

Product datasheet for KN210226LP

OriGene Technologies, Inc.

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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

Disclaimer: These products are manufactured and supplied by OriGene under license from ERS. The kit is

designed based on the best knowledge of CRISPR technology. The system has been functionally validated for knocking-in the cassette downstream the native promoter. The efficiency of the knock-out varies due to the nature of the biology and the complexity of the

experimental process.

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 beta-methylglutaryl-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

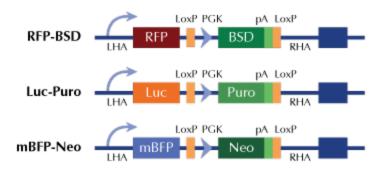
myocardial energy homeostasis during ischemia. [provided by RefSeq, Jul 2008]





Product images:

Donor Vector Edited Chromosome



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