

New England Biolabs Certificate of Analysis

Product Name: *EnGen Lba Cas12a (Cpf1)*
Catalog Number: *M0653S*
Concentration: *1,000 Nanomolar*
Lot Number: *10055875*
Expiration Date: *08/2021*
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)	10052574	Pass
B7202SVIAL	NEBuffer™ 2.1	10043907	Pass

Assay Name/Specification	Lot # 10055875
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
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 pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	Pass
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.	Pass
Exonuclease Activity (Radioactivity Release) A 50 µl reaction in NEBuffer 2.1 containing 1 µg of a mixture of single and double-stranded [³ H] E. coli DNA and a minimum of 1 pmol of EnGen® Lba Cas12a	Pass

Assay Name/Specification	Lot # 10055875
<p>(Cpf1) incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.</p> <p>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.</p>	<p>Pass</p>

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



Jessica Cane
Production Scientist
26 Aug 2019



Michael Tonello
Packaging Quality Control Inspector
04 Oct 2019