

# Product datasheet for KN204456LP

#### OriGene Technologies, Inc.

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## DNA Polymerase gamma (POLG) 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: DNA Polymerase gamma

**Locus ID:** 5428

**Components:** KN204456G1, DNA Polymerase gamma gRNA vector 1 in pCas-Guide CRISPR vector

(GE100002)

KN204456G2, DNA Polymerase gamma gRNA vector 2 in pCas-Guide CRISPR vector

(GE100002)

KN204456LPD, 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:** NM 001126131, NM 002693

UniProt ID: P54098

Synonyms: MDP1; MIRAS; MTDPS4A; MTDPS4B; PEO; POLG1; POLGA; SANDO; SCAE

**Summary:** Mitochondrial DNA polymerase is heterotrimeric, consisting of a homodimer of accessory

subunits plus a catalytic subunit. The protein encoded by this gene is the catalytic subunit of mitochondrial DNA polymerase. The encoded protein contains a polyglutamine tract near its N-terminus that may be polymorphic. Defects in this gene are a cause of progressive external ophthalmoplegia with mitochondrial DNA deletions 1 (PEOA1), sensory ataxic neuropathy dysarthria and ophthalmoparesis (SANDO), Alpers-Huttenlocher syndrome (AHS), and mitochondrial neurogastrointestinal encephalopathy syndrome (MNGIE). Two transcript variants encoding the same protein have been found for this gene. [provided by RefSeq, Jul

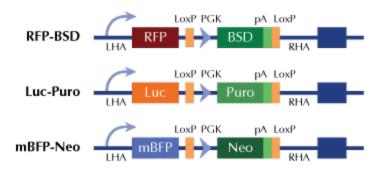
2008]





# **Product images:**

### Donor Vector Edited Chromosome



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