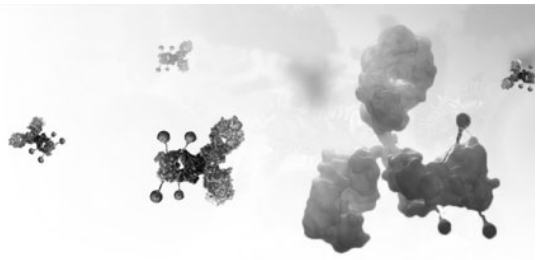

Anti-Cas9 monoclonal antibody (DCAB-WB156)

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

PRODUCT INFORMATION

Product Overview	This clone can be used for detection of transfected levels of total Cas9 protein; It recognizes Cas9 variants dCas9 of Streptococcus pyogenes origin by WB, IP, IF, IHC and FC.
Specificity	Cas9 protein from Streptococcus pyogene serotype M1.
Immunogen	Recombinant Cas9 within the N-terminal region of Streptococcus pyogene.
Isotype	IgG1, κ
Source/Host	Mouse
Species Reactivity	N/A
Purification	Protein G purified
Conjugate	Unconjugated
Applications	WB, IP, IF, IHC, FC
Concentration	1 mg/ml
Size	100 µl
Buffer	PBS
Preservative	0.02% Sodium Azide
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

BACKGROUND

Introduction	CRISPR (clustered regularly interspaced short palindromic repeat) is an adaptive immune

45-1 Ramsey Road, Shirley, NY 11967, USA
Email:info@creative-diagnostics.com
Tel: 1-631-624-4882 Fax: 1-631-938-8221

	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.
Keywords	Cas9; CRISPR-associated endonuclease Cas9/Csn1; CRISPR-Cas9/Csn1; csn1; SpyCas9; CRISPR; CRISPR-associated protein 9 nuclease

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Email:info@creative-diagnostics.com
Tel: 1-631-624-4882 Fax: 1-631-938-8221