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TGFB3 Knockout 293T Cell Line, Homozygous

Catalog No.: RM02751

Basic Information

Catalog No.
RM02751

Category
Cell Line

Parental Cell line
293T

Genotype
Knockout

Gene Information

Gene Symbol
TGFB3

Species
Human

Gene ID
7043

Swiss Prot
P10600

Synonyms
ARVD; LDS5; RNHF; ARVD1; TGF-beta3; TGFB3

Contact

400-999-6126

cn.market@abclonal.com.cn

www.abclonal.com.cn

Background

This gene encodes a secreted ligand of the TGF-beta (transforming growth factor-beta) superfamily of proteins. Ligands of this family bind various TGF-beta receptors leading to recruitment and activation of SMAD family transcription factors that regulate gene expression. The encoded preproprotein is proteolytically processed to generate a latency-associated peptide (LAP) and a mature peptide, and is found in either a latent form composed of a mature peptide homodimer, a LAP homodimer, and a latent TGF-beta binding protein, or in an active form consisting solely of the mature peptide homodimer. The mature peptide may also form heterodimers with other TGF-beta family members. This protein is involved in embryogenesis and cell differentiation, and may play a role in wound healing. Mutations in this gene are a cause of aortic aneurysms and dissections, as well as familial arrhythmogenic right ventricular dysplasia 1.

Product Information

Description
TGFB3 Knockout cell line is engineered from 293T cell line with Gene-Editing Technology.
Allele-1:130bp insertion in exon1
Allele-2:130bp insertion 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
Stored in liquid nitrogen for a long time less than -130℃. 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℃ 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   CCCCTGAGCCAACG                    GTGATGACCCACG
Mut  CCCCTGAGCCAACG***Insertion***GTGATGACCCACG
Allele-1:   130bp Insertion in exon1

WT   CCCCTGAGCCAACG                    GTGATGACCCACG
Mut  CCCCTGAGCCAACG***Insertion***GTGATGACCCACG
Allele-2:   130bp Insertion in exon1
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Genome sequence analysis of PCR products from parental (WT) and TGFB3 knockout (KO) 293T cells, using sanger sequencing.