

Resource Summary Report

Generated by [RRID](#) on Sep 2, 2026

pUC57-mitoLbNOX

RRID:Addgene_74448

Type: Plasmid

Proper Citation

RRID:Addgene_74448

Plasmid Information

URL: <http://www.addgene.org/74448>

Proper Citation: RRID:Addgene_74448

Insert Name: mitoLbNOX

Organism: Lactobacillus brevis

Bacterial Resistance: Kanamycin

Defining Citation: [PMID:27124460](#)

Vector Backbone Description: Backbone Size:2710; Vector Backbone:PUC57; Vector Types;; Bacterial Resistance:Kanamycin

Comments: In our original publication we express mitoLbNOX in mammalian cells using a Tet3G dox-inducible system from Clontech. We cannot distribute those exact plasmids due to Clontech license restrictions. We recommend that investigators subclone this mitoLbNOX sequence into their preferred expression system.

Plasmid Name: pUC57-mitoLbNOX

Relevant Mutation: Human codon optimized

Record Creation Time: 20220422T222454+0000

Record Last Update: 20260902T050127+0000

Ratings and Alerts

No rating or validation information has been found for pUC57-mitoLbNOX.

No alerts have been found for pUC57-mitoLbNOX.

Data and Source Information

Source: [Addgene](#)

Usage and Citation Metrics

We found 14 mentions in open access literature.

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

Lin M, et al. (2026) Complex I protein NDUFB9 is a metabolic vulnerability in triple negative breast cancer brain metastases. *Nature communications*, 17(1).

Xie A, et al. (2026) Citrate clearance is a major function of aconitase 2 in the canonical TCA cycle. *Cell*, 189(9), 2684.

Nguyen TT, et al. (2025) The mevalonate pathway couples lipid metabolism to amino acid synthesis via ubiquinone-dependent redox control. *bioRxiv : the preprint server for biology*.

Marques-Carvalho A, et al. (2025) Estrogens protect bone mass by inhibiting NAD⁺ metabolism in osteoclasts. *bioRxiv : the preprint server for biology*.

Erdem A, et al. (2025) Lactate dehydrogenase A-coupled NAD⁺ regeneration is critical for acute myeloid leukemia cell survival. *Cancer & metabolism*, 13(1), 22.

Choe M, et al. (2025) Genetically encoded tool for manipulation of ??m identifies its role as the driver of ISR induced by ATP synthase dysfunction. *Cell chemical biology*, 32(4), 620.

D'Alessandro KB, et al. (2025) Genetic modulation of mitochondrial NAD⁺ regeneration does not prevent dopaminergic neuron dysfunction caused by mitochondrial complex I impairment. *Frontiers in cell and developmental biology*, 13, 1650462.

Erdem A, et al. (2025) Lactate dehydrogenase A-coupled NAD⁺ regeneration is critical for acute myeloid leukemia cell survival. *bioRxiv : the preprint server for biology*.

Higurashi M, et al. (2025) Respiratory complex I-mediated NAD⁺ regeneration regulates cancer cell proliferation through the transcriptional and translational control of p21Cip1 expression by SIRT3 and SIRT7. *Molecular oncology*, 19(6), 1775.

Mahmood M, et al. (2024) Mitochondrial DNA mutations drive aerobic glycolysis to enhance checkpoint blockade response in melanoma. *Nature cancer*.

Mahmood M, et al. (2023) Tumour mitochondrial DNA mutations drive aerobic glycolysis to enhance checkpoint blockade. *bioRxiv : the preprint server for biology*.

Balderas E, et al. (2022) Mitochondrial calcium uniporter stabilization preserves energetic homeostasis during Complex I impairment. *Nature communications*, 13(1), 2769.

Altea-Manzano P, et al. (2022) Reversal of mitochondrial malate dehydrogenase 2 enables anaplerosis via redox rescue in respiration-deficient cells. *Molecular cell*, 82(23),

4537.

Vardhana SA, et al. (2020) Impaired mitochondrial oxidative phosphorylation limits the self-renewal of T cells exposed to persistent antigen. *Nature immunology*, 21(9), 1022.