

New England Biolabs Certificate of Analysis

Product Name: EnGen[®] Lba Cas12a (Cpf1)
Catalog #: M0653T
Concentration: 100 μ M
Unit Definition: 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.
Lot #: 0031804
Assay Date: 04/2018
Expiration Date: 04/2020
Storage Temp: -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 v1.0
Effective Date: 31 Oct 2017

Assay Name/Specification (minimum release criteria)	Lot #0031804
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] <i>E. coli</i> 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
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 electrophoresis.	Pass
RNase Activity (Extended Digestion) - A 10 μ l 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



Authorized by
Derek Robinson
31 Oct 2017



Inspected by
Bhairavi Jani
24 Apr 2018

