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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

## Contact


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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**
1~5x$10^6$ cells/vial.

**Storage**
Stored in liquid nitrogen for a long time less than -130℃. 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℃ 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

```
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
```

Genome sequence analysis of PCR products from parental (WT) and DNMT3A knockout (KO) 293T cells, using sanger sequencing.