

CRISPR/Cas9 C-terminal monoclonal antibody

Other name: Csn1

Cat. No. C15200223

Type: Monoclonal

Source: Mouse

Lot #: 001

Size: 50 µg/23 µl

Concentration: 2.2 µg/µl

Specificity: Streptococcus pyogenes

Purity: Protein G purified monoclonal antibody in PBS containing 0.2 % Na-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: Monoclonal antibody raised in mouse against the C-terminus of Cas9 nuclease (CRISPR-associated protein 9).

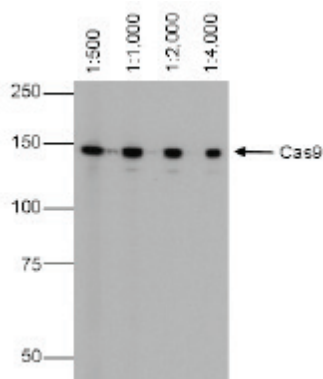
Applications

Applications	Suggested dilution	Results
Western blotting	1:1,000 - 1:5,000	Fig 1,2
IP	13 µg/IP	Fig 3
IF	1:200	Fig 4

Target description

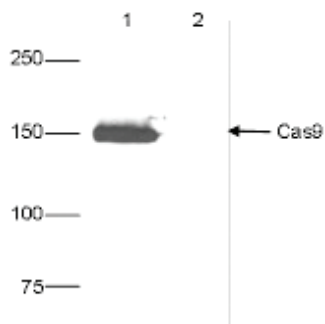
CRISPR systems are adaptable immune mechanisms which are present in many bacteria to protect themselves from foreign nucleic acids, such as viruses, transposable elements or plasmids. Recently, the CRISPR/Cas9 [CRISPR-associated protein 9 nuclease, UniProtKB/Swiss-Prot entry Q99ZW2] system from *S. pyogenes* has been 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.

Results



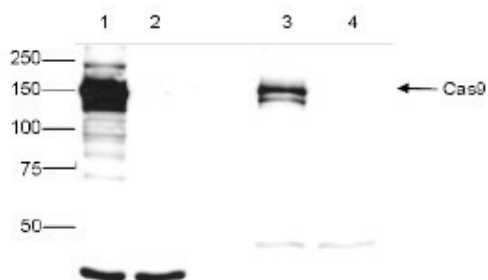
Western blot analysis using the Diagenode monoclonal antibody directed against CRISPR/Cas9

Western blot was performed on protein extracts from HeLa cells transfected with Cas9 using the Diagenode antibody against CRISPR/Cas9 (cat. No. C15200223). The antibody was used at different dilutions. The marker is shown on the left, position of the Cas9 protein is indicated on the right.



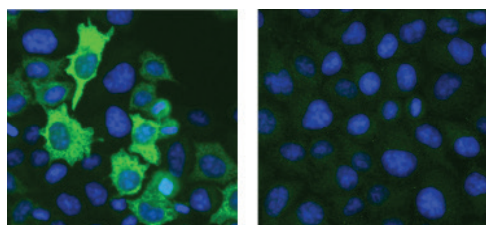
Western blot analysis using the Diagenode monoclonal antibody directed against CRISPR/Cas9

Western blot was performed on 20 µg protein extracts from Cas9 expressing HeLa cells (lane 1) and on negative control HeLa cells (lane 2) with the Diagenode antibody against Cas9 (cat. No. C15200223). The antibody was diluted 1:4,000. The marker is shown on the left, position of the Cas9 protein is indicated on the right.



IP using the Diagenode monoclonal antibody directed against Cas9

IP was performed on whole cell extracts (250 µg) from HeLa cells transfected with a Cas9 expression vector (lane 1 and 3), or untransfected cells (lane 2 and 4) using 13 µg of the Diagenode antibody against Cas9 (cat. No. C15200223). The immunoprecipitated proteins were subsequently analysed by Western blot. Lane 3 and 4 show the result of the IP, the input (15 µg) is shown in lane 1 and 2.



Immunofluorescence using the Diagenode monoclonal antibody directed against CRISPR/Cas9

HeLa cells expressing Cas9 under the control of the tight TRE promoter were fixed in methanol at -20°C, permeabilized with acetone at -20°C and blocked with PBS containing 2% BSA. The cells were stained with the Cas9 C-terminal antibody (cat. No. C15200223) diluted 1:200, followed by incubation with a donkey anti-mouse secondary antibody coupled to AF488. Nuclei were counter-stained with Hoechst 33342. Figure 4 shows the result in the presence (left) or absence (right) of doxycycline.

Diagenode sa. BELGIUM | EUROPE

LIEGE SCIENCE PARK
Rue Bois Saint-Jean, 3
4102 Seraing (Ougrée) - Belgium
Tel: +32 4 364 20 50
Fax: +32 4 364 20 51
orders@diagenode.com
info@diagenode.com

Diagenode Inc. USA | NORTH AMERICA

400 Morris Avenue, Suite 101
Denville, NJ 07834 - USA
Tel: +1 862 209-4680
Fax: +1 862 209-4681
orders.na@diagenode.com
info.na@diagenode.com

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