

DDIT3 Knockout HeLa Cell Line, Homozygous

Catalog No.: RM01845

Basic Information

Catalog No.

RM01845

Category

Cell Line

Parental Cell line

HeLa

Genotype

Knockout

Gene Information

Gene Symbol

DDIT3

Species

Human

Gene ID

1649

Swiss Prot

P35638

Synonyms

CEBPZ; CHOP; CHOP-10; CHOP10;
GADD153

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Background

This gene encodes a member of the CCAAT/enhancer-binding protein (C/EBP) family of transcription factors. The protein functions as a dominant-negative inhibitor by forming heterodimers with other C/EBP members, such as C/EBP and LAP (liver activator protein), and preventing their DNA binding activity. The protein is implicated in adipogenesis and erythropoiesis, is activated by endoplasmic reticulum stress, and promotes apoptosis. Fusion of this gene and FUS on chromosome 16 or EWSR1 on chromosome 22 induced by translocation generates chimeric proteins in myxoid liposarcomas or Ewing sarcoma. Multiple alternatively spliced transcript variants encoding two isoforms with different length have been identified.

Product Information

Description

DDIT3 Knockout cell line is engineered from HeLa cell line with Gene-Editing Technology.

Allele-1: 7bp deletion in exon1

Allele-2: 7bp 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

1~5x10⁶ 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% CO₂ 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% CO₂.
7. A subcultivation ratio of 1:2-1:4 is recommended.

Sequencing data

WT TGGCTGACTGAGGAGGAGCCAGAACCCAGCAGAGGTCACAA
Mut TGGCTGACTGAGGAGGAGCC-----GCAGAGGTCACAA
Allele-1: 7bp deletion in exon1
WT TGGCTGACTGAGGAGGAGCCAGAACCCAGCAGAGGTCACAA
Mut TGGCTGACTGAGGAGGAGCC-----GCAGAGGTCACAA
Allele-2: 7bp deletion in exon1

Genome sequence analysis of PCR products from parental (WT) and DDIT3 knockout (KO) HeLa cells, using sanger sequencing.