

New England Biolabs Certificate of Analysis

Product Name: EnGen[®] Seq1 Cas9
Catalog Number: M0668T
Concentration: 20 µM
Packaging Lot Number: 10195510
Expiration Date: 06/2025
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	10195266	Pass
B6003SVIAL	NEBuffer [™] r3.1	10182163	Pass

Assay Name/Specification	Lot # 10195510
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 # 10195510
<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 Jun 2023



Josh Hersey
Packaging Quality Control Inspector
09 Jun 2023