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SMAD4 Knockdown 293T Cell Line, Heterozygous

Catalog No.: RM01961

Basic Information

Catalog No.
RM01961

Category
Cell Line

Parental Cell line
293T

Genotype
Knockdown

Background

This gene encodes a member of the Smad family of signal transduction proteins. Smad proteins are phosphorylated and activated by transmembrane serine-threonine receptor kinases in response to TGF-beta signaling. The product of this gene forms homomeric complexes and heteromeric complexes with other activated Smad proteins, which then accumulate in the nucleus and regulate the transcription of target genes. This protein binds to DNA and recognizes an 8-bp palindromic sequence (GTCTAGAC) called the Smad-binding element (SBE). The Smad proteins are subject to complex regulation by post-translational modifications. Mutations or deletions in this gene have been shown to result in pancreatic cancer, juvenile polyposis syndrome, and hereditary hemorrhagic telangiectasia syndrome. [provided by RefSeq, Oct 2009]

Gene Information

Gene Symbol
SMAD4

Species
Human

Gene ID
4089

Swiss Prot
Q13485

Synonyms
DPC4; JIP; MADH4; MYHRS

Product Information

Description
SMAD4 Knockdown 293T Cell Line is engineered from 293T cell line with Gene-Editing Technology.
Allele-1:139bp deletion in exon1
Allele-2:141bp 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
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.

Contact

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Sequencing data

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WT    TGTGCCATAGACAA**********AGAGAACATTGGAT
Mut   TGTGCCATAGACAA***Deletion***AGAGAACATTGGAT
Allele-1:   139bp deletion in exon1

WT    TGTGCCATAGACAA**********AGAACATTGGATGG
Mut   TGTGCCATAGACAA***Deletion***AGAACATTGGATGG
Allele-2:   141bp deletion in exon1
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Genome sequence analysis of PCR products from parental (WT) and SMAD4 Knockdown (KD) 293T cells, using sanger sequencing.