

Resource Summary Report

Generated by [NIF](#) on Sep 10, 2026

pcDNA3.1/opto-a1AR-EYFP

RRID:Addgene_20947

Type: Plasmid

Proper Citation

RRID:Addgene_20947

Plasmid Information

URL: <http://www.addgene.org/20947>

Proper Citation: RRID:Addgene_20947

Insert Name: opto-a1AR

Organism: synthetic

Bacterial Resistance: Ampicillin

Defining Citation: [PMID:19295515](#)

Vector Backbone Description: Backbone Size:5446; Vector Backbone:pcDNA3.1; Vector Types:Mammalian Expression; Bacterial Resistance:Ampicillin

Comments: Please see <http://www.optogenetics.org> for additional information.

Plasmid Name: pcDNA3.1/opto-a1AR-EYFP

Record Creation Time: 20220422T222053+0000

Record Last Update: 20260905T075350+0000

Ratings and Alerts

No rating or validation information has been found for pcDNA3.1/opto-a1AR-EYFP.

No alerts have been found for pcDNA3.1/opto-a1AR-EYFP.

Data and Source Information

Source: [Addgene](#)

Usage and Citation Metrics

We found 8 mentions in open access literature.

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

Kim YJ, et al. (2024) A light-controlled phospholipase C for imaging of lipid dynamics and controlling neural plasticity. Cell chemical biology, 31(7), 1336.

Maltsev A, et al. (2023) Bidirectional regulation by "star forces": Ionotropic astrocyte's optical stimulation suppresses synaptic plasticity, metabotropic one strikes back. Hippocampus, 33(1), 18.

Gerasimov E, et al. (2023) Activation of Gq-Coupled Receptors in Astrocytes Restores Cognitive Function in Alzheimer's Disease Mice Model. International journal of molecular sciences, 24(12).

Dai R, et al. (2022) A neuropsin-based optogenetic tool for precise control of Gq signaling. Science China. Life sciences, 65(7), 1271.

Gerasimov E, et al. (2021) Optogenetic Activation of Astrocytes-Effects on Neuronal Network Function. International journal of molecular sciences, 22(17).

Hou X, et al. (2020) Adenosine Receptor A1-A2a Heteromers Regulate EAAT2 Expression and Glutamate Uptake via YY1-Induced Repression of PPAR?? Transcription. PPAR research, 2020, 2410264.

Mu Y, et al. (2019) Glia Accumulate Evidence that Actions Are Futile and Suppress Unsuccessful Behavior. Cell, 178(1), 27.

Lazar J, et al. (2011) Two-photon polarization microscopy reveals protein structure and function. Nature methods, 8(8), 684.