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CALR Knockout HeLa Cell Line, Homozygous

Catalog No.: RM50156

Basic Information

Catalog No.
RM50156

Category
Cell Line

Parental Cell line
HeLa

Genotype
Knockout

Gene Information

Gene Symbol
CALR

Species
Human

Gene ID
811

Swiss Prot
P27797

Synonyms
RO; CRT; SSA; cC1qR; HEL-S-99n; Calreticulin

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Background

Calreticulin is a highly conserved chaperone protein which resides primarily in the endoplasmic reticulum, and is involved in a variety of cellular processes, among them, cell adhesion. Additionally, it functions in protein folding quality control and calcium homeostasis. Calreticulin is also found in the nucleus, suggesting that it may have a role in transcription regulation. Systemic lupus erythematosus is associated with increased autoantibody titers against calreticulin. Recurrent mutations in calreticulin have been linked to various neoplasms, including the myeloproliferative type.

Product Information

Description
CALR Knockout cell line is engineered from HeLa cell line with Gene-Editing Technology.
Allele-1:100bp deletion in exon3
Allele-2:100bp 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
1~5x10^6 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    GACAAGCCAGGATG**********TGGGGGCGGCTATG
Mut   GACAAGCCAGGATG***Deletion***TGGGGGCGGCTATG
Allele-1:   100bp deletion in exon3

WT    GACAAGCCAGGATG**********TGGGGGCGGCTATG
Mut   GACAAGCCAGGATG***Deletion***TGGGGGCGGCTATG
Allele-2:   100bp deletion in exon3
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Genome sequence analysis of PCR products from parental (WT) and CALR knockout (KO) HeLa cells, using sanger sequencing.