

Acidaminococcus sp. CRISPR/Cpf1 polyclonal antibody

Cat. No. C15310262

Type: Polyclonal

Source: Rabbit

Lot #: A2574-001

Size: 100 µl

Concentration: Not determined

Specificity: *Acidaminococcus sp.*

Purity: Whole antiserum from rabbit containing 0.05% azide.

Storage: Store at -20°C; for long storage, store at -80°C. Avoid multiple freeze-thaw cycles.

Precautions: This product is for research use only. Not for use in diagnostic or therapeutic procedures.

Description: Polyclonal antibody raised in rabbit against *Acidaminococcus sp.* (As) Cpf1 (CRISPR from *Prevotella* and *Francisella 1*) using a recombinant protein.

Applications

	Suggested dilution	Results
Western blotting	1:5,000	Fig 1, 2

Target description

CRISPR systems are adaptable immune mechanisms which are present in many bacteria to protect themselves from foreign nucleic acids, such as viruses, transposable elements or plasmids. The CRISPR/Cas9 (CRISPR-associated protein 9nuclease) system from *S. pyogenes* was the first to be adapted for inducing sequence-specific double stranded breaks and targeted genome editing. This system is unique and flexible due to its dependence on RNA as the moiety that targets the nuclease to a desired DNA sequence and can be used to induce indel mutations, specific sequence replacements or insertions and large deletions or genomic rearrangements at any desired location in the genome. In addition, Cas9 can also be used to mediate upregulation of specific endogenous genes or to alter histone modifications or DNA methylation. Recently, a so-called type V CRISPR system has been identified in several bacteria which contains the Cpf1 (CRISPR from *Prevotella* and *Francisella 1*) protein. In contrast to Cas9 systems, CRISPR/Cpf1 systems do not require an additional trans-activating crRNA (tracrRNA), they cleave target DNA preceded by a short T-rich protospacer-adjacent motif (PAM), in contrast to the G-rich PAM following the target DNA for Cas9, and they introduce a staggered DNA doublestranded break with a 4 or 5-nt 5' overhang. Two of these CRISPR/Cpf1 systems, present in *Acidaminococcus sp.* and *Lachnospiraceae* bacterium have been identified as potential candidates for genome editing in mammalian cells.

Results

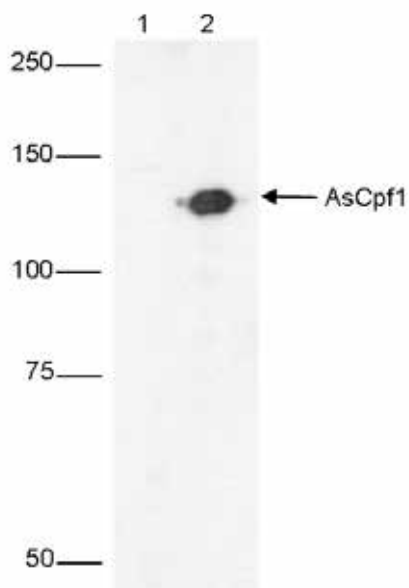


Figure 1. Western blot analysis using the Diagenode antibody directed against AsCRISPR/Cpf1

Western blot was performed on protein extracts from HEK293 cells transfected with AsCRISPR/Cpf1 using the Diagenode antibody against AsCRISPR/Cpf1 (Cat. No. C15310262), diluted 1:5,000 in PBS-T containing 3% NFD. The marker is shown on the left, the position of the Cpf1 protein is indicated on the right. Lane 1 shows the Western blot analysis with the pre-immune serum, used as a negative control.

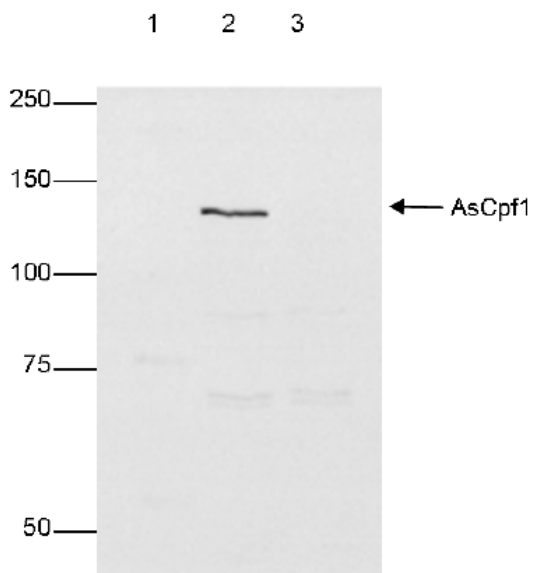


Figure 2. Western blot analysis using the Diagenode antibody directed against AsCRISPR/Cpf1

Western blot was performed on protein extracts from HEK293 cells (lane 1), HEK293 cells transfected with AsCRISPR/Cpf1 (lane 2) and HEK293 cells transfected with LbCRISPR/Cpf1 (lane 3) using the Diagenode antibody against AsCRISPR/Cpf1 (Cat. No. C15310262), diluted 1:5,000 in PBS-T containing 3% NFD. The marker is shown on the left, the position of the Cpf1 protein is indicated on the right.

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