

## New England Biolabs Certificate of Analysis

**Product Name:** AlwI  
**Catalog Number:** R0513S  
**Concentration:** 10,000 U/ml  
**Unit Definition:** One unit is defined as the amount of enzyme required to digest 1 µg of Lambda DNA (dam-) in 1 hour at 37°C in total reaction volume of 50 µl.  
**Packaging Lot Number:** 10151730  
**Expiration Date:** 05/2024  
**Storage Temperature:** -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-R0513S/L v1.0

| AlwI Component List |                       |            |                      |
|---------------------|-----------------------|------------|----------------------|
| NEB Part Number     | Component Description | Lot Number | Individual QC Result |
| R0513SVIAL          | AlwI                  | 10151731   | Pass                 |
| B6004SVIAL          | rCutSmart™ Buffer     | 10146822   | Pass                 |

| Assay Name/Specification   | Lot # 10151730 |
|--|----------------|
| <b>Protein Purity Assay (SDS-PAGE)</b><br>AlwI is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.   | Pass           |
| <b>Exonuclease Activity (Radioactivity Release)</b><br>A 50 µl reaction in CutSmart™ Buffer containing 1 µg of a mixture of single and double-stranded [ <sup>3</sup> H] E. coli DNA and a minimum of 10 units of AlwI incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.  | Pass           |
| <b>Ligation and Recutting (Terminal Integrity)</b><br>After a 2-fold over-digestion of Lambda dam- DNA with AlwI, ~50% 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 AlwI.  | Pass           |
| <b>Non-Specific DNase Activity (16 hour)</b><br>A 50 µl reaction in CutSmart™ Buffer containing 1 µg of Lambda dam- DNA and a minimum of 10 Units of AlwI incubated for 16 hours at 37°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 | Pass           |

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|--|----------------|
| 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. |                |

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

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17 May 2022



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17 May 2022