

Resource Summary Report

Generated by [RRID](#) on Aug 17, 2026

pAAV-CaMKIIa-hChR2(C128S/D156A)-EYFP

RRID:Addgene_35501

Type: Plasmid

Proper Citation

RRID:Addgene_35501

Plasmid Information

URL: <http://www.addgene.org/35501>

Proper Citation: RRID:Addgene_35501

Insert Name: hChR2

Organism: Chlamydomonas reinhardtii

Bacterial Resistance: Ampicillin

Defining Citation: [PMID:21796121](#)

Vector Backbone Description: Backbone Size:5385; Vector Backbone:pAAV; Vector Types:Mammalian Expression, AAV; Bacterial Resistance:Ampicillin

Comments: ChR2 variant harboring two amino acid substitutions which act to stabilize the conducting state of the channel to deactivate with a time constant of nearly 30 minutes following a brief pulse of activating blue light. Like previously published step function opsins, this stabilized step function opsin (SSFO) may be deactivated using yellow light (590nm). The stabilized open state of the channel allows for both lower power activation, meaning in some circumstances the light delivery system need not penetrate the brain, as well as for behavior in the absence of a tethered laser or other light delivery system.

Plasmid Name: pAAV-CaMKIIa-hChR2(C128S/D156A)-EYFP

Relevant Mutation: C128S and D156A

Record Creation Time: 20220422T222151+0000

Record Last Update: 20260815T081401+0000

Ratings and Alerts

No rating or validation information has been found for pAAV-CaMKIIa-hChR2(C128S/D156A)-EYFP.

No alerts have been found for pAAV-CaMKIIa-hChR2(C128S/D156A)-EYFP.

Data and Source Information

Source: [Addgene](#)

Usage and Citation Metrics

We found 3 mentions in open access literature.

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

Hsu TT, et al. (2020) Anterior Commissure Regulates Neuronal Activity of Amygdalae and Influences Locomotor Activity, Social Interaction and Fear Memory in Mice. *Frontiers in molecular neuroscience*, 13, 47.

Huang TN, et al. (2019) Interhemispheric Connectivity Potentiates the Basolateral Amygdalae and Regulates Social Interaction and Memory. *Cell reports*, 29(1), 34.

Kakava-Georgiadou N, et al. (2019) Considerations related to the use of short neuropeptide promoters in viral vectors targeting hypothalamic neurons. *Scientific reports*, 9(1), 11146.