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Product datasheet for KN204456

DNA Polymerase gamma (POLG) Human Gene Knockout Kit (CRISPR)

Product data:

Product Type: Knockout Kits (CRISPR)

Format: 2 gRNA vectors, 1 GFP-puro donor, 1 scramble control

Donor DNA: GFP-puro

Symbol: DNA Polymerase gamma

Locus ID: 5428

Components: **KN204456G1**, DNA Polymerase gamma gRNA vector 1 in pCas-Guide CRISPR vector (GE100002), Target Sequence: CCACCTTCCTCCAGAGCAGG
KN204456G2, DNA Polymerase gamma gRNA vector 2 in pCas-Guide CRISPR vector (GE100002), Target Sequence: CAGGGCCGGTTCCAGCTCCG
KN204456D, donor DNA containing left and right homologous arms and GFP-puro functional cassette.
Homologous arm and GFP-puro sequences:

pUC vector backbone in gray; Left arm sequence in blue; GFP-puro in green; Right arm in violet

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ATACACTCCG CTATCGCTAC GTGACTGGGT CATGGCTGCG CCCCGACACC

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.

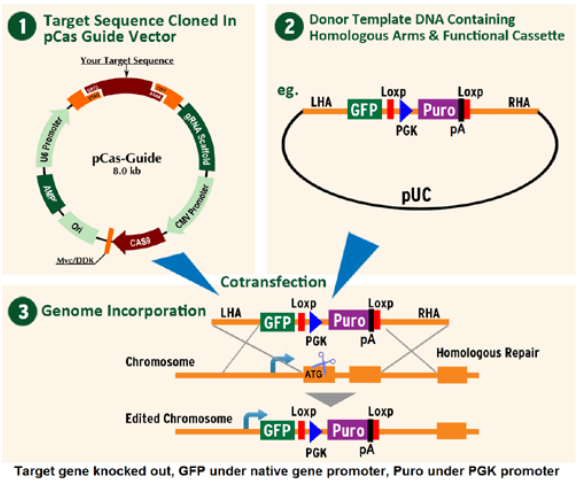
RefSeq: NM_001126131, NM_002693

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:



Target gene knocked out, GFP under native gene promoter, Puro under PGK promoter