NEW ENGLAND BioLabs Inc.
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240 County Road
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New England Biolabs
Certificate of Analysis

Product Name:	*AlwI*
Catalog Number:	*R0513L*
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:	*10076882*
Expiration Date:	*06/2022*
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**
R0513LVIAL	AlwI	10076883	**Pass**
B7204SVIAL	CutSmart® Buffer	10091458	**Pass**

Assay Name/Specification	**Lot # 10076882**
Protein Purity Assay (SDS-PAGE) AlwI is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.	**Pass**
Non-Specific DNase Activity (16 hour) 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 37ºC 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**
Exonuclease Activity (Radioactivity Release) 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 10 units of AlwI incubated for 4 hours at 37ºC releases <0.1% of the total radioactivity.	**Pass**
Ligation and Recutting (Terminal Integrity)	**Pass**

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Assay Name/Specification	Lot # 10076882
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 16ºC. Of these ligated fragments, ~75% can be recut with AlwI.	

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

One or more products referenced in this document may be covered by a 3rd-party trademark. Please visit www.neb.com/trademarks for additional information.

Penghua Zhang
Production Scientist
01 Feb 2021

Michael Tonello
Packaging Quality Control Inspector
01 Feb 2021