

Resource Summary Report

Generated by [RRID](#) on Aug 20, 2026

[pcDNA3-SypHluorin 2x \(S2x\)](#)

RRID:Addgene_37004

Type: Plasmid

Proper Citation

RRID:Addgene_37004

Plasmid Information

URL: <http://www.addgene.org/37004>

Proper Citation: RRID:Addgene_37004

Insert Name: SypHluorin 2x

Organism: Rattus norvegicus

Bacterial Resistance: Ampicillin

Defining Citation: [PMID:19217377](#)

Vector Backbone Description: Backbone Marker:Invitrogen; Vector Backbone:pcDNA3; Vector Types:Mammalian Expression; Bacterial Resistance:Ampicillin

Plasmid Name: pcDNA3-SypHluorin 2x (S2x)

Relevant Mutation: Two copies of pHluorin inserted at site 184-185

Record Creation Time: 20220422T222157+0000

Record Last Update: 20260815T081412+0000

Ratings and Alerts

No rating or validation information has been found for pcDNA3-SypHluorin 2x (S2x).

No alerts have been found for pcDNA3-SypHluorin 2x (S2x).

Data and Source Information

Source: [Addgene](#)

Usage and Citation Metrics

We found 7 mentions in open access literature.

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

Jeans AF, et al. (2025) CaV2.1 mediates presynaptic dysfunction induced by amyloid ?? oligomers. Cell reports, 44(4), 115451.

Osman V, et al. (2023) Isoflurane Alters Presynaptic Endoplasmic Reticulum Calcium Dynamics in Wild-Type and Malignant Hyperthermia-Susceptible Rodent Hippocampal Neurons. eNeuro, 10(8).

Kim SR, et al. (2023) Comprehensive analysis of sex differences in the function and ultrastructure of hippocampal presynaptic terminals. Neurochemistry international, 169, 105570.

Speigel I, et al. (2023) Volatile anesthetics inhibit presynaptic cGMP signaling to depress presynaptic excitability in rat hippocampal neurons. Neuropharmacology, 240, 109705.

Shi B, et al. (2022) Light and electron microscopic imaging of synaptic vesicle endocytosis at mouse hippocampal cultures. STAR protocols, 3(3), 101495.

Watanabe S, et al. (2018) Synaptojanin and Endophilin Mediate Neck Formation during Ultrafast Endocytosis. Neuron, 98(6), 1184.

Dimitrov D, et al. (2016) Reconstitution of Giant Mammalian Synapses in Culture for Molecular Functional and Imaging Studies. The Journal of neuroscience : the official journal of the Society for Neuroscience, 36(12), 3600.