

## New England Biolabs Certificate of Analysis

**Product Name:** AfIII  
**Catalog Number:** R0541S  
**Concentration:** 10,000 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:** 10122753  
**Expiration Date:** 09/2023  
**Storage Temperature:** -20°C  
**Storage Conditions:** 500 mM NaCl , 10 mM Tris-HCl (7.4), 1 mM DTT , 0.1 mM EDTA , 50 % Glycerol , 200 µg/ml BSA  
**Specification Version:** PS-R0541S/L v1.0

AfIII Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0541SVIAL	AfIII	10122751	Pass
B6003SVIAL	NEBuffer™ r3.1	10116057	Pass

Assay Name/Specification	Lot # 10122753
<b>Ligation and Recutting (Terminal Integrity)</b> After a 5-fold over-digestion of Lambda DNA with AfIII, >95% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments, >95% can be recut with AfIII.	Pass
<b>Non-Specific DNase Activity (16 Hour)</b> A 50 µl reaction in NEBuffer 3.1 containing 1 µg of Lambda DNA and a minimum of 30 Units of AfIII incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	Pass
<b>Exonuclease Activity (Radioactivity Release)</b> A 50 µl reaction in NEBuffer 3.1 containing 1 µg of a mixture of single and double-stranded [ <sup>3</sup> H] E. coli DNA and a minimum of 50 units of AfIII incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	Pass

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

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17 Nov 2021



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