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IL12B Knockout HeLa Cell Line, Homozygous

Catalog No.: RM02584

Basic Information

Catalog No.
RM02584

Category
Cell Line

Parental Cell line
HeLa

Genotype
Knockout

Gene Information

Gene Symbol
IL12B

Species
Human

Gene ID
3593

Swiss Prot
P29460

Synonyms
CLMF; CLMF2; IL-12B; IMD28; IMD29; NKSF; NKSF2

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Background

This gene encodes a subunit of interleukin 12, a cytokine that acts on T and natural killer cells, and has a broad array of biological activities. Interleukin 12 is a disulfide-linked heterodimer composed of the 40 kD cytokine receptor like subunit encoded by this gene, and a 35 kD subunit encoded by IL12A. This cytokine is expressed by activated macrophages that serve as an essential inducer of Th1 cells development. This cytokine has been found to be important for sustaining a sufficient number of memory/effector Th1 cells to mediate long-term protection to an intracellular pathogen. Overexpression of this gene was observed in the central nervous system of patients with multiple sclerosis (MS), suggesting a role of this cytokine in the pathogenesis of the disease. The promoter polymorphism of this gene has been reported to be associated with the severity of atopic and non-atopic asthma in children. [provided by RefSeq, Jul 2008]

Product Information

Description
IL12B Knockout HeLa Cell Line is engineered from HeLa cell line with Gene-Editing technology.
Allele-1:151bp deletion in exon2
Allele-2:151bp 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
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    AGAATTGGATTGGT**********CACCTGTCACAAAG
Mut   AGAATTGGATTGGT***Deletion***CACCTGTCACAAAG
Allele-1:   151bp deletion in exon2

WT    AGAATTGGATTGGT**********CACCTGTCACAAAG
Mut   AGAATTGGATTGGT***Deletion***CACCTGTCACAAAG
Allele-2:   151bp deletion in exon2
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Genome sequence analysis of PCR products from parental (WT) and IL12B knockout (KO) HeLa cells, using sanger sequencing.