

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: *10247074*
Expiration Date: *08/2026*
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	10247073	Pass
B9004SVIAL	ThermoPol® Reaction Buffer Pack	10249555	Pass

Assay Name/Specification	Lot # 10247074
<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>	Pass
<p>Exonuclease Activity (Radioactivity Release) A 50 µl reaction in ThermoPol® Reaction Buffer containing 1 µg of a mixture of 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>	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

Assay Name/Specification	Lot # 10247074
<p>Protein Purity Assay (SDS-PAGE) Thermostable FEN1 is $\geq 95\%$ pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</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

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

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Nicole Castagnozzi
Production Scientist
06 Sep 2024



Michael Tonello
Packaging Quality Control Inspector
06 Sep 2024