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WT1 Knockout 293T Cell Line, Homozygous

Catalog No.: RM01903

Basic Information

Catalog No.
RM01903

Category
Cell Line

Parental Cell line
293T

Genotype
Knockout

Gene Information

Gene Symbol
WT1

Species
Human

Gene ID
7490

Swiss Prot
P19544

Synonyms
AWT1; EWS-WT1; GUD; NPHS4; WAGR; WIT-2; WT33

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Background

This gene encodes a transcription factor that contains four zinc-finger motifs at the C-terminus and a proline/glutamine-rich DNA-binding domain at the N-terminus. It has an essential role in the normal development of the urogenital system, and it is mutated in a small subset of patients with Wilms tumor. This gene exhibits complex tissue-specific and polymorphic imprinting pattern, with biallelic, and monoallelic expression from the maternal and paternal alleles in different tissues. Multiple transcript variants have been described. In several variants, there is evidence for the use of a non-AUG (CUG) translation initiation codon upstream of, and in-frame with the first AUG. Authors of PMID:7926762 also provide evidence that WT1 mRNA undergoes RNA editing in human and rat, and that this process is tissue-restricted and developmentally regulated. [provided by RefSeq, Mar 2015]

Product Information

Description
WT1 Knockout 293T Cell Line is engineered from 293T cell line with Gene-Editing Technology.
Allele-1:61bp deletion in exon2
Allele-2:61bp 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
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

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WT     ACGGTCACCTTCGA**************TTCAAGCATGAGGA
Mut    ACGGTCACCTTCGA***Deletion***TTCAAGCATGAGGA
Allele-1：61bp deletion in exon2

WT     ACGGTCACCTTCGA**************TTCAAGCATGAGGA
Mut    ACGGTCACCTTCGA***Deletion***TTCAAGCATGAGGA
Allele-2：61bp deletion in exon2
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Genome sequence analysis of PCR products from parental (WT) and WT1 knockout (KO) 293T cells, using sanger sequencing.