

New England Biolabs Certificate of Analysis

Product Name: Tth111I
Catalog Number: R0185S
Concentration: 10,000 U/ml
Unit Definition: One unit is defined as the amount of enzyme required to digest 1 µg of pBC4 DNA in rCutSmart Buffer in 1 hour at 65°C in a total reaction volume of 50 µl.
Packaging Lot Number: 10237518
Expiration Date: 04/2026
Storage Temperature: -20°C
Storage Conditions: 500 mM NaCl, 10 mM Tris-HCl, 1 mM DTT, 0.1 mM EDTA, 50 % Glycerol, 200 µg/ml rAlbumin, (pH 7.4 @ 25°C)
Specification Version: PS-R0185S v2.0

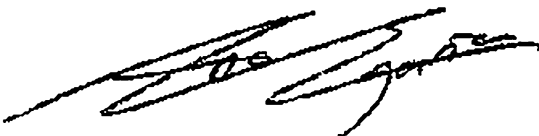
| Tth111I Component List | | | |
|------------------------|-----------------------|------------|----------------------|
| NEB Part Number | Component Description | Lot Number | Individual QC Result |
| R0185SVIAL | Tth111I | 10237498 | Pass |
| B6004SVIAL | rCutSmart™ Buffer | 10233338 | Pass |

| Assay Name/Specification | Lot # 10237518 |
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| Exonuclease Activity (Radioactivity Release) A 50 µl reaction in rCutSmart™ Buffer containing 1 µg of a mixture of single and double-stranded [³ H] E. coli DNA and a minimum of 50 units of Tth111I incubated for 4 hours at 65°C releases <0.1% of the total radioactivity. | Pass |
| Functional Testing (15 minute Digest) A 50 µl reaction in rCutSmart™ Buffer containing 1 µg of pBC4 DNA and 1 µl of Tth111I incubated for 15 minutes at 65°C results in complete digestion as determined by agarose gel electrophoresis. | Pass |
| Ligation and Recutting (Terminal Integrity) After a 5-fold over-digestion of pBC4 DNA with Tth111I, ~25% 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 Tth111I. | Pass |
| Non-Specific DNase Activity (16 hour) A 50 µl reaction in rCutSmart™ Buffer containing 1 µg of pBC4 DNA and a minimum of 10 units of Tth111I incubated for 16 hours at 65°C results in a DNA pattern free of | Pass |

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| <p>detectable nuclease degradation as determined by agarose gel electrophoresis. NOTE: although no nuclease degradation is detected under these conditions, extended incubations and/or high concentrations of this enzyme may result in star activity. See the product FAQ for recommended reaction conditions for this enzyme.</p> | |
| <p>Protein Purity Assay (SDS-PAGE) Tth111I is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.</p> | Pass |
| <p>qPCR DNA Contamination (E. coli Genomic) A minimum of 10 units of Tth111I is screened for the presence of E. coli genomic DNA using SYBR® Green qPCR with primers specific for the E. coli 16S rRNA locus. Results are quantified using a standard curve generated from purified E. coli genomic DNA. The measured level of E. coli genomic DNA contamination is ≤ 1 E. coli genome.</p> | Pass |

This product has been tested and shown to be in compliance with all specifications.

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Production Scientist
18 Apr 2024



Michael Tonello
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18 Apr 2024