lot Number: *10143420*
Expiration Date: *03/2024*
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
R3198LVIAL	MluI-HF®	10143422	Pass
B7024AVIAL	Gel Loading Dye, Purple (6X)	10138405	Pass
B6004SVIAL	rCutSmart™ Buffer	10138403	Pass

Assay Name/Specification	Lot # 10143420
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.	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 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.	Pass
Functional Test (15 minute Digest) A 50 µl reaction in CutSmart™ Buffer containing 1 µg of Lambda DNA and 1 µl of MluI-HF incubated for 15 minutes at 37°C results in complete digestion as determined by agarose gel electrophoresis.	Pass
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%	Pass

Assay Name/Specification	Lot # 10143420
conversion to the nicked form as determined by agarose gel electrophoresis.	
<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 MluI-HF incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.</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

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

One or more products referenced in this document may be covered by a 3rd-party trademark. Please visit www.neb.com/trademarks for additional information.



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Production Scientist
31 Mar 2022



Michael Tonello
Packaging Quality Control Inspector
31 Mar 2022