

Anti-Cas9 (RABBIT) Antibody Peroxidase Conjugated
Cas 9 Antibody Peroxidase Conjugated
Catalog # ASR5828**Specification**

Anti-Cas9 (RABBIT) Antibody Peroxidase Conjugated - Product Information

Host	Rabbit
Conjugate	Peroxidase (Horseradish)
Clonality	Polyclonal
Application	WB, E, I, LCI
Application Note	Cas9 Peroxidase Conjugated Antibody has been tested for use in ELISA and suitable in Immunofluorescence and western blotting. Specific conditions for reactivity should be optimized by the end user. Expect a band ~158 kDa in size corresponding to Cas-9 protein by western blotting in the appropriate cell lysate or extract.
Physical State	Lyophilized
Buffer	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Immunogen	Cas-9 affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to a region near the C-terminal of Streptococcus pyogenes Cas-9 protein.
Reconstitution Volume	100 µL
Reconstitution Buffer	Restore with deionized water (or equivalent)
Stabilizer	10 mg/mL Bovine Serum Albumin (BSA) - Immunoglobulin and Protease free
Preservative	0.01% (w/v) Gentamicin Sulfate. Do NOT add Sodium Azide!

Anti-Cas9 (RABBIT) Antibody Peroxidase Conjugated - Additional Information**Other Names**

901176

Purity

Anti-Cas9 antibody is directed against Streptococcus pyogenes Cas-9. The product was affinity purified from monospecific antiserum by immunoaffinity chromatography.

Storage Condition

Store vial at 4° C prior to restoration. For extended storage aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

Precautions Note

This product is for research use only and is not intended for therapeutic or diagnostic applications.

Anti-Cas9 (RABBIT) Antibody Peroxidase Conjugated - 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).

Anti-Cas9 (RABBIT) Antibody Peroxidase Conjugated - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Anti-Cas9 (RABBIT) Antibody Peroxidase Conjugated - Images**Anti-Cas9 (RABBIT) Antibody Peroxidase Conjugated - Background**

The Clustered Regularly Interspaced Short Palindromic Repeats (CRISPR) and CRISPR Associated (Cas) system was discovered in bacteria as a defense against foreign DNA, even being believed to act as a sort of prokaryotic immune system. The Cas9 protein is becoming a useful tool in the field of genomic editing for its ability to induce site-directed double strand breaks in DNA. It can cleave almost any sequence complementary to the guide RNA and has recently been used for modifying the genome of human embryos for the first time.