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TP53 Knockout 293T Cell Line, Homozygous

Catalog No.: RM50055

Basic Information

Catalog No.
RM50055

Category
Cell Line

Parental Cell line
293T

Genotype
Knockout

Gene Information

Gene Symbol
TP53

Species
Human

Gene ID
7157

Swiss Prot
P04637

Synonyms
BCC7; LFS1; P53; TRP53

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Background

This gene encodes a tumor suppressor protein containing transcriptional activation, DNA binding, and oligomerization domains. The encoded protein responds to diverse cellular stresses to regulate expression of target genes, thereby inducing cell cycle arrest, apoptosis, senescence, DNA repair, or changes in metabolism. Mutations in this gene are associated with a variety of human cancers, including hereditary cancers such as Li-Fraumeni syndrome. Alternative splicing of this gene and the use of alternate promoters result in multiple transcript variants and isoforms. Additional isoforms have also been shown to result from the use of alternate translation initiation codons from identical transcript variants (PMIDs: 12032546, 20937277).

Product Information

Description
TP53 Knockout 293T Cell Line is engineered from 293T cell line with Gene-Editing technology.
Allele-1:8bp deletion in exon1 and 26bp deletion in exon2
Allele-2:8bp deletion in exon1 and 26bp deletion in exon2
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
Store at -20℃

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    CAGA**********GTGA**TTAG**********CGAG
Mut   CAGA***Deletion***GTGA**TTAG***Deletion***CGAG
Allele-1:   8bp deletion in exon1 and 26bp deletion in exon2

WT    CAGA**********GTGA**TTAG**********CGAG
Mut   CAGA***Deletion***GTGA**TTAG***Deletion***CGAG
Allele-2:   8bp deletion in exon1 and 26bp deletion in exon2
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Genome sequence analysis of PCR products from parental (WT) and TP53 knockout (KO) 293T cells, using sanger sequencing.