

## 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.  
**Lot Number:** 10008600  
**Expiration Date:** 04/2020  
**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	0201804	Pass
B7204SVIAL	CutSmart® Buffer	3081804	Pass

Assay Name/Specification	Lot # 10008600
<b>Protein Purity Assay (SDS-PAGE)</b> AlwI is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.	Pass
<b>Exonuclease Activity (Radioactivity Release)</b> 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>Non-Specific DNase Activity (16 hour)</b> 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 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.	Pass
<b>Ligation and Recutting (Terminal Integrity)</b>	Pass

Assay Name/Specification	Lot # 10008600
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.	

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

  
Penghua Zhang  
Production Scientist  
06 Jul 2018

  
Josh Hersey  
Packaging Quality Control Inspector  
06 Jul 2018