

# OLIG2 Knockout 293T Cell Line, Homozygous

Catalog No.: RM02651

## Basic Information

### Catalog No.

RM02651

### Category

Cell Line

### Parental Cell line

293T

### Genotype

Knockout

## Gene Information

### Gene Symbol

OLIG2

### Species

Human

### Gene ID

10215

### Swiss Prot

Q13516

### Synonyms

BHLHB1; OLIGO2; PRKCBP2; RACK17;  
bHLHe19

## Contact

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## 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]

## 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<sup>6</sup> cells/vial

### Storage

Stored in liquid nitrogen for a long time less than -130°C. 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°C with 5% CO<sub>2</sub> condition.

1. Thaw the vial in 37°C 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°C incubator with 5% CO<sub>2</sub>.
7. A subcultivation ratio of 1:2-1:4 is recommended.

## Sequencing data

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WT GTCGCTACGTCGT\*\*\*\*\*GGTCATGCCGTACG  
Mut GTCGCTACGTCGT\*\*\*Deletion\*\*\*GGTCATGCCGTACG  
Allele-1: 136bp deletion in exon1

WT GTCGCTACGTCGT\*\*\*\*\*GGTCATGCCGTACG  
Mut GTCGCTACGTCGT\*\*\*Deletion\*\*\*GGTCATGCCGTACG  
Allele-2: 136bp deletion in exon1

Genome sequence analysis of PCR products from parental (WT) and OLIG2 knockout (KO) 293T cells, using sanger sequencing.