

New England Biolabs Certificate of Analysis

Product Name: Fpg
Catalog #: M0240S/L
Concentration: 8,000 units/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.
Lot #: 0081710
Assay Date: 10/2017
Expiration Date: 10/2019
Storage Temp: -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
Effective Date: 27 Apr 2017

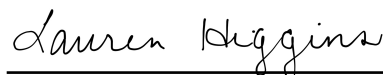
Assay Name/Specification (minimum release criteria)	Lot #0081710
Exonuclease Activity (Radioactivity Release) - A 50 µl reaction in NEBuffer 1 containing 1 µg of a mixture of single and double-stranded [³ H] <i>E. coli</i> DNA and a minimum of 24 units of Fpg incubated for 4 hours at 37°C releases <1.0% of the total radioactivity.	Pass
Non-Specific DNase Activity (16 Hour) - 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
Protein Concentration (A280) - 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
Protein Purity Assay (SDS-PAGE) - Fpg is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	Pass
qPCR DNA Contamination (<i>E. coli</i> Genomic) - A minimum of 8 units of Fpg is screened for the presence of <i>E. coli</i> genomic DNA using SYBR® Green qPCR with primers specific for the <i>E. coli</i> 16S rRNA locus. Results are quantified using a standard curve generated from purified <i>E. coli</i> genomic DNA. The measured level of <i>E. coli</i> genomic DNA contamination is ≤ 1 <i>E. coli</i> genome.	Pass
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 8 units of Fpg 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.	Pass

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* The BSA in this product has been granted an EDQM "Certificate of Suitability" from the European Directorate for the Quality of Medicines (# R1-CEP-2003-204-Rev00) and has been granted a USDA Certificate for Export of Bovine Blood Plasma/Serum for Manufacture into Pharmaceutical Products.



Authorized by
Derek Robinson
27 Apr 2017



Inspected by
Lauren Higgins
27 Oct 2017

