

240 County Road Ipswich, MA 01938-2723 Tel 978-927-5054 Fax 978-921-1350 www.neb.com info@neb.com

New England Biolabs Certificate of Analysis

Product Name: Apal
Catalog Number: R0114S
Concentration: 50,000 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 25°C in a total reaction volume of 50 μl.

Lot Number: 10032394
Expiration Date: 11/2020
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, 500 µg/ml BSA

Specification Version: PS-R0114S/L v1.0

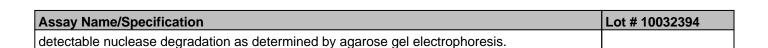
Apal Component List				
NEB Part Number	Component Description	Lot Number	Individual QC Result	
R0114SVIAL	Apal	10028240	Pass	
B7204SVIAL	CutSmart® Buffer	10031565	Pass	
B7024SVIAL	Gel Loading Dye, Purple (6X)	10021137	Pass	

Assay Name/Specification	Lot # 10032394
Endonuclease Activity (Nicking) A 50 µl reaction in CutSmart™ Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 100 Units of Apal incubated for 4 hours at 25°C results in <20%	Pass
conversion to the nicked form as determined by agarose gel electrophoresis. Exonuclease Activity (Radioactivity Release) A 50 µl reaction in CutSmart™ Buffer containing 1 µg of a mixture of single and double-stranded [³H] E. coli DNA and a minimum of 100 units of Apal incubated for 4	Pass
hours at 25°C releases <0.1% of the total radioactivity. Ligation and Recutting (Terminal Integrity) After a 10-fold over-digestion of pXba DNA with Apal, >95% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments, >95%	Pass
Can be recut with Apal. Non-Specific DNase Activity (16 Hour) A 50 μl reaction in CutSmart™ Buffer containing 1 μg of pXba DNA and a minimum of 100 Units of Apal incubated for 16 hours at 25°C results in a DNA pattern free of	Pass



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

Penghua Zhang **Production Scientist**

16 Nov 2018

Michael Tonello

Packaging Quality Control Inspector

23 Jan 2019



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