

# Gene Snipper™ SaCas9 Null NLS

**ALTERNATIVE NAMES:** Nuclease-deficient saCas9; CRISPR-associated endonuclease Cas9 from *Staphylococcus aureus*

**CATALOG #:**  
 M1283-50            50 pmol (50 µl)  
 M1283-250        250 pmol (25 µl)

**SOURCE:** Recombinant *E. coli*

**CONCENTRATION:**  
 M1283-50            1000 nM  
 M1283-250        10 µM

**ENDOTOXIN LEVEL:** <1.0 EU/µg of recombinant protein as determined by the LAL method.

**FORM:** Enzyme supplied with 10X Reaction Buffer

**COMPONENTS:**

Product Name	M1283-50	M1283-250	Part No.
SaCas9 Null NLS	1000 nM	10 µM	M1283-XX-1
10X Cas9 Reaction Buffer	1.25 ml	1.25 ml	M1283-XX-2

**ENZYME STORAGE BUFFER:** 10 mM Tris-HCl (pH 7.4), 0.1 mM EDTA, 1 mM DTT, 300 mM NaCl, and 50% (v/v) Glycerol

**10X CAS9 REACTION BUFFER:** 200 mM HEPES, 50 mM MgCl<sub>2</sub>, 1 M NaCl, 1 mM EDTA, pH 6.5

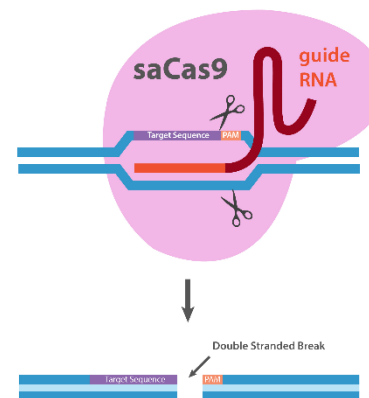
**STORAGE CONDITIONS:** Store all components at -20°C. Avoid repeated freeze/thaw cycles. All components are stable for 1 year from the date of shipping when stored and handled properly.

**DESCRIPTION:** The Clustered Regularly Interspaced Short Palindromic Repeats (CRISPR)/Cas9 system is the latest RNA-guided, endonuclease tool in genome editing which allows for very specific genomic disruption and replacement.

The saCas9 Null Mutant Protein is created by mutating both cleavage domains of the wild type saCas9. Such a saCas9 protein retains its ability to bind to genomic DNA through gRNA:genomic DNA base pairing, however, the saCas9 Null Mutant does not introduce any genome modifications. Therefore, this protein can provide a useful negative control for CRISPR experiments. In addition, binding of the Null Mutant can act as a roadblock to hinder transcription, thus offering a useful tool to achieve reversible knock-down of gene expression.

The Cas9 nuclease from the bacteria *Staphylococcus aureus*, abbreviated saCas9, is gaining popularity as an alternative to spCas9 due to its relatively smaller size. The saCas9 PAM sequence is 5'-NNGRRN (preferably 5'-NNGRRT). saCas9 NLS Null Mutant contains a SV40 T antigen nuclear localization sequence (NLS) on the C-terminus of the protein.

**REACTION CONDITIONS:** Use 1X Cas9 Reaction Buffer and incubate at 37°C



**RELATED PRODUCTS:**

- Gene Snipper™ Cas9 Protein (Cat. No. M1094-50, -250)
- Gene Snipper™ Cas9 NLS (Cat. No. M1095-50, -250)
- Gene Snipper™ Cas9 Nickase (D10A) (Cat. No. M1096-50, -250)
- Gene Snipper™ Cas9 (D10A) NLS (Cat. No. M1097-50, -250)
- Gene Snipper™ Cas9 Nickase (H840A) (Cat. No. M1098-50, -250)
- Gene Snipper™ Cas9 (H840A) NLS (Cat. No. M1099-50, -250)
- Gene Snipper™ Cas9 Null (Cat. No. M1100-50, -250)
- Gene Snipper™ Cas9 Null NLS (Cat. No. M1103-50, -250)
- Gene Snipper™ CRISPR Activity Kit (Cat. No. K1104-25)
- Gene Snipper™ SaCas9 Protein (Cat. No. M1280-50, -250)
- Gene Snipper™ SaCas9 NLS (Cat. No. M1281-50, -250)
- Gene Snipper™ SaCas9 Null (Cat. No. M1282-50, -250)
- Gene Snipper™ SaCas9 Null NLS (Cat. No. M1280-50, -250)
- Gene Snipper™ Cas9 GFPNLS (Cat. No. M1284-50, -250)
- Gene Snipper™ Cas9 Nickase GFPNLS (Cat. No. M1285-50, -250)
- Gene Snipper™ Cas9 GFPNull NLS (Cat. No. M1286-50, -250)

**FOR RESEARCH USE ONLY! Not to be used on humans.**