

VHL Knockout 293T Cell Line, Homozygous

Catalog No.: RM50098

Basic Information

Catalog No.

RM50098

Category

Cell Line

Parental Cell line

293T

Genotype

Knockout

Gene Information

Gene Symbol

VHL

Species

Human

Gene ID

7428

Swiss Prot

P40337

Synonyms

RCA1; VHL1; pVHL; HRCA1; VHL

Contact

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Background

This gene encodes a component of a ubiquitination complex. The encoded protein is involved in the ubiquitination and degradation of hypoxia-inducible-factor (HIF), which is a transcription factor that plays a central role in the regulation of gene expression by oxygen. In addition to oxygen-related gene expression, this protein plays a role in many other cellular processes including cilia formation, cytokine signaling, regulation of senescence, and formation of the extracellular matrix. Variants of this gene are associated with von Hippel-Lindau syndrome, pheochromocytoma, erythrocytosis, renal cell carcinoma, and cerebellar hemangioblastoma.

Product Information

Description

VHL Knockout cell line is engineered from 293T cell line with Gene-Editing Technology.

Allele-1:149bp deletion in exon1

Allele-2:28bp 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

Amount1~5x10⁶ 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% CO₂ 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% CO₂.
7. A subcultivation ratio of 1:2-1:4 is recommended.

Sequencing data

WT AGTCCGGCCCGGAA*****CGACGGCGAGCCGC
Mut AGTCCGGCCCGGAA***Deletion***CGACGGCGAGCCGC
Allele-1: 149bp deletion in exon1

WT CGGA*****GGAA**CCGT*****GACG
Mut CGGA**Deletion***GGAA**CCGT**Deletion***GACG
Allele-2: 28bp deletion in exon1

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