

Resource Summary Report

Generated by [NIF](#) on Aug 19, 2026

CMV-mito-R-GECO1

RRID:Addgene_46021

Type: Plasmid

Proper Citation

RRID:Addgene_46021

Plasmid Information

URL: <http://www.addgene.org/46021>

Proper Citation: RRID:Addgene_46021

Insert Name: R-GECO1

Organism: Synthetic

Bacterial Resistance: Ampicillin

Defining Citation: [PMID:23452507](#)

Vector Backbone Description: Backbone Marker:Invitrogen; Backbone Size:5600; Vector Backbone:pcDNA3.1 (-); Vector Types:Mammalian Expression; Bacterial Resistance:Ampicillin

Comments: The vector of the CMV-mito-R-GECO1 is based on the mitATeam1.03 pcDNA plasmid reported here: (<http://www.pnas.org/content/106/37/15651.abstract>).

Plasmid Name: CMV-mito-R-GECO1

Relevant Mutation: Substitutions relative to the mApple-derived analogue of GCaMP3: T47A/L60P/E61V/S63V/E64S/R81G/K83R/Y134C/M158L/N164aD/V228A/S290P/I366F/K380N/S404G/N414D/E430V

Record Creation Time: 20220422T222237+0000

Record Last Update: 20260815T081528+0000

Ratings and Alerts

No rating or validation information has been found for CMV-mito-R-GECO1.

No alerts have been found for CMV-mito-R-GECO1.

Data and Source Information

Source: [Addgene](#)

Usage and Citation Metrics

We found 22 mentions in open access literature.

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

Koomoa DT, et al. (2025) Novel Compounds Target Aberrant Calcium Signaling in the Treatment of Relapsed High-Risk Neuroblastoma. International journal of molecular sciences, 26(7).

Sassano ML, et al. (2025) Endoplasmic reticulum-mitochondria contacts are prime hotspots of phospholipid peroxidation driving ferroptosis. Nature cell biology, 27(6), 902.

Li J, et al. (2025) LONP1 regulation of mitochondrial protein folding provides insight into beta cell failure in type 2 diabetes. Nature metabolism, 7(8), 1570.

LaMoia TE, et al. (2024) Cytosolic calcium regulates hepatic mitochondrial oxidation, intrahepatic lipolysis, and gluconeogenesis via CAMKII activation. Cell metabolism, 36(10), 2329.

Anania S, et al. (2024) Identification of myoferlin as a mitochondria-associated membranes component required for calcium signaling in PDAC cell lines. Cell communication and signaling : CCS, 22(1), 133.

Brund MJ, et al. (2024) MCU-independent Ca²⁺ uptake mediates mitochondrial Ca²⁺ overload and necrotic cell death in a mouse model of Duchenne muscular dystrophy. Scientific reports, 14(1), 6751.

He W, et al. (2024) FUNDC1 alleviates doxorubicin-induced cardiotoxicity by restoring mitochondrial-endoplasmic reticulum contacts and blocked autophagic flux. Theranostics, 14(9), 3719.

Ryu JE, et al. (2024) Circadian regulation of endoplasmic reticulum calcium response in cultured mouse astrocytes. eLife, 13.

Petersen CE, et al. (2023) Increased mitochondrial free Ca²⁺ during ischemia is suppressed, but not eliminated by, germline deletion of the mitochondrial Ca²⁺ uniporter. Cell reports, 42(7), 112735.

Tessier N, et al. (2023) TRPV1 Channels Are New Players in the Reticulum-Mitochondria Ca²⁺ Coupling in a Rat Cardiomyoblast Cell Line. Cells, 12(18).

Quarato G, et al. (2022) Ca²⁺-mediated mitochondrial inner membrane permeabilization induces cell death independently of Bax and Bak. Cell death and differentiation, 29(7), 1318.

Im S, et al. (2022) Low-Dose Dioxin Reduced Glucose Uptake in C2C12 Myocytes: The Role of Mitochondrial Oxidative Stress and Insulin-Dependent Calcium Mobilization. *Antioxidants* (Basel, Switzerland), 11(11).

Gäbelein CG, et al. (2022) Mitochondria transplantation between living cells. *PLoS biology*, 20(3), e3001576.

Patron M, et al. (2022) Regulation of mitochondrial proteostasis by the proton gradient. *The EMBO journal*, 41(16), e110476.

Sargsyan Y, et al. (2021) Peroxisomes contribute to intracellular calcium dynamics in cardiomyocytes and non-excitable cells. *Life science alliance*, 4(9).

Han S, et al. (2021) The role of Mfn2 in the structure and function of endoplasmic reticulum-mitochondrial tethering in vivo. *Journal of cell science*, 134(13).

Rysted JE, et al. (2021) Distinct properties of Ca²⁺ efflux from brain, heart and liver mitochondria: The effects of Na⁺, Li⁺ and the mitochondrial Na⁺/Ca²⁺ exchange inhibitor CGP37157. *Cell calcium*, 96, 102382.

Lim Y, et al. (2021) α 2-adrenergic receptor regulates ER-mitochondria contacts. *Scientific reports*, 11(1), 21477.

Fung TS, et al. (2019) Two distinct actin filament populations have effects on mitochondria, with differences in stimuli and assembly factors. *Journal of cell science*, 132(18).

Lee JH, et al. (2019) Parkinson's disease-associated LRRK2-G2019S mutant acts through regulation of SERCA activity to control ER stress in astrocytes. *Acta neuropathologica communications*, 7(1), 68.