

MCU Knockout 293T Cell Line, Homozygous

Catalog No.: RM02148

Basic Information

Catalog No.

RM02148

Category

Cell Line

Parental Cell line

293T

Genotype

Knockout

Gene Information

Gene Symbol

MCU

Species

Human

Gene ID

90550

Swiss Prot

Q8NE86

Synonyms

C10orf42; CCDC109A; HsMCU

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Background

This gene encodes a calcium transporter that localizes to the mitochondrial inner membrane. The encoded protein interacts with mitochondrial calcium uptake 1. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Jul 2012]

Product Information

Description

MCU Knockout 293T Cell Line is engineered from 293T cell line with Gene-Editing Technology.

Allele-1:12bp deletion and 8bp deletion in exon3

Allele-2:12bp deletion and 8bp deletion in exon3

Mammalian cells such as human, rat and mouse cells are normally diploid with two alleles.

Homozygote: both alleles were knocked out, mRNA has no signal, no expression of proteins.

Heterozygote: only one allele was knocked out, the mRNA transcript levels was decreased compared to wild type, and the protein expression levels was also lower than that of the wild type.

Packaging

1 vial parental cell line and 1 vial knockout cell line

Shipping Conditions

Dry ice

Amount

1~5x10⁶ cells/vial

Storage

Stored in liquid nitrogen for a long time less than -130°C. Minimizing freeze-thaw cycles.

Protocol

Upon arrival, it should be maintained in DMEM medium with 10%(v/v) fetal bovine serum and 100U penicillin-streptomycin, at 37°C with 5% CO₂ condition.

1. Thaw the vial in 37°C water bath, and shake it to melt as soon as possible.
2. Transfer the cell suspension to a 15mL conical tube with pre-warmed 5mL complete medium and centrifuge 1000rpm for approximately 5 minutes at room temperature.
3. Remove and discard the supernatant.
4. Resuspend the cell pellet with 1mL pre-warmed complete medium and seed in 10cm dish.
5. Add 8-10mL of complete medium.
6. Incubate the culture at 37°C incubator with 5% CO₂.
7. A subcultivation ratio of 1:2-1:4 is recommended.

Sequencing data

WT TGAGGCTACCATCC*****TGTCAGTTCACACT***TACGACAACCTGCAAGAAGAGGATCGGGGAATTGACA
Mut TGAGGCTACCATCC***Deletion***TGTCAGTTCACACT***TACGACAACCTGCAA -----TCGGGGGAATTGACA
Allele-1: 12bp deletion and 8bp deletion in exon3
WT TGAGGCTACCATCC*****TGTCAGTTCACACT***TACGACAACCTGCAAGAAGAGGATCGGGGAATTGACA
Mut TGAGGCTACCATCC***Deletion***TGTCAGTTCACACT***TACGACAACCTGCAA-----TCGGGGGAATTGACA
Allele-2: 12bp deletion and 8bp deletion in exon3

Genome sequence analysis of PCR products from parental (WT) and MCU knockout (KO) 293T cells, using sanger sequencing.