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# Product datasheet for KN202659

## MRPS18C 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:** MRPS18C

**Locus ID:** 51023

**Components:** **KN202659G1**, MRPS18C gRNA vector 1 in pCas-Guide CRISPR vector (GE100002), Target Sequence: ACACATCCCGGGACTCACAC
**KN202659G2**, MRPS18C gRNA vector 2 in pCas-Guide CRISPR vector (GE100002), Target Sequence: GAAGTTGACACACTTGGTAA
**KN202659D**, 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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**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.

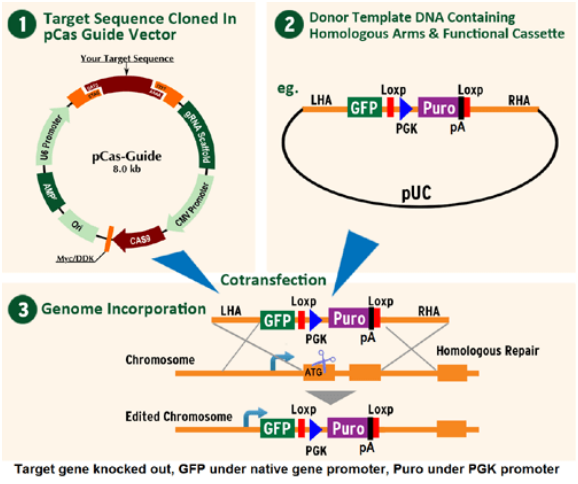
**RefSeq:** NM_001297767, NM_001297769, NM_001297770, NM_016067

**UniProt ID:** Q9Y3D5

**Synonyms:** CGI-134; MRP-S18-1; MRP-S18-c; MRPS18-1; mrps18-c; S18mt-c

**Summary:** Mammalian mitochondrial ribosomal proteins are encoded by nuclear genes and help in protein synthesis within the mitochondrion. Mitochondrial ribosomes (mitoribosomes) consist of a small 28S subunit and a large 39S subunit. They have an estimated 75% protein to rRNA composition compared to prokaryotic ribosomes, where this ratio is reversed. Another difference between mammalian mitoribosomes and prokaryotic ribosomes is that the latter contain a 5S rRNA. Among different species, the proteins comprising the mitoribosome differ greatly in sequence, and sometimes in biochemical properties, which prevents easy recognition by sequence homology. This gene encodes a 28S subunit protein that belongs to the ribosomal protein S18P family. The encoded protein is one of three that has significant sequence similarity to bacterial S18 proteins. The primary sequences of the three human mitochondrial S18 proteins are no more closely related to each other than they are to the prokaryotic S18 proteins. Pseudogenes corresponding to this gene are found on chromosomes 8p, 12p, 15q, and 22q. [provided by RefSeq, Jul 2008]

## Product images:




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