

New England Biolabs Certificate of Analysis

Product Name: Afel
Catalog Number: R0652S
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.
Packaging Lot Number: 10058170
Expiration Date: 07/2021
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
R0652SVIAL	Afel	10048635	Pass
B7204SVIAL	CutSmart® Buffer	10055735	Pass
B7024SVIAL	Gel Loading Dye, Purple (6X)	10046084	Pass

Assay Name/Specification	Lot # 10058170
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 100 units of Afel incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	Pass
Ligation and Recutting (Terminal Integrity) 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% can be recut with Afel.	Pass
Non-Specific DNase Activity (16 Hour) 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
Endonuclease Activity (Nicking) 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%	Pass

Assay Name/Specification	Lot # 10058170
conversion to the nicked form as determined by agarose gel electrophoresis.	

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



Jianying Luo
Production Scientist
03 Jul 2019



Michael Tonello
Packaging Quality Control Inspector
24 Oct 2019