

HK2 Knockout HeLa Cell Line, Homozygous

Catalog No.: RM02205

Basic Information

Catalog No.

RM02205

Category

Cell Line

Parental Cell line

HeLa

Genotype

Knockout

Gene Information

Gene Symbol

HK2

Species

Human

Gene ID

3099

Swiss Prot

P52789

Synonyms

HKII; HXK2

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Background

Hexokinases phosphorylate glucose to produce glucose-6-phosphate, the first step in most glucose metabolism pathways. This gene encodes hexokinase 2, the predominant form found in skeletal muscle. It localizes to the outer membrane of mitochondria. Expression of this gene is insulin-responsive, and studies in rat suggest that it is involved in the increased rate of glycolysis seen in rapidly growing cancer cells. [provided by RefSeq, Apr 2009]

Product Information

Description

HK2 Knockout cell line is engineered from HeLa cell line with Gene-Editing Technology.

Allele-1:exon2 was deleted

Allele-2:exon2 was deleted

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

1~5x10⁶ 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% CO₂ 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% CO₂.
7. A subcultivation ratio of 1:2-1:4 is recommended.

Sequencing data

WT GTGGTGTTCATGA*****CTCAGGGGTGATT
Mut GTGGTGTTCATGA***Deletion***CTCAGGGGTGATT
Allele-1: exon2 was deleted

WT TGAAGAGCTGAGTG*****CTCAGGGGTGATT
Mut TGAAGAGCTGAGT***Deletion***CTCAGGGGTGATT
Allele-2: exon2 was deleted

Genome sequence analysis of PCR products from parental (WT) and HK2 knockout (KO) HeLa cells, using sanger sequencing.