

Resource Summary Report

Generated by [RRID](#) on Aug 26, 2026

pENN.AAV.GFAP.iGluSnFr.WPRE.SV40

RRID:Addgene_98930

Type: Plasmid

Proper Citation

RRID:Addgene_98930

Plasmid Information

URL: <http://www.addgene.org/98930>

Proper Citation: RRID:Addgene_98930

Insert Name: iGluSnFr

Organism: Synthetic

Bacterial Resistance: Ampicillin

Defining Citation: [PMID:23314171](#)

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

Comments: Penn Vector Core PV2914. Biosensor iGluSnFRa is a single-wavelength glutamate sensor constructed from E. coli Glut and cpGFP. iGluSnFR is bright and photostable, with 4.5 (F/F)_{max} in vitro, under both 1- and 2-photon illumination. These iGluSnFR constructs contain a K158R (GFP numbering) mutation that is not referenced in the publication. Depositing lab has confirmed that this mutation is expected and that the plasmids function as described. ** A newer version of this sensor is available. Please see iGluSnFR3 plasmids at <https://www.addgene.org/browse/article/28220233/> **

Plasmid Name: pENN.AAV.GFAP.iGluSnFr.WPRE.SV40

Record Creation Time: 20220422T222632+0000

Record Last Update: 20260815T082241+0000

Ratings and Alerts

No rating or validation information has been found for pENN.AAV.GFAP.iGluSnFr.WPRE.SV40.

No alerts have been found for pENN.AAV.GFAP.iGluSnFr.WPRE.SV40.

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 [RRID](#) .

Coulter O, et al. (2025) Adolescent Alcohol Exposure Disrupts Astrocyte-Synaptic Structural And Functional Coupling In The Male Dorsal Hippocampus. bioRxiv : the preprint server for biology.

Buchanan RA, et al. (2025) Differential impact of manganese on glutamate clearance, electroencephalography, and sleep in Alzheimer's disease. Alzheimer's & dementia : the journal of the Alzheimer's Association, 21(10), e70821.

Li SM, et al. (2024) Neurotransmitter accumulation and Parkinson's disease-like phenotype caused by anion channelrhodopsin opto-controlled astrocytic mitochondrial depolarization in substantia nigra pars compacta. MedComm, 5(6), e568.

Yan Y, et al. (2024) 3D bioprinting of human neural tissues with functional connectivity. Cell stem cell, 31(2), 260.

Cahill MK, et al. (2024) Network-level encoding of local neurotransmitters in cortical astrocytes. Nature, 629(8010), 146.

Domingos C, et al. (2023) Induced Remodelling of Astrocytes In Vitro and In Vivo by Manipulation of Astrocytic RhoA Activity. Cells, 12(2).

Minge D, et al. (2021) Heterogeneity and Development of Fine Astrocyte Morphology Captured by Diffraction-Limited Microscopy. Frontiers in cellular neuroscience, 15, 669280.

Wilkie CM, et al. (2021) The Effect of GLT-1 Upregulation on Extracellular Glutamate Dynamics. Frontiers in cellular neuroscience, 15, 661412.