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FDPS Knockout 293T Cell Line, Homozygous

Catalog No.: RM02717

Basic Information

Catalog No.
RM02717

Category
Cell Line

Parental Cell line
293T

Genotype
Knockout

Gene Information

Gene Symbol
FDPS

Species
Human

Gene ID
2224

Swiss Prot
P14324

Synonyms
FPS; FPPS; POROK9; FPS/FDPS

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Background

This gene encodes an enzyme that catalyzes the production of geranyl pyrophosphate and farnesyl pyrophosphate from isopentenyl pyrophosphate and dimethylallyl pyrophosphate. The resulting product, farnesyl pyrophosphate, is a key intermediate in cholesterol and sterol biosynthesis, a substrate for protein farnesylation and geranylgeranylation, and a ligand or agonist for certain hormone receptors and growth receptors. Drugs that inhibit this enzyme prevent the post-translational modifications of small GTPases and have been used to treat diseases related to bone resorption. Multiple pseudogenes have been found on chromosomes 1, 7, 14, 15, 21 and X. Multiple transcript variants encoding different isoforms have been found for this gene.

Product Information

Description
FDPS Knockout cell line is engineered from 293T cell line with Gene-Editing Technology.
Allele-1:82bp deletion in exon1
Allele-2:82bp 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
1~5x10^6 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    CCGCTGGTTGAGAT**********GCACGGGTACCCA
Mut   CCGCTGGTTGAGAT***Deletion***GCACGGGTACCCA
Allele-1:   82bp deletion in exon1

WT    CCGCTGGTTGAGAT**********GCACGGGTACCCA
Mut   CCGCTGGTTGAGAT***Deletion***GCACGGGTACCCA
Allele-2:   82bp deletion in exon1
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Genome sequence analysis of PCR products from parental (WT) and FDPS knockout (KO) 293T cells, using sanger sequencing.