Resource Summary Report

Generated by RRID on Aug 25, 2026

pET-28b-Cas9-His

RRID:Addgene_47327
Type: Plasmid

Proper Citation

RRID:Addgene_47327

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

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.

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

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

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.