

Resource Summary Report

Generated by [NIF](#) on Sep 9, 2026

CMV-R-GECO1

RRID:Addgene_32444

Type: Plasmid

Proper Citation

RRID:Addgene_32444

Plasmid Information

URL: <http://www.addgene.org/32444>

Proper Citation: RRID:Addgene_32444

Insert Name: R-GECO1.0

Organism: synthetic construct

Bacterial Resistance: Ampicillin

Defining Citation: [PMID:21903779](#)

Vector Backbone Description: Backbone Size:3200; Vector Backbone:Customized Vector; Vector Types:Mammalian Expression; Bacterial Resistance:Ampicillin

Comments: Note: Could not make stable cell line using this vector.

Plasmid Name: CMV-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: 20220422T222141+0000

Record Last Update: 20260905T075512+0000

Ratings and Alerts

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

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

Data and Source Information

Usage and Citation Metrics

We found 63 mentions in open access literature.

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

Haschke AM, et al. (2026) Biallelic MCUR1 nonsense mutation associated with vacuolar myopathy and altered mitochondrial calcium signaling. *Acta neuropathologica communications*, 14(1).

Cho J, et al. (2025) Optogenetic calcium modulation in astrocytes enhances post-stroke recovery in chronic capsular infarct. *Science advances*, 11(5), eadn7577.

Tóth S, et al. (2025) The calcium pump PMCA4b promotes epithelial cell polarization and lumen formation. *Communications biology*, 8(1), 421.

Chatzifrangkeskou M, et al. (2025) Reversible Modulation of Motile Cilia by a Benzo[e][1,2,4]triazinone: A Potential Non-Hormonal Approach to Male Contraception. *Cells*, 14(10).

Nilsson CI, et al. (2025) Somatostatin triggers local cAMP and Ca²⁺ signaling in primary cilia to modulate pancreatic β -cell function. *The EMBO journal*, 44(6), 1663.

Prischich D, et al. (2024) In vivo photocontrol of orexin receptors with a nanomolar light-regulated analogue of orexin-B. *Cellular and molecular life sciences : CMLS*, 81(1), 288.

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

Hall ET, et al. (2024) Cytoneme signaling provides essential contributions to mammalian tissue patterning. *Cell*, 187(2), 276.

Thomas A, et al. (2024) Cannabinoid Receptor Signaling is Dependent on Sub-Cellular Location. *bioRxiv : the preprint server for biology*.

Ajiki M, et al. (2024) ORP9-PH domain-based fluorescent reporters for visualizing phosphatidylinositol 4-phosphate dynamics in living cells. *RSC chemical biology*, 5(6), 544.

Kook YH, et al. (2023) AAV-compatible optogenetic tools for activating endogenous calcium channels in vivo. *Molecular brain*, 16(1), 73.

Zhang D, et al. (2023) Design of a palette of SNAP-tag mimics of fluorescent proteins and their use as cell reporters. *Cell discovery*, 9(1), 56.

Xie B, et al. (2022) The endoplasmic reticulum-plasma membrane tethering protein TMEM24 is a regulator of cellular Ca²⁺ homeostasis. *Journal of cell science*, 135(5).

Dischler AM, et al. (2022) Development and Characterization of a Red Fluorescent Protein-Based Sensor RZnP1 for the Detection of Cytosolic Zn²⁺. ACS sensors, 7(12), 3838.

Suzuki S, et al. (2022) A chemogenetic platform for controlling plasma membrane signaling and synthetic signal oscillation. Cell chemical biology, 29(9), 1446.

Naffa R, et al. (2021) The Plasma Membrane Ca²⁺ Pump PMCA4b Regulates Melanoma Cell Migration through Remodeling of the Actin Cytoskeleton. Cancers, 13(6).

Wang X, et al. (2021) Sex Differences in the Hypothalamic Oxytocin Pathway to Locus Coeruleus and Augmented Attention with Chemogenetic Activation of Hypothalamic Oxytocin Neurons. International journal of molecular sciences, 22(16).

Xue Y, et al. (2021) SMARCA4/2 loss inhibits chemotherapy-induced apoptosis by restricting IP3R3-mediated Ca²⁺ flux to mitochondria. Nature communications, 12(1), 5404.

Inaba H, et al. (2021) Optogenetic control of small GTPases reveals RhoA mediates intracellular calcium signaling. The Journal of biological chemistry, 296, 100290.

Hall ET, et al. (2021) Cytoneme delivery of Sonic Hedgehog from ligand-producing cells requires Myosin 10 and a Dispatched-BOC/CDON co-receptor complex. eLife, 10.