

Product datasheet for **RC202901**

WFS1 (NM_006005) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	WFS1 (NM_006005) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	WFS1
Synonyms:	CTRCT41; WFRS; WFS; WFSL
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>RC202901 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGACTCCAACACTGCTCCGCTGGGCCCTCCTGCCACAGCCCCGCCAGCACCCGAGCCCCAGGCGC
 GTTCCCGACTCAATGCCACAGCCTCGTTGGAGCAGGAGAGGAGCGAAAGGCCCGAGCACCCGGACCCCA
 GGCTGGCCCTGGCCCTGGTGTAGAGACGACGGCCCGCTGAACCCAGGCCAGCATACCAGGAGC
 CGGAAAGAGCAGACGGCACCGGCCCTACAAAGGGAGACATGAAATCCCCTTTGAAGAAGTCTGGAGA
 GGGCCAAGGCCGGGACCCCAAGGCACAGACTGAGGTGGGGAAGCACTACCTGCAGTTGGCCGGCAGAC
 GGATGAAGAACTCAACAGCTGCACCGCTGTGGACTGGCTGGTCTCGCCGCAAGCAGGGCCGTCGCGAG
 GCTGTGAAGCTGCTTCGCCGGTCTTGGCGACAGAAGAGGCATCACGTCCGAGAACGAACGGGAGGTGA
 GGCAGCTCTCCTCGAGACCGACTGGAGAGGGCCGTGCGCAAGGCAGCCCTGGTCATGTACTGGAAGCT
 CAACCCCAAGAAGAAGAAGCAGGTGGCCGTGGCGGAGCTGCTGGAGAATGTCGGCCAGGTCAACGAGCAC
 GATGGAGGGGCGCAGCCAGGCCCCCGTGCCCAAGTCCCTGCAGAAGCAGAGGCCATGCTGGAGCGCCTGG
 TCAGCAGCGAGTCCAAGAATAACATCGCCCTGGATGACTTTGTGGAGATCACTAAGAAGTACGCCAAGGG
 CGTCATCCCCAGCAGCCTGTTCCCTGCAGGACGACGAAGATGATGACGAGCTGGCGGGGAAGGCCCTGAG
 GACCTGCCACTGCGTCTGAAGGTGGTCAAGTACCCCTGCACGCCATCATGGAGATCAAGGAGTACCTGA
 TTGACATGGCCTCCAGGGCAGGCATGCACTGGCTGTCCACCATCATCCCCACGCACCACATCAACGCGCT
 CATCTTCTTTCATCGTCAGCAACCTCACCATCGACTTCTTCGCCTTCTTCATCCCGCTGGTCATCTTC
 TACCTGTCTTTCATCTCCATGGTATCTGCACCCTCAAGGTGTCCAGGACAGCAAGGCCCTGGGAGA
 TCCGCACCCTCACCGACTGCTGCTGGCCTTCGAGCCCAACCTGGATGTGGAGCAGGCCGAGGTCAACTT
 CGGCTGGAACCACTGGAGCCCTATGCCATTTCCCTGCTCTCTGCTTCTTCGTCATCTTCTCCTCCCC
 ATCGCCAGCAAGGACTGCATCCCTGCTCGGAGCTGGCTGTCATCACCGCTTCTTTACCGTACCAGCT
 ACCTGAGCCTGAGCACCCATGCAGAGCCCTACACGCGCAGGGCCCTGGCCACCGAGGTACCGCCGGCCT
 GCTATCGCTGCTGCCCTCCATGCCCTTGAATTGGCCCTACCTGAAGGTCTTGGCCAGACCTTCATCACC
 GTGCCCTGTCGGCCACCTGGTCTGCTCAACGTACGCTCCCGTGCCTGCTCTATGTCTACCTGCTCTATC
 TCTTCTTCGCGATGGCACAGCTGAGGAATTTCAAGGGCACCTACTGCTACCTTGCCCTACCTGGTGTG
 CTTTCATGTGGTGTGAGCTCTCCGTGGTATCCTGCTGGAGTCCACCGCCCTGGGGCTGCTCCGCGCTCC
 ATCGGCTACTTCTCTTCTCTTTGCCCTCCCCATCCTGGTGGCCGGCCTGGCCCTGGTGGGCGTGTGC
 AGTTCCGCCGGTGGTTCACGTCTCTGGAGCTACCAAGATCGCAGTACCGTGGCCGTCTGTAGTGTGCC
 CCTGCTGTTGCGCTGGTGGACCAAGGCCAGCTTCTCTGTGGTGGGGATGGTGAAGTCCCTGACCGGAGC
 TCCATGGTCAAGCTCATCCTGGTGTGGCTCACGGCCATCGTGTGTTCTGCTGGTTCATGTGTACCCT
 CAGAGGGCATGAAGGTCTACAACCTCCACTGACCTGGCAGCAGTATGGTGCCTGTGCGGGCCACGCGC
 CTGGAAGGAGACCAACATGGCGCGCACCCAGATCCTCTGCAGCCACCTGGAGGGCCACAGGGTACCGTGG
 ACCGGCCGCTTCAAGTACGTCCGCGTACTGACATCGACAACAGCGCCGAGTCTGCCATCAACATGCTCC
 CGTTCTTCATCGGCGACTGGATGCGTGCCTCTACGGCGAGGCCCTACCTGCCTGCAGCCCTGGCAACAC
 CTCCACGGCCGAGGAGGAGCTCTGTCCCTTAAGCTGCTGGCCAAGCACCCCTGCCACATCAAGAAGTTC
 GACCGCTACAAGTTTGAATTACCGTGGGCATGCCATTACAGCAGCGGCGCTGACGCTCGCGCAGCCGCG
 AGGAGGACGACGTACCAAGGACATCGTCTGCGGGCCAGCAGGAGTTCAAGAGCGTGTGCTCAGCCT
 GCGCCAGGGCAGCCTCATCGAGTTCAGCACCATCCTGGAGGGCCGCTGGGCAGCAAGTGGCCTGTCTTC
 GAGCTCAAGGCCATCAGCTGCCTCAACTGCATGGCCAGCTCTCACCCACCAGGGCGCACGTGAAGATCG
 AGCAGGACTGGCGCAGCACCGTGCATGGCGCCGTGAAGTTCGCTTCGACTTCTTTTTCTTCCATTCTCT
 GTCGGCGGCC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC202901 protein sequence
 Red=Cloning site Green=Tags(s)

