

# ATF4 Knockout HeLa Cell Line, Homozygous

Catalog No.: RM50112

## Basic Information

### Catalog No.

RM50112

### Category

Cell Line

### Parental Cell line

HeLa

### Genotype

Knockout

## Gene Information

### Gene Symbol

ATF4

### Species

Human

### Gene ID

468

### Swiss Prot

P18848

### Synonyms

CREB2; TXREB; CREB-2; TAXREB67; ATF4

## Contact

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## Background

This gene encodes a transcription factor that was originally identified as a widely expressed mammalian DNA binding protein that could bind a tax-responsive enhancer element in the LTR of HTLV-1. The encoded protein was also isolated and characterized as the cAMP-response element binding protein 2 (CREB-2). The protein encoded by this gene belongs to a family of DNA-binding proteins that includes the AP-1 family of transcription factors, cAMP-response element binding proteins (CREBs) and CREB-like proteins. These transcription factors share a leucine zipper region that is involved in protein-protein interactions, located C-terminal to a stretch of basic amino acids that functions as a DNA binding domain. Two alternative transcripts encoding the same protein have been described. Two pseudogenes are located on the X chromosome at q28 in a region containing a large inverted duplication.

## Product Information

### Description

ATF4 Knockout cell line is engineered from HeLa cell line with Gene-Editing Technology.

Allele-1:71bp deletion in exon1

Allele-2:71bp 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<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°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.
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°C incubator with 5% CO<sub>2</sub>.
7. A subcultivation ratio of 1:2-1:4 is recommended.

## Sequencing data

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WT TCTCTAGATGATT\*\*\*\*\*TGGCTGGCTGTGGA  
Mut TCTCTAGATGATT\*\*\*Deletion\*\*\*TGGCTGGCTGTGGA  
Allele-1: 71bp deletion in exon1

Genome sequence analysis of PCR products from parental (WT) and ATF4 knockout (KO) HeLa cells, using sanger sequencing.

WT TCTCTAGATGATT\*\*\*\*\*TGGCTGGCTGTGGA  
Mut TCTCTAGATGATT\*\*\*Deletion\*\*\*TGGCTGGCTGTGGA  
Allele-2: 71bp deletion in exon1