

Product datasheet for **SC111938**

RAD17 (NM_002873) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	RAD17 (NM_002873) Human Untagged Clone
Tag:	Tag Free
Symbol:	RAD17
Synonyms:	CCYC; HRAD17; R24L; RAD17SP; RAD24
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF: >NCBI ORF sequence for NM_002873, the custom clone sequence may differ by one or more nucleotides

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ATGAATCAGGTAACAGACTGGGTTGACCCATCATTGATGATTTCTAGAGTGTAGTGGCGTCTCTACTA
TTACTGCCACATCATTAGGTGTGAATAACTCAAGTCATAGAAGAAAAATGGGCCTTCTACATTAGAAAG
CAGCAGATTTCCAGCGAGAAAAAGAGAAATCTATCTTCCTTAGAACAGATTTATGGTTTAGAAAAATTC
AAAGAATATCTGTCTGAAAATGAACCATGGGTGGATAAATAAAACCAGAACTCAGCATGAACTTGCTG
TGCATAAAAAGAAAATTGAAGAAGTCGAAACCTGGTTAAAAGCTCAAGTTTTAGAAAAGGCAACCAAAACA
GGGTGGATCTATTTTATAATAACAGGTCCTCCTGGATGTGAAAAGACAACGACCTTAAAAATACTATCA
AAGGAGCATGGTATTCAAGTACAAGAGTGGATTAATCCAGTTTTACCAGACTTCCAAAAAGATGATTTCA
AGGGGATGTTAATACTGAATCAAGCTCCATATGTTCCCTATCAGTCTCAGATAGCAGTTTTCAAAGA
GTTTCTACTAAGAGCGACAAAGTATAACAAGTTACAAATGCTTGGAGATGATCTGAGAACTGATAAGAAG
ATAATTCTGGTTGAAGATTTACCTAACAGTTTTATCGGGATTCTCATACTTTACATGAAGTTCTAAGGA
AGTATGTGAGGATTGGTCGATGTCCTTATATTTATAATCTCGGACAGTCTCAGTGGAGATAAATCA
AAGGTTATTGTTCCCAAAGAAATTCAGGAAGAGTGTCTATCTCAAATATTAGTTTCAACCCTGTGGCA
CCAACAATTATGATGAAATTTCTTAATCGAATAGTGACTATAGAAGCTAACAAAGATGGAGGAAAAATTA
CTGTCCCTGACAAAACCTCTCTAGAGTTGCTCTGTGAGGGATGTTCTGGTGATATCAGAAGTGAATAAA
CAGCCTCCAGTTTTCTTCTTCAAAGGAGAAAAACAACCTACGGCCAAGGAAAAAGGAATGTCTTTAAAA
TCAGATGCTGTGCTGTCAAAATCAAACGAAGAAAAAACCTGATAGGGTTTTGAAAATCAAGAGGTCC
AAGCTATTGGTGGCAAAGATGTTTCTGTGTTCTCTTCCAGAGCTTTGGGAAAAATCTATATTGAAAAG
AGCATTTAACAGAATTAGACTCACCTCGTTGCCCTCATTATCAGAATATGAACGGGATACATTA
CTTGTGAACTGAGGAGGTAGTAGAAATGTCACACATGCCTGGAGACTTATTTAATTTATATCTTACC
AAAACACATAGATTTCTCATGAAAATTGATGATATTGTGAGAGCCAGTGAATTTCTGAGTTTTGCAGA
TATCCTCAGTGGTGACTGGAATACACGCTCTTACTCAGGGAATATAGCAGTCTATAGCTACGAGAGGT
GTGATGCATTCACAAAGCCCGAGGATATGCTCATTGCCAAGGAGGAGGATCAAGTTTTCGACCCTTGC
ACAAACCTCAGTGGTTTCTAATAAATAAAAAGTATCGGAAAAATGCCTGGCAGCAAAAGCACTTTTTCC
TGACTTCTGCCTACCAGCTTTATGCCTCAAACCTCAGCTATTGCCATACCTTGTCTACTAACCATTCCA
ATGAGAAATCAAGCTCAGATTTCTTTTCCAAGATATTGGAAGGCTCCCTCTGAAGCGCACTTTGGAA
GATTGAAAATGGAAGCCCTGACTGACAGGGAACATGGAATGATAGACCCTGACAGCGGAGATGAAGCCCA
GCTTAATGGAGGACATTCTGCAGAGGAATCTCTGGGTGAACCCACTCAAGCCACTGTGCCGAAACCTGG
TCTCTTCTTTGAGTCAAGATAGTGCCAGTGAACCTGCCTGCTAGCCAGCCCAAGCCCTTTTCAGCCCAAG
GAGACATGGAAGAAAACATAATAATAGAAGACTACGAGAGTGATGGGACATAG
    