MDSNTAPLGPSCPQPPAPQPQARSRLNATASLEQERSERPRAPGPQAGPGVGRDAAAPAEQQAQHTRS
 RERADGTGPTKGDMEIPFEEVLERAKAGDPKAQTEVGKHYLQLAGDTDEELNSCTAVDWL VLA AKQGRRE
 AVKLLRRCLADRRGITSENERVRQLSSETDLERAVRKAALVMYWKLNPKKKKQVAVAEELLENVGVQVNEH
 DGGAQPGVPKSLQKQRRMLERLVSSSESKNYIALDDFVEITKKYAKGVIPSSFLQDDEDDDELAKKSPE
 DLPLRLKVKYPLHAIMEIKEYLIDMASRAGMHWLSTIIPTHHINALIFFFIVSNLTIDFFAFFIPLVIF
 YLFSISMVICTLKVFQDSKAWENFRTLTDLLRFEPNLDVEQAEVNFNGWNHLEPYAHFLLSVFFVIFSFP
 IASKDCIPCSELAVITGFFVTVSYLSLSTHAEPYTRRALATEVTAGLLSLLPSMPLNWPYLKVLGQTFIT
 VPVGHVVLNVSVPCLLVYLLYLFFRMAQLRNFKGTICYLVPYL VCFMWCELSVVILLESTGLGLLRAS
 IGYFLFLFALPILVAGLALVGLVQFARWFTSLELTKIAVTAVCSVPLLLRWWTKASFVVG MVKSLTRS
 SMVKLILVWLTAIVLFCWFVYVRSEG MKVYNSTLTWQQYGALCGPRAWKETNMARTQILCSHLEGHRVTW
 TGRFKYVRVTDIDNSAESAINMLPFFIGDWMRCLYGEAYPACSPGNTSTAEELCRLKLLAKHPCHKKFK
 DRYKFEITVGMPPFSSGADGSR SREDDVT KDIVLRASSEFKSVLLSLRQGS LIEFSTILEGR LGS KWPFV
 ELKAISCLNCMAQLSPTRRHVKIEHDWRSTVHGAVKFAFDFFF PFLSAA

