

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: *10059586*

Expiration Date: *12/2021*

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	10059585	Pass
B9004SVIAL	ThermoPol® Reaction Buffer Pack	10041932	Pass

Assay Name/Specification	Lot # 10059586
<p>Protein Purity Assay (SDS-PAGE) Thermostable FEN1 is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p>	Pass
<p>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 37°C results in a DNA pattern free of detectable nuclease degradation as determined by gel electrophoresis.</p>	Pass
<p>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 37°C. After incubation for 16 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.</p>	Pass
<p>Exonuclease Activity (Radioactivity Release) A 50 µl reaction in ThermoPol® Reaction Buffer containing 1 µg of a mixture of</p>	Pass

Assay Name/Specification	Lot # 10059586
<p>single and double-stranded [³H] E. coli DNA and a minimum of 160 units of Thermostable FEN1 incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.</p> <p>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 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.</p>	<p>Pass</p>

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



Lauren Sears Higgins
Production Scientist
19 Dec 2019



Michael Tonello
Packaging Quality Control Inspector
03 Jan 2020