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TCF4 Knockout HCT116 Cell Line, Homozygous

Catalog No.: RM01869

Basic Information

Catalog No.
RM01869

Category
Cell Line

Parental Cell line
HCT116

Genotype
Knockout

Gene Information

Gene Symbol
TCF4

Species
Human

Gene ID
6925

Swiss Prot
P15884

Synonyms
E2-2; FECD3; ITF-2; ITF2; PTHS; SEF-2; SEF2; SEF2-1; SEF2-1A; SEF2-1B; SEF2-1D; TCF-4; bHLHb19

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Background

This gene encodes transcription factor 4, a basic helix-loop-helix transcription factor. The encoded protein recognizes an Ephrussi-box ('E-box') binding site ('CANNTG') - a motif first identified in immunoglobulin enhancers. This gene is broadly expressed, and may play an important role in nervous system development. Defects in this gene are a cause of Pitt-Hopkins syndrome. In addition, an intronic CTG repeat normally numbering 10-37 repeat units can expand to >50 repeat units and cause Fuchs endothelial corneal dystrophy. Multiple alternatively spliced transcript variants that encode different proteins have been described. [provided by RefSeq, Jul 2016]

Product Information

Description
TCF4 Knockout HCT116 Cell Line is engineered from HCT116 cell line with Gene-Editing Technology.
Allele-1:exon2 was deleted
Allele-2:exon2 was deleted
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

WT ATATAAGAATGGAG**********TCACTTAATGTCAC
Mut ATATAAGAATGGAG***Deletion***TCACTTAATGTCAC
Allele-1: exon2 was deleted

WT ATATAAGAATGGAG**********TCACTTAATGTCAC
Mut ATATAAGAATGGAG***Deletion***TCACTTAATGTCAC
Allele-2: exon2 was deleted

Genome sequence analysis of PCR products from parental (WT) and TCF4 knockout (KO) HCT116 cells, using sanger sequencing.