

Resource Summary Report

Generated by [RRID](#) on Aug 20, 2026

pCMVd1-NLS-GAL4-iLight-VP16-T2A-mTagBFP2

RRID:Addgene_170273

Type: Plasmid

Proper Citation

RRID:Addgene_170273

Plasmid Information

URL: <http://www.addgene.org/170273>

Proper Citation: RRID:Addgene_170273

Insert Name: NLS-Gal4(1-65)-iLight(human codon optimized)-VP16-T2A-mTagBFP2

Organism: Bradyrhizobium sp. (strain ORS 278)

Bacterial Resistance: Kanamycin

Defining Citation: [PMID:34162879](#)

Vector Backbone Description: Backbone Marker:Originally derived from pEGFP-N1 backbone after several modifications in our lab.; Backbone Size:3427; Vector Backbone:pQP-Select; Vector Types:Mammalian Expression; Bacterial Resistance:Kanamycin

Comments: To design iLight, a full-length bacterial phytochrome IsPadC from Idiomarina sp. A28L was used as an original template. First, diguanylyl cyclase effector in IsPadC was removed, then following mutations were introduced: I68F, H80Q, A86T, R90S S242C, E274K, R295H I360V, and L464V. After that, iLight was human codon optimized for mammalian expression.

Plasmid Name: pCMVd1-NLS-GAL4-iLight-VP16-T2A-mTagBFP2

Relevant Mutation: See Comments

Record Creation Time: 20220422T221952+0000

Record Last Update: 20260815T081007+0000

Ratings and Alerts

No rating or validation information has been found for pCMVd1-NLS-GAL4-iLight-VP16-T2A-mTagBFP2.

No alerts have been found for pCMVd1-NLS-GAL4-iLight-VP16-T2A-mTagBFP2.

Data and Source Information

Source: [Addgene](#)

Usage and Citation Metrics

We found 1 mentions in open access literature.

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

Tan LYH, et al. (2026) Dual-channel optogenetics in yeast for multiplexed light-based control of cellular processes and pathways. Nature communications, 17(1).