Product Name: EnGen Lba Cas12a (Cpf1)
Catalog Number: M0653T
Concentration: 100 µM
Packaging Lot Number: 10187658
Expiration Date: 04/2025
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-M0653T v2.0

EnGen Lba Cas12a (Cpf1) Component List

<table>
<thead>
<tr>
<th>NEB Part Number</th>
<th>Component Description</th>
<th>Lot Number</th>
<th>Individual QC Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>M0653TVIAL</td>
<td>EnGen® Lba Cas12a (Cpf1)</td>
<td>10185536</td>
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<tr>
<td>B6002SVIAL</td>
<td>NEBuffer™ r2.1</td>
<td>10173667</td>
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<tr>
<td>B0653AVIAL</td>
<td>EnGen® Lba Cas12a Diluent</td>
<td>10156821</td>
<td>Pass</td>
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</tbody>
</table>

Assay Name/Specification

Endonuclease Activity (Nicking)  
A 50 µl reaction in NEBuffer 2.1 containing 1 µg 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.  

Exonuclease Activity (Radioactivity Release)  
A 50 µl reaction in NEBuffer 2.1 containing 1 µg of a mixture of single and double-stranded [³H] 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.  

Functional Testing (Targeted Digestion)  
A 20 µl 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 ≥90% targeted digestion of the substrate DNA as determined by capillary electrophoresis.  

Non-Specific DNase Activity (16 Hour)  
A 50 µl reaction in NEBuffer 2.1 containing 1 µg 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
### Assay Name/Specification

<table>
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pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.

### 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.

Pass

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

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10 Apr 2023

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Packaging Quality Control Inspector  
05 May 2023