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PRKAA1 Knockout HeLa Cell Line, Homozygous

Catalog No.: RM02088

Basic Information

Catalog No.
RM02088

Category
Cell Line

Parental Cell line
HeLa

Genotype
Knockout

Background

The protein encoded by this gene belongs to the ser/thr protein kinase family. It is the catalytic subunit of the 5'-prime-AMP-activated protein kinase (AMPK). AMPK is a cellular energy sensor conserved in all eukaryotic cells. The kinase activity of AMPK is activated by the stimuli that increase the cellular AMP/ATP ratio. AMPK regulates the activities of a number of key metabolic enzymes through phosphorylation. It protects cells from stresses that cause ATP depletion by switching off ATP-consuming biosynthetic pathways. Alternatively spliced transcript variants encoding distinct isoforms have been observed. [provided by RefSeq, Jul 2008]

Gene Information

Gene Symbol
PRKAA1

Species
Human

Gene ID
5562

Swiss Prot
Q13131

Synonyms
AMPK; AMPKa1

Product Information

Description
PRKAA1 Knockout HeLa Cell Line is engineered from HeLa cell line with Gene-Editing Technology.
Allele-1:1bp deletion in exon2
Allele-2:2bp 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.

Contact

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Sequencing data

WT TCGGAGCCTTGATG**********GGTAGGAAAAATCC
Mut TCGGAGCCTTGATG***Deletion***GGTAGGAAAAATCC
Allele-1: 1bp deletion in exon2

WT TCGGAGCCTTGATG**********GTAGGAAAAATCCG
Mut TCGGAGCCTTGATG***Deletion***GTAGGAAAAATCCG
Allele-2: 2bp deletion in exon2

Genome sequence analysis of PCR products from parental (WT) and PRKAA1 knockout (KO) HeLa cells, using sanger sequencing.