

## Product datasheet for **SC124514**

### **RAD17 (NM\_133344) Human Untagged Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	RAD17 (NM_133344) Human Untagged Clone
Tag:	Tag Free
Symbol:	RAD17
Synonyms:	CCYC; HRAD17; R24L; RAD17SP; RAD24
Mammalian Cell Selection:	None
Vector:	<u><a href="#">pCMV6-XL5</a></u>
E. coli Selection:	Ampicillin (100 ug/mL)



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**Fully Sequenced ORF:** >NCBI ORF sequence for NM\_133344, the custom clone sequence may differ by one or more nucleotides

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ATGAATCAGGTAACAGACTGGGTTGACCCATCATTGATGATTTCTAGAGTGTAGTGGCGTCTCTACTA
TTACTGCCACATCATTAGGTGTGAATAACTCAAGTCATAGAAGAAAAATGGGCCTTCTACATTAGAAAG
CAGCAGATTTCCAGCGAGAAAAAGAGGAAATCTATCTTCCTTAGAACAGATTTATGGTTTAGAAAAATTC
AAAGAATATCTGTCTGAAAATGAACCATGGGTGGATAAATAAAACCAGAACTCAGCATGAACTTGCTG
TGCATAAAAAGAAAAATTGAAGAAGTCGAAACCTGGTTAAAAGCTCAAGTTTTAGAAAGGCAACCAAAACA
GGGTGGATCTATTTTATAATAACAGGTCCTCCTGGATGTGAAAAGACAACGACCTTAAAAATACTATCA
AAGGAGCATGGTATTCAAGTACAAGAGTGGATTAATCCAGTTTTACCAGACTTCCAAAAAGATGATTTCA
AGGGGATGTTTAATACTGAATCAAGCTCCATATGTTCCCTATCAGTCTCAGATAGCAGTTTTCAAAGA
GTTTCTACTAAGAGCGACAAAGTATAACAAGTTACAAATGCTTGGAGATGATCTGAGAACTGATAAGAAG
ATAATTCTGGTTGAAGATTTACCTAACCAGTTTTATCGGGATTCTCATACTTTACATGAAGTTCTAAGGA
AGTATGTGAGGATTGGTCGATGTCCTTATATTTATAATCTCGGACAGTCTCAGTGGAGATAAATCA
AAGGTTATTGTTCCCAAAGAAATTCAGGAAGAGTGTTCTATCTCAAATATTAGTTTCAACCCTGTGGCA
CCAACAATTATGATGAAATTTCTTAATCGAATAGTGACTATAGAAGCTAACAAAGAATGGAGGAAAAATTA
CTGTCCCTGACAAAACCTCTCTAGAGTTGCTCTGTGAGGGATGTTCTGGTGATATCAGAAGTGAATAAA
CAGCCTCCAGTTTTCTTCTTCAAAGGAGAAAAACAACCTACGGCCAAGGAAAAAGGAAATGTCTTTAAAA
TCAGATGCTGTGCTGTCAAAATCAAACGAAGAAAAAACCTGATAGGGTTTTGAAAAATCAAGAGGTCC
AAGCTATTGGTGGCAAAGATGTTTCTGTGTTCTCTTCCAGAGCTTTGGGGAAAAATCTATATTGAAAAG
AGCATTTTAAACAGAATTAGACTCACCTCGTTGCCCTCATTATCAGAATATGAACGGGACATACATTA
CTTGTGAACTGAGGAGGTAGTAGAAATGTCACACATGCCTGGAGACTTATTTAATTTATATCTTCCAC
AAAACACATAGATTTCTCATGAAAATTGATGATATTGTGAGAGCCAGTGAATTTCTGAGTTTTGCAGA
TATCCTCAGTGGTGACTGGAATACACGCTCTTACTCAGGGAATATAGCAGTCTATAGCTACGAGAGGT
GTGATGCATTCACAAAGCCCGAGGATATGCTCATTGCCAAGGAGGAGGATCAAGTTTTCGACCCTTGC
ACAAACCTCAGTGGTTTCTAATAAATAAAAAGTATCGGGAAAAATGCCTGGCAGCAAAAGCACTTTTTCC
TGACTTCTGCCTACCAGCTTTATGCCTCAAACCTCAGCTATTGCCATACCTTGTCTACTAACCATTCCA
ATGAGAAATCAAGCTCAGATTTCTTTTCCAAGATATTGGAAGGCTCCCTCTGAAGCGACACTTTGGAA
GATTGAAAATGGAAGCCCTGACTGACAGGGAACATGGAATGATAGACCCTGACAGCGGAGATGAAGCCCA
GCTTAATGGAGGACATTCTGCAGAGGAATCTCTGGGTGAACCCACTCAAGCCACTGTGCCGAAACCTGG
TCTCTTCTTTGAGTCAAGATAGTGCCAGTGAACCTGCCTGCTAGCCAGCCCCAGCCCTTTTCAGCCCAAG
GAGACATGGAAGAAAAACATAATAATAGAAGACTACGAGAGTGATGGGACATAG
    
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**5' Read Nucleotide Sequence:**

