

Anti-CRISPR-Cas9 SP Rabbit Monoclonal Antibody

Catalog # ABO14199

Product Information

Application	WB, IHC, IF, ICC, FC
Primary Accession	Q99ZW2
Host	Rabbit
Isotype	Rabbit IgG
Clonality	Monoclonal
Format	Liquid
Description	Anti-CRISPR-Cas9 SP Rabbit Monoclonal Antibody . Tested in WB, IHC, ICC/IF, Flow Cytometry applications. This antibody reacts with Recombinant fragment, Streptococcus pyogenes.

Additional Information

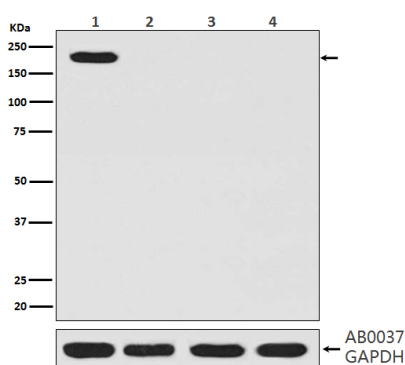
Other Names	CRISPR-associated endonuclease Cas9/Csn1 {ECO:0000255 HAMAP-Rule:MF_01480}, 3.1.-.- {ECO:0000255 HAMAP-Rule:MF_01480}, SpCas9, SpyCas9, cas9 {ECO:0000255 HAMAP-Rule:MF_01480, ECO:0000303 PubMed:22745249}
Calculated MW	158441
Application Details	WB 1:1000-1:5000 IHC 1:50-1:200 ICC/IF 1:50-1:200 FC 1:50
Source	Bacteria
Contents	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
Clone Names Immunogen	Clone: ABCI-3 Recombinant fragment derived from Streptococcus pyogenes.
Purification	Affinity-chromatography
Storage	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

Protein Information

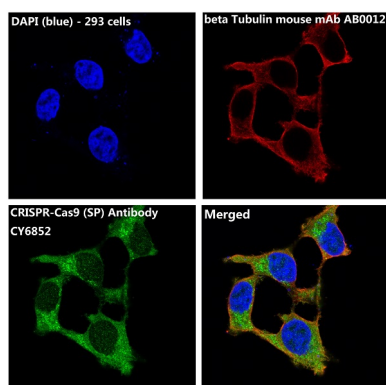
Name	cas9 {ECO:0000255 HAMAP-Rule:MF_01480, ECO:0000303 PubMed:22745249}
Function	CRISPR (clustered regularly interspaced short palindromic repeat) is an

adaptive immune system that provides protection against mobile genetic elements (viruses, transposable elements and conjugative plasmids) (PubMed:[21455174](#)). 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). 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; Cas9 only stabilizes the pre-crRNA:tracrRNA interaction and has no catalytic function in RNA processing (PubMed:[24270795](#)). Subsequently Cas9/crRNA/tracrRNA endonucleolytically cleaves linear or circular dsDNA target complementary to the spacer; Cas9 is inactive in the absence of the 2 guide RNAs (gRNA). The target strand not complementary to crRNA is first cut endonucleolytically, then trimmed 3'-5' exonucleolytically. DNA-binding requires protein and both gRNAs, as does nuclease activity. Cas9 recognizes the protospacer adjacent motif (PAM) in the CRISPR repeat sequences to help distinguish self versus nonself, as targets within the bacterial CRISPR locus do not have PAMs. DNA strand separation and heteroduplex formation starts at PAM sites; PAM recognition is required for catalytic activity (PubMed:[24476820](#)). Confers immunity against a plasmid with homology to the appropriate CRISPR spacer sequences (CRISPR interference) (PubMed:[21455174](#)).

Images



Western blot analysis of CRISPR-Cas9 SP expression in (1) 293T cell lysate transfected with CRISPR-Cas9; (2) 293T cell lysate; (3) 3T3 cell lysate; (4) PC12 cell lysate.



Immunofluorescent analysis of 293T cells transfected with CRISPR-SpCas9, using CRISPR-Cas9 SP Antibody.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.