

### Product datasheet for KN201831LP

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#### PDHA1 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: PDHA1 Locus ID: 5160

**Components: KN201831G1**, PDHA1 gRNA vector 1 in pCas-Guide CRISPR vector (GE100002)

**KN201831G2**, PDHA1 gRNA vector 2 in pCas-Guide CRISPR vector (GE100002)

KN201831LPD, donor DNA containing left and right homologous arms and Luciferase-Puro

functional cassette.

GE100003, scramble sequence in pCas-Guide vector

RefSeq: NM 000284, NM 001173454, NM 001173455, NM 001173456

UniProt ID: <u>P08559</u>

Synonyms: PDHA; PDHAD; PDHCE1A; PHE1A

**Summary:** The pyruvate dehydrogenase (PDH) complex is a nuclear-encoded mitochondrial

multienzyme complex that catalyzes the overall conversion of pyruvate to acetyl-CoA and CO(2), and provides the primary link between glycolysis and the tricarboxylic acid (TCA) cycle. The PDH complex is composed of multiple copies of three enzymatic components: pyruvate dehydrogenase (E1), dihydrolipoamide acetyltransferase (E2) and lipoamide dehydrogenase (E3). The E1 enzyme is a heterotetramer of two alpha and two beta subunits. This gene encodes the E1 alpha 1 subunit containing the E1 active site, and plays a key role in the function of the PDH complex. Mutations in this gene are associated with pyruvate dehydrogenase E1-alpha deficiency and X-linked Leigh syndrome. Alternatively spliced transcript variants encoding different isoforms have been found for this gene.[provided by

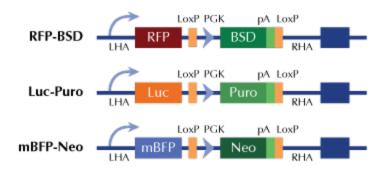
RefSeq, Mar 2010]





## **Product images:**

#### Donor Vector Edited Chromosome



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