

# AKT1 Knockout HeLa Cell Line, Homozygous

Catalog No.: RM01847

## Basic Information

### Catalog No.

RM01847

### Category

Cell Line

### Parental Cell line

HeLa

### Genotype

Knockout

## Gene Information

### Gene Symbol

AKT1

### Species

Human

### Gene ID

207

### Swiss Prot

P31749

### Synonyms

AKT; CWS6; PKB; PKB-ALPHA; PRKBA;  
RAC; RAC-ALPHA

## Contact

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## Background

The serine-threonine protein kinase encoded by the AKT1 gene is catalytically inactive in serum-starved primary and immortalized fibroblasts. AKT1 and the related AKT2 are activated by platelet-derived growth factor. The activation is rapid and specific, and it is abrogated by mutations in the pleckstrin homology domain of AKT1. It was shown that the activation occurs through phosphatidylinositol 3-kinase. In the developing nervous system AKT is a critical mediator of growth factor-induced neuronal survival. Survival factors can suppress apoptosis in a transcription-independent manner by activating the serine/threonine kinase AKT1, which then phosphorylates and inactivates components of the apoptotic machinery. Mutations in this gene have been associated with the Proteus syndrome. Multiple alternatively spliced transcript variants have been found for this gene.

## Product Information

### Description

AKT1 Knockout cell line is engineered from HeLa cell line with Gene-Editing Technology.

Allele-1:52bp deletion in exon4

Allele-2:52bp deletion in exon4

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.

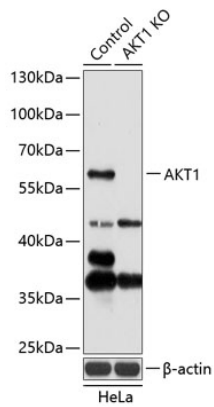
1. Thaw the vial in 37°C water bath, and shake it to melt as soon as possible.
2. Transfer the cell suspension to a 15mL conical tube with pre-warmed 5mL complete medium and centrifuge 1000rpm for approximately 5 minutes at room temperature.
3. Remove and discard the supernatant.
4. Resuspend the cell 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

WT AACCGCCATCCAGA\*\*\*\*\*GGGTCACCCAGTG  
Mut AACCGCCATCCAGA\*\*\*Deletion\*\*\*GGGTCACCCAGTG  
Allele-1: 52bp deletion in exon4  
WT AACCGCCATCCAGA\*\*\*\*\*GGGTCACCCAGTG  
Mut AACCGCCATCCAGA\*\*\*Deletion\*\*\*GGGTCACCCAGTG  
Allele-2: 52bp deletion in exon4

Genome sequence analysis of PCR products from parental (WT) and AKT1 knockout (KO) HeLa cells, using sanger sequencing.

## WB data



Western blot analysis of extracts from parental (Control) and AKT1 knockout (KO) HeLa cells, using AKT1 antibody at 1:1000 dilution.