

# GenCRISPR™ SaCas9 Antibody (11C12), mAb, Mouse

## PRODUCT INFORMATION

### Description

Clustered regularly interspaced short palindromic repeats (CRISPR)/CRISPR-associated (Cas) protein 9 system provides a robust and multiplexable genome editing tool, enabling researchers to precisely manipulate specific genomic elements, and facilitating the elucidation of target gene function in biology and diseases. CRISPR/Cas9 genome editing allows for double-stranded DNA breaks at specific sequences to efficiently disrupt, excise, mutate, insert, or replace genes. The best characterized CRISPR-associated nucleases are the Cas9 proteins from *Streptococcus pyogenes* and *Staphylococcus aureus*. It is important that the precision of transfection and the level of Cas9 expression should be controlled strictly during the editing processes by using specific anti-CRISPR/Cas9 antibodies.

### Specificity

The product is specific for *Staphylococcus aureus* CRISPR/Cas9. This antibody binds with recombinant *Staphylococcus aureus* CRISPR/Cas9 protein in ELISA and Endogenous overexpressed *Staphylococcus aureus* CRISPR/Cas9 in immunofluorescence, western blot, immunoprecipitation.

### Concentration

0.5 mg/ml, lyophilized with PBS, pH 7.4, containing 0.02% sodium azide. (It may be customized for bulk orders.)

### Note

GenScript can customize this product per the customer's request including product size, buffer components, etc.

### Reconstitution

Reconstitute the lyophilized antibody with deionized water (or equivalent) to a final concentration of 0.5 mg/ml.

### Storage

The lyophilized product remains stable up to 1 year at -20 °C from date of receipt. Upon reconstitution, it can be stored for 2-3 weeks at 2-8 °C or for up to 12 months at -20 °C or below. Avoid repeated freezing and thawing cycles.

### Applications

Working concentrations for specific applications should be determined by the investigators. The appropriate concentration may be affected by secondary antibody affinity, antigen concentration, the sensitivity of the method of detection, temperature, the length of the incubations, and other factors. The suitability of this antibody for applications other than those

