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CD1A Knockout 293T Cell Line, Homozygous

Catalog No.: RM02640

Basic Information

Catalog No.
RM02640

Category
Cell Line

Parental Cell line
293T

Genotype
Knockout

Gene Information

Gene Symbol
CD1A

Species
Human

Gene ID
909

Swiss Prot
P06126

Synonyms
CD1; FCB6; HTA1; R4; T6

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Background

This gene encodes a member of the CD1 family of transmembrane glycoproteins, which are structurally related to the major histocompatibility complex (MHC) proteins and form heterodimers with beta-2-microglobulin. The CD1 proteins mediate the presentation of primarily lipid and glycolipid antigens of self or microbial origin to T cells. The human genome contains five CD1 family genes organized in a cluster on chromosome 1. The CD1 family members are thought to differ in their cellular localization and specificity for particular lipid ligands. The protein encoded by this gene localizes to the plasma membrane and to recycling vesicles of the early endocytic system. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Mar 2016]

Product Information

Description
CD1A Knockout 293T Cell Line is engineered from 293T cell line with Gene-Editing technology.
Allele-1:112bp deletion in exon2
Allele-2:112bp 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

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WT    ATTTGCAGACTCAT**********GGTCATTTGAGGGA
Mut   ATTTGCAGACTCAT***Deletion***GGTCATTTGAGGGA
Allele-1:   112bp deletion in exon2

WT    ATTTGCAGACTCAT**********GGTCATTTGAGGGA
Mut   ATTTGCAGACTCAT***Deletion***GGTCATTTGAGGGA
Allele-2:   112bp deletion in exon2
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Genome sequence analysis of PCR products from parental (WT) and CD1A knockout (KO) 293T cells, using sanger sequencing.