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GFAP Knockout HeLa Cell Line, Homozygous

Catalog No.: RM01835

Basic Information

Catalog No.

RM01835

Category

Cell Line

Parental Cell line

HeLa

Genotype

Knockout

Background

This gene encodes one of the major intermediate filament proteins of mature astrocytes. It is used as a marker to distinguish astrocytes from other glial cells during development. Mutations in this gene cause Alexander disease, a rare disorder of astrocytes in the central nervous system. Alternative splicing results in multiple transcript variants encoding distinct isoforms.

Gene Information

Gene Symbol

GFAP

Species

Human

Gene ID

2670

Swiss Prot

P14136

Synonyms

ALXDRD

Contact

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Product Information

Description

GFAP Knockout cell line is engineered from HeLa cell line with Gene-Editing Technology. Allele-1:202bp deletion in exon1

Allele-2:202bp deletion in exon1

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

Amount

Dry ice

 $1\sim5x10^6$ 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_2 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

CCTCCACTCCCGAC***********TACCAGGCTGAGCT Mut CCTCCACTCCCGAC***Deletion***TACCAGGCTGAGCT Allele-1: 202bp deletion in exon1

WT CCTCCACTCCCGAC****************TACCAGGCTGAGCT
Mut CCTCCACTCCCGAC***Deletion***TACCAGGCTGAGCT
Allele-2: 202bp deletion in exon1

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