

Catalog No.: RPT0034LQ **Recombinant**

Species	Gene ID	Swiss Prot
<i>Acidaminococcus</i>		U2UMQ6
<i>ccus</i> sp.		
BV316		

No tag

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

Source <i>E. coli</i>	Purification ≥ 95 % as determined by Tris-Bis PAGE; ≥ 95 % as determined by HPLC.
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Endotoxin
≤10 EU/mg by the LAL method.

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.

Contact

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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.

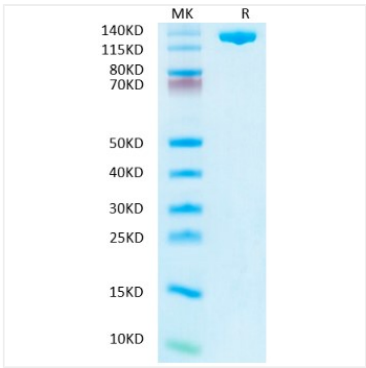
Recombinant AsCas12a Nuclease is produced by *E. coli* expression system. The target protein is expressed with sequence (Met1- Asn1307) of *Acidaminococcus* sp. *BV3L6* Cas12a (Accession #U2UM06) fused with no tag.

The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

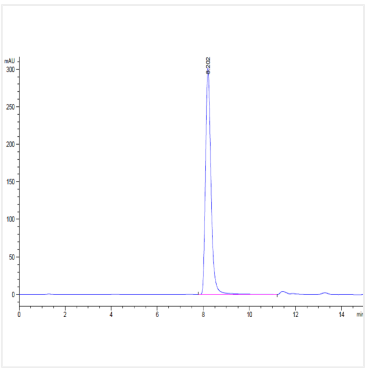
Store at -20°C. This product is stable at -20°C to -80°C up to 1 year from the date of receipt. For optimal storage, aliquot into smaller quantities after centrifugation and store at recommended temperature. Avoid repeated freeze-thaw cycles.

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

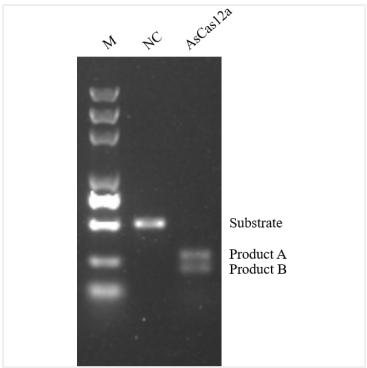
Validation Data



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



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



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