

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: 10084461
Expiration Date: 08/2022
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®	10080034	Pass
B7204SVIAL	CutSmart® Buffer	10085423	Pass
B7024AVIAL	Gel Loading Dye, Purple (6X)	10084971	Pass

Assay Name/Specification	Lot # 10084461
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
Protein Purity Assay (SDS-PAGE) MluI-HF is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	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

Assay Name/Specification	Lot # 10084461
<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
<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

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

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Penghua Zhang
Production Scientist
30 Oct 2020



Michael Tonello
Packaging Quality Control Inspector
30 Oct 2020