Resource Summary Report

Generated by FDI Lab - SciCrunch.org on May 1, 2025

pcDNA-D1ER

RRID:Addgene_36325
Type: Plasmid

Proper Citation

RRID:Addgene_36325

Plasmid Information

URL: http://www.addgene.org/36325

Proper Citation: RRID:Addgene_36325

Insert Name: D1ER second generation cameleon (calcium sensor) targeted to ER

Organism: Synthetic

Bacterial Resistance: Ampicillin

Defining Citation: PMID:15585581

Vector Backbone Description: Backbone Marker:Invitrogen; Backbone Size:5400; Vector Backbone:pcDNA3; Vector Types:Mammalian Expression; Bacterial Resistance:Ampicillin

Comments: Genetically encoded, ratiometric, calcium biosensor that contains enhanced CFP and Citrine. D1ER does not bind wild-type calmodulin. It has a Kd1' of 0.8 uM and a Kd2' of 60 uM. D1ER is retained in the ER with a C-terminal KDEL sequence. See also Palmer & Tsien (2006) Nature Protocols.

Plasmid Name: pcDNA-D1ER

Record Creation Time: 20220422T222154+0000

Record Last Update: 20230915T081043+0000

Ratings and Alerts

No rating or validation information has been found for pcDNA-D1ER.

No alerts have been found for pcDNA-D1ER.

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 FDI Lab - SciCrunch.org.

Bischof H, et al. (2024) mitoBKCa is functionally expressed in murine and human breast cancer cells and potentially contributes to metabolic reprogramming. eLife, 12.

Socodato R, et al. (2023) Microglial Rac1 is essential for experience-dependent brain plasticity and cognitive performance. Cell reports, 42(12), 113447.

Nguyen HT, et al. (2023) CDN1163, an activator of sarco/endoplasmic reticulum Ca2+ ATPase, up-regulates mitochondrial functions and protects against lipotoxicity in pancreatic ?-cells. British journal of pharmacology, 180(21), 2762.

Sharifi S, et al. (2023) Luminal H2 O2 promotes ER Ca2+ dysregulation and toxicity of palmitate in insulin-secreting INS-1E cells. FASEB journal : official publication of the Federation of American Societies for Experimental Biology, 37(1), e22685.

Tran GB, et al. (2023) Caffeine supplementation and FOXM1 inhibition enhance the antitumor effect of statins in neuroblastoma. Cancer research.

Inoue R, et al. (2022) Uncoupling protein 2 and aldolase B impact insulin release by modulating mitochondrial function and Ca2+ release from the ER. iScience, 25(7), 104603.

Zhang J, et al. (2021) Calcium-Collagen Coupling is Vital for Biomineralization Schedule. Advanced science (Weinheim, Baden-Wurttemberg, Germany), 8(15), e2100363.

Wild AR, et al. (2019) Synapse-to-Nucleus Communication through NFAT Is Mediated by L-type Ca2+ Channel Ca2+ Spike Propagation to the Soma. Cell reports, 26(13), 3537.