

New England Biolabs Certificate of Analysis

Product Name: *EnGen® Seq1 Cas9*
Catalog Number: *M0668T*
Concentration: *20 µM*
Packaging Lot Number: *10248119*
Expiration Date: *07/2026*
Storage Temperature: *-20°C*
Storage Conditions: *10 mM Tris-HCl, 300 mM NaCl, 0.1 mM EDTA, 1 mM DTT; 50%, Glycerol (pH 7.4 @ 25°C)*
Specification Version: *PS-M0668T v1.0*

EnGen® Seq1 Cas9 Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M0668TVIAL	EnGen® Seq1 Cas9	10248117	Pass
B6003SVIAL	NEBuffer™ r3.1	10237086	Pass

Assay Name/Specification	Lot # 10248119
Endonuclease Activity (Nicking) A 50 µl reaction in NEBuffer™ r3.1 containing 1 µg of supercoiled PhiX174 DNA and a minimum of 1 pmol of EnGen® Seq1 Cas9 incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	Pass
Exonuclease Activity (Radioactivity Release) A 50 µl reaction in NEBuffer™ r3.1 containing 1 µg of a mixture of single and double-stranded [³ H] E. coli DNA and a minimum of 1 pmol of EnGen® Seq1 Cas9 incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	Pass
Functional Testing (Targeted Digestion) A 20 µl reaction in NEBuffer™ r3.1 containing 20 nM of 550 bp FAM and ROX-labeled double-stranded target DNA, 200 nM sgRNA, and 200 nM EnGen® Seq1 Cas9 incubated for 15 minutes at 37°C results in ≥90% targeted digestion of the substrate DNA as determined by capillary electrophoresis.	Pass
Non-Specific DNase Activity (16 Hour) A 50 µl reaction in NEBuffer™ r3.1 containing 1 µg of Lambda DNA and a minimum of 1 pmol of EnGen® Seq1 Cas9 incubated for 16 hours at 37°C results in a DNA pattern	Pass

Assay Name/Specification	Lot # 10248119
<p>free of detectable nuclease degradation as determined by agarose gel electrophoresis.</p> <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 pmol of EnGen® Seq1 Cas9 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>	<p>Pass</p>

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

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Jessica Cane
Production Scientist
01 Jul 2024



Josh Hersey
Packaging Quality Control Inspector
17 Jul 2024