EPIGENTEK
Complete Solutions for Epigenetics

CRISPR/Cas9 Monoclonal Antibody

(Catalog No. A-9000)

Background:
The discovery of CRISPR (Clustered Regularly Interspaced Short Palindromic Repeats) and Cas9 (CRISPR associated system or CRISPR associated protein 9 nuclease) found in bacteria to work as a defense mechanism against foreign DNA, has proven to be an invaluable tool to target and modify a genetic sequence in gene editing and genome engineering applications. The system, known as CRISPR/Cas9, allows for sequence-specific cleavage of a targeted genomic locus by delivering the RNA-guided nuclease (Cas9) and appropriate guide RNAs (gRNA) into a cell. In addition, Protospacer Adjacent Motif (PAM) sequence immediately following the specificity sequence is necessary for successful binding of the Cas9 nuclease.

Concentration:
1 mg/ml

Description:
Mouse monoclonal antibody raised against CRISPR/Cas9, clone 7A9, generated with synthesized peptide corresponding to sequence of Streptococcus pyogene (*S. pyogenes*) CRISPR-associated endonuclease Cas9/Csn1. This Anti-Cas9 mAb can detect CRISPR/Cas9 expression in target cells by WB, IF, IP, or ELISA to confirm and verify whether gRNA and Cas9 vectors are successfully transfected.

Specificity:
Recognizes both Cas9 and dCas9 (nuclease deficient Cas9)

Reactivity:
Species Independent

Isotype:
IgG1/Kappa

Formulation:
PBS, 30% Glycerol.

Storage:
Store at 4°C for short term (1-2 weeks). For long term storage, aliquot and then store at −20°C. Avoid multiple freeze/thaw cycles.

Purification:
Protein G purified

Application:
WB (1:1000), IP (2 µg/10^6 cells), IF (1:500), ELISA

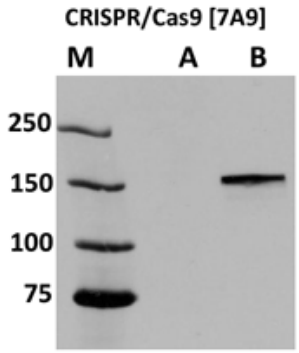

Fig1: Western Blot: Shown are the results of WB on protein extracts from transfected (B) and untransfected (A) HEK293 cells using the CRISPR/Cas9 [7A9] antibody.

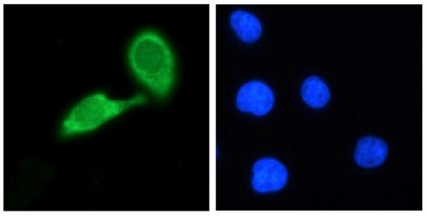

Fig2: Immunofluorescence: Hela cells were transiently transfected with an N-terminally Flag-tagged S. pyogenes Cas9 expression vector. The cells were stained with the Cas9 antibody followed by anti mouse-AF488 coupled secondary antibody. Nuclei were counter-stained with Hoechst 33342.

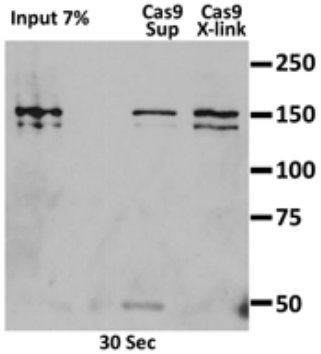

Fig3 Immunoprecipitation: HEK293T expressing N-terminally Flag-tagged S.pyogenes Cas9 were lysed 72H post transfection. Proteins were immunoprecipitated from 100 µg of whole cell lysate for 1H at 4°C with Cas9 Sup followed by incubation for 1h at 4°C with a 1:1 mixture of protein A/G sepharose beads, or for 2H at 4°C with Cas9 ab X-linked to a 1:1 mixture of protein A/G sepharose beads. Beads were washed and eluted by boiling in Laemmli, separated by SDS-PAGE, and transferred to nitrocellulose. Membrane was blocked, incubated with Cas9 ab, then incubated with HRP anti-mouse antibody.

Ordering Information

Products:	Size	Cat. No.
CRISPR/Cas9 Monoclonal Antibody	10 µg	A-9000-010
	50 µg	A-9000-050
	100 µg	A-9000-100

This product is for research purposes only. Not intended for use in diagnostic procedures.

Epigentek Group Inc. • USA Tel: 1-877-374-4368 • Int. Tel: 1-718-484-3990 • Fax: 1-718-484-3990 • info@epigentek.com • **www.epigentek.com**