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: SalI-HFTM Catalog #: R3138S/L Concentration: 20,000 units/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  $\mu$ l.

Lot #: 0051305 05/2013 Assay Date: Expiration Date: 05/2015 Storage Temp: -20 °C

Storage Conditions: 50 mM KCl, 10 mM Tris-HCl (pH 7.5), 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 300 µg/ml BSA

PS-R3138S/L v1.0 Specification Version: Effective Date: 01 May 2013

Assay Name/Specification (minimum release criteria)	Lot #0051305
<b>Blue-White Screening (Terminal Integrity)</b> - A sample of pUC19 vector linearized with a 10-fold excess of SalI-HF <sup>TM</sup> , religated and transformed into an <i>E. coli</i> strain expressing the LacZ beta fragment gene results in <1% white colonies.	Pass
<b>Endonuclease Activity (Nicking)</b> - A 50 μl reaction in CutSmart <sup>TM</sup> Buffer containing 1 μg of supercoiled PhiX174 DNA and a minimum of 20 Units of SalI-HF <sup>TM</sup> incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	Pass
<b>Exonuclease Activity (Radioactivity Release)</b> - A 50 μl reaction in CutSmart <sup>TM</sup> Buffer containing 1 μg of a mixture of single and double-stranded [ <sup>3</sup> H] <i>E. coli</i> DNA and a minimum of 200 units of SalI-HF <sup>TM</sup> incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	Pass
<b>Ligation and Recutting (Terminal Integrity)</b> - After a 50-fold over-digestion of Adenovirus-2 DNA with SalI-HF <sup>™</sup> , >95% of the DNA fragments can be ligated with T4 DNA ligase in 4 hours at 25°C. Of these ligated fragments, >95% can be recut with SalI-HF <sup>™</sup> .	Pass
Non-Specific DNase Activity (16 Hour) - A 50 μl reaction in CutSmart <sup>TM</sup> Buffer containing 1 μg of pBR322 DNA and a minimum of 200 Units of SalI-HF <sup>TM</sup> incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	Pass

<sup>\*</sup> The BSA in this product has been granted an EDQM "Certificate of Suitability" from the European Directorate for the Quality of Medicines (#R1-CEP-2003-204-Rev00) and has been granted a USDA Certificate for Export of Bovine Blood Plasma/Serum for Manufacture into Pharmaceutical Products.

Authorized by Derek Robinson 01 May 2013

nga ISO 9001





Larry Shea Inspected by Cathy Shea 23 Jul 2013