Datasheet for ABIN3188227

Cas9 Null Mutant NLS Protein

Overview

Quantity:	8 µg
Application:	Genome Editing with Engineered Nucleases (GEEN)

Product Details

Characteristics:	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 Null Mutant NLS Protein (also referred to as Double Mutant) is created by mutating both cleavage domains of the wild type Cas9 (D10A and H840A) and adding a SV40 T antigen nuclear localization sequence (NLS) on the C-terminus of the protein. Such a Cas9 protein retains its ability to bind to genomic DNA through gRNA:genomic DNA base pairing, however, unlike Cas9 Nuclease and Cas9 Nickase, where permanent gene disruption can be achieved, the Cas9 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.
Components:	Enzyme supplied with 10X Reaction Buffer

Application Details

Restrictions:	For Research Use only

Handling

Concentration:	1000 nM
Buffer:	10 mM Tris-HCl (pH 7.4), 0.1 mM EDTA, 1 mM DTT, 300 mM NaCl, and 50 % (v/v) Glycerol.
Storage:	-20 °C

Publications

Product cited in:	Johnson, Drugan, Miller, Evans: "38" in: , Vol. 1363, Issue Nucleic acids research, pp. 28-39, (1991)