

# Resource Summary Report

Generated by [RRID](#) on Aug 25, 2026

## pET-28b-Cas9-His

RRID:Addgene\_47327

Type: Plasmid

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### Proper Citation

RRID:Addgene\_47327

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### Plasmid Information

**URL:** <http://www.addgene.org/47327>

**Proper Citation:** RRID:Addgene\_47327

**Insert Name:** Cas9

**Organism:** Other

**Bacterial Resistance:** Kanamycin

**Defining Citation:** [PMID:24873830](#)

**Vector Backbone Description:** Backbone Size:5368; Vector Backbone:pET-28b; Vector Types:Bacterial Expression, CRISPR; Bacterial Resistance:Kanamycin

**Comments:** Please see the Schier lab website <http://labs.mcb.harvard.edu/schier/> for detailed protocols about target site selection, sgRNA production, stop codon cassette design, Cas9 protein purification, injection and downstream analysis. This plasmid was used to express a His-tagged Cas9 protein in *E. coli* and purify it by nickel-based affinity purification. The Cas9 protein and sgRNA were incubated at room temperature to form the Cas9 protein/sgRNA complex in vitro, which was then microinjected into zebrafish zygotes. See publication for more details.

**Plasmid Name:** pET-28b-Cas9-His

**Record Creation Time:** 20220422T222244+0000

**Record Last Update:** 20260815T081540+0000

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### Ratings and Alerts

No rating or validation information has been found for pET-28b-Cas9-His.

No alerts have been found for pET-28b-Cas9-His.

## Data and Source Information

**Source:** [Addgene](#)

## Usage and Citation Metrics

We found 35 mentions in open access literature.

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

Zhang Y, et al. (2025) Pamoic acid and carbenoxolone specifically inhibit CRISPR/Cas9 in bacteria, mammalian cells, and mice in a DNA topology-specific manner. *Genome biology*, 26(1), 75.

D'Amico M, et al. (2025) Simplified Protocol for the Purification of Native Cas Nucleases for DNA-Free Genome Editing. *Methods and protocols*, 8(1).

Agrawal S, et al. (2024) Optimizing Recombinant Cas9 Expression: Insights from E. coli BL21(DE3) Strains for Enhanced Protein Purification and Genome Editing. *Biomedicines*, 12(6).

Ben-Tov D, et al. (2024) Uncovering the dynamics of precise repair at CRISPR/Cas9-induced double-strand breaks. *Nature communications*, 15(1), 5096.

Dey D, et al. (2024) A mechanistic study on the tolerance of PAM distal end mismatch by SpCas9. *The Journal of biological chemistry*, 300(7), 107439.

Zhang W, et al. (2024) Enhancing CRISPR prime editing by reducing misfolded pegRNA interactions. *eLife*, 12.

Muñoz-Gallardo MDM, et al. (2024) miR-195b is required for proper cellular homeostasis in the elderly. *Scientific reports*, 14(1), 810.

Ma J, et al. (2024) Instantaneous visual genotyping and facile site-specific transgenesis via CRISPR-Cas9 and phiC31 integrase. *Biology open*, 13(9).

Li YJ, et al. (2024) A platform to deliver single and bi-specific Cas9/guide RNA to perturb genes in vitro and in vivo. *Molecular therapy : the journal of the American Society of Gene Therapy*, 32(10), 3629.

Zhang W, et al. (2023) Enhancing CRISPR prime editing by reducing misfolded pegRNA interactions. *bioRxiv : the preprint server for biology*.

Zadabbas Shahabadi H, et al. (2023) Site-specific gene knock-in and bacterial phytase gene expression in *Chlamydomonas reinhardtii* via Cas9 RNP-mediated HDR. *Frontiers in plant science*, 14, 1150436.

Baidukova O, et al. (2022) Gating and ion selectivity of Channelrhodopsins are critical for photo-activated orientation of *Chlamydomonas* as shown by in vivo point mutation. *Nature communications*, 13(1), 7253.

Lainš?ek D, et al. (2022) Coiled-coil heterodimer-based recruitment of an exonuclease to CRISPR/Cas for enhanced gene editing. *Nature communications*, 13(1), 3604.

Yokomori M, et al. (2022) DNA-functionalized colloidal crystals for macromolecular encapsulation. *Soft matter*, 18(36), 6954.

Luther DC, et al. (2022) Cytosolic Protein Delivery Using Modular Biotin-Streptavidin Assembly of Nanocomposites. *ACS nano*, 16(5), 7323.

de Oliveira MB, et al. (2021) Vasohibin 1 selectively regulates secondary sprouting and lymphangiogenesis in the zebrafish trunk. *Development (Cambridge, England)*, 148(4).

Zhao J, et al. (2021) Development of aptamer-based inhibitors for CRISPR/Cas system. *Nucleic acids research*, 49(3), 1330.

Ghetti S, et al. (2021) CRISPR/Cas9 ribonucleoprotein-mediated knockin generation in hTERT-RPE1 cells. *STAR protocols*, 2(2), 100407.

Sizova I, et al. (2021) Chlamydomonas POLQ is necessary for CRISPR/Cas9-mediated gene targeting. *G3 (Bethesda, Md.)*, 11(7).

Chen Z, et al. (2021) Neurodevelopmental and transcriptomic effects of CRISPR/Cas9-induced somatic orco mutation in honey bees. *Journal of neurogenetics*, 35(3), 320.