

Gene Snipper™ SaCas9 Protein

CATALOG #: M1280 50 pmol (50 µl)
M1280-250 250 pmol (25 µl)

ALTERNATIVE NAMES: CRISPR-associated endonuclease Cas9 from *Staphylococcus aureus*

SOURCE: Recombinant *E. coli*

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

CONCENTRATION: M1280-50 1000 nM
M1280-250 10 µM

FORM: Enzyme supplied with 10X Reaction Buffer

COMPONENTS:

Product Name	M1280-50	M1280-250	Part No.
SaCas9 Protein	1000 nM	10 µM	M1280-XX-1
10X Cas9 Reaction Buffer	1.25 ml	1.25 ml	M1280-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

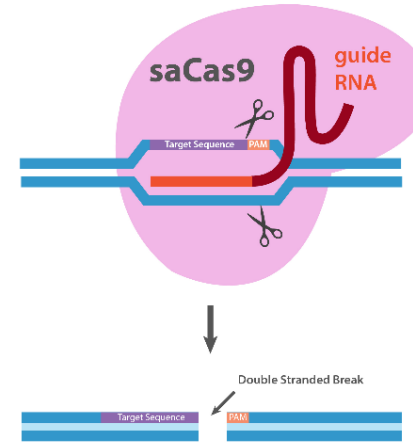
10X CAS9 REACTION BUFFER: 200 mM HEPES, 50 mM MgCl₂, 1 M NaCl, 1 mM EDTA, pH 6.5

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 Cas9 nuclease serves to unwind the genomic DNA duplex next to conserved protospacer adjacent motifs (PAMs) and homes in on its target sequence, which is recognized by a complementary single-guide RNA. The resulting double-stranded break gets repaired by the non-homologous end joining (NHEJ) pathway, leading to a disruption in the open reading frame of the targeted gene. Alternatively, by supplying a suitable repair template, any desired point mutation can be introduced at the break point via homology-directed repair.

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).

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.