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HADHA Knockout 293T Cell Line, Homozygous

Catalog No.: RM02245

Basic Information

Catalog No.
RM02245

Category
Cell Line

Parental Cell line
293T

Genotype
Knockout

Gene Information

Gene Symbol
HADHA

Species
Human

Gene ID
3030

Swiss Prot
P40939

Synonyms
ECHA; GBP; HADH; LCEH; LCHAD; MTPA; TP-ALPHA

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Background

This gene encodes the alpha subunit of the mitochondrial trifunctional protein, which catalyzes the last three steps of mitochondrial beta-oxidation of long chain fatty acids. The mitochondrial membrane-bound heterocomplex is composed of four alpha and four beta subunits, with the alpha subunit catalyzing the 3-hydroxyacyl-CoA dehydrogenase and enoyl-CoA hydratase activities. Mutations in this gene result in trifunctional protein deficiency or LCHAD deficiency. The genes of the alpha and beta subunits of the mitochondrial trifunctional protein are located adjacent to each other in the human genome in a head-to-head orientation. [provided by RefSeq, Jul 2008]

Product Information

Description
HADHA Knockout cell line is engineered from 293T cell line with Gene-Editing Technology.
Allele-1:exon1 was deleted
Allele-2:exon1 was deleted
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.

Sequencing data

WT AGTCCTCCGCTCGG**********TGAGGCCTGGCCGA
Mut AGTCCTCCGCTCGG***Deletion***TGAGGCCTGGCCGA
Allele-1: exon1 was deleted

WT AGTCCTCCGCTCGG**********TGAGGCCTGGCCGA
Mut AGTCCTCCGCTCGG***Deletion***TGAGGCCTGGCCGA
Allele-2: exon1 was deleted

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