# 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 GltI 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 ** A newer version of this sensor is available.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.