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NLRP3 Knockout 293T Cell Line, Homozygous

Catalog No.: RM01936

Basic Information

Catalog No.
RM01936

Category
Cell Line

Parental Cell line
293T

Genotype
Knockout

Gene Information

Gene Symbol
NLRP3

Species
Human

Gene ID
114548

Swiss Prot
Q96P20

Synonyms
AGTAVPRL; AII; AVP; C1orf7; CIAS1; CLR1.1; FCAS; FCAS1; FCU; MWS; NALP3; PYPAF1

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Background

This gene encodes a pyrin-like protein containing a pyrin domain, a nucleotide-binding site (NBS) domain, and a leucine-rich repeat (LRR) motif. This protein interacts with the apoptosis-associated speck-like protein PYCARD/ASC, which contains a caspase recruitment domain, and is a member of the NALP3 inflammasome complex. This complex functions as an upstream activator of NF-kappaB signaling, and it plays a role in the regulation of inflammation, the immune response, and apoptosis. Mutations in this gene are associated with familial cold autoinflammatory syndrome (FCAS), Muckle-Wells syndrome (MWS), chronic infantile neurological cutaneous and articular (CINCA) syndrome, and neonatal-onset multisystem inflammatory disease (NOMID). Multiple alternatively spliced transcript variants encoding distinct isoforms have been identified for this gene. Alternative 5' UTR structures are suggested by available data; however, insufficient evidence is available to determine if all of the represented 5' UTR splice patterns are biologically valid. [provided by RefSeq, Oct 2008]

Product Information

Description
NLRP3 Knockout 293T Cell Line is engineered from 293T cell line with Gene-Editing Technology.
Allele-1:64bp deletion in exon1
Allele-2:85bp deletion in exon1
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

WT GATCTAGCCACGCT**********AACAGGAGAGACCT
Mut GATCTAGCCACGCT***Deletion***AACAGGAGAGACCT
Allele-1: 64bp deletion in exon1

WT TGGATCTAGCCACG**********AGAAAGCAAAAAGA
Mut TGGATCTAGCCACG***Deletion***AGAAAGCAAAAAGA
Allele-2: 85bp deletion in exon1

Genome sequence analysis of PCR products from parental (WT) and NLRP3 knockout (KO) 293T cells, using sanger sequencing.