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CHIT1 Knockout 293T Cell Line, Homozygous

Catalog No.: RM02714

Basic Information

Catalog No.
RM02714

Category
Cell Line

Parental Cell line
293T

Genotype
Knockout

Background

Chitotriosidase is secreted by activated human macrophages and is markedly elevated in plasma of Gaucher disease patients. The expression of chitotriosidase occurs only at a late stage of differentiation of monocytes to activated macrophages in culture. Human macrophages can synthesize a functional chitotriosidase, a highly conserved enzyme with a strongly regulated expression. This enzyme may play a role in the degradation of chitin-containing pathogens. Several alternatively spliced transcript variants have been described for this gene.

Gene Information

Gene Symbol
CHIT1

Species
Human

Gene ID
1118

Swiss Prot
Q13231

Synonyms
CHI3; CHIT; CHITD; CHIT1

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Product Information

Description
CHIT1 Knockout cell line is engineered from 293T cell line with Gene-Editing Technology.
Allele-1:110bp deletion in exon4
Allele-2:110bp deletion in exon4
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    TATGGTAGCCACGG**********GTAGACAAGGAGC
Mut   TATGGTAGCCACGG***Deletion***GTAGACAAGGAGC
Allele-1:   110bp deletion in exon4

WT    TATGGTAGCCACGG**********GTAGACAAGGAGC
Mut   TATGGTAGCCACGG***Deletion***GTAGACAAGGAGC
Allele-2:   110bp deletion in exon4
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Genome sequence analysis of PCR products from parental (WT) and CHIT1 knockout (KO) 293T cells, using sanger sequencing.