Recombinant AsCas12a Nuclease

Catalog No.: RPT0034LQ

Sequence Information

Species
Acidaminococcus sp. BV3L6

Gene ID

Swiss Prot
U2UMQ6

Tags
No tag

Synonyms
AsCas12a; Cas12a; CRISPR-associated endonuclease Cas12a; cpf1; AsCpf1

Product Information

Source
E. coli

Purification
≥ 95 % as determined by Tris-Bis PAGE;≥ 95 % as determined by HPLC.

Calculated MW
155.3 kDa

Observed MW
130-150 kDa

Endotoxin
≤10 EU/mg by the LAL method.

Formulation
Supplied as a 0.22 μm filtered solution of 20 mM Tris-HCl, 300 mM NaCl, 0.1 mM EDTA, 1 mM DTT, 50% Glycerol, pH 7.4. Contact us for customized product form or formulation.

Reconstitution

Background

AsCas12a (previously AsCpf1) was characterized as an RNA-guided endonuclease capable of efficient mammalian genome-editing activity in 2015. And it has subsequently become a staple in the CRISPR toolbox. Recognizing a thymine-rich 5'-TTTV-3' PAM on the 5' side of the protospacer (on the non-target strand), AsCas12a utilizes a single catalytic site to cleave RNA-complementary double-stranded DNA (cis cleavage), as well as indiscriminately cleave single-stranded DNA (trans cleavage), upon RNA-guided DNA binding. This has led to its use in rapid and highly sensitive nucleic acid detection. AsCas12a and related orthologs LbCas12a and FnCas12a generate staggered cuts within the protospacer but distal to the PAM. Because AsCas12a does not require tracrRNA and can process the CRISPR array into crRNAs internally, it is a good tool for multiplex editing.

Basic Information

Description
Recombinant AsCas12a Nuclease is produced by *E. coli* expression system. The target protein is expressed with sequence (Met1- Asn1307) of *Acidaminococcus sp. BV3L6* Cas12a (Accession #U2UMQ6) fused with no tag.

Activity

Shipping
Lyophilized proteins are shipped at ambient temperature.
Liquid proteins are shipped at frozen temperature with dry ice.
Upon receipt, store it immediately at the temperature recommended below.

Storage
Store at -70℃

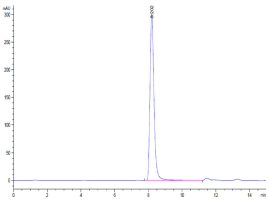
Operational Notes
For your safety and health, please wear a lab coat and disposable gloves for handling.

Contact

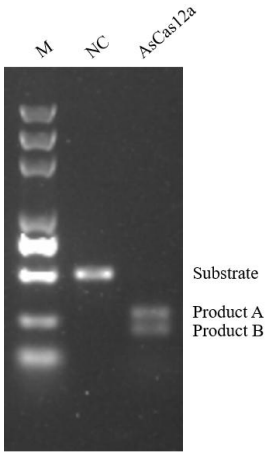
400-999-6126
cn.market@abclonal.com.cn
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For research use only. Not for therapeutic or diagnostic purposes.
Please visit http://abclonal.com for a complete listing of recommended products.

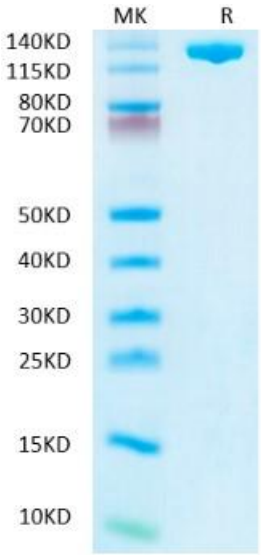
Validation Data



The purity of Recombinant AsCas12a detected by SEC-HPLC is greater than 95%.



More than 95% of substrates can be cleaved by AsCas12a.



Recombinant AsCas12a Nuclease was determined by SDS-PAGE under reducing conditions with Coomassie Blue.