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FTO Knockout 293T Cell Line, Homozygous

Catalog No.: RM02201

Basic Information

Catalog No.
RM02201

Category
Cell Line

Parental Cell line
293T

Genotype
Knockout

Gene Information

Gene Symbol
FTO

Species
Human

Gene ID
79068

Swiss Prot
Q9C0B1

Synonyms
ALKBH9; BMIQ14; GDFD

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Background

This gene is a nuclear protein of the AlkB related non-haem iron and 2-oxoglutarate-dependent oxygenase superfamily but the exact physiological function of this gene is not known. Other non-heme iron enzymes function to reverse alkylated DNA and RNA damage by oxidative demethylation. Studies in mice and humans indicate a role in nervous and cardiovascular systems and a strong association with body mass index, obesity risk, and type 2 diabetes. [provided by RefSeq, Jul 2011]

Product Information

Description
FTO Knockout cell line is engineered from 293T cell line with Gene-Editing Technology.
Allele-1:52bp deletion in exon3
Allele-2:52bp 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.

Sequencing data

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WT     CTGCTTATTTCGGG**************CATTGGTAATCCAG
Mut    CTGCTTATTTCGGG***Deletion***CATTGGTAATCCAG
Allele-1：52bp deletion in exon3

WT     CTGCTTATTTCGGG**************CATTGGTAATCCAG
Mut    CTGCTTATTTCGGG***Deletion***CATTGGTAATCCAG
Allele-2：52bp deletion in exon3
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Genome sequence analysis of PCR products from parental (WT) and FTO knockout (KO) 293T cells, using sanger sequencing.