NEW ENGLAND BioLabs Inc.
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240 County Road
Ipswich, MA 01938-2723
Tel 978-927-5054
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www.neb.com
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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:	*10091584*
Expiration Date:	*11/2022*
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**
R0513SVIAL	AlwI	10091585	**Pass**
B7204SVIAL	CutSmart® Buffer	10089402	**Pass**

Assay Name/Specification	**Lot # 10091584**
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) 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.	**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**

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Assay Name/Specification	Lot # 10091584
Protein Purity Assay (SDS-PAGE) AlwI is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.	**Pass**

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
02 Dec 2020

Michael Tonello
Packaging Quality Control Inspector
02 Dec 2020