

Resource Summary Report

Generated by [RRID](#) on Aug 17, 2026

pCMV-GCaMP5G

RRID:Addgene_31788

Type: Plasmid

Proper Citation

RRID:Addgene_31788

Plasmid Information

URL: <http://www.addgene.org/31788>

Proper Citation: RRID:Addgene_31788

Insert Name: GCaMP5G

Organism: Rattus norvegicus

Bacterial Resistance: Kanamycin

Defining Citation: [PMID:23035093](#)

Vector Backbone Description: Backbone Marker:Clontech; Backbone Size:3955; Vector Backbone:pEGFP-N1; Vector Types:Mammalian Expression; Bacterial Resistance:Kanamycin

Plasmid Name: pCMV-GCaMP5G

Record Creation Time: 20220422T222138+0000

Record Last Update: 20260815T081339+0000

Ratings and Alerts

No rating or validation information has been found for pCMV-GCaMP5G.

No alerts have been found for pCMV-GCaMP5G.

Data and Source Information

Source: [Addgene](#)

Usage and Citation Metrics

We found 45 mentions in open access literature.

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

Belloir C, et al. (2025) TAS1R2/TAS1R3 Single-Nucleotide Polymorphisms Affect Sweet Taste Receptor Activation by Sweeteners: The SWEET Project. *Nutrients*, 17(6).

Rakovskaya A, et al. (2025) Hippocampal dendritic spines store-operated calcium entry and endoplasmic reticulum content is dynamic microtubule dependent. *Scientific reports*, 15(1), 1314.

Shi X, et al. (2025) Ceftriaxone attenuates Poly I:C-induced neuroinflammation in vitro by modulating glutamate transport, synaptic integrity, and immunometabolic reprogramming. *Frontiers in cellular neuroscience*, 19, 1684398.

Kang RB, et al. (2025) Human pancreatic β -cell heterogeneity and trajectory inference analyses reveal SMOC1 as a β -cell dedifferentiation gene. *Nature communications*, 16(1), 8434.

Chen X, et al. (2024) A PACAP-activated network for secretion requires coordination of Ca^{2+} influx and Ca^{2+} mobilization. *Molecular biology of the cell*, 35(7), ar92.

Katsuta E, et al. (2022) Mechano-Sensing Channel PIEZO2 Enhances Invasive Phenotype in Triple-Negative Breast Cancer. *International journal of molecular sciences*, 23(17).

Lee SH, et al. (2022) A molecular clock controls periodically driven cell migration in confined spaces. *Cell systems*, 13(7), 514.

Dischler AM, et al. (2022) Development and Characterization of a Red Fluorescent Protein-Based Sensor RZnP1 for the Detection of Cytosolic Zn^{2+} . *ACS sensors*, 7(12), 3838.

Lavik AR, et al. (2022) A non-canonical role for pyruvate kinase M2 as a functional modulator of Ca^{2+} signalling through IP3 receptors. *Biochimica et biophysica acta. Molecular cell research*, 1869(4), 119206.

Mazzaferro S, et al. (2021) NACHO and 14-3-3 promote expression of distinct subunit stoichiometries of the $\alpha 4\beta 2$ acetylcholine receptor. *Cellular and molecular life sciences : CMLS*, 78(4), 1565.

Neiers F, et al. (2021) Comparison of Different Signal Peptides for the Efficient Secretion of the Sweet-Tasting Plant Protein Brazzein in *Pichia pastoris*. *Life (Basel, Switzerland)*, 11(1).

Chang-Graham AL, et al. (2020) Rotavirus induces intercellular calcium waves through ADP signaling. *Science (New York, N.Y.)*, 370(6519).

Housley DM, et al. (2020) Australian Scorpion *Hormurus waigiensis* Venom Fractions Show Broad Bioactivity Through Modulation of Bio-Impedance and Cytosolic Calcium. *Biomolecules*, 10(4).

Jiang M, et al. (2020) BCL9 provides multi-cellular communication properties in colorectal cancer by interacting with paraspeckle proteins. *Nature communications*, 11(1), 19.

Foreman R, et al. (2020) Mammalian gene expression variability is explained by underlying cell state. *Molecular systems biology*, 16(2), e9146.

Fricke S, et al. (2019) Fast Regulation of GABAAR Diffusion Dynamics by Nogo-A Signaling. *Cell reports*, 29(3), 671.

MacDougall MS, et al. (2019) Intracellular Ca²⁺ Homeostasis and Nuclear Export Mediate Exit from Naive Pluripotency. *Cell stem cell*, 25(2), 210.

Heck J, et al. (2019) Transient Confinement of CaV2.1 Ca²⁺-Channel Splice Variants Shapes Synaptic Short-Term Plasticity. *Neuron*, 103(1), 66.

Sun JL, et al. (2019) Co-activation of selective nicotinic acetylcholine receptors is required to reverse beta amyloid-induced Ca²⁺ hyperexcitation. *Neurobiology of aging*, 84, 166.

Griesche N, et al. (2019) Cortical mitochondria regulate insulin secretion by local Ca²⁺ buffering in rodent beta cells. *Journal of cell science*, 132(9).