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RUNX1T1 Knockout 293T Cell Line, Homozygous

Catalog No.: RM02752

Basic Information

Catalog No.
RM02752

Category
Cell Line

Parental Cell line
293T

Genotype
Knockout

Gene Information

Gene Symbol
RUNX1T1

Species
Human

Gene ID
862

Swiss Prot
Q06455

Synonyms
CDR; ETO; MTG8; AML1T1; ZMYND2; CBFA2T1; AML1-MTG8; RUNX1T1

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Background

This gene encodes a member of the myeloid translocation gene family which interact with DNA-bound transcription factors and recruit a range of corepressors to facilitate transcriptional repression. The t(8;21)(q22;q22) translocation is one of the most frequent karyotypic abnormalities in acute myeloid leukemia. The translocation produces a chimeric gene made up of the 5'-region of the runt-related transcription factor 1 gene fused to the 3'-region of this gene. The chimeric protein is thought to associate with the nuclear corepressor/histone deacetylase complex to block hematopoietic differentiation. Alternative splicing results in multiple transcript variants.

Product Information

Description
RUNX1T1 Knockout cell line is engineered from 293T cell line with Gene-Editing Technology.
Allele-1:52bp deletion in exon2
Allele-2:9bp insertion and 55bp deletion in exon2
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

WT GGCATCCTCCAGAT**********AATCTAGGCTGACT
Mut GGCATCCTCCAGAT***Deletion***AATCTAGGCTGACT
AIlele-1: 52bp deletion in exon2

WT CCTCCAGAT **********CTAGGCTGAC
Mut CCTCCAGATACTGTCAGC***Deletion***CTAGGCTGAC
AIlele-2: 9bp Insertion and 55bp deletion in exon2

Genome sequence analysis of PCR products from parental (WT) and RUNX1T1 knockout (KO) 293T cells, using sanger sequencing.

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