**Cat. No.:** A01951-40

**Host:** Mouse

**Size:** 40 µg

**Ig Subclass:** IgG2b,K

**Clone:** 11C12

**Immunogen:** Recombinant *Staphylococcus aureus* CRISPR/Cas9

**UniProt Accession:** J7RUA5

**Purification:** Protein A affinity column

**Conjugation:** Unconjugated

**Version:** 12/8/2017

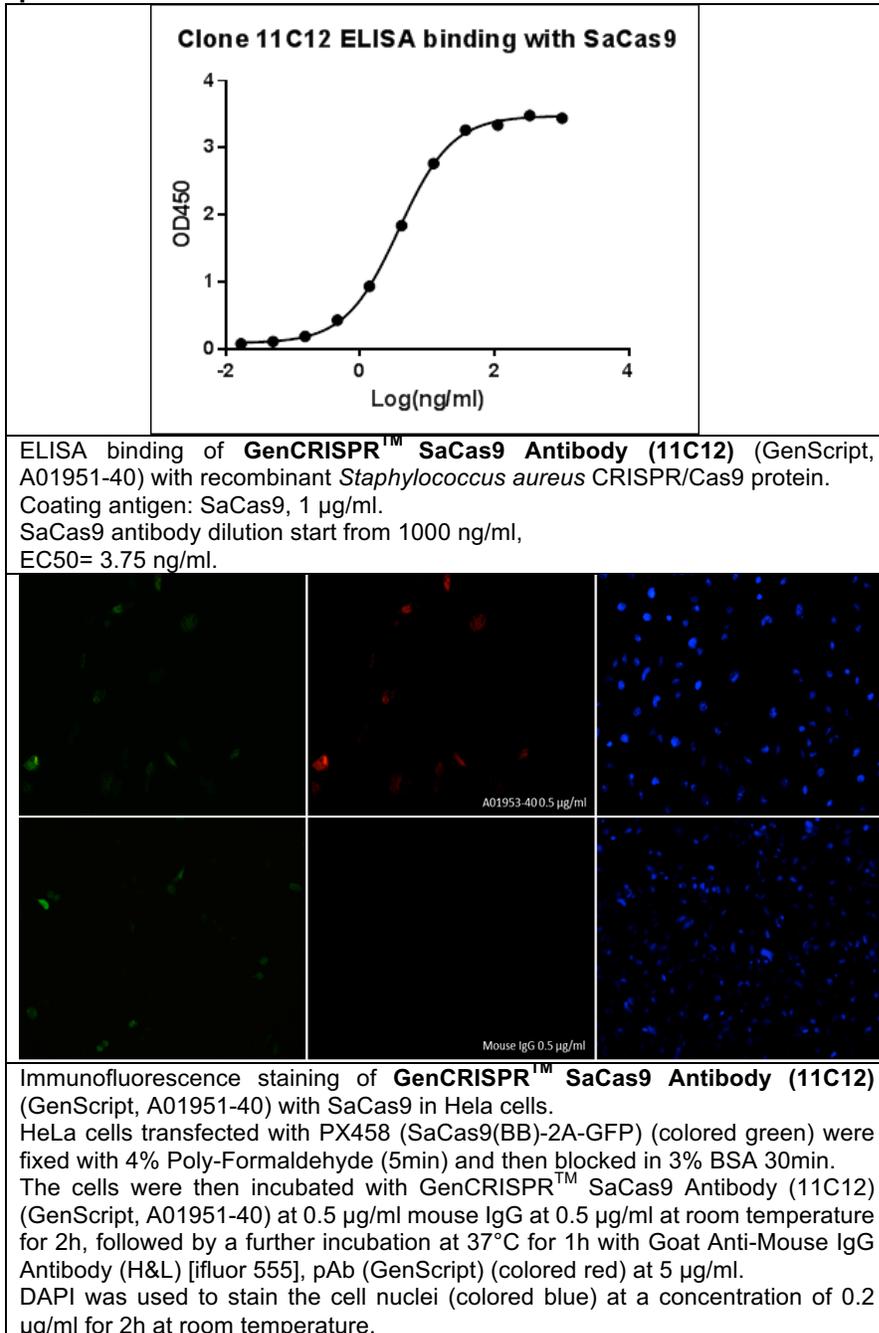
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listed below has not been determined. The following concentration ranges are recommended starting points for this product.

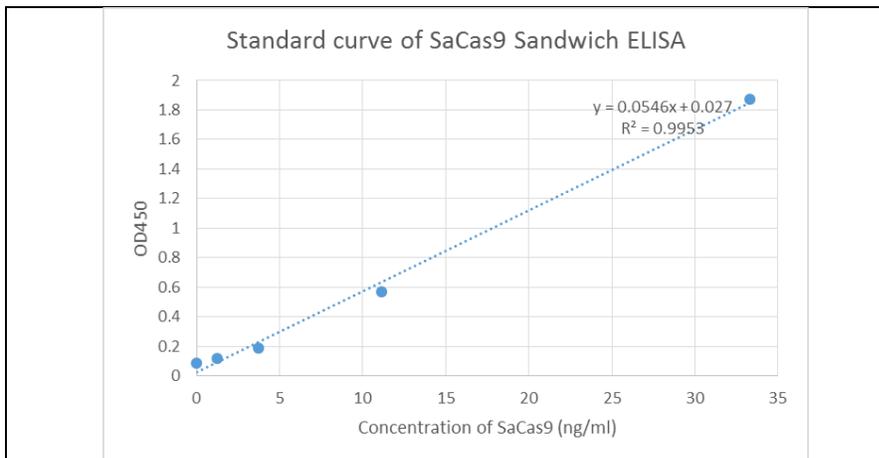
- ELISA detection: 0.005-1 µg/ml
- Immunofluorescence: 0.2-1 µg/ml
- Western blot: 1 µg/ml
- Other applications: user-optimized

