

## Product datasheet

# Anti-CRISPR-Cas9 antibody [EPR19795] ab203943

Recombinant RabMAb

6 Images

### Overview

<b>Product name</b>	Anti-CRISPR-Cas9 antibody [EPR19795]
<b>Description</b>	Rabbit monoclonal [EPR19795] to CRISPR-Cas9
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> IP, Flow Cyt, ICC/IF, WB
<b>Species reactivity</b>	<b>Reacts with:</b> Staphylococcus aureus
<b>Immunogen</b>	Recombinant fragment within Staphylococcus aureus CRISPR-Cas9 aa 1-400. The exact sequence is proprietary. (subsp. aureus). Database link: <a href="#">J7RUA5</a>
<b>Positive control</b>	WB: HEK-293T whole cell lysate transfected with Myc-His tagged CRISPR-Cas9 (J7RUA5, Staphylococcus aureus) vector. ICC/IF: HEK-293T cells transfected with GFP-tagged CRISPR-Cas9 (J7RUA5, Staphylococcus aureus) expression construct. Flow Cyt: HEK-293T cells transfected with GFP-tagged CRISPR-Cas9 (J7RUA5, Staphylococcus aureus) expression construct. IP: HEK-293T cell lysate transfected with GFP-tagged CRISPR-Cas9 (J7RUA5, Staphylococcus aureus) vector.
<b>General notes</b>	This product is a recombinant monoclonal antibody, which offers several advantages including: <ul style="list-style-type: none"> <li>- High batch-to-batch consistency and reproducibility</li> <li>- Improved sensitivity and specificity</li> <li>- Long-term security of supply</li> <li>- Animal-free production</li> </ul> For more information <a href="#">see here</a> .  Our RabMAb <sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMAb<sup>®</sup> patents</a> .

### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
<b>Storage buffer</b>	Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol, 0.05% BSA

<b>Purity</b>	Protein A purified
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	EPR19795
<b>Isotype</b>	IgG

## Applications

Our [Abpromise guarantee](#) covers the use of **ab203943** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

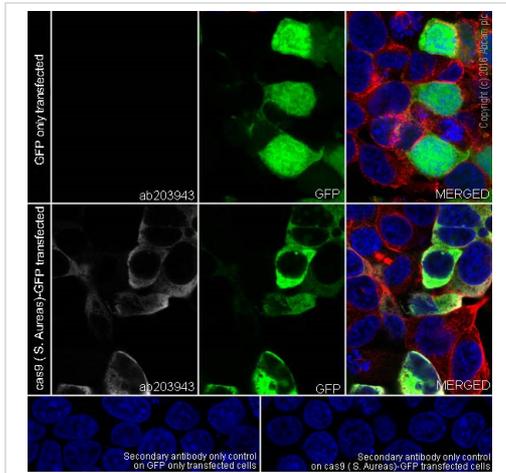
Application	Abreviews	Notes
IP		1/30.
Flow Cyt		1/500. <a href="#">ab172730</a> - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.
ICC/IF		1/100.
WB		1/5000. Detects a band of approximately 124 kDa (predicted molecular weight: 124 kDa).

## Target

### Relevance

[FUNCTION] 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.

## Images



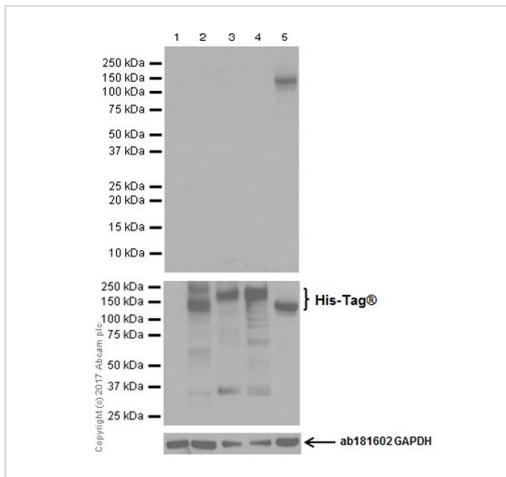
Immunocytochemistry/ Immunofluorescence - Anti-CRISPR-Cas9 antibody [EPR19795] (ab203943)

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HEK-293T (Human epithelial cell line from embryonic kidney) cells labeling CRISPR-Cas9 with ab203943 at 1/100 dilution, followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green).

Confocal image showing positive staining on HEK-293T cells transfected with a GFP-tagged CRISPR-Cas9 (J7RUA5, *Staphylococcus aureus subsp. aureus*) expression construct.

The nuclear counter stain is DAPI (blue). Tubulin is detected with ab195889 (Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594)) at 1/200 dilution (red).

