

Resource Summary Report

Generated by [RRID](#) on Aug 17, 2026

pET-21a_3xNLS_SpCas9_protein_expression

RRID:Addgene_114365

Type: Plasmid

Proper Citation

RRID:Addgene_114365

Plasmid Information

URL: <http://www.addgene.org/114365>

Proper Citation: RRID:Addgene_114365

Insert Name: 3xNLS_SpCas9

Organism: Synthetic

Bacterial Resistance: Ampicillin

Defining Citation: [PMID:30911135](#)

Vector Backbone Description: Backbone Size:5400; Vector Backbone:pET-21 a; Vector Types:Bacterial Expression, CRISPR; Bacterial Resistance:Ampicillin

Comments: This plasmid is also associated with the following publication: PMID 30911135: Highly efficient therapeutic gene editing of human hematopoietic stem cells

Plasmid Name: pET-21a_3xNLS_SpCas9_protein_expression

Record Creation Time: 20220422T221559+0000

Record Last Update: 20260815T080222+0000

Ratings and Alerts

No rating or validation information has been found for pET-21a_3xNLS_SpCas9_protein_expression.

No alerts have been found for pET-21a_3xNLS_SpCas9_protein_expression.

Data and Source Information

Source: [Addgene](#)

Usage and Citation Metrics

We found 10 mentions in open access literature.

Listed below are recent publications. The full list is available at [RRID](#) .

Sun Y, et al. (2026) A human cardiomyocyte screen identifies optimized lipid nanoparticles for in vivo cardiac gene editing. Proceedings of the National Academy of Sciences of the United States of America, 123(21), e2528477123.

Khamaikawin W, et al. (2024) CRISPR/Cas9 genome editing of CCR5 combined with C46 HIV-1 fusion inhibitor for cellular resistant to R5 and X4 tropic HIV-1. Scientific reports, 14(1), 10852.

Cancellieri S, et al. (2023) Human genetic diversity alters off-target outcomes of therapeutic gene editing. Nature genetics, 55(1), 34.

Yao Y, et al. (2022) Highly Efficient One-Step Tagging of Endogenous Genes in Primary Cells Using CRISPR-Cas Ribonucleoproteins. The CRISPR journal, 5(6), 843.

Liang SQ, et al. (2022) Genome-wide detection of CRISPR editing in vivo using GUIDE-tag. Nature communications, 13(1), 437.

Verhagen HJMP, et al. (2022) Optimized Guide RNA Selection Improves Streptococcus pyogenes Cas9 Gene Editing of Human Hematopoietic Stem and Progenitor Cells. The CRISPR journal, 5(5), 702.

Lu ZH, et al. (2022) Efficient Genome Editing Achieved via Plug-and-Play Adenovirus Piggyback Transport of Cas9/gRNA Complex on Viral Capsid Surface. ACS nano, 16(7), 10443.

Rao S, et al. (2021) Dissecting ELANE neutropenia pathogenicity by human HSC gene editing. Cell stem cell, 28(5), 833.

Iyer S, et al. (2019) Precise therapeutic gene correction by a simple nuclease-induced double-stranded break. Nature, 568(7753), 561.

Xu S, et al. (2019) Editing aberrant splice sites efficiently restores β -globin expression in β^0 -thalassemia. Blood, 133(21), 2255.