

FnCas12a

1 Packing list

Components	HY-KE7066-100 pmol	HY-KE7066-600 pmol
FnCas12a	100 μ L	600 μ L
10 \times Reaction Buffer	0.4 mL	2.4 mL

2 Introduction

FnCas12a(Cpf1), is an RNA-guided, DNA-editable recombinant endonuclease that can be used for gene editing and detection. FnCas12a can recognize PAM sequences containing TTN, and the cutting site is relatively far away from its recognition site, providing the possibility of multiple editing, and has the advantages of high gene editing efficiency and low off-target rate. This product does not contain DNA endonuclease and exonuclease, and does not contain RNase.

3 Properties

Source	<i>E.coli</i>
Molecular weight	154 kDa
Storage buffer	500 mM NaCl, 20 mM Sodium acetate, 0.1 mM EDTA, 0.1 mM TCEP, 50% (v/v) Glycerol (pH6, 25°C)
10 \times Reaction Buffer	500 mM NaCl, 100 mM Tris-HCl, 100 mM MgCl ₂ ·6H ₂ O, 1 mg/mL BSA (pH7.9, 25°C)
Concentration	1 μ M (153.7 ng/ μ L)
inactivate or inhibit	Deactivate by heating at 65°C for 10 min

4 General Protocol

FnCas12a digests target DNA in vitro

- 1) Place FnCas12a, gRNA, and substrate DNA on an ice bath, and use nuclease-free water to dilute gRNA to 300 nM and substrate DNA to 30 nM.
- 2) Prepare 30 μ L reaction system according to the sequence in the table.

Components	Adding amount
Nuclease-free water	20 μ L
10 \times Reaction Buffer	3 μ L
gRNA (300 μ M)	3 μ L
FnCas12a	1 μ L

Mix slightly, centrifuge at room temperature for a few seconds to allow the liquid to accumulate at the bottom of the tube, and pre-incubate at 25°C for 10 min.

30 nM substrate target DNA	3 μ L
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- 3) Mix gently, then centrifuge the precipitated liquid and incubate at 37°C for 10 min.
- 4) Add 1 µL proteinase K to each sample, mix gently and incubate at room temperature for 10 min.
- 5) Add 6 µL DNA loading buffer (6×) to the reaction system, and then use 1% agarose gel for electrophoresis analysis.

5 Storage

-20°C, 2 years

6 Precautions

1. It is necessary to ensure Nuclease-free during use. To avoid contamination, all operations need to be performed in accordance with RNase-free requirements.
2. This product is for R&D use only, not for drug, household, or other uses.
3. For your safety and health, please wear a lab coat and disposable gloves to operate.