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) at 1/1000 dilution.



Western blot - Anti-CRISPR-Cas9 antibody [EPR19795] (ab203943)

**All lanes** : Anti-CRISPR-Cas9 antibody [EPR19795] (ab203943) at 1/5000 dilution

**Lane 1** : HEK-293T whole cell lysate (Human epithelial cell line from embryonic kidney) transfected with an empty vector containing Myc-His tag (vector control)

**Lane 2** : HEK-293T whole cell lysate transfected with a Myc-His tagged CRISPR-Cas9 (A1IQ68, Neisseria meningitidis serogroup A / serotype 4A (strain Z2491)) vector

**Lane 3** : HEK-293T whole cell lysate transfected with a Myc-His tagged CRISPR-Cas9 (G3ECR1, Streptococcus thermophilus) vector

**Lane 4** : HEK-293T whole cell lysate transfected with a Myc-His tagged CRISPR-Cas9 (Q03Jl6, Streptococcus thermophilus (strain ATCC BAA-491/ LMD-9)) vector

**Lane 5** : HEK-293T whole cell lysate transfected with a Myc-His tagged CRISPR-Cas9 (J7RUA5, *Staphylococcus aureus subsp. aureus*) vector

Lysates/proteins at 20 µg per lane.

## Secondary

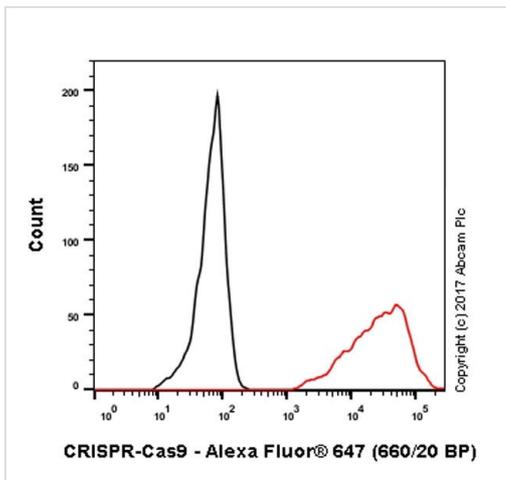
**All lanes** : Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/100000 dilution

**Predicted band size:** 124 kDa

**Observed band size:** 124 kDa

**Exposure time:** 1 second

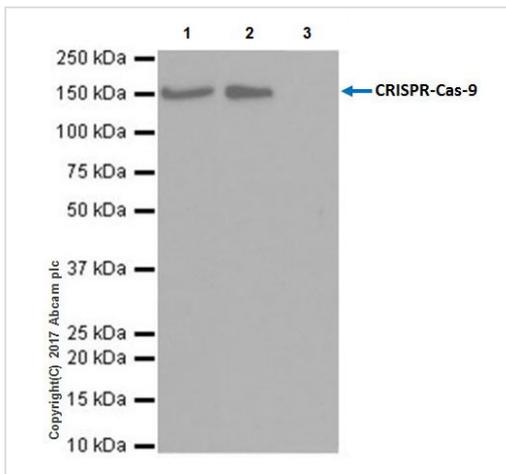
Blocking/Dilution buffer: 5% NFDM/TBST.



Flow Cytometry - Anti-CRISPR-Cas9 antibody  
[EPR19795] (ab203943)

Flow cytometric analysis of 4% paraformaldehyde-fixed HEK-293T (Human epithelial cell line from embryonic kidney) cells transfected with a GFP tagged CRISPR-Cas9 (J7RUA5, *Staphylococcus aureus subsp. aureus*) vector, labeling CRISPR-Cas9 with ab203943 at 1/500 dilution (red) compared with a rabbit monoclonal IgG isotype control ([ab172730](#); black). Goat anti rabbit IgG (Alexa Fluor® 647) at 1/2000 dilution was used as the secondary antibody.

Note: The image is obtained by gating the GFP-tag positive population.



Immunoprecipitation - Anti-CRISPR-Cas9 antibody  
[EPR19795] (ab203943)

CRISPR-Cas9 was immunoprecipitated from 0.35 mg of HEK-293T (Human epithelial cell line from embryonic kidney) whole cell lysate transfected with a GFP tagged CRISPR-Cas9 (J7RUA5, *Staphylococcus aureus subsp. aureus*) vector, with ab203943 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab203943 at 1/2000 dilution. VeriBlot for IP Detection Reagent (HRP) ([ab131366](#)), was used for detection at 1/10000 dilution.

