

Resource Summary Report

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

pET28a/Cas9-Cys

RRID:Addgene_53261

Type: Plasmid

Proper Citation

RRID:Addgene_53261

Plasmid Information

URL: <http://www.addgene.org/53261>

Proper Citation: RRID:Addgene_53261

Insert Name: Cas9-Cys

Organism: S. pyogenes

Bacterial Resistance: Kanamycin

Defining Citation: [PMID:24696462](#)

Vector Backbone Description: Backbone Marker:Novagen; Backbone Size:5369; Vector Backbone:pET28a; Vector Types:Bacterial Expression; Bacterial Resistance:Kanamycin

Comments: A sequence encoding Cas9 with a cysteine at the C-terminus was prepared by PCR amplification using a previously described Cas9 plasmid (Cho et al, Nat Biotechnol. 2013)(Addgene: 43945) as the template and then cloned into the pET28-(a) vector (Novagen, Merck Millipore, Germany), which includes a sequence encoding a His-tag at the N-terminus.

Plasmid Name: pET28a/Cas9-Cys

Relevant Mutation: Additional Cysteine is added to the C-terminal region of Cas9

Record Creation Time: 20220422T222312+0000

Record Last Update: 20260815T081629+0000

Ratings and Alerts

No rating or validation information has been found for pET28a/Cas9-Cys.

No alerts have been found for pET28a/Cas9-Cys.

Data and Source Information

Source: [Addgene](#)

Usage and Citation Metrics

We found 23 mentions in open access literature.

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

Starke S, et al. (2024) The antifungal peptide AnAFP from *Aspergillus niger* promotes nutrient mobilization through autophagic recycling during asexual development. *Frontiers in microbiology*, 15, 1490293.

Egorova TV, et al. (2023) In-Frame Deletion of Dystrophin Exons 8-50 Results in DMD Phenotype. *International journal of molecular sciences*, 24(11).

Polikarpova AV, et al. (2023) CRISPR/Cas9-generated mouse model with humanizing single-base substitution in the *Gnao1* for safety studies of RNA therapeutics. *Frontiers in genome editing*, 5, 1034720.

Lin Y, et al. (2023) Folate Receptor-Mediated Delivery of Cas9 RNP for Enhanced Immune Checkpoint Disruption in Cancer Cells. *Small (Weinheim an der Bergstrasse, Germany)*, 19(2), e2205318.

Mirzazadeh Dizaji N, et al. (2022) Biomimetic Mineralization of Iron-Fumarate Nanoparticles for Protective Encapsulation and Intracellular Delivery of Proteins. *Chemistry of materials : a publication of the American Chemical Society*, 34(19), 8684.

Won EJ, et al. (2021) One-shot dual gene editing for drug-resistant pancreatic cancer therapy. *Biomaterials*, 279, 121252.

Gangoso E, et al. (2021) Glioblastomas acquire myeloid-affiliated transcriptional programs via epigenetic immunoediting to elicit immune evasion. *Cell*, 184(9), 2454.

Cui H, et al. (2021) Carrier-Free Cellular Transport of CRISPR/Cas9 Ribonucleoprotein for Genome Editing by Cold Atmospheric Plasma. *Biology*, 10(10).

Manzano I, et al. (2021) Purification of Cas9-RNA complexes by ultrafiltration. *Biotechnology progress*, 37(2), e3104.

M??zsik L, et al. (2021) CRISPR-based transcriptional activation tool for silent genes in filamentous fungi. *Scientific reports*, 11(1), 1118.

Hirschenberger M, et al. (2021) CRISPA: A Non-viral, Transient Cas9 Delivery System Based on Reengineered Anthrax Toxin. *Frontiers in pharmacology*, 12, 770283.

Ali Z, et al. (2020) Fusion of the Cas9 endonuclease and the VirD2 relaxase facilitates homology-directed repair for precise genome engineering in rice. *Communications biology*, 3(1), 44.

Kuhn J, et al. (2020) Delivery of Cas9/sgRNA Ribonucleoprotein Complexes via Hydroxystearyl Oligoamino Amides. *Bioconjugate chemistry*, 31(3), 729.

Wang X, et al. (2020) Clustered Regularly Interspaced Short Palindromic Repeats/Cas9-Mediated Lateral Flow Nucleic Acid Assay. *ACS nano*, 14(2), 2497.

Forsberg KJ, et al. (2019) Functional metagenomics-guided discovery of potent Cas9 inhibitors in the human microbiome. *eLife*, 8.

Egorova TV, et al. (2019) CRISPR/Cas9-generated mouse model of Duchenne muscular dystrophy recapitulating a newly identified large 430 kb deletion in the human DMD gene. *Disease models & mechanisms*, 12(4).

Kwon MJ, et al. (2019) Practical guidance for the implementation of the CRISPR genome editing tool in filamentous fungi. *Fungal biology and biotechnology*, 6, 15.

Chaverra-Rodriguez D, et al. (2018) Targeted delivery of CRISPR-Cas9 ribonucleoprotein into arthropod ovaries for heritable germline gene editing. *Nature communications*, 9(1), 3008.

Zhou W, et al. (2018) A CRISPR-Cas9-triggered strand displacement amplification method for ultrasensitive DNA detection. *Nature communications*, 9(1), 5012.

Dewari PS, et al. (2018) An efficient and scalable pipeline for epitope tagging in mammalian stem cells using Cas9 ribonucleoprotein. *eLife*, 7.