

New England Biolabs Certificate of Analysis

Product Name: *Thermostable OGG*
Catalog Number: *M0464S*
Concentration: *8,000 U/ml*
Unit Definition: *One unit is defined as the amount of enzyme required to cleave 10 pmol of a 60-mer fluorescently labeled oligonucleotide duplex containing a single 8-oxoguanine base paired with a cytosine in a total reaction volume of 10 µl in 1 hour at 65°C.*
Packaging Lot Number: *10252424*
Expiration Date: *08/2026*
Storage Temperature: *-20°C*
Storage Conditions: *10 mM Tris-HCl, 500 mM NaCl, 0.1 mM EDTA, 1 mM DTT, 200 µg/ml rAlbumin (pH 7.4 @ 25°C)*
Specification Version: *PS-M0464S v1.0*

Thermostable OGG Component List

NEB Part Number	Component Description	Lot Number	Individual QC Result
M0464SVIAL	Thermostable OGG	10252423	Pass
B6004SVIAL	rCutSmart™ Buffer	10245415	Pass

Assay Name/Specification	Lot # 10252424
DNase Activity (Labeled Oligo, 3' extension) A 50 µl reaction in CutSmart® Buffer containing a 20 nM solution of a fluorescent labeled double-stranded oligonucleotide containing a 3' extension and a minimum of 40 units of Thermostable OGG incubated for 16 hours at 37°C yields <5% degradation as determined by capillary electrophoresis.	Pass
DNase Activity (Labeled Oligo, 5' extension) A 50 µl reaction in CutSmart® Buffer containing a 20 nM solution of a fluorescent labeled double-stranded oligonucleotide containing a 5' extension and a minimum of 40 units of Thermostable OGG incubated for 16 hours at 37°C yields <5% degradation as determined by capillary electrophoresis.	Pass
Double Stranded DNase Activity (Labeled Oligo) A 50 µl reaction in CutSmart® Buffer containing a 20 nM solution of a fluorescent labeled double-stranded oligonucleotide containing a blunt end and a minimum of 40 units of Thermostable OGG incubated for 16 hours at 37°C yields <5% degradation as determined by capillary electrophoresis.	Pass

Assay Name/Specification	Lot # 10252424
<p>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 Thermostable OGG incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.</p>	Pass
<p>Protein Purity Assay (SDS-PAGE) Thermostable OGG is ≥ 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 8 units of Thermostable OGG 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>Single Stranded DNase Activity (FAM-Labeled Oligo) A 50 µl reaction in CutSmart® Buffer containing a 20 nM solution of a fluorescent internal labeled oligonucleotide and a minimum of 40 units of Thermostable OGG incubated for 16 hours at 37°C yields <5% degradation as determined by capillary electrophoresis.</p>	Pass
<p>qPCR DNA Contamination (E. coli Genomic) A minimum of 8 units of Thermostable OGG is screened for the presence of E. coli genomic DNA using SYBR® 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 ≤ 1 E. coli genome.</p>	Pass

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

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Production Scientist
03 Sep 2024



Josh Hersey
Packaging Quality Control Inspector
09 Sep 2024