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5' Read Nucleotide Sequence:

>OriGene 5' read for NM_002873 unedited

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NGAAACGTTACATTTGTATACGACTCACTATAGGCGGCCGNAATTCGCACGAGGGT
GGTCGGCTAGGAATAGTCTTGAAGGTCTACCTCTGACATCTCATTTCAGTAACCTCGCAT
CTTCAGGGACAGTTATCTGCTTTTTAAAGGAGGTAATTGTCAATCTTGTTTTCAAGAGTG
AATAGAGACCTGACCGTGACAACAGTCTGCACCTTTTTTTGTTTGTGTTGTTTTGT
TTTTGTTTGTGAGACGGAGTCTCACTCTTGTGCGCCAGGCTGGAGTGCAACCTCCGCCTCT
GGGTTCAAGTGATTCTCCTGCCTTAGCCTCCAGAGTAGCTGGGATTACAGGCGCCACCA
CCACGCCCGGCTAATTTTTGCATTTTTAATAGAGACGGGGTTTACCATGTTTTGGCCAG
GCTGGTCTCAAACCTCCTGACCTCAGATGATCCGCCCGCTCGTCTCCCACGGTGTGGG
ATTACAGGCATGAGCCACCGCTCGGCCCTGGTCTGCATCTTTTATTTTCGAGTACAA
ACTATATTTACTCAAATAGGTGTTTTTTTTCCACCTGTATACCTTTTGAACGTACAGT
CTCTAATCGTGAACGATTTGGGGCGGAGGGCTGAACAATGTGTTTTCTAGTGTGTCGAGG
TGTTTATAGGCTATGTGTGCCTCAAACCTGTAAGTAGTCCAGTATACTTTCCAATGAT
AAGTTTGTAGACCTTAACTTTTCTTGGCTAACTTAAATCGTTGAATTCAGTGT
GCATAAACATTTAAGAATTTGANAACACGGTTGAAAAACAGTGTACCAAGAAATTTTGT
AATAACATGTTCAAATGAAGACAAAATTTTACG
    
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3' Read Nucleotide Sequence:	>OriGene 3' read for NM_002873 unedited TGACCGCGCCGCAATCTAGAGTCGAGTTT TTTTTTTTTTTTAAATTTCAACATTTTAAATGGGGATATAACTTATGTAAATACTTTCCAAA AAGTTTTTTAAATTTCCACTGTACAACACATAAAAACTTTTTGAAAAGCGGGAAACAAT AAAGGGTAAATAAGGCCCCCAAGTTTACCCTCGTAATTGCATCCTAAACTGGGGAATAGTG GATTTTTACAACCCCAATAACGTTTTTGCATCCTGAATTAACCCTTACATTTTTGATT TTGGGCATAATGTTCAACACACTTTATACACTGACCGTTTCTTAAACCACTCACAGA TTTAATAAATCCCGAAAAAATTAAAAAATTGAAAGCTTGAATTTTTTTTTTACTTCAAAA TGACAAAAAGTAGGTTTTTGGGATGAAATCCTCAAGAATGAAAAATTACAAACTGT TGGGTAATTCATCAAAAAAGCTTTTTACCTTTGCTGAAGTCCCACTGAATGAAACAAAAA TGAAGCTGGGAAGTACCAATCTGATTACCAGGCTGGCTTTATGCCCATCACTCTCGAA GCCTTCTATTATTATGTTTTCTCCATGCCTCCTGGGCTGAAAAGGGCTGGGGCTGGTT AACAGGCATTTCACTGGCCCTATTCTGACTCAAGGAAGAGACCAGGTTTCCGGCACAGTG GCTTGAGTGGGTTCAACCAGAAATTCCTCTGCAGAATGCCTCCATTAAGCTGGGCTTCA TCTCCGTTGTAGGCTATCATTTTTCATGTTCTTGGCAGAAGGNCCTCCATTTTTCATCTT CCAAGGGTGCCTCAGAGGGAGCCTCCCATATCTGGATAAAGAACTGAGCTGATTCTCA TGAATGGTATTAAGCAG
Restriction Sites:	NotI-NotI
ACCN:	NM_002873
Insert Size:	4880 bp
OTI Disclaimer:	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).
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:	<u>NM_002873.1</u> , <u>NP_002864.1</u>
RefSeq Size:	3164 bp
RefSeq ORF:	2013 bp
Locus ID:	5884
UniProt ID:	<u>O75943</u>
Cytogenetics:	5q13.2
Domains:	Rad17
Protein Families:	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 (8) has an alternate 5' terminal sequence and lacks an internal exon in the 5' UTR, when compared to variant 1. The encoded protein (isoform 1) is identical to that encoded by variants 1, 5, 6, 7 and 9.