Product Datasheet

**Anti-CRISPR-Cas9 antibody [7A9-3A3] ab191468**

**Overview**
- **Product name**: Anti-CRISPR-Cas9 antibody [7A9-3A3]
- **Description**: Mouse monoclonal [7A9-3A3] to CRISPR-Cas9
- **Host species**: Mouse
- **Tested applications**: Suitable for: ICC/IF, IHC - Wholemount, WB
- **Species reactivity**: Reacts with: Streptococcus pyogenes
- **Immunogen**: Recombinant fragment corresponding to Streptococcus pyogenes CRISPR-Cas9 (N terminal).
- **Positive control**: WB: S2 cells transfected with CRISPR-Cas9 ICC-IF: NIH/3T3-Cas9 transfected cells.
- **General notes**: This antibody clone is manufactured by Abcam.

If you require this antibody in a particular buffer formulation or a particular conjugate for your experiments, please contact orders@abcam.com or you can find further information here.

**Properties**
- **Form**: Liquid
- **Storage instructions**: Shipped at 4°C. Store at +4°C short term (1-2 weeks). Store at -20°C long term.
- **Storage buffer**: pH: 7.4
  - Preservative: 0.02% Sodium azide
  - Constituent: PBS
  - Some batches contain 6.97% L-Arginine as a stabilizing agent. For lot-specific buffer information, please contact our Scientific Support team.
- **Purity**: Protein G purified
- **Clonality**: Monoclonal
- **Clone number**: 7A9-3A3
- **Isotype**: IgG1
- **Light chain type**: kappa

**Applications**
Our Abpromise guarantee covers the use of ab191468 in the following tested applications.
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.

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

**All lanes**: Anti-CRISPR-Cas9 antibody [7A9-3A3] (ab191468) at 5 µg/ml

**Lane 1**: S2 non-transfected cell lysate

**Lane 2**: S2 cells transfected with CRISPR-Cas9 plasmid

Lysates/proteins at 20 µg per lane.

**Secondary**

**All lanes**: Goat polyclonal to Mouse IgG - H&L - Pre-Adsorbed (HRP) at 1/5000 dilution

Developed using the ECL technique.

Performed under reducing conditions.
Predicted band size: 160 kDa
Observed band size: 160 kDa

Exposure time: 4 minutes

We recommend using 3% milk as the blocking agent in Western Blot.

ab191468 stained in NIH3T3 cells. Untreated and Cas9 transfected cells were fixed with 4% paraformaldehyde (10min) at room temperature and incubated with PBS containing 10% goat serum, 0.3 M glycine, 1% BSA and 0.1% triton for 1h at room temperature to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody ab191468 at 10µg/ml and ab6046 (Rabbit polyclonal to beta tubulin) at 1ug/ml overnight at +4°C. The secondary antibodies were ab150117 (colored green) used at 1 ug/ml and ab150087 (pseudo-colored red) used at 2ug/ml for 1hour at room temperature. DAPI was used to stain the cell nuclei (colored blue) at a concentration of 1.43µM for 1hour at room temperature.

Please note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE"

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit https://www.abcam.com/abpromise or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors