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NR1I3 Knockout 293T Cell Line, Homozygous

Catalog No.: RM02089

Basic Information

Catalog No.
RM02089

Category
Cell Line

Parental Cell line
293T

Genotype
Knockout

Background

This gene encodes a member of the nuclear receptor superfamily, and is a key regulator of xenobiotic and endobiotic metabolism. The protein binds to DNA as a monomer or a heterodimer with the retinoid X receptor and regulates the transcription of target genes involved in drug metabolism and bilirubin clearance, such as cytochrome P450 family members. Unlike most nuclear receptors, this transcriptional regulator is constitutively active in the absence of ligand but is regulated by both agonists and inverse agonists. Ligand binding results in translocation of this protein to the nucleus, where it activates or represses target gene transcription. These ligands include bilirubin, a variety of foreign compounds, steroid hormones, and prescription drugs. Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2008]

Gene Information

Gene Symbol
NR1I3

Species
Human

Gene ID
9970

Swiss Prot
Q14994

Synonyms
CAR; CAR1; MB67

Product Information

Description
NR1I3 Knockout 293T Cell Line is engineered from 293T cell line with Gene-Editing Technology.
Allele-1:59bp deletion in exon3
Allele-2:73bp 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

WT AAGCAGGCCCAGCG**********TCCTGGGGGCCCAC
Mut AAGCAGGCCCAGCG***Deletion***TCCTGGGGGCCCAC
Allele-1: 59bp deletion in exon3

WT GCGGCGAGCAAAGC**********GGGGGCCCACACCC
Mut GCGGCGAGCAAAGC***Deletion***GGGGGCCCACACCC
Allele-2: 73bp deletion in exon3

Genome sequence analysis of PCR products from parental (WT) and NR1I3 knockout (KO) 293T cells, using sanger sequencing.