

MUC1 Knockout HeLa Cell Line, Homozygous

Catalog No.: RM02436

Basic Information

Catalog No.

RM02436

Category

Cell Line

Parental Cell line

HeLa

Genotype

Knockout

Gene Information

Gene Symbol

MUC1

Species

Human

Gene ID


4582

Swiss Prot

P15941

SynonymsADMCKD; ADMCKD1; CA 15-3; CD227;
EMA; H23AG; KL-6; MAM6; MCD; MCKD;
MCKD1; MUC-1; MUC-1/SEC; MUC-1/X;
MUC1/ZD; PEM; PEMT; PUM

Contact

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Background

This gene encodes a membrane-bound protein that is a member of the mucin family. Mucins are O-glycosylated proteins that play an essential role in forming protective mucous barriers on epithelial surfaces. These proteins also play a role in intracellular signaling. This protein is expressed on the apical surface of epithelial cells that line the mucosal surfaces of many different tissues including lung, breast stomach and pancreas. This protein is proteolytically cleaved into alpha and beta subunits that form a heterodimeric complex. The N-terminal alpha subunit functions in cell-adhesion and the C-terminal beta subunit is involved in cell signaling. Overexpression, aberrant intracellular localization, and changes in glycosylation of this protein have been associated with carcinomas. This gene is known to contain a highly polymorphic variable number tandem repeats (VNTR) domain. Alternate splicing results in multiple transcript variants.[provided by RefSeq, Feb 2011]

Product Information

Description

MUC1 Knockout HeLa Cell Line knockout is engineered from HeLa cell line with Gene-Editing Technology.

Allele-1:182bp deletion in exon1

Allele-2:182bp 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

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 GACCGGTATAAGC*****TAGGTGGTCTTCGTG
Mut GACCGGTATAAGC***Deletion***TAGGTGGTCTTCGTG
Allele-1: 182bp deletion in exon1
WT GACCGGTATAAGC*****TAGGTGGTCTTCGTG
Mut GACCGGTATAAGC***Deletion***TAGGTGGTCTTCGTG
Allele-2: 182bp deletion in exon1

Genome sequence analysis of PCR products from parental (WT) and MUC1 knockout (KO) HeLa cells, using sanger sequencing.