

New England Biolabs Certificate of Analysis

Product Name: *EnGen Lba Cas12a (Cpf1)*
Catalog Number: *M0653S*
Concentration: *1 μ M*
Packaging Lot Number: *10098008*
Expiration Date: *01/2023*
Storage Temperature: *-20°C*
Storage Conditions: *500 mM NaCl, 20 mM Sodium Acetate, 0.1 mM EDTA, 0.1 mM TCEP-HCl, 50% Glycerol, (pH 6.0 @ 25°C)*
Specification Version: *PS-M0653S v2.0*

| EnGen Lba Cas12a (Cpf1) Component List | | | |
|--|--------------------------|------------|----------------------|
| NEB Part Number | Component Description | Lot Number | Individual QC Result |
| M0653SVIAL | ENGEN® LBA CAS12A (CPF1) | 10096494 | Pass |
| B7202SVIAL | NEBuffer™ 2.1 | 10090560 | Pass |

| Assay Name/Specification | Lot # 10098008 |
|--|----------------|
| Endonuclease Activity (Nicking) A 50 μ l reaction in NEBuffer 2.1 containing 1 μ g of supercoiled PhiX174 RF I DNA and a minimum of 1 pmol of EnGen® Lba Cas12a (Cpf1) 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 μ l reaction in NEBuffer 2.1 containing 1 μ g of a mixture of single and double-stranded [³ H] E. coli DNA and a minimum of 1 pmol of EnGen® Lba Cas12a (Cpf1) incubated for 4 hours at 37°C releases <0.1% of the total radioactivity. | Pass |
| Functional Testing (Targeted Digestion) A 20 μ l reaction in 1X NEBuffer 2.1 containing 20 nM of 100 bp FAM and ROX-labeled double-stranded target DNA, 100 nM crRNA, and 100 nM EnGen® Lba Cas12a (Cpf1) incubated for 15 minutes at 37°C results in \geq 90% targeted digestion of the substrate DNA as determined by capillary electrophoresis. | Pass |
| Non-Specific DNase Activity (16 Hour) A 50 μ l reaction in NEBuffer 2.1 containing 1 μ g of Lambda DNA and a minimum of 1 pmol of EnGen® Lba Cas12a (Cpf1) incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel | Pass |

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|--|--------------------|
| <p>electrophoresis.</p> <p>RNase Activity (Extended Digestion) A 10 µl reaction in NEBuffer 4 containing 40 ng of f-300 RNA transcript and a minimum of 1 pmol of EnGen® Lba Cas12a (Cpf1) 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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Bhairavi Jani
Production Scientist
02 Feb 2021



Michael Tonello
Packaging Quality Control Inspector
02 Feb 2021