

CHIT1 Knockout 293T Cell Line, Homozygous

Catalog No.: RM02714

Basic Information

Catalog No.

RM02714

Category

Cell Line

Parental Cell line

293T

Genotype

Knockout

Gene Information

Gene Symbol

CHIT1

Species

Human

Gene ID

1118


Swiss Prot

Q13231

Synonyms

CHI3; CHIT; CHITD; CHIT1

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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.

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

1~5x10⁶ 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 TATGGTAGCCACGG*****GTAGACAAGGAGC
Mut TATGGTAGCCACGG***Deletion***GTAGACAAGGAGC
Allele-1: 110bp deletion in exon4

Genome sequence analysis of PCR products from parental (WT) and CHIT1 knockout (KO) 293T cells, using sanger sequencing.

WT TATGGTAGCCACGG*****GTAGACAAGGAGC
Mut TATGGTAGCCACGG***Deletion***GTAGACAAGGAGC
Allele-2: 110bp deletion in exon4