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MICU1 Knockout 293T Cell Line, Homozygous

Catalog No.: RM50161

Basic Information

Catalog No.
RM50161

Category
Cell Line

Parental Cell line
293T

Genotype
Knockout

Background

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.

Gene Information

Gene Symbol
MICU1

Species
Human

Gene ID
10367

Swiss Prot
Q9BPX6

Synonyms
CALC; EFHA3; MPXPS; CBARA1; ara
CALC; MICU1

Product Information

Description
MICU1 Knockout cell line is engineered from 293T cell line with Gene-Editing Technology.
Allele-1:133bp deletion in exon3
Allele-2:133bp 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
1~5x10^6 cells/vial.

Storage
Stored in liquid nitrogen for a long time less than -130℃. 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℃ with 5% CO_2 condition.
1. Thaw the vial in 37℃ 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℃ incubator with 5% CO_2.
7. A subcultivation ratio of 1:2-1:4 is recommended.

Contact

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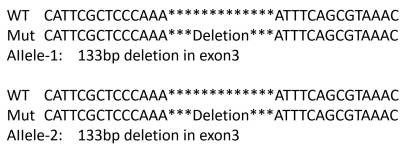
Sequencing data



Genome sequence analysis of PCR products from parental (WT) and MICU1 knockout (KO) 293T cells, using sanger sequencing.