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SIRT1 Knockout HeLa Cell Line, Homozygous

Catalog No.: RM01830

Basic Information

Catalog No.
RM01830

Category
Cell Line

Parental Cell line
HeLa

Genotype
Knockout

Gene Information

Gene Symbol
SIRT1

Species
Human

Gene ID
23411

Swiss Prot
Q96EB6

Synonyms
SIR2; SIR2L1; SIR2alpha

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Background

This gene encodes a member of the sirtuin family of proteins, homologs to the yeast Sir2 protein. Members of the sirtuin family are characterized by a sirtuin core domain and grouped into four classes. The functions of human sirtuins have not yet been determined; however, yeast sirtuin proteins are known to regulate epigenetic gene silencing and suppress recombination of rDNA. Studies suggest that the human sirtuins may function as intracellular regulatory proteins with mono-ADP-ribosyltransferase activity. The protein encoded by this gene is included in class I of the sirtuin family. Alternative splicing results in multiple transcript variants.

Product Information

Description
SIRT1 Knockout cell line is engineered from HeLa cell line with Gene-Editing Technology.
Allele-1:56bp deletion in exon2
Allele-2:65bp deletion in exon2
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.

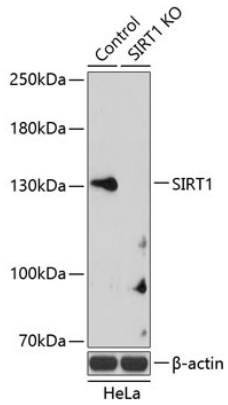
Sequencing data

WT CATAGCCTTGTCAG**********GTTGCGGGAATCCA
Mut CATAGCCTTGTCAG***Deletion***GTTGCGGGAATCCA
Allele-1: 56bp deletion in exon2

WT TCACAAATTCATAG**********GTTGCGGGAATCCA
Mut TCACAAATTCATAG***Deletion***GTTGCGGGAATCCA
Allele-2: 65bp deletion in exon2

Genome sequence analysis of PCR products from parental (WT) and SIRT1 knockout (KO) HeLa cells, using sanger sequencing.

WB data



Western blot analysis of extracts from parental (Control) and SIRT1 knockout (KO) HeLa cells, using SIRT1 antibody at 1:1000 dilution.