

Resource Summary Report

Generated by [kravitz2](#) on Sep 1, 2026

pUCmini-iCAP-PHP.B

RRID:Addgene_103002

Type: Plasmid

Proper Citation

RRID:Addgene_103002

Plasmid Information

URL: <http://www.addgene.org/103002>

Proper Citation: RRID:Addgene_103002

Insert Name: Synthetic construct isolate AAV-PHP.B VP1 gene

Organism: Synthetic

Bacterial Resistance: Ampicillin

Defining Citation: [PMID:26829320](#)

Vector Backbone Description: Vector Backbone:pUC57-mini; Vector Types:Mammalian Expression, AAV; Bacterial Resistance:Ampicillin

Comments: Please note that this is a non-standard rep-cap construct. It uses a tTA-TRE amplification loop to increase Capsid expression and AAV production. We find that this system increases AAV titers 1.5-5 fold (Ben Deverman, Bryan Simpson and Paul Patterson, unpublished data). This is a tet-off system, so no dox or tet is needed to turn it on. It can be used like any other rep-cap plasmid. *This system should only present a problem if the rAAV genome to be packaged has a tet responsive element that directs expression of a protein that affected the health of the production cells. The introduction of an XbaI restriction site for ease of cloning introduces a K449R mutation, which does not have an overt effect on vector production or transduction.

Plasmid Name: pUCmini-iCAP-PHP.B

Record Creation Time: 20220422T221458+0000

Record Last Update: 20260829T075010+0000

Ratings and Alerts

No rating or validation information has been found for pUCmini-iCAP-PHP.B.

No alerts have been found for pUCmini-iCAP-PHP.B.

Data and Source Information

Source: [Addgene](#)

Usage and Citation Metrics

We found 14 mentions in open access literature.

Listed below are recent publications. The full list is available at [kravitz2](#) .

Ramirez JJ, et al. (2026) Astrocyte-microglia crosstalk through Hevin and Toll-like receptor signaling controls developmental thalamocortical synapse refinement. *Neuron*, 114(8), 1433.

Radukic MT, et al. (2026) Engineering of High-Yield Recombinant Adeno-Associated Virus Producer Plasmids. *Biotechnology journal*, 21(1), e70179.

Heo EY, et al. (2025) Impaired neuromodulator crosstalk delays arousal-dependent astroglia Ca²⁺ activation in mouse models of Alzheimer's disease. *iScience*, 28(8), 113120.

Shay TF, et al. (2023) Primate-conserved carbonic anhydrase IV and murine-restricted LY6C1 enable blood-brain barrier crossing by engineered viral vectors. *Science advances*, 9(16), eadg6618.

Ogawa Y, et al. (2023) Antibody-directed extracellular proximity biotinylation reveals Contactin-1 regulates axo-axonic innervation of axon initial segments. *bioRxiv : the preprint server for biology*.

Wang J, et al. (2023) An ultra-compact promoter drives widespread neuronal expression in mouse and monkey brains. *Cell reports*, 42(11), 113348.

Kim H, et al. (2022) Reactive astrocytes transduce inflammation in a blood-brain barrier model through a TNF-STAT3 signaling axis and secretion of alpha 1-antichymotrypsin. *Nature communications*, 13(1), 6581.

Chen X, et al. (2022) Engineered AAVs for non-invasive gene delivery to rodent and non-human primate nervous systems. *Neuron*, 110(14), 2242.

Gray SR, et al. (2021) Noradrenergic terminal short-term potentiation enables modality-selective integration of sensory input and vigilance state. *Science advances*, 7(51), eabk1378.

Arotcarena ML, et al. (2021) Pilot Study Assessing the Impact of Intrathecal Administration of Variants AAV-PHP.B and AAV-PHP.eB on Brain Transduction in Adult Rhesus Macaques. *Frontiers in bioengineering and biotechnology*, 9, 762209.

Men Y, et al. (2020) Astroglial FMRP deficiency cell-autonomously up-regulates miR-128 and disrupts developmental astroglial mGluR5 signaling. *Proceedings of the National Academy of Sciences of the United States of America*, 117(40), 25092.

Ravindra Kumar S, et al. (2020) Multiplexed Cre-dependent selection yields systemic AAVs for targeting distinct brain cell types. *Nature methods*, 17(5), 541.

Challis RC, et al. (2019) Systemic AAV vectors for widespread and targeted gene delivery in rodents. *Nature protocols*, 14(2), 379.

Xing G, et al. (2019) A mechanism in agrin signaling revealed by a prevalent Rapsyn mutation in congenital myasthenic syndrome. *eLife*, 8.