Lane 1: HEK-293T whole cell lysate transfected with a GFP tagged CRISPR-Cas9 (J7RUA5, *Staphylococcus aureus subsp. aureus*) vector, 10 µg (Input).

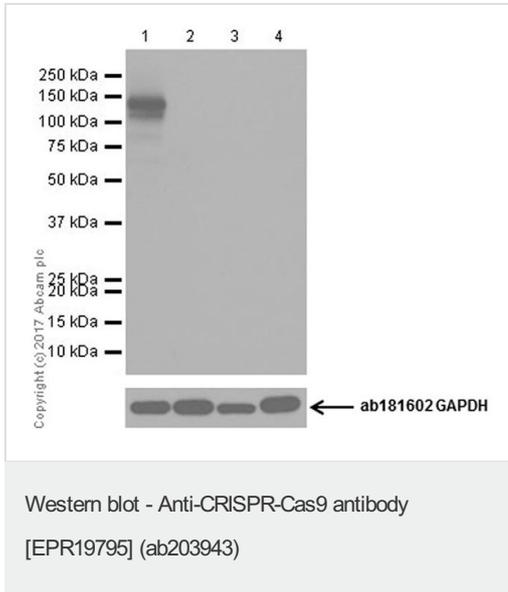
Lane 2: ab203943 IP in HEK-293T whole cell lysate transfected with a GFP tagged CRISPR-Cas9 (J7RUA5, *Staphylococcus aureus subsp. aureus*) vector.

Lane 3: Rabbit monoclonal IgG ([ab172730](#)) instead of ab203943 in

HEK-293T whole cell lysate transfected with a GFP tagged CRISPR-Cas9 (J7RUA5, *Staphylococcus aureus subsp. aureus*) vector.

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 10 seconds.



**All lanes** : Anti-CRISPR-Cas9 antibody [EPR19795] (ab203943) at 1/5000 dilution

**Lane 1** : HEK-293 whole cell lysate (Human epithelial cell line from embryonic kidney) transfected with a Myc-His tagged CRISPR-Cas9 (J7RUA5, *Staphylococcus aureus subsp. aureus*) vector

**Lane 2** : HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate

**Lane 3** : NIH/3T3 (Mouse embryonic fibroblast cell line) whole cell lysate

**Lane 4** : Rat embryo lysate

Lysates/proteins at 20 µg per lane.

#### Secondary

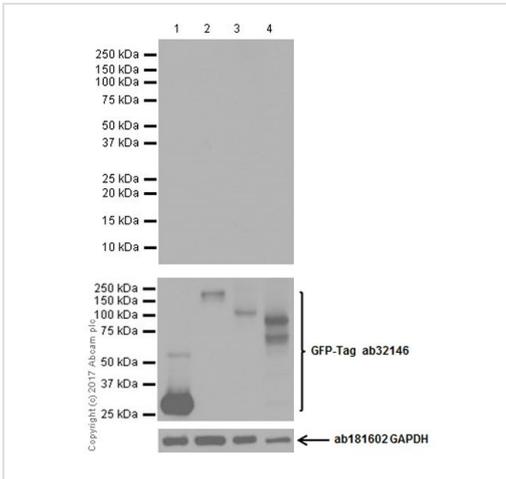
**All lanes** : Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

**Predicted band size:** 124 kDa

**Observed band size:** 124 kDa

**Exposure time:** 1 second

Blocking/Dilution buffer: 5% NFDM/TBST.



Western blot - Anti-CRISPR-Cas9 antibody [EPR19795] (ab203943)

**All lanes :** Anti-CRISPR-Cas9 antibody [EPR19795] (ab203943) at 1/5000 dilution

**Lane 1 :** HEK-293T whole cell lysate (Human epithelial cell line from embryonic kidney transfected with an empty vector containing GFP-Myc tag (vector control)

**Lane 2 :** HEK-293T whole cell lysate transfected with a GFP-Myc tagged CRISPR-Cas9 (Q99ZW2, Streptococcus pyogenes serotype M1) vector

**Lane 3 :** HEK-293T whole cell lysate transfected with a GFP-Myc tagged CRISPR-Cas9 (G3ECR1, Streptococcus thermophilus, aa1-800) vector

**Lane 4 :** HEK-293T whole cell lysate transfected with a GFP-Myc tagged CRISPR-Cas9 (G3ECR1, Streptococcus thermophilus, aa801-1409) vector

Lysates/proteins at 20 µg per lane.

### Secondary

**All lanes :** Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

**Predicted band size:** 124 kDa

**Observed band size:** 124 kDa

**Exposure time:** 1 second

Blocking/Dilution buffer: 5% NFD/MTBST.

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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