

E2F1 Knockout HeLa Cell Line, Homozygous

Catalog No.: RM02185

Basic Information

Catalog No.

RM02185

Category

Cell Line

Parental Cell line

HeLa

Genotype

Knockout

Gene Information

Gene Symbol

E2F1

Species

Human

Gene ID

1869

Swiss Prot

Q01094

Synonyms

E2F-1; RBAP1; RBBP3; RBP3

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Background

The protein encoded by this gene is a member of the E2F family of transcription factors. The E2F family plays a crucial role in the control of cell cycle and action of tumor suppressor proteins and is also a target of the transforming proteins of small DNA tumor viruses. The E2F proteins contain several evolutionally conserved domains found in most members of the family. These domains include a DNA binding domain, a dimerization domain which determines interaction with the differentiation regulated transcription factor proteins (DP), a transactivation domain enriched in acidic amino acids, and a tumor suppressor protein association domain which is embedded within the transactivation domain. This protein and another 2 members, E2F2 and E2F3, have an additional cyclin binding domain. This protein binds preferentially to retinoblastoma protein pRB in a cell-cycle dependent manner. It can mediate both cell proliferation and p53-dependent/independent apoptosis. [provided by RefSeq, Jul 2008]

Product Information

Description

E2F1 Knockout HeLa Cell Line is engineered from HeLa cell line with Gene-Editing Technology.

Allele-1:79bp deletion in exon3

Allele-2:79bp 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

1~5x10⁶ 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 TGCTGAGCCACTCG*****TCCTTGAGGGCATC
Mut TGCTGAGCCACTCG***Deletion***TCCTTGAGGGCATC
Allele-1: 79bp deletion in exon3
WT TGCTGAGCCACTCG*****TCCTTGAGGGCATC
Mut TGCTGAGCCACTCG***Deletion***TCCTTGAGGGCATC
Allele-2: 79bp deletion in exon3

Genome sequence analysis of PCR products from parental (WT) and E2F1 knockout (KO) HeLa cells, using sanger sequencing.