BioVision

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For research use only

Gene Snipper™ Cas9 GFP NLS

ALERNATIVE NAMES: Cas9-GFP; CRISPR-associated endonuclease Cas9 from *Streptococcus pyrogenes*

CATALOG #:

M1284-50	50 pmol (50 µl)
M1284-250	250 pmol (25 µl)

SOURCE: Recombinant *E. coli* and contains a His-tag

CONCENTRATION:

M1284-50	1000 nM
M1284-250	10 µM

FORM: Enzyme supplied with 10X Reaction Buffer

COMPONENTS:

Product Name	M1284-50	M1284-250	Part No.
Cas9 GFP NLS	1000 nM	10 µM	M1284-XX-1
10X Cas9 Reaction Buffer	1.25 ml	1.25 ml	M1284-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 $MgCl_2$, 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.

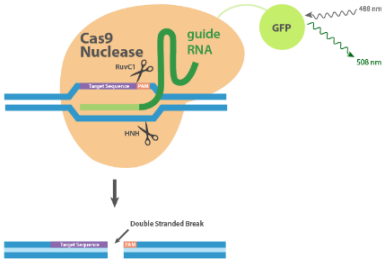
The fusion of Cas9 Nuclease NLS to GFP allows for visual confirmation of transfection as well as subsequent verification of Cas9 clearance from the cells. Cas9 Nuclease-GFP can also be used for FACS applications and screening. Cas9 Nuclease-GFP NLS contains a SV40 T antigen nuclear localization sequence (NLS) on the C-terminus of the protein.

PROTOCOL*: In vitro* digestion of DNA

1. Add the following components to a sterile, nuclease-free tube sitting on ice:

Components	Volume	Final Concentration
sgRNA (300 nM)	3 µl	~30 nM
Cas9 Nuclease GFP NLS Protein (1000 nM)	1 µl	~30 nM
10X Cas9 Reaction Buffer	3 µl	1X
Nuclease-free H_2O	20 µl -	-
Pre-Incubate for 15 minutes at 37°C		
Substrate DNA (30 nM)	3 µl	3 nM
Total Volume	30 µl	-

2. Collect all components by a brief centrifugation. Incubate the reaction at 37°C for 1 hour
3. Analyze fragments via agarose gel electrophoresis. *Note: The substrate DNA: sgRNA: Cas9 molar ratio must be kept at 1:10:10 for highest efficiency.*



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)

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