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New England Biolabs Certificate of Analysis

| Product Name: | I-CeuI |
|------------------------|--|
| Catalog #: | R0699S/L |
| Concentration: | 5,000 units/ml |
| Unit Definition: | One unit is defined as the amount of enzyme required to cleave 1 μ g of pBHS ScaI-linearized Control Plasmid in 3 hours at 37° |
| | C in a total reaction volume of 50 μ l. |
| Lot #: | 0091508 |
| Assay Date: | 08/2015 |
| Expiration Date: | 8/2017 |
| 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-R0699S/L v1.0 |
| Effective Date: | 25 Nov 2013 |

| Assay Name/Specification (minimum release criteria) | Lot #0091508 Pass |
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| Endonuclease Activity (Nicking) - A 50 µl reaction in CutSmart [™] Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 15 Units of I-CeuI incubated for 4 hours at 37°C results in <20% conversion to the nicked form as determined by agarose gel electrophoresis. | |
| Exonuclease Activity (Radioactivity Release) - A 50 μ l reaction in CutSmart TM Buffer containing 1 μ g of a mixture of single and double-stranded [³ H] <i>E. coli</i> DNA and a minimum of 50 units of I-CeuI incubated for 4 hours at 37°C releases <0.1% of the total radioactivity. | Pass |
| Ligation and Recutting (Terminal Integrity) - After a 10-fold over-digestion of pBHS-ScaI DNA with I- CeuI, >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 I-CeuI. | Pass |
| Non-Specific DNase Activity (16 Hour) - A 50 μ l reaction in CutSmart TM Buffer containing 1 μ g of pBHS- Scal DNA and a minimum of 50 Units of I-CeuI incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis. | 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.

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Authorized by Derek Robinson 25 Nov 2013



Inspected by Jianying Luo 13 Aug 2015