

New England Biolabs Certificate of Analysis

Product Name: Mlul-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.
Packaging Lot Number: 10081925
Expiration Date: 05/2022
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

Mlul-HF [®] Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R3198SVIAL	Mlul-HF [®]	10073725	Pass
B7204SVIAL	CutSmart [®] Buffer	10078756	Pass
B7024AVIAL	Gel Loading Dye, Purple (6X)	10082183	Pass

Assay Name/Specification	Lot # 10081925
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.	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 Mlul-HF incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	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 Mlul-HF incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	Pass
Ligation and Recutting (Terminal Integrity) After a 20-fold over-digestion of Lambda DNA with Mlul-HF, >95% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments,	Pass

Assay Name/Specification	Lot # 10081925
>95% can be recut with Mlul-HF.	
Protein Purity Assay (SDS-PAGE) Mlul-HF is \geq 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	Pass
Non-Specific DNase Activity (16 Hour) A 50 μ l reaction in CutSmart [™] Buffer containing 1 μ g of Lambda DNA and a minimum of 100 units of Mlul-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

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

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11 Sep 2020



Michael Tonello
Packaging Quality Control Inspector
11 Sep 2020