

Resource Summary Report

Generated by [RRID](#) on Aug 17, 2026

pAMPK alpha2 K45R

RRID:Addgene_15992

Type: Plasmid

Proper Citation

RRID:Addgene_15992

Plasmid Information

URL: <http://www.addgene.org/15992>

Proper Citation: RRID:Addgene_15992

Insert Name: AMPK alpha2

Organism: Rattus norvegicus

Bacterial Resistance: Ampicillin

Defining Citation: [PMID:11389854](#)

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

Plasmid Name: pAMPK alpha2 K45R

Relevant Mutation: K45R

Record Creation Time: 20220422T221905+0000

Record Last Update: 20260815T080833+0000

Ratings and Alerts

No rating or validation information has been found for pAMPK alpha2 K45R.

No alerts have been found for pAMPK alpha2 K45R.

Data and Source Information

Source: [Addgene](#)

Usage and Citation Metrics

We found 23 mentions in open access literature.

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

Zhang L, et al. (2024) AMPK β 2 regulates fasting-induced hyperketonemia by suppressing SCOT ubiquitination and degradation. Scientific reports, 14(1), 1713.

Liu X, et al. (2023) AMP-activated protein kinase inhibition in fibro-adipogenic progenitors impairs muscle regeneration and increases fibrosis. Journal of cachexia, sarcopenia and muscle, 14(1), 479.

Park JM, et al. (2023) Redefining the role of AMPK in autophagy and the energy stress response. Nature communications, 14(1), 2994.

Feliciano D, et al. (2021) YAP1 nuclear efflux and transcriptional reprogramming follow membrane diminution upon VSV-G-induced cell fusion. Nature communications, 12(1), 4502.

Karabiyik C, et al. (2021) Glucose starvation induces autophagy via ULK1-mediated activation of PIKfyve in an AMPK-dependent manner. Developmental cell, 56(13), 1961.

Kinsey CG, et al. (2019) Protective autophagy elicited by RAF $\rightarrow$ MEK $\rightarrow$ ERK inhibition suggests a treatment strategy for RAS-driven cancers. Nature medicine, 25(4), 620.

Obata Y, et al. (2018) Adiponectin/T-cadherin system enhances exosome biogenesis and decreases cellular ceramides by exosomal release. JCI insight, 3(8).

Lee Y, et al. (2018) Dishevelled has a YAP nuclear export function in a tumor suppressor context-dependent manner. Nature communications, 9(1), 2301.

Saha M, et al. (2018) AMPK-Akt Double-Negative Feedback Loop in Breast Cancer Cells Regulates Their Adaptation to Matrix Deprivation. Cancer research, 78(6), 1497.

Marinangeli C, et al. (2018) AMP-Activated Protein Kinase Is Essential for the Maintenance of Energy Levels during Synaptic Activation. iScience, 9, 1.

Sun X, et al. (2017) AMPK improves gut epithelial differentiation and barrier function via regulating Cdx2 expression. Cell death and differentiation, 24(5), 819.

Hamann JC, et al. (2017) Entosis Is Induced by Glucose Starvation. Cell reports, 20(1), 201.

Sato Y, et al. (2017) Hypoxia reduces HNF4 α /MODY1 protein expression in pancreatic β -cells by activating AMP-activated protein kinase. The Journal of biological chemistry, 292(21), 8716.

Xue Y, et al. (2016) Metformin Improves Ileal Epithelial Barrier Function in Interleukin-10 Deficient Mice. PloS one, 11(12), e0168670.

Matsuda T, et al. (2015) Regulation of Pancreatic β Cell Mass by Cross-Interaction between CCAAT Enhancer Binding Protein β Induced by Endoplasmic Reticulum Stress and AMP-Activated Protein Kinase Activity. PloS one, 10(6), e0130757.

Weerasekara VK, et al. (2014) Metabolic-stress-induced rearrangement of the 14-3-3 σ interactome promotes autophagy via a ULK1- and AMPK-regulated 14-3-3 σ interaction with phosphorylated Atg9. Molecular and cellular biology, 34(24), 4379.

He H, et al. (2014) Calcineurin suppresses AMPK-dependent cytoprotective autophagy in cardiomyocytes under oxidative stress. Cell death & disease, 5(1), e997.

Salvadó L, et al. (2013) Oleate prevents saturated-fatty-acid-induced ER stress, inflammation and insulin resistance in skeletal muscle cells through an AMPK-dependent mechanism. Diabetologia, 56(6), 1372.

Singh PK, et al. (2012) The laforin-malin complex negatively regulates glycogen synthesis by modulating cellular glucose uptake via glucose transporters. Molecular and cellular biology, 32(3), 652.

Das AK, et al. (2012) AMP-activated protein kinase stimulates myostatin expression in C2C12 cells. Biochemical and biophysical research communications, 427(1), 36.