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CCND1 Knockout HeLa Cell Line, Homozygous

Catalog No.: RM01834

Basic Information

Catalog No.
RM01834

Category
Cell Line

Parental Cell line
HeLa

Genotype
Knockout

Gene Information

Gene Symbol
CCND1

Species
Human

Gene ID
595

Swiss Prot
P24385

Synonyms
BCL1; D11S287E; PRAD1; U21B31

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Background

The protein encoded by this gene belongs to the highly conserved cyclin family, whose members are characterized by a dramatic periodicity in protein abundance throughout the cell cycle. Cyclins function as regulators of CDK kinases. Different cyclins exhibit distinct expression and degradation patterns which contribute to the temporal coordination of each mitotic event. This cyclin forms a complex with and functions as a regulatory subunit of CDK4 or CDK6, whose activity is required for cell cycle G1/S transition. This protein has been shown to interact with tumor suppressor protein Rb and the expression of this gene is regulated positively by Rb. Mutations, amplification and overexpression of this gene, which alters cell cycle progression, are observed frequently in a variety of tumors and may contribute to tumorigenesis.

Product Information

Description
CCND1 Knockout cell line is engineered from HeLa cell line with Gene-Editing Technology.
Allele-1:29bp deletion in exon1
Allele-2:29bp 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
1~5x10^6 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

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WT    AGTGGAAACCATCC**************AACGACCGGGTGCT
Mut   AGTGGAAACCATCC***Deletion***AACGACCGGGTGCT
Allele-1：29bp deletion in exon1

WT    AGTGGAAACCATCC**************AACGACCGGGTGCT
Mut   AGTGGAAACCATCC***Deletion***AACGACCGGGTGCT
Allele-2：29bp deletion in exon1
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Genome sequence analysis of PCR products from parental (WT) and CCND1 knockout (KO) HeLa cells, using sanger sequencing.