

## New England Biolabs Certificate of Analysis

**Product Name:** *Nt.BstNBI*  
**Catalog Number:** *R0607S*  
**Concentration:** *10,000 U/ml*  
**Unit Definition:** *One unit is defined as the amount of enzyme required to digest 1 µg T7 DNA in NEBuffer r3.1 in 1 hour at 55°C in a total reaction volume of 50 µl.*  
**Packaging Lot Number:** *10159563*  
**Expiration Date:** *08/2024*  
**Storage Temperature:** *-20°C*  
**Storage Conditions:** *10 mM Tris-HCl, 50 mM KCl, 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 200 µg/ml rAlbumin (pH 7.4 @ 25°C)*  
**Specification Version:** *PS-R0607S/L v2.0*

| Nt.BstNBI Component List |                       |            |                      |
|--------------------------|-----------------------|------------|----------------------|
| NEB Part Number          | Component Description | Lot Number | Individual QC Result |
| R0607SVIAL               | Nt.BstNBI             | 10159526   | Pass                 |
| B6003SVIAL               | NEBuffer™ r3.1        | 10146826   | Pass                 |

| Assay Name/Specification   | Lot # 10159563 |
|--|----------------|
| <p><b>Exonuclease Activity (Radioactivity Release)</b><br/>           A 50 µl reaction in NEBuffer™ r3.1 containing 1 µg of a mixture of single and double-stranded [<sup>3</sup>H] E. coli DNA and a minimum of 50 units of Nt.BstNBI incubated for 4 hours at 55°C releases &lt;0.1% of the total radioactivity.</p>   | Pass           |
| <p><b>Non-Specific DNase Activity (16 hour)</b><br/>           A 50 µl reaction in NEBuffer™ r3.1 containing 1 µg of T7 DNA and a minimum of 10 units of Nt.BstNBI incubated for 16 hours at 55°C results in a DNA pattern free of 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> | Pass           |
| <p><b>qPCR DNA Contamination (E. coli Genomic)</b><br/>           A minimum of 10 units of Nt.BstNBI 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</p>  | Pass           |

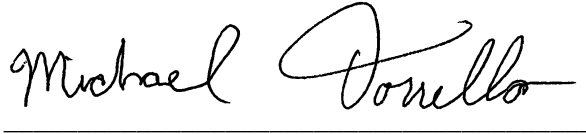
| Assay Name/Specification  | Lot # 10159563 |
|---|----------------|
| genome.   |                |
| <p><b>Protein Purity Assay (SDS-PAGE)</b><br/>Nt.BstNBI is &gt;95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.</p>  | <b>Pass</b>    |
| <p><b>Ligation and Recutting (Terminal Integrity)</b><br/>After a 10-fold over-digestion of T7 DNA with Nt.BstNBI, &gt;95% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments, &gt;95% can be recut with Nt.BstNBI.</p> | <b>Pass</b>    |

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

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09 Sep 2022



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