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MTNR1A Knockout 293T Cell Line, Homozygous

Catalog No.: RM02662

Basic Information

Catalog No.
RM02662

Category
Cell Line

Parental Cell line
293T

Genotype
Knockout

Gene Information

Gene Symbol
MTNR1A

Species
Human

Gene ID
4543

Swiss Prot
P48039

Synonyms
MEL-1A-R; MT1

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Background

This gene encodes one of two high affinity forms of a receptor for melatonin, the primary hormone secreted by the pineal gland. This receptor is a G-protein coupled, 7-transmembrane receptor that is responsible for melatonin effects on mammalian circadian rhythm and reproductive alterations affected by day length. The receptor is an integral membrane protein that is readily detectable and localized to two specific regions of the brain. The hypothalamic suprachiasmatic nucleus appears to be involved in circadian rhythm while the hypophysial pars tuberalis may be responsible for the reproductive effects of melatonin. [provided by RefSeq, Jul 2008]

Product Information

Description
MTNR1A Knockout 293T Cell Line is engineered from 293T cell line with Gene-Editing technology.
Allele-1:85bp deletion in exon2
Allele-2:85bp deletion in exon2
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

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WT    TTATCCGTACCCGT**********CATCGGCTCCATAT
Mut   TTATCCGTACCCGT***Deletion***CATCGGCTCCATAT
Allele-1:   85bp deletion in exon2

WT    TTATCCGTACCCGT**********CATCGGCTCCATAT
Mut   TTATCCGTACCCGT***Deletion***CATCGGCTCCATAT
Allele-2:   85bp deletion in exon2
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Genome sequence analysis of PCR products from parental (WT) and MTNR1A knockout (KO) 293T cells, using sanger sequencing.