**Example**

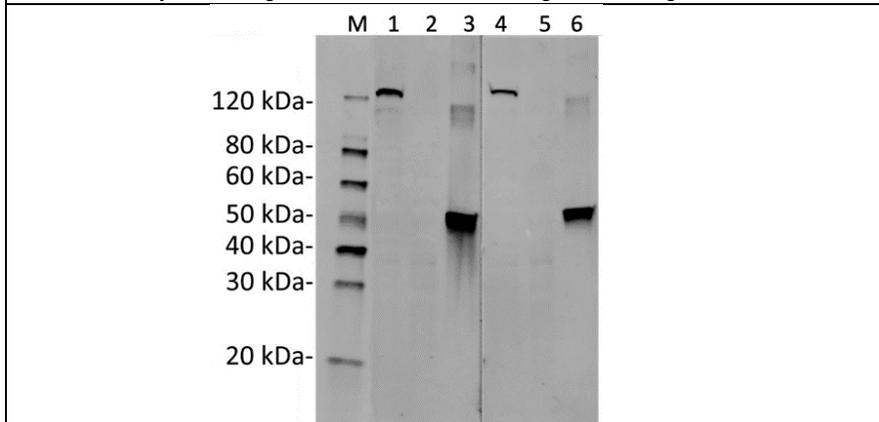


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Standard curve of SaCas9 Sandwich ELISA. The SaCas9 Sandwich ELISA assay is developed by using **GenCRISPR™ SaCas9 Antibody (11C12)** (GenScript, A01951-40) and **GenCRISPR™ SaCas9 Antibody (26H10)** (GenScript, A01952-40) as capture and detection antibody, respectively. These two antibodies recognize different epitopes. In this ELISA assay, **GenCRISPR™ SaCas9 Antibody (26H10)** (GenScript, A01952-40) was labeled with Biotin. GenScript can provide customized conjugation service for this product per customer's request. The sensitivity is <1 ng/ml and the detection range is 0-30 ng/ml.



Western Blot of HeLa transfected with PX458 (SaCas9(BB)-2A-GFP) or untransfected cell lysates with two independent antibodies: **GenCRISPR™ SaCas9 Antibody (11C12)** (GenScript, A01951-40) and **GenCRISPR™ SaCas9 Antibody (26H10)** (GenScript, A01952-40). The correlated pattern indicates the high specificity of these two antibodies.

Predicted band size: 124 kDa

Predicted band size of recombinant protein: 47.5 kDa

Loading:

Lane 1: 50 µg HeLa transfected with SaCas9(BB)-2A-GFP cell Lysate

Lane 2: 50 µg Untransfected HeLa cell Lysate

Lane 3: 40 ng SaCas9 recombinant protein

Lane 4: 50 µg HeLa transfected with SaCas9(BB)-2A-GFP cell Lysate

Lane 5: 50 µg Untransfected HeLa cell Lysate

Lane 6: 40 ng SaCas9 recombinant protein

Primary Antibody:

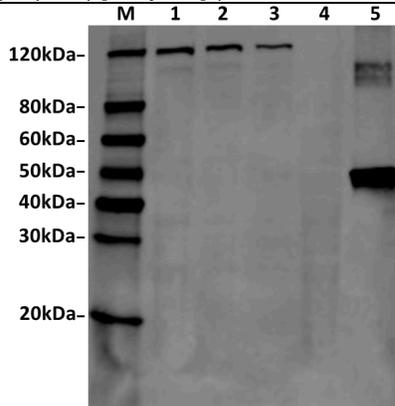
Lane 1~3: GenCRISPR™ SaCas9 Antibody (11C12) (GenScript, A01951-40) 1 µg/ml

Lane 4~6: GenCRISPR™ SaCas9 Antibody (26H10) (GenScript, A01952-40) 1 µg/ml

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Secondary Antibody:  
Goat anti-Mouse IgG (H&L) [IRDye<sup>800</sup>] (Licor,926-32211) 0.125 µg/ml



Western Blot of HeLa transfected with PX458 (SaCas9(BB)-2A-GFP) or untransfected cell lysates with **GenCRISPR™ SaCas9 Antibody (11C12)** (GenScript, A01951-40). The different concentration of cell lysates indicates the high affinity and sensitivity of the antibody.

Predicted band size: 124 kDa

Predicted band size of recombinant protein: 47.5 kDa

Loading:

Lane 1: 50 µg HeLa transfected with SaCas9(BB)-2A-GFP cell Lysate

Lane 2: 25 µg HeLa transfected with SaCas9(BB)-2A-GFP cell Lysate

Lane 3: 10 µg HeLa transfected with SaCas9(BB)-2A-GFP cell Lysate

Lane 4: 50 µg Untransfected HeLa cell Lysate

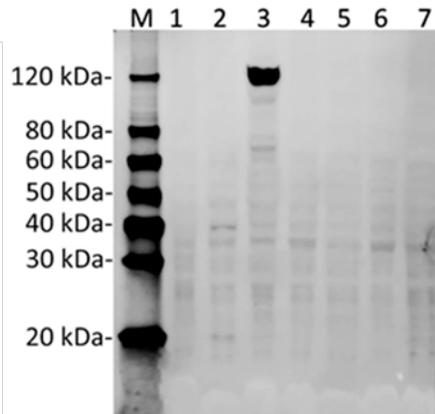
Lane 5: 40 ng SaCas9 recombinant protein

