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New England Biolabs
Product Specification

Product Name:	*BpuEI*
Catalog #:	*R0633S*
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 37°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, 1 mM DTT, 0.1 mM EDTA, 0.32 mM S-adenosylmethionine (SAM), 50% Glycerol, 500 µg/ml BSA (pH 7.4 @ 25°C)*
Specification Version:	*PS-R0633S v3.0*
Effective Date:	*02 Nov 2020*

Assay Name/Specification (minimum release criteria)
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 5 units of BpuEI incubated for 4 hours at 37°C releases <0.5% of the total radioactivity.
Ligation and Recutting (Terminal Integrity) - After a 2-fold over-digestion of Lambda DNA with BpuEI, >95% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments, ~50% can be recut with BpuEI.
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 BpuEI incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.
Protein Purity Assay (SDS-PAGE) - BpuEI is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.

Date 02 Nov 2020

Derek Robinson
Director, Quality Control