

New England Biolabs Certificate of Analysis

Product Name: *BtsαI*
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 LambdaDNA in 1 hour at 55°C in a total reaction volume of 50 μl.*
Lot #: *0031504*
Assay Date: *04/2015*
Expiration Date: *4/2017*
Storage Temp: *-20°C*
Storage Conditions: *50 mM KCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50 % Glycerol, 200 μg/ml BSA*
Specification Version: *PS-R0667S/L v1.0*
Effective Date: *24 Nov 2014*

| Assay Name/Specification (minimum release criteria) | Lot #0031504 |
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| Exonuclease Activity (Radioactivity Release) - A 50 μl reaction in CutSmart™ Buffer containing 1 μg of a mixture of single and double-stranded [³ H] <i>E. coli</i> DNA and a minimum of 50 units of BtsαI incubated for 4 hours at 55°C releases <0.1% of the total radioactivity. | Pass |
| Functional Test (15 minute Digest) - A 50 μl reaction in CutSmart™ Buffer containing 1 μg of Lambda DNA and 1 μl of BtsαI incubated for 15 minutes at 55°C results in complete digestion as determined by agarose gel electrophoresis. | Pass |
| Ligation and Recutting (Terminal Integrity) - After a 10-fold over-digestion of Lambda DNA with BtsαI, >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 BtsαI. | Pass |
| 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 BtsαI incubated for 16 hours at 55°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis. | Pass |
| Protein Purity Assay (SDS-PAGE) - BtsαI is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection. | Pass |



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* 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
24 Nov 2014



Inspected by
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28 Apr 2015

