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ATF4 Knockout HeLa Cell Line, Homozygous

Catalog No.: RM50112

Basic Information

Catalog No.
RM50112

Category
Cell Line

Parental Cell line
HeLa

Genotype
Knockout

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.

Gene Information

Gene Symbol
ATF4

Species
Human

Gene ID
468

Swiss Prot
P18848

Synonyms
CREB2; TXREB; CREB-2; TAXREB67; ATF4

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
1~5x10^6 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.

Contact

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Sequencing data

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

WT     TCTCTTAGATGATT**********TGGCTGGCTGTGGA
Mut    TCTCTTAGATGATT***Deletion***TGGCTGGCTGTGGA
Allele-2:   71bp deletion in exon1
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Genome sequence analysis of PCR products from parental (WT) and ATF4 knockout (KO) HeLa cells, using sanger sequencing.