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

New England Biolabs Product Specification

Product Name: BssHII

Catalog #: R0199S/L/V
Concentration: 5,000 units/ml

Unit Definition: One unit is defined as the amount of enzyme required to digest 1 µg Lambda DNA in 1 hour at 50°C in a total reaction

volume of 50 µl.

Shelf Life: 24 months
Storage Temp: -20°C

Storage Conditions: 300 mM NaCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 500 µg/ml BSA

Specification Version: PS-R0199S/L v2.0

Effective Date: 20 Dec 2013

Assay Name/Specification (minimum release criteria)

Blue-White Screening (Terminal Integrity) - A sample of LITMUS28i vector linearized with a 10-fold excess of BssHII, religated and transformed into an *E. coli* strain expressing the LacZ beta fragment gene results in <1.0% white colonies.

Endonuclease Activity (Nicking) - A 50 μ l reaction in CutSmartTM Buffer containing 1 μ g of supercoiled pBR322 DNA and a minimum of 25 units of BssHII incubated for 4 hours at 50°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.

Exonuclease Activity (Radioactivity Release) - A 50 μl reaction in CutSmartTM Buffer containing 1 μg of a mixture of single and double-stranded [³H] *E. coli* DNA and a minimum of 50 units of BssHII incubated for 4 hours at 50°C releases <0.1% of the total radioactivity.

Ligation and Recutting (Terminal Integrity) - After a 20-fold over-digestion of Lambda DNA with BssHII, >95% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments, >95% can be recut with BssHII.

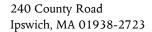
Non-Specific DNase Activity (16 Hour) - A 50 μl reaction in CutSmartTM Buffer containing 1 μg of Lambda DNA and a minimum of 50 Units of BssHII incubated for 16 hours at 50°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.

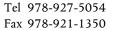
Protein Purity Assay (SDS-PAGE) - BssHII is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.



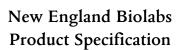








www.neb.com info@neb.com



One or more products referenced in this document may be covered by a 3rd-party trademark. Please visit www.neb.com/trademarks for additional information.

New england Biolabs

Duk Cotum

Date 20 Dec 2013

Derek Robinson Quality Approver





