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TWIST1 Knockout 293T cell line, Homozygous

Catalog No.: RM50169

Basic Information

Catalog No.
RM50169

Category
Cell Lysate

Parental Cell line
293T

Genotype
Knockout

Background

This gene encodes a basic helix-loop-helix (bHLH) transcription factor that plays an important role in embryonic development. The encoded protein forms both homodimers and heterodimers that bind to DNA E box sequences and regulate the transcription of genes involved in cranial suture closure during skull development. This protein may also regulate neural tube closure, limb development and brown fat metabolism. This gene is hypermethylated and overexpressed in multiple human cancers, and the encoded protein promotes tumor cell invasion and metastasis, as well as metastatic recurrence. Mutations in this gene cause Saethre-Chotzen syndrome in human patients, which is characterized by craniosynostosis, ptosis and hypertelorism.

Gene Information

Gene Symbol
TWIST1

Species
Human

Gene ID
7291

Swiss Prot
Q15672

Synonyms
CRS; CSO; SCS; ACS3; CRS1; BPES2; BPES3; SWCOS; TWIST; bHLHa38; Twist

Product Information

Description
TWIST1 Knockout cell line is engineered from 293T cell line with Gene-Editing Technology.
Allele-1:122bp deletion in exon1
Allele-2:122bp 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    AGCGCGGGGGACGC**********TGCGGGCTGTGGCG
Mut   AGCGCGGGGGACGC***Deletion***TGCGGGCTGTGGCG
Allele-1:    122bp deletion in exon1

WT    AGCGCGGGGGACGC**********TGCGGGCTGTGGCG
Mut   AGCGCGGGGGACGC***Deletion***TGCGGGCTGTGGCG
Allele-2:    122bp deletion in exon1
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Genome sequence analysis of PCR products from parental (WT) and TWIST1 knockout (KO) 293T cells, using sanger sequencing.