

## New England Biolabs Certificate of Analysis

**Product Name:** Afel  
**Catalog Number:** R0652L  
**Concentration:** 10,000 U/ml  
**Unit Definition:** One unit is defined as the amount of enzyme required to digest 1 µg of pXba DNA in 1 hour at 37°C in a total reaction volume of 50 µl.  
**Lot Number:** 10035453  
**Expiration Date:** 02/2021  
**Storage Temperature:** -20°C  
**Storage Conditions:** 300 mM NaCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 500 µg/ml BSA  
**Specification Version:** PS-R0652S/L v1.0

| Afel Component List |                              |            |                      |
|---------------------|------------------------------|------------|----------------------|
| NEB Part Number     | Component Description        | Lot Number | Individual QC Result |
| R0652LVIAL          | Afel                         | 10035454   | Pass                 |
| B7204SVIAL          | CutSmart® Buffer             | 10021121   | Pass                 |
| B7024SVIAL          | Gel Loading Dye, Purple (6X) | 10021140   | Pass                 |

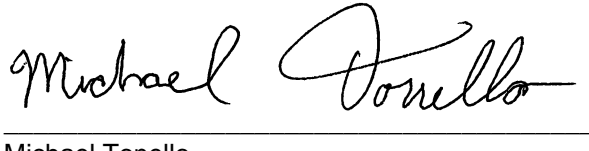
| Assay Name/Specification   | Lot # 10035453 |
|--|----------------|
| <b>Non-Specific DNase Activity (16 Hour)</b><br>A 50 µl reaction in CutSmart™ Buffer containing 1 µg of pXba DNA and a minimum of 10 Units of Afel incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis. | Pass           |
| <b>Endonuclease Activity (Nicking)</b><br>A 50 µl reaction in CutSmart™ Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 10 Units of Afel incubated for 4 hours at 37°C results in <20% conversion to the nicked form as determined by agarose gel electrophoresis.            | 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 100 units of Afel 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 10-fold over-digestion of pXba DNA with Afel, >95% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments, >95%  | Pass           |

| Assay Name/Specification | Lot # 10035453 |
|--------------------------|----------------|
| can be recut with Afel.  |                |

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



Tony Spear-Alfonso  
Production Scientist  
10 Dec 2018



Michael Tonello  
Packaging Quality Control Inspector  
07 Feb 2019