

Product datasheet for **RC403473**

Wilms Tumor Protein (WT1) (NM_024426) Human Mutant ORF Clone

Product data:

Product Type:	Mutant ORF Clones
Product Name:	Wilms Tumor Protein (WT1) (NM_024426) Human Mutant ORF Clone
Mutation Description:	G447C
Affected Codon#:	447
Affected NT#:	1339
Nucleotide Mutation:	WT1 Mutant (G447C), Myc-DDK-tagged ORF clone of Homo sapiens Wilms tumor 1 (WT1), transcript variant D as transfection-ready DNA
Effect:	Nephrotic syndrome
Symbol:	WT1
Synonyms:	AWT1; GUD; NPHS4; WAGR; WIT-2; WT33
E. coli Selection:	Kanamycin (25 ug/mL)
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
Tag:	Myc-DDK
ACCN:	NM_024426
ORF Size:	1551 bp
Restriction Sites:	Sgfl-Mlul



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ORF Nucleotide Sequence:

>RC403473 representing NM_024426
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATG**CAGGACCCGGCTTCCACGTGTGTCCCGGAGCCGGCTCTCAGCACACGCTCCGCTCCGGGCCTGGT**
GCCTACAGCAGCCAGAGCAGCAGGGAGTCCGGGACCCGGCGGCATCTGGCCAAAGTTAGCGCCGCCGA
GGCCAGCGCTGAACGTCTCCAGGGCCGAGGAGCCGCGGGCGTCCGGTCTGAGCCGACGAAATGGGC
TCCGACGTGCGGGACCTGAACGCGCTGCTGCCGCCGTCCCTCCCTGGGTGGCGGCGCGGCTGTGCC
TGCCTGTGAGCGGCGCGCAGTGGCGCCGGTGTGGACTTTGCGCCCCGGGCGCTTCGGCTTACGG
GTCGTTGGGCGGCCCGCGCCGACCCGGCTCCGCCGCCACCCCGCGCGCGCCCTACTCCTTCATC
AAACAGGAGCCGAGCTGGGGCGGCGGAGCCGCACGAGGAGCAGTGCCTGAGCGCCTTACTGTCCACT
TTTCCGGCCAGTTCACTGGCACAGCCGAGCCTGTGCTACGGGCCCTTCGGTCTCTCCGCCAGCCA
GGCGTCATCCGGCCAGGCCAGGATGTTTCTAACGCGCCCTACCTGCCAGCTGCCTCGAGAGCCAGCCC
GCTATTCGCAATCAGGGTTACAGCACGGTCACCTTCGACGGGACGCCAGCTACGGTACACGCCCTCGC
ACCATGCGGCGCAGTTCCCAACCACTATTCAAGCATGAGGATCCCATGGGCCAGCAGGGCTCGTGGG
TGAGCAGCAGTACTCGGTGCCGCCCGGTCTATGGTGCCACACCCCAACCGACAGCTGCACCGGCAGC
CAGGCTTTGCTGCTGAGGACGCCTACAGCAGTGACAATTTATACCAATGACATCCCAGCTTGAATGCA
TGACCTGGAATCAGATGAACTTAGGAGCCACCTTAAAGGGAGTTGCTGCTGGGAGCTCCAGCTCAGTAA
ATGGACAGAAGGGCAGAGCAACCACAGCACAGGACGAGAGCGATAACCACACAACGCCATCCTCTGC
GGAGCCCAATACAGAATACACACGCACGGTGTCTTACAGGGCATTACAGGATGTGCGACGTGTGCCGGAG
TAGCCCCGACTTTGTACGGTCCGCATCTGAGACCAGTGAAGAACGCCCTTCATGTGCTTACCCAGG
CTGCAATAAGAGATATTTTAAGCTGTCCCACTTACAGATGCACAGCAGGAAGCACACTGGTGAGAAACCA
TACCAGTGTGACTTCAAGGACTGTGAACGAAGTTTTCTCGTTACAGCAGCTCAAAAGACCAAAAGGA
GACATACATGTGTGAAACCATTCCAGTGTAAAACCTGTGACGAAAAGTTCTCCGGTCCGACCACCTGAA
GACCCACACCAGGACTCATAAGGTAACAAGTGAAGGCCCTTACAGTGTGCGTGGCCAAAGTTGTGAG
AAAAAGTTTCCCGGTGAGTGAATTAGTCCGCCATCACAAATGCATCAGAGAAACATGACCAAACTCC
AGCTGGCGCTT

AG**CGGACCG**ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
 TGGATTACAAGGATGACGACGA TAAGGTTTAA

Protein Sequence:

>RC403473 representing NM_024426
 Red=Cloning site Green=Tags(s)

MQDPASTCVPEPASQHTLRSGPGCLQQPEQQVDRDPGGIWAKLGAAEASAERLQRRSRGASGSEPPQMG
 SDVDRDLNALLPAVPSLGGGGCALPVSGAAQWAPVLDFAAPPASAYGSLGGPAPPPAPPPPPPPHPSFI
 KQEPSWGAEPHEEQCLSAFTVHFSGQFTGTAGACRYGPFPPPPSQASSGQARMFPNAPYLPSCLEQP
 AIRNQYSTVTFDGTSPSYGHTPSHAAQFPNHSFKHEDPMQQGSLGEQQYSVPPPVYGHPTDSTGSG
 QALLLRTPYSSDNLQMTSQLCMTWNQMLGATLKGVAAGSSSVKWTEGQSNHSTGYESDNHTPTILC
 GAQYRIHTHGVRGIQDVRVPGVAPTLVRSASETSEKRPFMCAYPGCNKRYFKLSHLQMSRKHTGEKP
 YQCDFKDCERRFSRSDQLKRHQRHTCVKPFQCKTCQRKFSRSDHLKTHTRHTGKTSEKPFSCRWPSCQ
 KKFARSDELVRHHNMHRNMTKLQAL

SGPTRRRLEQKLI**SEEDLAANDILDYKDDDDKV**

Restriction Sites:

SgfI-MluI

Cloning Scheme:

OTI Disclaimer:

Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in *E. coli* are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation:

This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components:

The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

RefSeq:

[NP_077744](#)

RefSeq Size:

1551 bp

RefSeq ORF:

1569 bp

Locus ID:

7490

Cytogenetics:

11p13

Domains:

WT1, zf-C2H2

Protein Families:

Druggable Genome, Transcription Factors

MW:

56.9 kDa

Gene Summary:

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]