

# PRKAA1 Knockout HeLa Cell Line, Homozygous

**Catalog No.:** RM02088

## Basic Information

**Catalog No.**

RM02088

**Category**

Cell Line

**Parental Cell line**

HeLa

**Genotype**

Knockout

## Gene Information

**Gene Symbol**

PRKAA1

**Species**

Human

**Gene ID**

5562

**Swiss Prot**

Q13131

**Synonyms**AMPK; AMPK $\alpha$ 1

## Contact

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## 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]

## 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<sup>6</sup> 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% CO<sub>2</sub> 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% CO<sub>2</sub>.
7. A subcultivation ratio of 1:2-1:4 is recommended.

## Sequencing data

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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.