

Resource Summary Report

Generated by [NIF](#) on Aug 2, 2026

GFP-C1-PLCdelta-PH

RRID:Addgene_21179

Type: Plasmid

Proper Citation

RRID:Addgene_21179

Plasmid Information

URL: <http://www.addgene.org/21179>

Proper Citation: RRID:Addgene_21179

Insert Name: PLCdelta

Organism: Homo sapiens

Bacterial Resistance: Kanamycin

Defining Citation: [PMID:9512420](#)

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

Comments: This construct encodes a PI(4,5)P2 lipid selective PH domain that can be used as a fluorescent translocation biosensor to monitor changes or local differences in the concentration of plasma membrane PI(4,5)P2 lipids (Stauffer TP, Ahn S, Meyer T; Curr Biol. 1998 8:343-6). It is best used in combination with a second fluorescent protein that uniformly marks the plasma membrane (the last 20 amino acids "CAAX" region of KRas is often used as a PM marker). Relative changes in cell-wide or local plasma membrane PI(4,5)P2 can be determined by using a mask for the PM region and by dividing the two background subtracted PH domain and CAAX images. At high expression levels, this construct interferes with PI(4,5)P2 signaling and alters cortical actin (Raucher D et al Cell. 2000 100:221-8).

Plasmid Name: GFP-C1-PLCdelta-PH

Relevant Mutation: PH domain of human PLC delta, amino acids Met1–Ile175. (Lab plasmid WC 0003)

Record Creation Time: 20220422T222054+0000

Record Last Update: 20260801T081014+0000

Ratings and Alerts

No rating or validation information has been found for GFP-C1-PLCdelta-PH.

No alerts have been found for GFP-C1-PLCdelta-PH.

Data and Source Information

Source: [Addgene](#)

Usage and Citation Metrics

We found 94 mentions in open access literature.

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

Ferreira JV, et al. (2026) LAMP2A regulates endosomal protein composition and membrane identity in exosome biogenesis. *iScience*, 29(1), 114305.

Verpoort B, et al. (2025) A postsynaptic GPR158-PLCXD2 complex controls spine apparatus abundance and dendritic spine maturation. *Developmental cell*.

Taciak B, et al. (2025) Harnessing macrophage-drug conjugates for allogeneic cell-based therapy of solid tumors via the TRAIN mechanism. *Nature communications*, 16(1), 1327.

Abdelnaser RA, et al. (2025) Identification of TNFAIP2 as a unique cellular regulator of CSF-1 receptor activation. *Life science alliance*, 8(5).

Ozaki-Noma R, et al. (2025) Positive-Type Reversibly Photoswitching Red Fluorescent Protein for Dual-Color Superresolution Imaging with Single Light Exposure for Off-Switching. *ACS nano*, 19(7), 7188.

Jha A, et al. (2025) CD44 and Ezrin restrict EGF receptor mobility to generate a novel spatial arrangement of cytoskeletal signaling modules driving bleb-based migration. *bioRxiv : the preprint server for biology*.

Hiyoshi M, et al. (2025) M-Sec promotes the accumulation of intracellular HTLV-1 Gag puncta and the incorporation of Env into viral particles. *PLoS pathogens*, 21(1), e1012919.

Elsayyid M, et al. (2025) Phosphatidylinositol (4,5)-bisphosphate Impacts Ectosome Shedding from *C. elegans* Ciliated Sensory Neurons. *bioRxiv : the preprint server for biology*.

Reinders M, et al. (2025) ATXN3 regulates lysosome regeneration after damage by targeting K48-K63-branched ubiquitin chains. *The EMBO journal*, 44(18), 5086.

Christodoulou N, et al. (2025) Calcium transients regulate the apical emergence of basally located progenitors during *Xenopus* skin development. *Nature communications*, 16(1), 6650.

Elsayyid MW, et al. (2025) Phosphatidylinositol 4,5-bisphosphate impacts extracellular vesicle shedding from *C. elegans* ciliated sensory neurons. *Journal of cell science*, 138(20).

Lee C, et al. (2025) Optogenetic storage and release of protein and mRNA in live cells and animals. *Nature communications*, 16(1), 6230.

Dai A, et al. (2025) Multiple interactions mediate the localization of BLTP2 at ER-PM contacts to control plasma membrane dynamics. *bioRxiv : the preprint server for biology*.

He F, et al. (2025) Roles of class III phosphatidylinositol 3-kinase, Vps34, in phagocytosis, autophagy, and endocytosis in retinal pigmented epithelium. *iScience*, 28(5), 112371.

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.

George K, et al. (2024) Robust GRK2/3/6-dependent desensitization of oxytocin receptor in neurons. *iScience*, 27(6), 110047.

Di Meo D, et al. (2024) Pip5k1 γ regulates axon formation by limiting Rap1 activity. *Life science alliance*, 7(5).

Brands J, et al. (2024) A molecular mechanism to diversify Ca²⁺ signaling downstream of Gs protein-coupled receptors. *Nature communications*, 15(1), 7684.

Criado Santos N, et al. (2023) Sec22b regulates phagosome maturation by promoting ORP8-mediated lipid exchange at endoplasmic reticulum-phagosome contact sites. *Communications biology*, 6(1), 1008.

Andhare D, et al. (2023) A new GUV-based assay to reconstitute membrane tethering in vitro demonstrates the vesicle tethering ability of the selective autophagy scaffold Atg11. *bioRxiv : the preprint server for biology*.