

C2C2 polyclonal antibody

Cat. No. C15310267-100

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| Type: Polyclonal | Specificity: <i>Leptotrichia shahii</i> |
| Size: 100 µl | Isotype: NA |
| Concentration: Not determined | Source: Rabbit |
| Lot No.: A2915-004 | Purity: Whole antiserum from rabbit containing 0.05% azide. |
| Storage buffer: NA | Storage conditions: 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. | |

Last Data Sheet Update: January 30, 2018

Description

Polyclonal antibody raised in rabbit against the class 2 type VI CRISPR-Cas effector (C2C2) *Leptotrichia shahii* using a recombinant protein.

Applications

| Applications | Suggested dilution | References |
|------------------|--------------------|------------|
| Western Blotting | 1:1,000 - 1/10,000 | Fig 1 |

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 class 2 type VI CRISPR system has been identified in *Leptotrichia shahii*. This CRISPR system is characterized by the presence of the single effector protein C2C2. C2C2 lacks homology to any known DNA nuclease domain but contains two Higher Eukaryotes and Prokaryotes Nucleotide-binding (HEPN) domains and is thought to function solely as an RNA-guided RNA-targeting CRISPR effector.

Validation data

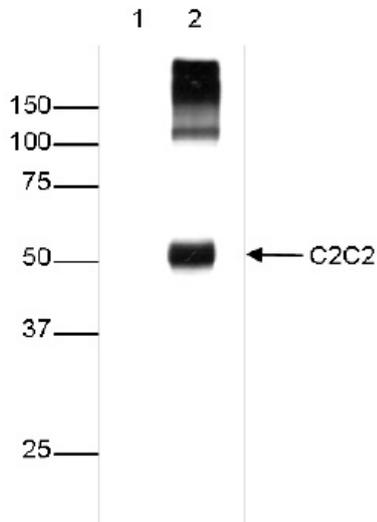


Figure 1. Western blot analysis using the Diagenode antibody directed against C2C2

Western blot was performed on protein extracts from U2OS cells (lane 1) and on extracts from U2OS cells spiked with 50 ng of the immunogen (Lsh C2C2 recombinant protein, lane 2) using the Diagenode antibody against C2C2 (Cat. No. C15310267), diluted 1:10,000 in PBS-T containing 3% NFD. The marker is shown on the left, the position of the C2C2 protein is indicated on the right. It's unclear what the higher MW signal represents but since it is absent in the lane without the spiked protein, it might be a protein aggregate.