

Datasheet for ABIN5563964

Recombinant anti-CRISPR-Cas9 antibody[Go to Product page](#)**1** Image

Overview

Quantity:	100 µg
Target:	CRISPR-Cas9
Reactivity:	Streptococcus pyogenes
Host:	Mouse
Antibody Type:	Recombinant Antibody
Clonality:	Monoclonal
Conjugate:	Un-conjugated
Application:	Western Blotting (WB), ELISA

Product Details

Brand:	AbFlex®
Isotype:	IgG2a
Specificity:	Human
Characteristics:	<p>AbFlex™ Cas9 antibody was expressed as full-length IgG with mouse immunoglobulin heavy and light chains (IgG2a isotype) in mammalian 293 cells. Cas9 is a nuclease from <i>Streptococcus pyogenes</i> 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</p>

Product Details

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.

Purification: Ni-NTA

Target Details

Target: CRISPR-Cas9

Alternative Name: Cas9

Molecular Weight: 160 kDa

Application Details

Application Notes: Bead-based ELISA: 9 - 75 ng/mL

Comment: AbFlex® Recombinant Antibodies defined antibodies for highly specific, reproducible performance.

AbFlex® antibodies are recombinant antibodies (rAbs) that have been generated using defined DNA sequences to produce highly specific, reproducible antibodies. The unique advantages of the AbFlex® antibody are its flexible labeling and purification options. Each AbFlex® antibody contains a Sortase recognition motif (LPXTG) to covalently add fluorophores, enzymatic substrates (HRP, AP...etc), peptides, DNA, drugs or other labels to the antibody in a directed and reproducible manner using our Sortag-IT Labeling Kits. Every antibody also contains a 6xHis tag, which can be used with nickel-based purification systems, and an avidin tag sequence for enzymatic biotin conjugation using the biotin ligase, BirA.

AbFlex® antibodies are specifically labeled at the end of the constant region of the heavy chain to avoid interference with antigen recognition and functionality. This is important as it ensures the labeling process maintains the integrity of the antibody so signal is not diminished as a

Application Details

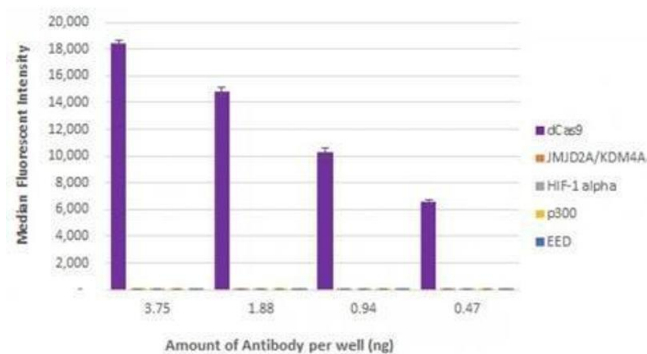
result of non-functional antibodies. In contrast, commonly used chemical labeling methods add labels to the antibody in a random fashion. The randomness of this process has a high potential to block the antigen-binding site and render the antibody ineffective. Chemical labeling can also deposit labels on the Fc region of the antibody which has the potential to obstruct interactions with protein A.

Restrictions: For Research Use only

Handling

Format:	Liquid
Buffer:	Purified IgG in 140 mM Hepes, pH 7.5, 70 mM NaCl, 35 mM NaOAc, 0.035 % sodium azide, 30 % glycerol
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	-20 °C

Images



Luminex Assay

Image 1. Cas9 antibody (rAb) tested by bead-based specificity analysis. Luminex bead-based specificity analysis was used to confirm the specificity of Cas9 antibody (rAb) antibody for Cas9. Various proteins were conjugated to MagPlex Luminex beads and incubated with various amounts of Cas9 antibody (rAb). Protein-bound antibody was detected with anti-mouse IgG-Phycoerythrin and read in a Luminex instrument.