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## New England Biolabs Certificate of Analysis

Product Name: SacI-HF®
Catalog Number: R3156L
Concentration: 20,000 U/ml

Unit Definition: One unit is defined as the amount of enzyme required to digest 1 µg

of Lambda DNA (HindIII digest) in 1 hour at 37°C in a total reaction

volume of 50 μl.

Packaging Lot Number: 10065912
Expiration Date: 10/2021
Storage Temperature: -20°C

Storage Conditions: 100 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-R3156S/L v2.0

SacI-HF® Component List			
<b>NEB Part Number</b>	<b>Component Description</b>	Lot Number	Individual QC Result
R3156LVIAL	SacI-HF®	10056708	Pass
B7204SVIAL	CutSmart® Buffer	10061305	Pass
B7024SVIAL	Gel Loading Dye, Purple (6X)	10059231	Pass

Assay Name/Specification	Lot # 10065912
Blue-White Screening (Terminal Integrity) A sample of LITMUS28i vector linearized with a 10-fold excess of SacI-HF™, religated and transformed into an E. coli strain expressing the LacZ beta fragment gene results in <1% white colonies.	Pass
Endonuclease Activity (Nicking) A 50 µl reaction in CutSmart™ Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 60 Units of SacI-HF™ incubated for 4 hours at 37°C results in <10% conversion to the nicked form 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 [ ³H] E. coli DNA and a minimum of 100 units of SacI-HF™ incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	Pass
Ligation and Recutting (Terminal Integrity) After a 20-fold over-digestion of pXba DNA with Sacl-HF™, >95% of the DNA fragments	Pass



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

Sacl-HF™ is >95% pure as determined by SDS PAGE analysis using Coomassie Blue

Anthony Francis

Production Scientist

22 Oct 2019

detection.

Jay Minichiello

Packaging Quality Control Inspector

05 Mar 2020



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