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SUMO1 Knockout 293T cell line, Homozygous

Catalog No.: RM50186

Basic Information

Catalog No.
RM50186

Category
Cell Lysate

Parental Cell line
293T

Genotype
Knockout

Gene Information

Gene Symbol
SUMO1

Species
Human

Gene ID
7341

Swiss Prot
P63165

Synonyms
DAP1; GMP1; PIC1; SMT3; UBL1; OFC10; SENP2; SMT3C; SMT3H3; O1

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Background

This gene encodes a protein that is a member of the SUMO (small ubiquitin-like modifier) protein family. It functions in a manner similar to ubiquitin in that it is bound to target proteins as part of a post-translational modification system. However, unlike ubiquitin which targets proteins for degradation, this protein is involved in a variety of cellular processes, such as nuclear transport, transcriptional regulation, apoptosis, and protein stability. It is not active until the last four amino acids of the carboxy-terminus have been cleaved off. Several pseudogenes have been reported for this gene. Alternate transcriptional splice variants encoding different isoforms have been characterized.

Product Information

Description
SUMO1 Knockout cell line is engineered from 293T cell line with Gene-Editing Technology.
Allele-1:exon1 was deleted
Allele-2:exon1 was deleted
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
Store at -20℃

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    AGTGACGCGAGGCG**********GGCCAGGGCCTTCC
Mut   AGTGACGCGAGGCG***Deletion***GGCCAGGGCCTTCC
Allele-1:    exon1 was deleted

WT    AGTGACGCGAGGCG**********GCCAGGGCCTTCCC
Mut   AGTGACGCGAGGCG***Deletion***GCCAGGGCCTTCCC
Allele-2:    exon1 was deleted
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Genome sequence analysis of PCR products from parental (WT) and SUMO1 knockout (KO) 293T cells, using sanger sequencing.