

## Product datasheet for **SC111831**

### WHIP (WRNIP1) (NM\_020135) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	WHIP (WRNIP1) (NM_020135) Human Untagged Clone
Tag:	Tag Free
Symbol:	WHIP
Synonyms:	bA420G6.2; CFAP93; FAP93; WHIP
Mammalian Cell Selection:	None
Vector:	<u><a href="#">pCMV6-XL4</a></u>
E. coli Selection:	Ampicillin (100 ug/mL)



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**Fully Sequenced ORF:** >NCBI ORF sequence for NM\_020135, the custom clone sequence may differ by one or more nucleotides

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ATGGAGGTGAGCGGGCCGGAAGACGACCCCTTCCTTCGAGCTGCACCAGTGCAGTGCCCGTGTGCC
AGCAGATGATGCCCGCCGCGACATCAACTCGACCTGGACCGTGTCTGCTGCCACCCGGCGGGGCA
CGCGGAGCCCGCGCGGGTTCGACCCGCGCGGGGAGCGGGCAAGGGGCCCTCGCCGCCGCGCAAG
AGGCGGGCGGTGTGCGAGAGCTCGGCGCTGAAGCAGCCAGCCACCCGACGGCAGCCGAGAGCAGCGAGG
GCGAGGGTGAGGAGGGCAGCAGCGGCGGAGACCCGAGAGCCGCGAGAGCTACGACGCGCCGCCACACC
CAGCGGGCGCCGCTTATCCCGACTTCGCGGTGGCCGCTCCAGCAGCCCGGGAGGAAGGGTTCGGGG
AAGAGGCCGCGCGCCGCCGCGGGGAGCGCTCTCCGCGCAGCTGGGACGAGGGGAGGCGCAGG
AGGAGGAGGAGCCGTGGGCGACGGCGATGGCGACGGGGACGCGGACGCGGACGGCGAGGACGACCCGGG
GCACTGGGACGCGGACGCTGCCGAAGCCGCCACCCCTTCGGGGCAGTGGCGGGGGCCGCCGACCC
CGGGCGTGGCTGCCGAGGAGATCCGACAGATGCTACAGGGCAAGCCGCTGGCCGACACGATGCGTCTG
ACACGCTGCAGGATTACTTCGGGCAGAGCAAGGCCGTGGCCAGGATACCCTGCTGCGCTGCTCCTGGA
GACCAACGAAATCCCCTCGCTTATCCTGTGGGGCCGCCGGGCTGCGGCAAGACCACTCTGGCTCACATC
ATAGCCAGCAACAGCAAGAAACATAGCATAAAGTTTGTGACATTATCTGCAACAAATGCCAAGACAAATG
ATGTGCGAGATGTCATAAAACAAGCTCAAAATGAAAAGAGCTTTTTCAAAGGAAAACCATCCTTTTTAT
TGATGAGATTCATCGGTTCAATAAATCTCAGCAGGACACTTTCCTTCCACGTGGAATGTGGGACGATC
ACTCTGATTGGGGCAACCACTGAAAACCTTCTTCCAGGTCAACGCTGCTTCTTGAGCCGCTGTGCGAG
TGATTGTTCTTGAGAAGCTTCCAGTAGAGGCAATGGTACTATTTAATGCGAGCGATCAACTCCCTGGG
AATCCAGTCTAGACTTAGCCGTCCCCTGACCCCTGAGCCACAGCAGCAACAGCAGCTCAGAGCCC
GCCATGTTTCATAGAGGATAAAGCAGTAGACACCCCTGGCTTACCTCAGTGACGGTGACGCCGAGGGT
TGAACGGACTGCAGCTGGCGGTGCTGGCTAGGTTAAGCTCTAGGAAGATGTTCTGTAAGAAGAGTGGGCA
ATCCTATTCTCCAGTAGAGTTCTGATCACAGAGAATGACGTGAAGGAGGGCCTACAGCGATCCACATT
TTATATGACCGGGCAGGTGAGGAGCATTACAACCTGCATCTCCGCCCTGCACAAGTCCATGCGGGGCTCAG
ACCAGAACGCCTCCCTCTACTGGCTGGCTCGCATGCTCGAGGGAGGAGAGGACCCACTCTACGTGGCAGG
GAGGCTTGTGAGGTTTGCACGCGAGGACATAGGTCTGGCAGACCCGCTGCGTTAACACAAGCGTTGCT
GCCTACCAAGGCTGTCATTTTATAGGCATGCCTGAATGTGAGGTGCTTCTGGCCAGTGTGTGGTCTACT
TTGCCAGAGCCCCAAAGTCCATTGAGGTGTACAGCGCCTACAACAACGTCAAAGCCTGCCTGAGGAACCA
CCAGGGGCCACTGCCCCCGTGCCTTGCACCTGAGGAACGCGCCCACTAGGCTGATGAAGATTTGGGC
TATGGCAAAGGCTACAAGTACAACCCCATGTACAGCGAGCCTGTGGATCAGGAGTACCTGCCTGAAGAGT
TGAGGGGGGTAGATTTCTCAAGCAGAGGAGGTGCTGA
    
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**5' Read Nucleotide Sequence:**

