NEW ENGLAND BioLabs Inc.
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240 County Road
Ipswich, MA 01938-2723
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New England Biolabs
Certificate of Analysis

Product Name:	*Thermostable FEN1*
Catalog Number:	*M0645S*
Concentration:	*32,000 U/ml*
Unit Definition:	*One unit is defined as the amount of FEN1 required to cleave 10 pmol of 5' DNA flap containing oligonucleotide substrate in a total reaction volume of 10 µl for 10 minutes at 65°C.*
Packaging Lot Number:	*10072358*
Expiration Date:	*04/2022*
Storage Temperature:	*-20°C*
Storage Conditions:	*10 mM Tris-HCl , 100 mM KCl , 1 mM DTT , 0.1 mM EDTA , 0.1 % Triton®X-100 , 50 % Glycerol, (pH 7.4 @ 25°C)*
Specification Version:	*PS-M0645S/L v1.0*

Thermostable FEN1 Component List			
NEB Part Number	**Component Description**	**Lot Number**	**Individual QC Result**
M0645SVIAL	Thermostable FEN1	10072359	**Pass**
B9004SVIAL	ThermoPol® Reaction Buffer Pack	10064335	**Pass**

Assay Name/Specification	**Lot # 10072358**
RNase Activity (Extended Digestion) A 10 µl reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 1 µl of Thermostable FEN1 is incubated at 37ºC. After incubation for 16 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.	**Pass**
Non-Specific DNase Activity (16 Hour) A 50 µl reaction in ThermoPol® Reaction Buffer containing 1 µg of Lambda-HindIII DNA and a minimum of 320 units of Thermostable FEN1 incubated for 16 hours at 37ºC results in a DNA pattern free of detectable nuclease degradation as determined by gel electrophoresis.	**Pass**
Endonuclease Activity (Nicking) A 50 µl reaction in ThermoPol® Reaction Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 160 units of Thermostable FEN1 incubated for 4 hours at 37ºC results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	**Pass**

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Assay Name/Specification	Lot # 10072358
Exonuclease Activity (Radioactivity Release) A 50 µl reaction in ThermoPol® Reaction Buffer containing 1 µg of a mixture of single and double-stranded [^{3}H] E. coli DNA and a minimum of 160 units of Thermostable FEN1 incubated for 4 hours at 37ºC releases <0.1% of the total radioactivity.	**Pass**
Protein Purity Assay (SDS-PAGE) Thermostable FEN1 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.

Lauren Higgins
Production Scientist
16 Apr 2020

Jay Minichiello
Packaging Quality Control Inspector
16 Apr 2020