

Resource Summary Report

Generated by [NIF](#) on Sep 3, 2026

pcDNA3.1/Puro-CAG-ASAP1

RRID:Addgene_52519

Type: Plasmid

Proper Citation

RRID:Addgene_52519

Plasmid Information

URL: <http://www.addgene.org/52519>

Proper Citation: RRID:Addgene_52519

Insert Name: Accelerated Sensor of Action Potentials 1

Organism: Synthetic

Bacterial Resistance: Ampicillin

Defining Citation: [PMID:24755780](#)

Vector Backbone Description: Backbone Marker:Invitrogen/Dr. Paulmurugan Ramasamy; Backbone Size:6107; Vector Backbone:pcDNA3.1/Puro-CAG; Vector Types:Mammalian Expression; Bacterial Resistance:Ampicillin

Plasmid Name: pcDNA3.1/Puro-CAG-ASAP1

Record Creation Time: 20220422T222308+0000

Record Last Update: 20260902T045645+0000

Ratings and Alerts

No rating or validation information has been found for pcDNA3.1/Puro-CAG-ASAP1.

No alerts have been found for pcDNA3.1/Puro-CAG-ASAP1.

Data and Source Information

Source: [Addgene](#)

Usage and Citation Metrics

We found 17 mentions in open access literature.

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

Rühl P, et al. (2024) An Ultrasensitive Genetically Encoded Voltage Indicator Uncovers the Electrical Activity of Non-Excitable Cells. *Advanced science* (Weinheim, Baden-Wurttemberg, Germany), 11(20), e2307938.

Higashi R, et al. (2024) Cl⁻-dependent amplification of excitatory synaptic potentials at distal dendrites revealed by voltage imaging. *Science advances*, 10(35), eadj2547.

Lu X, et al. (2023) Widefield imaging of rapid pan-cortical voltage dynamics with an indicator evolved for one-photon microscopy. *Nature communications*, 14(1), 6423.

Petratou D, et al. (2023) A proton-inhibited DEG/ENaC ion channel maintains neuronal ionstasis and promotes neuronal survival under stress. *iScience*, 26(7), 107117.

Espinosa-Medina I, et al. (2023) TEMPO enables sequential genetic labeling and manipulation of vertebrate cell lineages. *Neuron*, 111(3), 345.

Ozkan AD, et al. (2023) Force-induced motions of the PIEZO1 blade probed with fluorimetry. *Cell reports*, 42(8), 112837.

Liu Z, et al. (2022) Sustained deep-tissue voltage recording using a fast indicator evolved for two-photon microscopy. *Cell*, 185(18), 3408.

Bloxham B, et al. (2021) Linearly polarized excitation enhances signals from fluorescent voltage indicators. *Biophysical journal*, 120(23), 5333.

Limapichat W, et al. (2020) Real-time detection of changes in yeast plasma membrane potential using genetically encoded voltage indicator proteins. *FEMS yeast research*, 20(5).

Li B, et al. (2020) Neuronal Inactivity Co-opts LTP Machinery to Drive Potassium Channel Splicing and Homeostatic Spike Widening. *Cell*, 181(7), 1547.

Lee EEL, et al. (2019) Methodological improvements for fluorescence recordings in *Xenopus laevis* oocytes. *The Journal of general physiology*, 151(2), 264.

Wu L, et al. (2019) PARIS, an optogenetic method for functionally mapping gap junctions. *eLife*, 8.

Xu F, et al. (2018) Excitation wavelength optimization improves photostability of ASAP-family GEVIs. *Molecular brain*, 11(1), 32.

Silic MR, et al. (2018) Visualization of Cellular Electrical Activity in Zebrafish Early Embryos and Tumors. *Journal of visualized experiments : JoVE*(134).

Chamberland S, et al. (2017) Fast two-photon imaging of subcellular voltage dynamics in neuronal tissue with genetically encoded indicators. *eLife*, 6.

Kibat C, et al. (2016) Imaging voltage in zebrafish as a route to characterizing a vertebrate functional connectome: promises and pitfalls of genetically encoded indicators. *Journal of neurogenetics*, 30(2), 80.

Long X, et al. (2015) Magnetogenetics: remote non-invasive magnetic activation of neuronal activity with a magnetoreceptor. *Science bulletin*, 60, 2107.