>OriGene 5' read for NM\_020135 unedited

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NNNTTGTCAAAATTTGTATACGACTCACTATAGGCGGCCGGAATTCGCACGAGGGGANA
GAGAGAACTAGGCCGTGGGCGACGGCGATGGCGACGGGGACGCGGACGCGGACGCGGAGG
ACGACCCGGGGCACTGGGACGCGGACGCTGCCGAAGCCGCCACCCCTTCGGGGCCAGTG
GCGGGGGCCGCCGACCCCGGGCGTGGCTGCCGAGGAGATCCGACAGATGCTACAGG
GCAAGCCGCTGGCCGACAGATGCGTCCTGACACGCTGCAGGATTACTTCGGGCAGAGCA
AGGCCGTGGGCCAGGATACCCTGCTGCGCTCGCTCCTGGAGACCAACGAAATCCCCTCGC
TTATCCTGTGGGGGCCCGGGTGCAGCAAGACCACTCTGGCTCACATCATAGCCAGCA
ACAGCAAGAAACATAGCATAAAGTTTGTGACATTATCTGCAACAAATGCCAAGACAAATG
ATGTGCGAGATGTCATAAAACAAGCTCAAAATGAAAAGAGCTTTTTCAAAGGAAAACCA
TCCTTTTTATTGATGAGATTCATCGGTTCAATAAATCTCAGCAGGACACTTTCCTTCCCTC
ACGTGGAATGTGGGACGATCACTCTGATTGGGGCAACCACTGAAAACCTTCCCTCCAGG
TCAACGCTGCTCTTCTGAGCCGCTGTGAGTGATTGTTCTTGAGAAGCTTCCAGTAGAGG
CAATGGTGACTATNTAATGCGAGCGATCAACTCCCTGGGAATCCACGTCTTAGACTCTA
GCCGTCCCCTGACCCCTGAGCCCAGCAGCAACAGCAGCTCAGACCCGCCATGTCATAG
AGATAAAGCAGTGACACCTGGCTTACTCANTGACGGTGACCCGANCTGGNNTGACGACT
G
    
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<b>3' Read Nucleotide Sequence:</b>	>OriGene 3' read for NM_020135 unedited TGTACGCGCCGCAATCTAGTGTGCGAGTTTTTTTTTTTTTTTTTTTACTTTGAAATAGTT TTATTGGCTCGTAAGACCTTTGCATATAAAAAATACCCAAAACACTATGCAGTATTA TCACAATTACATTTTTTACCAATTAATAACTACCCAGAATATACATTTTTTAAAGAAAAG AAAATCCTACAGAACTGAATTCTGAAATGACATTATGACTTAAATACTATGACAAAATAG ATAATTCCTTATAACATTAATTCATTGCACAAAAGCTGCCAGGTATTTTCATAAGCATAAC CGCTGCACCGAGTGCAAATGAACACAATTTCAAAGTTACACATTTATTGAAAGAACTGC GCCTCCACCTATGGAACCTTAAATTTCTGGCACAAAATGTTGGTCTGTTCTAACTTCCA CCAGGCAACCACTTTGCAATCCACTAACTTTCTTTCTGGCCCTCCCTTAAAAAGCAAC ATCCTTCTGCTGTCGTGCCCTGAGGAGTCAGCACCTCCTCTGCTTGAAGAAATCTACCC CCTCAACTCTTCAGGCAGGTACTCCTGATCCACAGGCTCGCTGTACATGGGGTTGACTT GTAGCCTTTGCCATAGCCCAAATCCTTCATCAGCCTAGTGGGCGCTTCCCTCAGGTGCAG GGGCACGGGGGAGTGGCCCTGGTGGTTCCTCAGGCAGGCTTTGACGTTGTTGTAGGC GCTGTACACCTCAATGGACTTTGGGGCTCTGGCAATGTAGACACACACTGGCCAGAAGC ACCTCACATTGAGCATGCTATAAATGACAGCCTTGGGTAGCAGNCACCGCTTGTGTTA CGCANACGGGTCTGCCAGACCTATGTNCTCGCTGGNNCAACCTGACAGCCTNCGTGCACG TAAAAGTGGGTCTCTNCTNCTCGAGCTGCGACCANCCATAAGGGGAAGGGTTCTGGTC TGAACCCCTGTACTGGCAAGCCGAGTATTCATTGTATGCTCTCA
<b>Restriction Sites:</b>	NotI-NotI
<b>ACCN:</b>	NM_020135
<b>Insert Size:</b>	2000 bp
<b>OTI Disclaimer:</b>	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"> <li>1. Centrifuge at 5,000xg for 5min.</li> <li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li> <li>3. Close the tube and incubate for 10 minutes at room temperature.</li> <li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li> <li>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.</li> </ol>
<b>RefSeq:</b>	<u><a href="#">NM_020135.1</a></u> , <u><a href="#">NP_064520.1</a></u>
<b>RefSeq Size:</b>	2670 bp
<b>RefSeq ORF:</b>	2670 bp
<b>Locus ID:</b>	56897
<b>UniProt ID:</b>	<u><a href="#">Q96S55</a></u>
<b>Cytogenetics:</b>	6p25.2
<b>Domains:</b>	AAA, AAA, ZnF_Rad18

**Gene Summary:**

Werner's syndrome is a rare autosomal recessive disorder characterized by accelerated aging that is caused by defects in the Werner syndrome ATP-dependent helicase gene (WRN). The protein encoded by this gene interacts with the exonuclease-containing N-terminal portion of the Werner protein. This protein has a ubiquitin-binding zinc-finger domain in the N-terminus, an ATPase domain, and two leucine zipper motifs in the C-terminus. It has sequence similarity to replication factor C family proteins and is conserved from *E. coli* to human. This protein likely accumulates at sites of DNA damage by interacting with polyubiquitinated proteins and also binds to DNA polymerase delta and increases the initiation frequency of DNA polymerase delta-mediated DNA synthesis. This protein also interacts with nucleoporins at nuclear pore complexes. Two transcript variants encoding different isoforms have been isolated for this gene. [provided by RefSeq, Jul 2012]

Transcript Variant: This variant (1) encodes the longer isoform (1).