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DNMT1 Knockdown 293T Cell Line, Heterozygous

Catalog No.: RM01806

Basic Information

Catalog No.
RM01806

Category
Cell Line

Parental Cell line
293T

Genotype
Knockdown

Gene Information

Gene Symbol
DNMT1

Species
Human

Gene ID
1786

Swiss Prot
P26358

Synonyms
ADCADN; AIM; CXXC9; DNMT; HSN1E; MCMT; m.HsaI

Contact

400-999-6126

cn.market@abclonal.com.cn

www.abclonal.com.cn

Background

This gene encodes an enzyme that transfers methyl groups to cytosine nucleotides of genomic DNA. This protein is the major enzyme responsible for maintaining methylation patterns following DNA replication and shows a preference for hemi-methylated DNA. Methylation of DNA is an important component of mammalian epigenetic gene regulation. Aberrant methylation patterns are found in human tumors and associated with developmental abnormalities. Variation in this gene has been associated with cerebellar ataxia, deafness, and narcolepsy, and neuropathy, hereditary sensory, type IE. Alternative splicing results in multiple transcript variants.

Product Information

Description
DNMT1 Knockdown 293T cell line is engineered from 293T cell line with Gene-Editing Technology.
Allele-1:50bp deletion in exon4
Allele-2:54bp deletion in exon4
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
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.

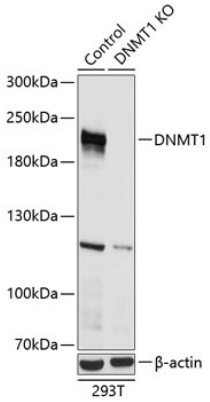
Sequencing data

WT CTTACAACCGGGAA**********AGTGGGAATGGCAG
Mut CTTACAACCGGGAA***Deletion***AGTGGGAATGGCAG
Allele-1: 50bp deletion in exon4

WT CATGCTTACAACCG**********AGTGGGAATGGCAG
Mut CATGCTTACAACCG***Deletion***AGTGGGAATGGCAG
Allele-2: 54bp deletion in exon4

Genome sequence analysis of PCR products from parental (WT) and DNMT1 Knockdown (KD) 293T cells, using sanger sequencing.

WB data



Western blot analysis of extracts from parental (Control) and DNMT1 knockdown (KD) 293T cells, using DNMT1 antibody at 1:1000 dilution.