

Recombinant NLS-Cas9-EGFP Fusion Protein, His-tagged

Cat. No. NLS-Cas9-EGFP-1 **Lot. No.** (See product label)

SPECIFICATION

Product Overview NLS-Cas9-EGFP is a fusion Protein produced by expression from an E. coli strain. It contains a nuclear localization signal (NLS) on its N terminal end, and an EGFP and a 6x(His) sequence on the C terminal end.

Source E.coli

Description Cas9 nuclease is an RNA-guided endonuclease that can catalyze cleavage of double stranded DNA. This kind of targeted nuclease is a powerful tool for genome editing with high precision. Cas9 Protein forms a highly stable ribonucleoProtein (RNP) complex with the guide RNA (gRNA) component of the CRISPR/Cas9 system. When Cas9 is expressed with an NLS sequence, the Cas9 RNP complex can localize to the nucleus immediately upon entering the cell. There is no requirement for in vivo transcription or translation, which improves the efficiency of this method over plasmid-based systems. Additionally, the Cas9 RNP complex is rapidly cleared from the cells minimizing the chance of off-target cleavage when compared to other systems. The EGFP tag can be used as a reporter for tracking or sorting transfected cells, which enables enrichment of cell populations for desired genome edits via fluorescence activated cell sorting (FACS). It significantly reduces the labor and cost associated with single cell cloning and genotyping in genome editing applications.

Applications Screening for highly efficient and specific targeting gRNAs by in vitro DNA cleavage.
In vivo gene editing when combined with a specific gRNA by electroporation or injection.
Enrichment of cell populations for desired genome edits via EGFP-based FACS.

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Storage	Stored at -20 centigrade.
Concentration	1000 nM is equal to 190 ng/μL.
Storage Buffer	Supplied with 1× storage buffer (10 mM Tris, 300 mM NaCl, 0.1 mM EDTA, 1 mM DTT, 50% Glycerol pH7.4 at 25 centigrade)

GENE INFORMATION

Synonyms	NLS-Cas9-EGFP

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