Primary Antibody:

GenCRISPR™ SaCas9 Antibody (11C12) (GenScript, A01951-40) 1 µg/ml

Secondary Antibody:

Goat anti-Mouse IgG (H&L) [IRDye<sup>800</sup>] (Licor,926-32211) 0.125 µg/ml



Western Blot analysis of HeLa transfected with various plasmids with **GenCRISPR™ SaCas9 Antibody (11C12)** (GenScript, A01951-40). The different HeLa transfected with various plasmids indicate the minimum cross reaction of the antibody.

Predicted band size: 124 kDa

Loading:

Lane 1: 50µg HeLa cell lysate transfected with StCas9(BB)-2A-GFP (G3ECR1, *Streptococcus thermophilus*)

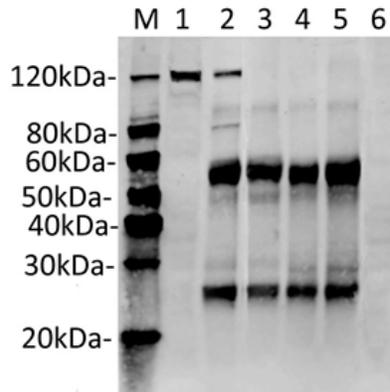
Lane 2: 50µg HeLa cell lysate transfected with pSpCas9(BB)-2A-GFP (PX458, Q99ZW2, *Streptococcus pyogenes serotype M1*)

Lane 3: 50µg HeLa cell lysate transfected with SaCas9(BB)-2A-GFP (J7RUA5, *Staphylococcus aureus*)

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Lane 4: 50µg HeLa cell lysate transfected with AsCpf1(BB)-2A-GFP (U2UMQ6, *Acidaminococcus sp. (strain BV3L6)*)  
 Lane 5: 50µg HeLa cell lysate transfected with FnCpf1(BB)-2A-GFP (A0Q7Q2, *Francisella tularensis subsp. novicida (strain U112)*)  
 Lane 6: 50µg HeLa cell lysate transfected with LbCpf1(BB)-2A-GFP (A0A182DWE3, *Lachnospiraceae bacterium ND2006*)  
 Lane 7: 50µg HeLa cell lysate (Non-transfected)  
 Primary Antibody:  
 GenCRISPR™ SaCas9 Antibody (11C12) (GenScript, A01951-40) 1 µg/ml  
 Secondary antibody:  
 Goat anti-Mouse IgG (H&L) [IRDye<sup>800</sup>] (Licor,926-32211) 0.125 µg/ml



Immunoprecipitation of SaCas9 from HeLa cell transfected with PX458 (SaCas9(BB)-2A-GFP) by using **GenCRISPR™ SaCas9 Antibody (11C12)** (GenScript, A01951-40).

Predicted band size: 124 kDa

Loading:

Lane 1: HeLa cell lysate transfected with PX458 (SaCas9(BB)-2A-GFP) 50µg (Input)

Lane 2: Protein A MagBeads (20µl) + Purified antibody of A01951-40 (10µg) + HeLa cell lysate transfected with PX458 (SaCas9(BB)-2A-GFP) (200µg)

Lane 3: Protein A MagBeads (20µl) + Purified antibody of A01951-40 (10µg) + HeLa cell lysate (200µg)

Lane 4: Protein A MagBeads (20µl) + Mouse IgG (10µg) + HeLa cell lysate transfected with PX458 (SaCas9(BB)-2A-GFP) (200µg)

Lane 5: Protein A MagBeads (20µl) + Mouse IgG (10µg) + HeLa Cell lysate (200µg)

Lane 6: HeLa Cell lysate (50µg)

Primary Antibody:

GenCRISPR™ SaCas9 Antibody (11C12) (GenScript, A01951-40) 1 µg/ml

Secondary antibody:

Goat anti-Mouse IgG (H&L) [IRDye<sup>800</sup>] (Licor,926-32211) 0.125 µg/ml

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