NEW ENGLAND
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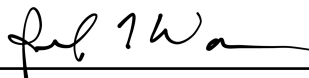
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New England Biolabs
Certificate of Analysis

Product Name:	*BsmAI*
Catalog #:	*R0529S/L*
Concentration:	*5,000 units/ml*
Unit Definition:	*One unit is defined as the amount of enzyme required to digest 1 μg of Lambda DNA in 1 hour at 55°C in a total reaction volume of 50 μl.*
Lot #:	*0081407*
Assay Date:	*07/2014*
Expiration Date:	*07/2016*
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-R0529S/L v1.0*
Effective Date:	*10 May 2013*

Assay Name/Specification (minimum release criteria)	Lot #0081407
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 50 units of BsmAI incubated for 4 hours at 55ºC releases <0.1% of the total radioactivity.	**Pass**
Ligation and Recutting (Terminal Integrity) - After a 10-fold over-digestion of Lambda DNA with BsmAI, >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 BsmAI.	**Pass**
Non-Specific DNase Activity (16 Hour) - A 50 μl reaction in CutSmart™ Buffer containing 1 μg of Lambda DNA and a minimum of 15 units of BsmAI incubated for 16 hours at 55ºC results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	**Pass**
Protein Purity Assay (SDS-PAGE) - BsmAI is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.	**Pass**

* *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
10 May 2013

Inspected by
Jenna Ware
24 Jul 2014

R0529S/L Lot: 0081407