

CTNNB1 Knockout 293T Cell Line, Homozygous

Catalog No.: RM01805

Basic Information

Catalog No.

RM01805

Category

Cell Line

Parental Cell line

293T

Genotype

Knockout

Gene Information

Gene Symbol

CTNNB1

Species

Human

Gene ID

1499

Swiss Prot

P35222

Synonyms

CTNNB; MRD19; armadillo

Contact

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Background

The protein encoded by this gene is part of a complex of proteins that constitute adherens junctions (AJs). AJs are necessary for the creation and maintenance of epithelial cell layers by regulating cell growth and adhesion between cells. The encoded protein also anchors the actin cytoskeleton and may be responsible for transmitting the contact inhibition signal that causes cells to stop dividing once the epithelial sheet is complete. Finally, this protein binds to the product of the APC gene, which is mutated in adenomatous polyposis of the colon. Mutations in this gene are a cause of colorectal cancer (CRC), pilomatixoma (PTR), medulloblastoma (MDB), and ovarian cancer. Alternative splicing results in multiple transcript variants.

Product Information

Description

CTNNB1 Knockout cell line is engineered from 293T cell line with Gene-Editing Technology.

Allele-1:43bp deletion in exon2

Allele-2:5bp 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

Amount1~5x10⁶ 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 CATGGCCATGGAAC*****AGAAAAGCGGCTG
Mut CATGGCCATGGAAC***Deletion***AGAAAAGCGGCTG
Allele-1: 5 bp deletion in exon2

WT ATGGAACCAGACA*****CTCTGGAATCCAT
Mut ATGGAACCAGACA***Deletion***CTCTGGAATCCAT
Allele-2: 43 bp deletion in exon2

WT CCATGGAACCAG*****CAGTCCT
Mut CCATGGAACCAG**Insertion*Deletion***CAGTCCT
Allele-3: 63bp Insertion and 164 bp deletion in exon2

Genome sequence analysis of PCR products from parental (WT) and CTNNB1 knockout (KO) 293T cells, using sanger sequencing.