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SMPD1 Knockout HeLa Cell Line, Homozygous

Catalog No.: RM02211

Basic Information

Catalog No.
RM02211

Category
Cell Line

Parental Cell line
HeLa

Genotype
Knockout

Gene Information

Gene Symbol
SMPD1

Species
Human

Gene ID
6609

Swiss Prot
P17405

Synonyms
ASM; ASMASE; NPD

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Background

The protein encoded by this gene is a lysosomal acid sphingomyelinase that converts sphingomyelin to ceramide. The encoded protein also has phospholipase C activity. Defects in this gene are a cause of Niemann-Pick disease type A (NPA) and Niemann-Pick disease type B (NPB). Multiple transcript variants encoding different isoforms have been identified. [provided by RefSeq, Jul 2010]

Product Information

Description
SMPD1 Knockout cell line is engineered from HeLa cell line with Gene-Editing Technology.
Allele-1:142bp deletion in exon1
Allele-2:142bp 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
1~5x10^6 cells/vial

Storage
Store at -20℃

Protocol
Upon arrival, it should be maintained in DMEM medium with 10%(v/v) fetal bovine serum and 100U penicillin-streptomycin, at 37℃ with 5% CO_2 condition.

1. Thaw the vial in 37℃ 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℃ incubator with 5% CO_2.
7. A subcultivation ratio of 1:2-1:4 is recommended.

Sequencing data

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WT    GGACAAGACGGGAC**************AGGTTACATCGCAT
Mut   GGACAAGACGGGAC***Deletion***AGGTTACATCGCAT
Allele-1: 142bp deletion in exon1

WT    GGACAAGACGGGAC**************AGGTTACATCGCAT
Mut   GGACAAGACGGGAC***Deletion***AGGTTACATCGCAT
Allele-2: 142bp deletion in exon1
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Genome sequence analysis of PCR products from parental (WT) and SMPD1 knockout (KO) HeLa cells, using sanger sequencing.