

be INSPIRED *drive* DISCOVERY *stay* GENUINE

240 County Road Ipswich, MA 01938-2723 Tel 978-927-5054 Fax 978-921-1350 www.neb.com info@neb.com

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 μ g of Lambda DNA (HindIII digest) in 1 hour at 37°C in a total reaction volume of 50 μ l.
Packaging Lot Number:	10074525
Expiration Date:	05/2022
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				
NEB Part Number	Component Description	Lot Number	Individual QC Result	
R3156LVIAL	SacI-HF®	10074524	Pass	
B7204SVIAL	CutSmart® Buffer	10074630	Pass	
B7024SVIAL	Gel Loading Dye, Purple (6X)	10071081	Pass	

Assay Name/Specification	Lot # 10074525
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 [³ H] 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 SacI-HF™, >95% of the DNA fragments	Pass





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Assay Name/Specification	Lot # 10074525
can be ligated with T4 DNA ligase in 16 hours at 16ºC. Of these ligated fragments, >95% can be recut with SacI-HF™.	
Non-Specific DNase Activity (16 Hour) A 50 µl reaction in CutSmart [™] Buffer containing 1 µg of Lambda-HindIII DNA and a minimum of 100 Units of SacI-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) SacI-HF™ is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.	Pass

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

Penghua Zhang

Penghua Zhang Production Scientist 08 Jun 2020

Michae MA.

Michael Tonello Packaging Quality Control Inspector 08 Jun 2020

