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OLIG2 Knockout 293T Cell Line, Homozygous

Catalog No.: RM02651

Basic Information

Catalog No.
RM02651

Category
Cell Line

Parental Cell line
293T

Genotype
Knockout

Background

This gene encodes a basic helix-loop-helix transcription factor which is expressed in oligodendroglial tumors of the brain. The protein is an essential regulator of ventral neuroectodermal progenitor cell fate. The gene is involved in a chromosomal translocation t(14;21)(q11.2;q22) associated with T-cell acute lymphoblastic leukemia. Its chromosomal location is within a region of chromosome 21 which has been suggested to play a role in learning deficits associated with Down syndrome. [provided by RefSeq, Jul 2008]

Gene Information

Gene Symbol
OLIG2

Species
Human

Gene ID
10215

Swiss Prot
Q13516

Synonyms
BHLHB1; OLIGO2; PRKCBP2; RACK17; bHLHe19

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Product Information

Description
OLIG2 Knockout 293T Cell Line is engineered from 293T cell line with Gene-Editing technology.
Allele-1:136bp deletion in exon1
Allele-2:136bp 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    GTCGTCTACGTCGT**********GGTCATGCCGTACG
Mut   GTCGTCTACGTCGT***Deletion***GGTCATGCCGTACG
AIlele-1:   136bp deletion in exon1

WT    GTCGTCTACGTCGT**********GGTCATGCCGTACG
Mut   GTCGTCTACGTCGT***Deletion***GGTCATGCCGTACG
AIlele-2:   136bp deletion in exon1
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Genome sequence analysis of PCR products from parental (WT) and OLIG2 knockout (KO) 293T cells, using sanger sequencing.