

CP Knockout HeLa Cell Line, Homozygous

Catalog No.: RM50130

Basic Information

Catalog No.

RM50130

Category

Cell Line

Parental Cell line

HeLa

Genotype

Knockout

Gene Information

Gene Symbol

CP

Species

Human

Gene ID

1356

Swiss Prot

P00450

Synonyms

CP-2; AB073614; Ceruloplasmin

Contact

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Background

The protein encoded by this gene is a metalloprotein that binds most of the copper in plasma and is involved in the peroxidation of Fe(II)transferrin to Fe(III) transferrin. Mutations in this gene cause aceruloplasminemia, which results in iron accumulation and tissue damage, and is associated with diabetes and neurologic abnormalities. Two transcript variants, one protein-coding and the other not protein-coding, have been found for this gene.

Product Information

Description

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

Allele-1:161bp deletion in exon2

Allele-2:161bp 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

1~5x10⁶ 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 CAAAATGCCCCAGA*****GGCCCTACACCTTT
Mut CAAAATGCCCCAGA***Deletion***GGCCCTACACCTTT
Allele-1: 161bp deletion in exon2

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

WT CAAAATGCCCCAGA*****GGCCCTACACCTTT
Mut CAAAATGCCCCAGA***Deletion***GGCCCTACACCTTT
Allele-2: 161bp deletion in exon2