

New England Biolabs Certificate of Analysis

Product Name: *Thermostable Endonuclease Q*
Catalog Number: *M0701S*
Concentration: *1,000 U/ml*
Unit Definition: *One unit is defined as the amount of enzyme required to cleave 1 pmol of a 60-mer single-stranded oligonucleotide containing a single deoxyxanthosine site* in a total reaction volume of 20 µl in 1 hour at 65°C. (* A dX site is synthetically prepared at the 24th position of a 60 mer oligonucleotide.)*

Packaging Lot Number: *10260082*
Expiration Date: *10/2026*
Storage Temperature: *-20°C*
Storage Conditions: *10 mM Tris-HCl, 500mM NaCl, 1 mM DTT, 0.1 mM EDTA, 50% Glycerol (pH 7.4 @ 25°C)*
Specification Version: *PS-M0701S v1.0*

Thermostable Endonuclease Q Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M0701SVIAL	Thermostable Endonuclease Q	10260080	Pass
B6002SVIAL	NEBuffer™ r2.1	10250211	Pass

Assay Name/Specification	Lot # 10260082
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 5 units of Thermostable Endonuclease Q 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 5 units of Thermostable Endonuclease Q 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 5 units of Thermostable Endonuclease Q incubated for 16 hours at 37°C yields <5%	Pass

Assay Name/Specification	Lot # 10260082
degradation as determined by capillary electrophoresis.	
<p>Non-Specific DNase Activity (16 Hour) A 50 µl reaction in rCutSmart™ Buffer containing 1 µg of Lambda-HindIII DNA and a minimum of 10 units of Thermostable Endonuclease Q 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 (Microfluidic Electrophoresis) Thermostable Endonuclease Q is ≥95% pure as determined by microfluidic electrophoresis.</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 5 units of Thermostable Endonuclease Q 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 1 unit of Thermostable Endonuclease Q 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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 Jamie Souza
 Production Scientist
 31 Oct 2024


 Josh Hersey
 Packaging Quality Control Inspector
 01 Nov 2024