

Resource Summary Report

Generated by [NIF](#) on Jul 30, 2026

pRSET-RCaMP1h

RRID:Addgene_42874

Type: Plasmid

Proper Citation

RRID:Addgene_42874

Plasmid Information

URL: <http://www.addgene.org/42874>

Proper Citation: RRID:Addgene_42874

Insert Name: Red Fluorescent Calcium binding Protein

Organism: Rattus norvegicus

Bacterial Resistance: Ampicillin

Defining Citation: [PMID:23459413](#)

Vector Backbone Description: Backbone Marker:Life Technologies (Invitrogen); Backbone Size:2753; Vector Backbone:pRSETA; Vector Types:Bacterial Expression; Bacterial Resistance:Ampicillin

Comments: Gene was cloned using BamHI and HindIII - But part of the vector backbone then becomes part of the protein (leader sequence containing histag) - using NdeI and HindIII will completely remove the open reading frame/gene.

Plasmid Name: pRSET-RCaMP1h

Record Creation Time: 20220422T222221+0000

Record Last Update: 20260725T074705+0000

Ratings and Alerts

No rating or validation information has been found for pRSET-RCaMP1h.

No alerts have been found for pRSET-RCaMP1h.

Data and Source Information

Source: [Addgene](#)

Usage and Citation Metrics

We found 7 mentions in open access literature.

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

Zhong C, et al. (2024) Development of fluorescence lifetime biosensors for ATP, cAMP, citrate, and glucose using the mTurquoise2-based platform. *Cell reports methods*, 4(11), 100902.

Shyr ZA, et al. (2022) SGLT2 inhibitors therapy protects glucotoxicity-induced β -cell failure in a mouse model of human KATP-induced diabetes through mitigation of oxidative and ER stress. *PloS one*, 17(2), e0258054.

Hussein W, et al. (2020) Red Photoactivatable Genetic Optical-Indicators. *Frontiers in cellular neuroscience*, 14, 113.

Belote RL, et al. (2020) Ca^{2+} transients in melanocyte dendrites and dendritic spine-like structures evoked by cell-to-cell signaling. *The Journal of cell biology*, 219(1).

Li S, et al. (2019) Ca^{2+} -Stimulated AMPK-Dependent Phosphorylation of Exo1 Protects Stressed Replication Forks from Aberrant Resection. *Molecular cell*, 74(6), 1123.

Westergard T, et al. (2019) Repeat-associated non-AUG translation in C9orf72-ALS/FTD is driven by neuronal excitation and stress. *EMBO molecular medicine*, 11(2).

Lu B, et al. (2018) Impaired β -cell glucokinase as an underlying mechanism in diet-induced diabetes. *Disease models & mechanisms*, 11(6).