

RELA Knockout HeLa Cell Line, Homozygous

Catalog No.: RM01765

Basic Information

Catalog No.

RM01765

Category

Cell Line

Parental Cell line

HeLa

Genotype

Knockout

Gene Information

Gene Symbol

RELA

Species

Human

Gene ID

5970

Swiss Prot

Q04206

Synonyms

NFKB3; p65

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Background

NF-kappa-B is a ubiquitous transcription factor involved in several biological processes. It is held in the cytoplasm in an inactive state by specific inhibitors. Upon degradation of the inhibitor, NF-kappa-B moves to the nucleus and activates transcription of specific genes. NF-kappa-B is composed of NFKB1 or NFKB2 bound to either REL, RELA, or RELB. The most abundant form of NF-kappa-B is NFKB1 complexed with the product of this gene, RELA. Four transcript variants encoding different isoforms have been found for this gene.

Product Information

Description

HeLa cells possess hypertriploid (3n +) karyotype. We obtained monoclonal homozygotes by gene editing technology.

Shows the number of effective mutations

Allele-1: 73bp deletion in exon3

Allele-2: 17bp deletion in exon3

Allele-3: exon3 was destroyed

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

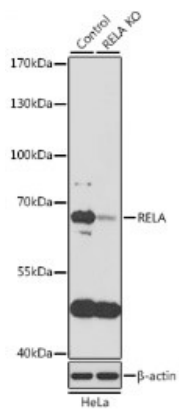
WT GCCCCCGCGGC*****CAAGTGCAGG
Mut GCCCCCGCGGC**Deletion(145bp)**CAAGTGCAGG
Allele-1: 73 bp deletion in exon3

WT CGCTTCGCTA*****CGCGGCAGCA
Mut CGCTTCGCTA**Deletion(17bp)**CGCGGCAGCA
Allele-2: 17 bp deletion in exon3

WT CGCTTCGCTA*****GTGCGAGGGC
Mut CGCTTCGCTA**Mutation**GTGCGAGGGC
Allele-3: exon3 was destroyed

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

WB data



Western blot analysis of extracts from parental (Control) and RELA knockout (KO) HeLa cells, using RELA antibody (A11201) at 1:1000 dilution.