

*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:	Spel-HF®
Catalog Number:	R3133L
Concentration:	20,000 U/mI
Unit Definition:	One unit is defined as the amount of enzyme required to digest 1 μg of pXba-XbaI DNA in 1 hour at 37°C in a total reaction volume of 50 μl.
Lot Number:	10050192
Expiration Date:	04/2021
Storage Temperature:	-20°C
Storage Conditions:	250 mM NaCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 0.15% Triton® X-100, 200 μg/ml BSA
Specification Version:	PS-R3133S/L v2.0

Spel-HF® Component List				
NEB Part Number	Component Description	Lot Number	Individual QC Result	
R3133LVIAL	Spel-HF®	10042381	Pass	
B7204SVIAL	CutSmart® Buffer	10043913	Pass	
B7024SVIAL	Gel Loading Dye, Purple (6X)	10043909	Pass	

Assay Name/Specification	Lot # 10050192
<b>Blue-White Screening (Terminal Integrity)</b> A sample of LITMUS28 vector linearized with a 10-fold excess of SpeI-HF®, religated and transformed into an E. coli strain expressing the LacZ beta fragment gene results in <1% white colonies.	Pass
<b>Endonuclease Activity (Nicking)</b> A 50 $\mu$ I reaction in CutSmart® Buffer containing 1 $\mu$ g of supercoiled PhiX174 DNA and a minimum of 60 units of SpeI-HF® incubated for 4 hours at 37°C results in <20% conversion to the nicked form as determined by agarose gel electrophoresis.	Pass
<b>Exonuclease Activity (Radioactivity Release)</b> A 50 µl reaction in CutSmart® Buffer containing 1 µg of a mixture of single and double-stranded [ <sup>3</sup> H] E. coli DNA and a minimum of 100 units of Spel-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 T7 DNA with SpeI-HF®, >95% of the DNA fragments	Pass





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Assay Name/Specification	Lot # 10050192
can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments, >95% can be recut with SpeI-HF®.	
<b>Non-Specific DNase Activity (16 Hour)</b> A 50 µl reaction in CutSmart® Buffer containing 1 µg of pXba-Xbal digested DNA and a minimum of 100 units of Spel-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) Spel-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.

Anthony Francis Production Scientist 09 May 2019

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Ary Minichiello Packaging Quality Control Inspector 01 Aug 2019

