Resource Summary Report

Generated by PRECISE-TBI on Sep 1, 2026

pAC-CANTHipi

RRID:Addgene_53301
Type: Plasmid

Proper Citation

RRID:Addgene_53301

Plasmid Information

URL: http://www.addgene.org/53301

Proper Citation: RRID:Addgene_53301

Insert Name: crtO

Organism: Haematococcus pluvialis

Bacterial Resistance: Chloramphenicol

Defining Citation: PMID:17634749

Vector Backbone Description: Backbone Marker:Francis X. Cunningham, Jr.; Backbone Size:9259; Vector Backbone:pAC-BETAipi; Vector Types:low copy number bacterial cloning vector; Bacterial Resistance:Chloramphenicol

Comments: For better yield of low copy number pAC-based plasmids, grow liquid cultures on a platform shaker at ca. 30 degrees Celsius. When cultures reach early stationary phase, dilute 2-fold with growth medium, add spectinomycin (150 mg/liter), and "amplify" for several hours before harvest. For plasmid selection and maintenance in E. coli, use chloramphenicol at 30 mg/liter.

Plasmid Name: pAC-CANTHipi

Record Creation Time: 20220422T222312+0000

Record Last Update: 20260829T080656+0000

Ratings and Alerts

No rating or validation information has been found for pAC-CANTHipi.

No alerts have been found for pAC-CANTHipi.

Data and Source Information

Source: Addgene

Usage and Citation Metrics

We found 9 mentions in open access literature.

Listed below are recent publications. The full list is available at PRECISE-TBI .

Tu W, et al. (2024) Engineering bionanoreactor in bacteria for efficient hydrogen production. Proceedings of the National Academy of Sciences of the United States of America, 121(29), e2404958121.

Chukhutsina VU, et al. (2024) The Carbonyl Group in ?2 of the Carotenoid Tunes the Photocycle Kinetics in Orange Carotenoid Protein. Journal of molecular biology, 436(5), 168463.

Rose JB, et al. (2023) Photoactivation of the orange carotenoid protein requires two light-driven reactions mediated by a metastable monomeric intermediate. Physical chemistry chemical physics : PCCP, 25(48), 33000.

Domínguez-Martín MA, et al. (2022) Structures of a phycobilisome in light-harvesting and photoprotected states. Nature, 609(7928), 835.

Chukhutsina VU, et al. (2022) Light activation of Orange Carotenoid Protein reveals bicycle-pedal single-bond isomerization. Nature communications, 13(1), 6420.

Kuznetsova V, et al. (2020) Comparative ultrafast spectroscopy and structural analysis of OCP1 and OCP2 from Tolypothrix. Biochimica et biophysica acta. Bioenergetics, 1861(2), 148120.

Gupta S, et al. (2019) X-ray radiolytic labeling reveals the molecular basis of orange carotenoid protein photoprotection and its interactions with fluorescence recovery protein. The Journal of biological chemistry, 294(22), 8848.

Gurchiek JK, et al. (2018) Fluorescence and Excited-State Conformational Dynamics of the Orange Carotenoid Protein. The journal of physical chemistry. B, 122(6), 1792.

Lechno-Yossef S, et al. (2017) Synthetic OCP heterodimers are photoactive and recapitulate the fusion of two primitive carotenoproteins in the evolution of cyanobacterial photoprotection. The Plant journal : for cell and molecular biology, 91(4), 646.