NEW ENGLAND BioLabs Inc.
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:	*SbfI-HF®*
Catalog Number:	*R3642S*
Concentration:	*20,000 U/ml*
Unit Definition:	*One unit is defined as the amount of enzyme required to digest 1µg of Lambda DNA in 1 hour at 37°C in a total reaction volume of 50 µl.*
Lot Number:	*10047877*
Expiration Date:	*06/2021*
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-R3642S/L v1.0*

SbfI-HF® Component List

NEB Part Number	Component Description	Lot Number	Individual QC Result
R3642SVIAL	SbfI-HF®	10047878	**Pass**
B7204SVIAL	CutSmart® Buffer	10046080	**Pass**
B7024SVIAL	Gel Loading Dye, Purple (6X)	10043349	**Pass**

Assay Name/Specification	Lot # 10047877
Protein Purity Assay (SDS-PAGE) SbfI-HF™ is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.	**Pass**
Endonuclease Activity (Nicking) A 50 µl reaction in CutSmart™ Buffer containing 1 µg of supercoiled pBR322 DNA and a minimum of 20 Units of SbfI-HF™ incubated for 4 hours at 37ºC results in <20% 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 SbfI-HF™ incubated for 4 hours at 37ºC releases <0.1% of the total radioactivity.	**Pass**
Ligation and Recutting (Terminal Integrity) After a 10-fold over-digestion of Lambda DNA with SbfI-HF™, >95% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16ºC. Of these ligated fragments, >95% can be recut with SbfI-HF™.	**Pass**

nqa ISO 9001 Registered Quality Management
nqa ISO 13485 Registered Medical Devices
nqa ISO 14001 Registered Environmental Management

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Assay Name/Specification	Lot # 10047877
Non-Specific DNase Activity (16 Hour) A 50 µl reaction in CutSmart™ Buffer containing 1 µg of Lambda DNA and a minimum of 20 Units of SbfI-HF™ incubated for 16 hours at 37ºC 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.

David Guo
Production Scientist
20 Jun 2019

Jay Minichiello
Packaging Quality Control Inspector
18 Jul 2019