

TGFBR2 Knockdown 293T Cell Line, Heterozygous

Catalog No.: RM02142

Basic Information

Catalog No.

RM02142

Category

Cell Line

Parental Cell line

293T

Genotype

Knockdown

Gene Information

Gene Symbol

TGFBR2

Species

Human

Gene ID

7048

Swiss Prot

P37173

Synonyms

AAT3; FAA3; LDS1B; LDS2; LDS2B; MFS2; RIIC; TAAD2; TGFR-2; TGFbeta-RII

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Background

This gene encodes a member of the Ser/Thr protein kinase family and the TGFβ receptor subfamily. The encoded protein is a transmembrane protein that has a protein kinase domain, forms a heterodimeric complex with another receptor protein, and binds TGF-β. This receptor/ligand complex phosphorylates proteins, which then enter the nucleus and regulate the transcription of a subset of genes related to cell proliferation. Mutations in this gene have been associated with Marfan Syndrome, Loeys-Deitz Aortic Aneurysm Syndrome, and the development of various types of tumors. Alternatively spliced transcript variants encoding different isoforms have been characterized. [provided by RefSeq, Jul 2008]

Product Information

Description

TGFBR2 Knockdown 293T Cell Line is engineered from 293T cell line with Gene-Editing Technology.

Allele-1:21bp deletion and 8bp deletion in exon3

Allele-2:90bp 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 CAGTTGGCCATGAC*****TTTATTCTGGGAAGA***CTTCATGTTCTCTGAGCTCTGATGAGTGAATGA
Mut CAGTTGGCCATGAC***Deletion***TTTATTCTGGGAAGA***CTTCATGTTCTCT - - - - -GATGAGTGAATGA
Allele-1: 21bp deletion and 8bp deletion in exon3
WT CAAGCTCCCTACC*****GCTCTGATGAGTGC
Mut CAAGCTCCCTACC***Deletion***GCTCTGATGAGTGC
Allele-2: 9bp deletion in exon3

Genome sequence analysis of PCR products from parental (WT) and TGFBR2 Knockdown (KD) 293T cells, using sanger sequencing.