

MLH1 Knockout HeLa Cell Line, Homozygous

Catalog No.: RM02418

Basic Information

Catalog No.

RM02418

Category

Cell Line

Parental Cell line

HeLa

Genotype

Knockout

Gene Information

Gene Symbol

MLH1

Species

Human

Gene ID

4292

Swiss Prot

P40692

Synonyms

COCA2; FCC2; HNPCC; HNPCC2; hMLH1

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Background

This gene was identified as a locus frequently mutated in hereditary nonpolyposis colon cancer (HNPCC). It is a human homolog of the E. coli DNA mismatch repair gene mutL, consistent with the characteristic alterations in microsatellite sequences (RER+phenotype) found in HNPCC. Alternative splicing results in multiple transcript variants encoding distinct isoforms. Additional transcript variants have been described, but their full-length natures have not been determined.[provided by RefSeq, Nov 2009]

Product Information

Description

MLH1 Knockout HeLa Cell Line knockout is engineered from HeLa cell line with Gene-Editing Technology.

Allele-1:68bp deletion in exon3

Allele-2:68bp deletion in exon3

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 GTTCACTTCCTGCA*****GGATGTACTTCACC
Mut GTTCACTTCCTGCA***Deletion***GGATGTACTTCACC
Allele-1: 68bp deletion in exon3

WT GTTCACTTCCTGCA*****GGATGTACTTCACC
Mut GTTCACTTCCTGCA***Deletion***GGATGTACTTCACC
Allele-2: 68bp deletion in exon3

Genome sequence analysis of PCR products from parental (WT) and MLH1 knockout (KO) HeLa cells, using sanger sequencing.