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# PER2 Knockout 293T Cell Line, Homozygous

**Catalog No.: RM02103**

## Basic Information

**Catalog No.**
RM02103

**Category**
Cell Line

**Parental Cell line**
293T

**Genotype**
Knockout

## Background

This gene is a member of the Period family of genes and is expressed in a circadian pattern in the suprachiasmatic nucleus, the primary circadian pacemaker in the mammalian brain. Genes in this family encode components of the circadian rhythms of locomotor activity, metabolism, and behavior. This gene is upregulated by CLOCK/ARNTL heterodimers but then represses this upregulation in a feedback loop using PER/CRY heterodimers to interact with CLOCK/ARNTL. Polymorphisms in this gene may increase the risk of getting certain cancers and have been linked to sleep disorders. [provided by RefSeq, Jan 2014]

## Gene Information

**Gene Symbol**
PER2

**Species**
Human

**Gene ID**
8864

**Swiss Prot**
O15055

**Synonyms**
FASPS; FASPS1

## Product Information

**Description**
PER2 Knockout 293T Cell Line is engineered from 293T cell line with Gene-Editing Technology.
Allele-1:104bp deletion in exon1
Allele-2:104bp deletion in exon1
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**
1~5x$10^6$ cells/vial

**Storage**
Store at -20℃

**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 CCCCACCAAGGAGC**********TCGCAGGGCAGTGA
Mut CCCCACCAAGGAGC***Deletion***TCGCAGGGCAGTGA
Allele-1: 104bp deletion in exon1

WT CCCCACCAAGGAGC**********TCGCAGGGCAGTGA
Mut CCCCACCAAGGAGC***Deletion***TCGCAGGGCAGTGA
Allele-2: 104bp deletion in exon1

Genome sequence analysis of PCR products from parental (WT) and PER2 knockout (KO) 293T cells, using sanger sequencing.



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