

## New England Biolabs Certificate of Analysis

**Product Name:** Fpg  
**Catalog Number:** M0240S  
**Concentration:** 8,000 U/ml  
**Unit Definition:** One unit is defined as the amount of enzyme required to cleave 10 pmol of a 34-mer oligonucleotide duplex containing a single 8-oxoguanine base paired with a cytosine in a total reaction volume of 10 µl in 1 hour at 37°C.  
**Packaging Lot Number:** 10197204  
**Expiration Date:** 05/2025  
**Storage Temperature:** -20°C  
**Storage Conditions:** 50 mM NaCl, 20 mM Tris-HCl, 0.5 mM EDTA, 50 % Glycerol, 200 µg/ml BSA, (pH 8.0 @ 25°C)  
**Specification Version:** PS-M0240S/L v1.0

Fpg Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M0240SVIAL	Fpg	10189861	Pass
B9200SVIAL	Recombinant Albumin, Molecular Biology G	10173665	Pass
B7001SVIAL	NEBuffer™ 1	10167590	Pass

Assay Name/Specification	Lot # 10197204
<b>Exonuclease Activity (Radioactivity Release)</b> A 50 µl reaction in NEBuffer 1 containing 1 µg of a mixture of single and double-stranded [ <sup>3</sup> H] E. coli DNA and a minimum of 24 units of Fpg incubated for 4 hours at 37°C releases <1.0% of the total radioactivity.	Pass
<b>Non-Specific DNase Activity (16 Hour)</b> A 50 µl reaction in NEBuffer 1 containing 1 µg of Lambda-HindIII DNA and a minimum of 40 units of Fpg incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	Pass
<b>Protein Concentration (A280)</b> The concentration of Fpg is 0.39 mg/ml +/- 10% as determined by UV absorption at 280 nm. Protein concentration is determined by the Pace method using the extinction coefficient of 39,795 and molecular weight of 30,290 daltons for Fpg (Pace, C.N. et al. (1995) Protein Sci., 4, 2411-2423).	Pass


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<p><b>Protein Purity Assay (SDS-PAGE)</b> Fpg is <math>\geq 95\%</math> pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p>	<b>Pass</b>
<p><b>RNase Activity (Extended Digestion)</b> A 10 <math>\mu</math>l reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 8 units of Fpg is incubated at 37°C. After incubation for 16 hours, &gt;90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.</p>	<b>Pass</b>
<p><b>qPCR DNA Contamination (E. coli Genomic)</b> A minimum of 8 units of Fpg is screened for the presence of E. coli genomic DNA using SYBR<sup>®</sup> Green qPCR with primers specific for the E. coli 16S rRNA locus. Results are quantified using a standard curve generated from purified E. coli genomic DNA. The measured level of E. coli genomic DNA contamination is <math>\leq 1</math> E. coli genome.</p>	<b>Pass</b>

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

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15 Jun 2023



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