# 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

## Contact

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## Background

This gene is a nuclear protein of the AlkB related non-haem iron and 2-oxoglutaratedependent 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<sup>6</sup> cells/vial

#### Storage

Stored in liquid nitrogen for a long time less than -130°C. 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  $37^{\circ}$ C with 5% CO<sub>2</sub> condition.

- 1. Thaw the vial in 37°C water bath ,and shake it to melt as soon as possible.
- 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.
  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°C incubator with 5%  $CO_2$ .
- 7. A subcultivation ratio of 1:2-1:4 is recommended.

## Sequencing data

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