

SaCas9 antibody (mAb)

Catalog Nos: 61787, 61788

RRID: AB_2793766

Clone: 11E7

Isotype: IgG2a

Application(s): WB

Reactivity: Not Species Specific

Quantities: 100 µg, 10 µg

Purification: Protein A Chromatography

Host: Mouse

Concentration: 1 µg/µl

Molecular Weight: 130 kDa

Background: SaCas9 is a nuclease from *Staphylococcus aureus* that can be targeted to particular DNA sequences through a guide RNA that results in double-stranded breaks in DNA. Cas9 is part of the CRISPR/Cas9 gene-editing system that can create a DNA break at a specific location with the genome.

CRISPR (clustered regularly interspaced short palindromic repeat) is an adaptive immune system that provides protection against mobile genetic elements (viruses, transposable elements and conjugative plasmids). CRISPR clusters contain spacers, sequences complementary to antecedent mobile elements, and target invading nucleic acids. CRISPR clusters are transcribed and processed into CRISPR RNA (crRNA) Probable. In type II CRISPR systems correct processing of pre-crRNA requires a trans-encoded small RNA (tracrRNA), endogenous ribonuclease 3 (rnc) and this protein. The tracrRNA serves as a guide for ribonuclease 3-aided processing of pre-crRNA. Subsequently Cas9/crRNA/tracrRNA endonucleolytically cleaves linear or circular dsDNA target complementary to the spacer. The target strand not complementary to crRNA is first cut endonucleolytically, then trimmed by 3'-5' exonucleolytically. DNA-binding requires protein and both RNA species. Cas9 probably recognizes a short motif in the CRISPR repeat sequences (the PAM or protospacer adjacent motif) to help distinguish self versus nonself.

Immunogen: This antibody was raised against a recombinant protein within the N-terminal region of *Staphylococcus aureus* Cas9. This antibody should recognize Cas9 and dCas9 based on the antigen design.

Buffer: Purified IgG in PBS with 30% glycerol and 0.035% sodium azide. Sodium azide is highly toxic.

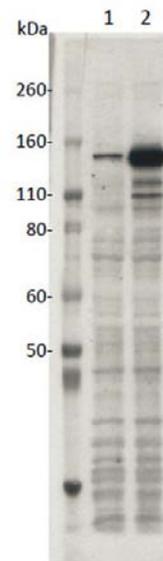
Application Notes:

Applications Validated by Active Motif:

WB: 0.5 - 2 µg/ml

This antibody is also available as an AbFlex® engineered recombinant antibody. For details on the corresponding AbFlex Recombinant Antibody, see Catalog No. 91279.

Storage and Guarantee: Some products may be shipped at room temperature. This will not affect their stability or performance. Avoid repeated freeze/thaw cycles by aliquoting items into single-use fractions for storage at -20°C for up to 2 years. Keep all reagents on ice when not in storage. This product is guaranteed for 12 months from date of receipt.



SaCas9 antibody (mAb) tested by Western blot.

Lane 1: OSC Drosophila ovary cell lysate, transfected with SaCas9 (WT);

Lane 2: OSC cell lysate transfected with SaCas9 (DN).