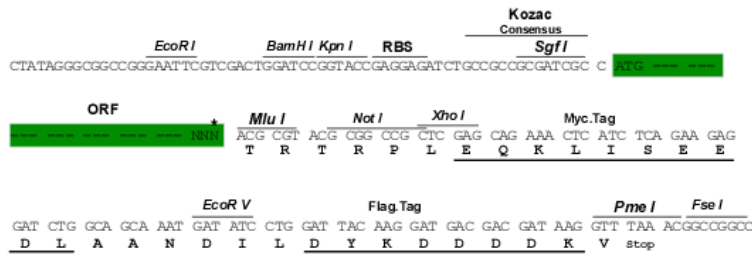
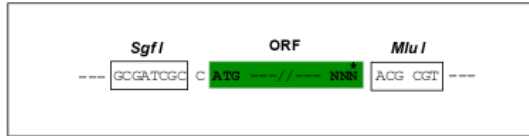
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6291_b09.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



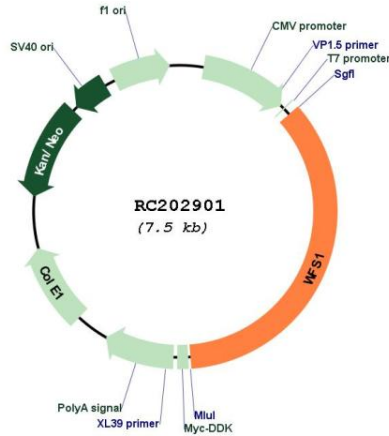
* The last codon before the Stop codon of the ORF

ACCN: NM_006005

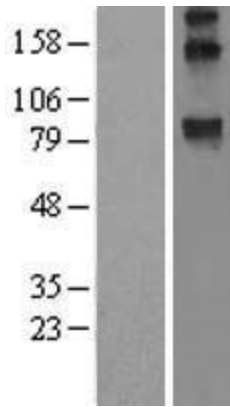
ORF Size:	2670 bp
OTI Disclaimer:	<p>Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional 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.</p> <p>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</p>
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).
Reconstitution Method:	<ol style="list-style-type: none"> 1. Centrifuge at 5,000xg for 5min. 2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA. 3. Close the tube and incubate for 10 minutes at room temperature. 4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom. 5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.
RefSeq:	NM_006005.3
RefSeq Size:	3640 bp
RefSeq ORF:	2673 bp
Locus ID:	7466
UniProt ID:	O76024
Cytogenetics:	4p16.1
Protein Families:	Druggable Genome, Transmembrane
MW:	100.3 kDa

Gene Summary:

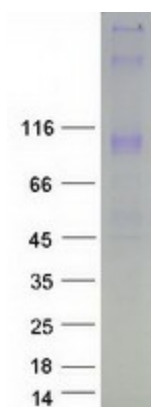
This gene encodes a transmembrane protein, which is located primarily in the endoplasmic reticulum and ubiquitously expressed with highest levels in brain, pancreas, heart, and insulinoma beta-cell lines. Mutations in this gene are associated with Wolfram syndrome, also called DIDMOAD (Diabetes Insipidus, Diabetes Mellitus, Optic Atrophy, and Deafness), an autosomal recessive disorder. The disease affects the brain and central nervous system. Mutations in this gene can also cause autosomal dominant deafness 6 (DFNA6), also known as DFNA14 or DFNA38. Alternatively spliced transcript variants have been found for this gene. [provided by RefSeq, Mar 2009]

Product images:


Circular map for RC202901



Western blot validation of overexpression lysate (Cat# [LY429034]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with [RC227925] using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified WFS1 protein (Cat# [TP302901]). The protein was produced from HEK293T cells transfected with WFS1 cDNA clone (Cat# RC202901) using MegaTran 2.0 (Cat# [TT210002]).