

SMAD3 Knockout HCT116 Cell Line, Homozygous

Catalog No.: RM01817

Basic Information

Catalog No.

RM01817

Category

Cell Line

Parental Cell line

HCT116

Genotype

Knockout

Gene Information

Gene Symbol

SMAD3

Species

Human

Gene ID

4088

Swiss Prot

P84022

Synonyms

HSPC193; HsT17436; JV15-2; LDS1C;
LDS3; MADH3

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Background

The protein encoded by this gene belongs to the SMAD, a family of proteins similar to the gene products of the Drosophila gene 'mothers against decapentaplegic' (Mad) and the C. elegans gene Sma. SMAD proteins are signal transducers and transcriptional modulators that mediate multiple signaling pathways. This protein functions as a transcriptional modulator activated by transforming growth factor-beta and is thought to play a role in the regulation of carcinogenesis.

Product Information

Description

SMAD3 Knockout HCT116 cell line is engineered from HCT116 cell line with Gene-Editing Technology.

Allele-1:68bp deletion in exon3

Allele-2:68bp 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 GCTGAACCAGCGC*****GAGCGCTTCTGCCT
Mut GCTGAACCAGCGC***Deletion***GAGCGCTTCTGCCT
Allele-1: 68bp deletion in exon3
WT GCTGAACCAGCGC*****GAGCGCTTCTGCCT
Mut GCTGAACCAGCGC***Deletion***GAGCGCTTCTGCCT
Allele-2: 68bp deletion in exon3

Genome sequence analysis of PCR products from parental (WT) and SMAD3 knockout (KO) HCT116 cells, using sanger sequencing.