

Resource Summary Report

Generated by [RRID](#) on Aug 25, 2026

piRFP

RRID:Addgene_31857

Type: Plasmid

Proper Citation

RRID:Addgene_31857

Plasmid Information

URL: <http://www.addgene.org/31857>

Proper Citation: RRID:Addgene_31857

Insert Name: iRFP

Organism: *Rhodopseudomonas palustris*

Bacterial Resistance: Kanamycin

Defining Citation: [PMID:21765402](#)

Vector Backbone Description: Backbone Marker:Clontech; Backbone Size:4700; Vector Backbone:pEGFP-C1; Vector Types:Mammalian Expression; Bacterial Resistance:Kanamycin

Comments: piRFP was derived from pEGFP-C1, whereby iRFP was inserted in place of EGFP. The iRFP in this plasmid has a stop codon at its end making it unsuitable for generating fusions. This plasmid can be used for cytoplasmic expression of iRFP or as a source of the iRFP gene. For additional protocols on using iRFP in other tissue types please review: Verkhusha. Deep-tissue photoacoustic tomography of a genetically encoded near-infrared fluorescent probe. *Angewandte Chemie Int. Ed.* 2012, 51: 1448-1451. PubMed: <https://www.ncbi.nlm.nih.gov/pubmed/22213541/> For more information on in vivo imaging, please see: https://www.addgene.org/fluorescent_proteins/in_vivo/

Plasmid Name: piRFP

Relevant Mutation: T2A, S13L, A92T, V104I, V114I, E161K, Y193K, F198Y, D202T, I203V, Y258F, A283V, K288T and N290Y relative to RpBphP2

Record Creation Time: 20220422T222138+0000

Record Last Update: 20260815T081340+0000

Ratings and Alerts

No rating or validation information has been found for piRFP.

No alerts have been found for piRFP.

Data and Source Information

Source: [Addgene](#)

Usage and Citation Metrics

We found 43 mentions in open access literature.

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

Barrios D, et al. (2025) Feedback-responsive cell factories for dynamic modulation of the unfolded protein response. *Nature communications*, 16(1), 4106.

Remeeva AA, et al. (2025) Structure and effective brightness of near-infrared fluorescent protein iRFP713/C15S/V254C complexed with phycocyanobilin. *The FEBS journal*.

Le HT, et al. (2025) Phosphorylation of eIF2 α suppresses the impairment of GSH/NADPH homeostasis and mitigates the activation of cell death pathways, including ferroptosis, during ER stress. *Molecules and cells*, 48(5), 100210.

Chou CC, et al. (2024) Inhibition of orthotopic castration-resistant prostate cancer growth and metastasis in mice by JC VLPs carrying a suicide gene driven by the PSA promoter. *Cancer gene therapy*, 31(2), 250.

Tojima T, et al. (2024) Spatiotemporal dissection of the Golgi apparatus and the ER-Golgi intermediate compartment in budding yeast. *eLife*, 13.

Park J, et al. (2023) Chemogenetic regulation of the TARP-lipid interaction mimics LTP and reversibly modifies behavior. *Cell reports*, 42(8), 112826.

Rajan V, et al. (2023) KIT D816V is dimerization-independent and activates downstream pathways frequently perturbed in mastocytosis. *British journal of haematology*, 202(5), 960.

Tojima T, et al. (2023) Super-Resolution Live Imaging of Cargo Traffic Through the Golgi Apparatus in Mammalian Cells. *Methods in molecular biology* (Clifton, N.J.), 2557, 127.

Lawson CD, et al. (2022) Nuclear fascin regulates cancer cell survival. *eLife*, 11.

Aass KR, et al. (2022) Intracellular IL-32 regulates mitochondrial metabolism, proliferation, and differentiation of malignant plasma cells. *iScience*, 25(1), 103605.

Chanda MK, et al. (2022) Combined analysis of T cell activation and T cell-mediated cytotoxicity by imaging cytometry. *Journal of immunological methods*, 506, 113290.

Ogunnaike M, et al. (2021) Bovine mammary alveolar MAC-T cells afford a tool for studies of bovine milk exosomes in drug delivery. *International journal of pharmaceutics*, 610, 121263.

Liu Y, et al. (2021) Visualizing looping of two endogenous genomic loci using synthetic zinc-finger proteins with anti-FLAG and anti-HA frankenbodies in living cells. *Genes to cells : devoted to molecular & cellular mechanisms*, 26(11), 905.

Westhrin M, et al. (2020) Bone Morphogenetic Protein 4 Gene Therapy in Mice Inhibits Myeloma Tumor Growth, But Has a Negative Impact on Bone. *JBMR plus*, 4(1), e10247.

Fujii S, et al. (2020) Recycling endosomes attach to the trans-side of Golgi stacks in *Drosophila* and mammalian cells. *Journal of cell science*, 133(4).

Tsakiris N, et al. (2020) Combined nanomedicines targeting colorectal cancer stem cells and cancer cells. *Journal of controlled release : official journal of the Controlled Release Society*, 326, 387.

Tei R, et al. (2020) Spatiotemporal control of phosphatidic acid signaling with optogenetic, engineered phospholipase Ds. *The Journal of cell biology*, 219(3).

Fujii S, et al. (2020) Sec71 separates Golgi stacks in *Drosophila* S2 cells. *Journal of cell science*, 133(24).

Belote RL, et al. (2020) Ca²⁺ transients in melanocyte dendrites and dendritic spine-like structures evoked by cell-to-cell signaling. *The Journal of cell biology*, 219(1).

Tojima T, et al. (2019) Spatiotemporal dissection of the trans-Golgi network in budding yeast. *Journal of cell science*, 132(15).