

Resource Summary Report

Generated by [RRID](#) on Aug 18, 2026

pLL7.0: tgRFPT-SSPB WT

RRID:Addgene_60415

Type: Plasmid

Proper Citation

RRID:Addgene_60415

Plasmid Information

URL: <http://www.addgene.org/60415>

Proper Citation: RRID:Addgene_60415

Insert Name: tgRFPT-SSPB

Organism: Synthetic

Bacterial Resistance: Ampicillin

Defining Citation: [PMID:25535392](#)

Vector Backbone Description: Vector Backbone:pLentiLox7.0; Vector Types:Mammalian Expression, Lentiviral, Cre/Lox; Bacterial Resistance:Ampicillin

Comments: The SspB used in this construct contains two amino acid mutations that disrupt the natural dimerization of SspB. These mutations are Y11K and A15E (residue numbering from pdb code 1ou9). Here is the sequence around the mutated residues with the sites of mutation in parentheses: SSPKRP(K)LLR(E)YYDWLVDNS

Plasmid Name: pLL7.0: tgRFPT-SSPB WT

Relevant Mutation: Y11K and A15E

Record Creation Time: 20220422T222347+0000

Record Last Update: 20260815T081732+0000

Ratings and Alerts

No rating or validation information has been found for pLL7.0: tgRFPT-SSPB WT.

No alerts have been found for pLL7.0: tgRFPT-SSPB WT.

Data and Source Information

Source: [Addgene](#)

Usage and Citation Metrics

We found 19 mentions in open access literature.

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

Gagnon KA, et al. (2026) Oncogenic Alterations in PI3K Signaling Emulated Optogenetically Recapitulate Some Phenotypic Changes in Mammary Epithelia. ACS synthetic biology, 15(2), 561.

Countryman AD, et al. (2025) Endogenous OptoRhoGEFs reveal biophysical principles of epithelial tissue furrowing. Nature communications, 16(1), 7665.

Faulkner B, et al. (2025) A Modular Platform for the Optogenetic Control of Small GTPase Activity in Living Cells Reveals Long-Range RhoA Signaling. bioRxiv : the preprint server for biology.

Jang J, et al. (2023) Engineering of bidirectional, cyanobacteriochrome-based light-inducible dimers (BICYCL)s. Nature methods, 20(3), 432.

Li X, et al. (2023) Ultrasensitive sensors reveal the spatiotemporal landscape of lactate metabolism in physiology and disease. Cell metabolism, 35(1), 200.

Natwick DE, et al. (2021) Optimized iLID Membrane Anchors for Local Optogenetic Protein Recruitment. ACS synthetic biology, 10(5), 1009.

Jagri? M, et al. (2021) Optogenetic control of PRC1 reveals its role in chromosome alignment on the spindle by overlap length-dependent forces. eLife, 10.

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

Guillén-Samander A, et al. (2021) VPS13D bridges the ER to mitochondria and peroxisomes via Miro. The Journal of cell biology, 220(5).

Schink KO, et al. (2021) The phosphoinositide coincidence detector Phafin2 promotes macropinocytosis by coordinating actin organisation at forming macropinosomes. Nature communications, 12(1), 6577.

Yamamoto K, et al. (2021) Optogenetic relaxation of actomyosin contractility uncovers mechanistic roles of cortical tension during cytokinesis. Nature communications, 12(1), 7145.

Venditti R, et al. (2019) The activity of Sac1 across ER-TGN contact sites requires the four-phosphate-adaptor-protein-1. The Journal of cell biology, 218(3), 783.

Liu Q, et al. (2019) A Photoactivatable Botulinum Neurotoxin for Inducible Control of Neurotransmission. *Neuron*, 101(5), 863.

Bracha D, et al. (2018) Mapping Local and Global Liquid Phase Behavior in Living Cells Using Photo-Oligomerizable Seeds. *Cell*, 175(6), 1467.

Okumura M, et al. (2018) Dynein-Dynactin-NuMA clusters generate cortical spindle-pulling forces as a multi-arm ensemble. *eLife*, 7.

Milas A, et al. (2018) Optogenetic reversible knocksideways, laser ablation, and photoactivation on the mitotic spindle in human cells. *Methods in cell biology*, 145, 191.

Shin Y, et al. (2018) Liquid Nuclear Condensates Mechanically Sense and Restructure the Genome. *Cell*, 175(6), 1481.

Reis JM, et al. (2018) Discovering Selective Binders for Photoswitchable Proteins Using Phage Display. *ACS synthetic biology*, 7(10), 2355.

Zimmerman SP, et al. (2016) Tuning the Binding Affinities and Reversion Kinetics of a Light Inducible Dimer Allows Control of Transmembrane Protein Localization. *Biochemistry*, 55(37), 5264.