diagenode
A Hologic Company

TECHNICAL DATASHEET

L. bacterium CRISPR/Cpf1 monoclonal antibody

Cat# C15200233-50

Type: Monoclonal	**Specificity:** Lachnospiraceae bacterium
Isotype:	**Concentration:** 1 µg/µl
Source: Mouse	**Purity:** Protein G purified monoclonal antibody in TBS containing 0.02 % Na-azide.
Lot #: 001	**Storage:** Store at -20°C; for long storage, store at -80°C. Avoid multiple freeze-thaw cycles.
Size: 50 µg/50 µl	**Precautions:** This product is for research use only. Not for use in diagnostic or therapeutic procedures.

Last Data Sheet Update: April 25, 2017

Description

Monoclonal antibody raised in mouse against *Lachnospiraceae bacterium* (Lb) Cpf1 (CRISPR from Prevotella and Francisella 1) using a recombinant protein.

Applications

Applications	Suggested dilution/amount	References
Western Blotting	1:1,000 - 1:20,000	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 proceeded 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.

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Validation data

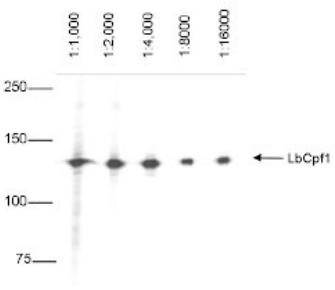

Figure 1. Western blot analysis using the Diagenode monoclonal antibody directed against LbCRISPR/Cpf1

Western blot was performed on protein extracts from HEK293 cells transfected with an HA-tagged LbCRISPR/Cpf1 using the Diagenode monoclonal antibody against LbCRISPR/Cpf1 (cat. No. C15200233). The antibody was used at different dilutions. The marker is shown on the left, the position of the Cpf1 protein is indicated on the right.

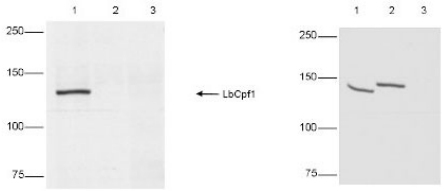

Figure 2. Western blot analysis using the Diagenode monoclonal antibody directed against LbCRISPR/Cpf1

Western blot was performed on protein extracts from HEK293 cells transfected with HA-tagged LbCRISPR/Cpf1 (lane 1), HEK293 cells transfected with HA-tagged AsCRISPR/Cpf1 (lane 2) and mock transfected HEK293 cells (lane 3) using the Diagenode monoclonal antibody against LbCRISPR/Cpf1 (cat. No. C15200233), diluted 1:1,000 in PBS-T containing 3% NFDM (left). The right figure shows a WB with an antibody against the HA-tag.

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