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New England Biolabs
Product Specification

Product Name:	*BtsI-v2*
Catalog #:	*R0667S/L*
Concentration:	*10,000 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:	*50 mM KCl , 10 mM Tris-HCl, 1 mM DTT , 0.1 mM EDTA , 50 % Glycerol , 200 µg/ml BSA (pH 7.4 @ 25°C)*
Specification Version:	*PS-R0667S/L v3.0*
Effective Date:	*14 Dec 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 50 units of BtsI-v2 incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.

Functional Testing (15 minute Digest) - A 50 µl reaction in CutSmart® Buffer containing 1 µg of Lambda DNA and 1 µl of BtsI-v2 incubated for 15 minutes at 37°C results in complete digestion as determined by agarose gel electrophoresis.

Ligation and Recutting (Terminal Integrity) - After a 10-fold over-digestion of Lambda DNA with BtsI-v2, >95% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments, ~75% can be recut with BtsI-v2.

Non-Specific DNase Activity (16 Hour) - A 50 µl reaction in CutSmart® Buffer containing 1 µg of Lambda DNA and a minimum of 10 units of BtsI-v2 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) - BtsI-v2 is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.

Date 14 Dec 2020

Derek Robinson
Director, Quality Control