

Product datasheet for **KN200921**

CBARA1 (MICU1) 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: CBARA1
Locus ID: 10367
Components: **KN200921G1**, CBARA1 gRNA vector 1 in pCas-Guide CRISPR vector (GE100002), Target Sequence: TAGTCTTCGCCGGATCTGGA
KN200921G2, CBARA1 gRNA vector 2 in pCas-Guide CRISPR vector (GE100002), Target Sequence: GGTCTCGATGGTACCATGG
KN200921D, 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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AGAAGTAAGT TGGCCGCAGT GTTATCACTC ATGGTTATGG CAGCACTGCA TAATTCTCTT ACTGTCATGC
CATCCGTAAG ATGCTTTTCT GTGACTGGTG AGTACTCAAC CAAGTCATTC TGAGAATAGT GTATGCCGGC
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TACAGGCATC GTGGTGTAC GCTCGTCGTT TGGTATGGCT TCATTCAGCT CCGGTTCCCA ACGATC

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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_001195518](#), [NM_001195519](#), [NM_006077](#), [NM_001363513](#)

UniProt ID:

[Q9BPX6](#)

Synonyms:

CALC; CBARA1; EFHA3; MPXPS

Summary:

This gene encodes an essential regulator of mitochondrial Ca²⁺ uptake under basal conditions. The encoded protein interacts with the mitochondrial calcium uniporter, a mitochondrial inner membrane Ca²⁺ channel, and is essential in preventing mitochondrial Ca²⁺ overload, which can cause excessive production of reactive oxygen species and cell stress. Alternatively spliced transcript variants encoding different isoforms have been described. [provided by RefSeq, Mar 2013]

