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DNMT3A Knockout 293T Cell Line, Homozygous

Catalog No.: RM01848

Basic Information

Catalog No.
RM01848

Category
Cell Line

Parental Cell line
293T

Genotype
Knockout

Gene Information

Gene Symbol
DNMT3A

Species
Human

Gene ID
1788

Swiss Prot
Q9Y6K1

Synonyms
DNMT3A2; M.HsaIIIA; TBRS

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Background

CpG methylation is an epigenetic modification that is important for embryonic development, imprinting, and X-chromosome inactivation. Studies in mice have demonstrated that DNA methylation is required for mammalian development. This gene encodes a DNA methyltransferase that is thought to function in de novo methylation, rather than maintenance methylation. The protein localizes to the cytoplasm and nucleus and its expression is developmentally regulated.

Product Information

Description
DNMT3A Knockout cell line is engineered from 293T cell line with Gene-Editing Technology.
Allele-1:56bp deletion in exon3
Allele-2:56bp 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
1~5x10^6 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    CAAAGGACCCTGCG**************CAATGGGGACTTGG
Mut   CAAAGGACCCTGCG***Deletion***CAATGGGGACTTGG
Allele-1：56bp deletion in exon3

WT    CAAAGGACCCTGCG**************CAATGGGGACTTGG
Mut   CAAAGGACCCTGCG***Deletion***CAATGGGGACTTGG
Allele-2：56bp deletion in exon3
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Genome sequence analysis of PCR products from parental (WT) and DNMT3A knockout (KO) 293T cells, using sanger sequencing.