NEW ENGLAND BioLabs Inc.
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# New England Biolabs
# Certificate of Analysis

| | |
|---|---|
| *Product Name:* | *MnlI* |
| *Catalog Number:* | *R0163S* |
| *Concentration:* | *5,000 U/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.* |
| *Packaging Lot Number:* | *10091604* |
| *Expiration Date:* | *07/2022* |
| *Storage Temperature:* | *-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-R0163S/L v1.0* |

| **MnlI Component List** | | | |
|---|---|---|---|
| **NEB Part Number** | **Component Description** | **Lot Number** | **Individual QC Result** |
| R0163SVIAL | MnlI | 10077830 | **Pass** |
| B7204SVIAL | CutSmart® Buffer | 10091030 | **Pass** |

| **Assay Name/Specification** | **Lot # 10091604** |
|---|---|
| **Exonuclease Activity (Radioactivity Release)**<br>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 MnlI incubated for 4 hours at 37ºC releases <0.1% of the total radioactivity. | **Pass** |
| **Ligation and Recutting (Terminal Integrity)**<br>After a 2-fold over-digestion of Lambda DNA with MnlI, ~50% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16ºC. Of these ligated fragments, >95% can be recut with MnlI. | **Pass** |
| **Non-Specific DNase Activity (16 Hour)**<br>A 50 µl reaction in CutSmart™ Buffer containing 1 µg of Lambda DNA and a minimum of 25 Units of MnlI incubated for 16 hours at 37ºC results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis. | **Pass** |

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

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13 Dec 2020

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