

### Product datasheet for KN210226LP

#### OriGene Technologies, Inc.

9620 Medical Center Drive, Ste 200 Rockville, MD 20850, US Phone: +1-888-267-4436 https://www.origene.com techsupport@origene.com EU: info-de@origene.com CN: techsupport@origene.cn

## AMPK alpha 2 (PRKAA2) Human Gene Knockout Kit (CRISPR)

#### **Product data:**

**Product Type:** Knockout Kits (CRISPR)

**Format:** 2 gRNA vectors, 1 Luciferase-Puro donor, 1 scramble control

Donor DNA: Luciferase-Puro Symbol: AMPK alpha 2

**Locus ID:** 5563

**Components: KN210226G1**, AMPK alpha 2 gRNA vector 1 in pCas-Guide CRISPR vector (GE100002)

KN210226G2, AMPK alpha 2 gRNA vector 2 in pCas-Guide CRISPR vector (GE100002)

KN210226LPD, donor DNA containing left and right homologous arms and Luciferase-Puro

functional cassette.

GE100003, scramble sequence in pCas-Guide vector

**RefSeq:** <u>NM 006252</u>

UniProt ID: P54646

Synonyms: AMPK; AMPK2; AMPKa2; PRKAA

**Summary:** The protein encoded by this gene is a catalytic subunit of the AMP-activated protein kinase

(AMPK). AMPK is a heterotrimer consisting of an alpha catalytic subunit, and non-catalytic beta and gamma subunits. AMPK is an important energy-sensing enzyme that monitors cellular energy status. In response to cellular metabolic stresses, AMPK is activated, and thus

phosphorylates and inactivates acetyl-CoA carboxylase (ACC) and beta-hydroxy betamethylglutaryl-CoA reductase (HMGCR), key enzymes involved in regulating de novo

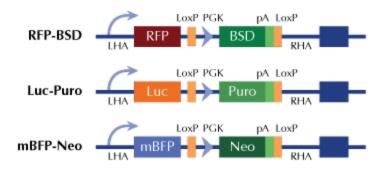
biosynthesis of fatty acid and cholesterol. Studies of the mouse counterpart suggest that this catalytic subunit may control whole-body insulin sensitivity and is necessary for maintaining

myocardial energy homeostasis during ischemia. [provided by RefSeq, Jul 2008]



# **Product images:**

### Donor Vector Edited Chromosome



RFP, Luc, and mBFP will be under native gene promoter