>OriGene 5' read for NM\_133344 unedited

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ATTTGTATACGACTCATATGGGCGGCCGCGATTTCGGCACGAGGCCCGGGAGGCCGTACC
TCCGAGAGGCTCGCGCTTGAGCCCGGGTAGGGCCAGGTGGCTGCCCTTTACCTAGGGTA
GTCCTTGGTGCCTCCGCTCTTTCGCCAAAAGGGATGCAGCTCCGGGAAATATATGGGA
GTCCACATTTATGTAAGAAATGAACTATAAAATGTATAAATAATTTGCAATCAGAATT
GCTGTGCAAAAGTTTTACTATAATGAAAGATATTTTCTACTCTCAAAAATATAGAGGAAA
GGGGCCAAGATTATAGTACCAGTCACAATCTTTTGATGAGGACGAAATGAATCAGGTAAC
AGACTGGGTTGACCCATCATTGATGATTTCTAGAGTGTAGTGGCGTCTCTACTATTAC
TGCCACATCATTAGGTGTGAATAACTCAAGTCATAGAAGAAAAATGGGCCTTCTACATT
AGAAAGCAGCAGATTTCCAGCGAGAAAAAGAGGAAATCTATCTTCCTTAGAACAGATTTA
TGGTTTAGAAAAATCAAAGAATATCTGTCTGAAAATGAACCATGGGTGGATAAATAAA
ACCAGAAACTCAGCATGAACTTGTGTGCATAAAAAGAAAAATTGAAGAAGTCGAAACCTG
GTAAAAGCTCAAGTTTTAGAAAGGCAACCAAAACAGGGTTGGGATCTATTTATAATAA
CAGGTCCTCCTGGATGTGGAAAGACACCGACCCTAAAATACTATCAAAGGAGCATGGTAT
CCAAGTACAAGAGTGGATTAATCCAGTTTACCAGACTTCCAAAAAGATGATTTCAAGGC
GATGGTTTATACTGGATCAAGC
    
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<b>3' Read Nucleotide Sequence:</b>	>OriGene 3' read for NM_133344 unedited TTGATCTCGGCATGGCACCTCTCCAGGTCCAGGAGGAGCACTGGGGCAGGGTCACAGGAT GCCACCCGGGTTCTGTTCAAGAAACAGCTATGACCGCGGCCGCAATCTAGAGTCGAGTTT TTTTTTTTTTTTTTAAATTCAACATTTAATTGTGATATAACTTATGTAATACTTTCC AAAAAGTATCTAAGATATTCCTGTACAACACATCAAACATCTGAGAAGCGGGAGAC AATAAAGTGTAAATAAGGCACACAGTTTACTCTGTAATTGCATCCTAACTGTTGAATA GTTGATATTTACAACCCCAATAACGTTTTTGCATCCTGAATTAGTCCTTCACATCTTG ATATTTGGCATAATGTTCAAACACACTTTATACACTGACCGCTCCTTAAACCACTCAC AGATTTAATAAATACCGAAAAAATTAAGAGATTTGAAGGCTTGATCTTCTATTTACTTCA AGATGACAGAAGAGTAGGTTTCTGTGATGAAATACTACAAGAATGAAGAATTAACAAAC TGTTGTGTAATTCATCAGAAAAGCATATTAACTCTGCTGAAGTACCCCTGAATGAAACAA AAATGAAGCTGTGAAGTACCAATCTGATTAGCAGGCTGGCTTCTATGTCCCATCACTCGC GAAGACATAAAATATAAGTTTTCTACCAAGTCACCTTGGCTAGAAAGGCCTGGGGCAGG CAACAAGGCTGTTCACTGCCCTTTTCGGCCAAAAGAAAAGACCAGTTCCGGCACAGT GGCTTGATTGGTATCACCAAAAAATTCGCTCGAGAAAAAGCCTACAATAAGGGGGTTAA ATCAGGAAGGTCAGAGCATAACAATCCCAAGTATCGCGGGCAGGGAGGAGTGCCTTTCAG G
<b>Restriction Sites:</b>	NotI-NotI
<b>ACCN:</b>	NM_133344
<b>Insert Size:</b>	2650 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_133344.1</a></u> , <u><a href="#">NP_579922.1</a></u>
<b>RefSeq Size:</b>	2842 bp
<b>RefSeq ORF:</b>	2013 bp
<b>Locus ID:</b>	5884
<b>UniProt ID:</b>	<u><a href="#">O75943</a></u>
<b>Cytogenetics:</b>	5q13.2
<b>Protein Families:</b>	Druggable Genome

**Gene Summary:**

The protein encoded by this gene is highly similar to the gene product of *Schizosaccharomyces pombe rad17*, a cell cycle checkpoint gene required for cell cycle arrest and DNA damage repair in response to DNA damage. This protein shares strong similarity with DNA replication factor C (RFC), and can form a complex with RFCs. This protein binds to chromatin prior to DNA damage and is phosphorylated by the checkpoint kinase ATR following damage. This protein recruits the RAD1-RAD9-HUS1 checkpoint protein complex onto chromatin after DNA damage, which may be required for its phosphorylation. The phosphorylation of this protein is required for the DNA-damage-induced cell cycle G2 arrest, and is thought to be a critical early event during checkpoint signaling in DNA-damaged cells. Multiple alternatively spliced transcript variants of this gene, which encode four distinct protein isoforms, have been reported. Two pseudogenes, located on chromosomes 7 and 13, have been identified. [provided by RefSeq, Jul 2013]

Transcript Variant: This variant (7) lacks two consecutive exons in the 5' UTR, when compared to variant 1. The encoded protein (isoform 1) is identical to that encoded by variants 1, 5, 6, 8 and 9.