

## Product datasheet for **SC116225**

### **RAD21 (NM\_006265) Human Untagged Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	RAD21 (NM_006265) Human Untagged Clone
Tag:	Tag Free
Symbol:	RAD21
Synonyms:	CDLS4; hHR21; HR21; HRAD21; MCD1; MGS; NXP1; SCC1
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:** >OriGene ORF within SC116225 sequence for NM\_006265 edited (data generated by NextGen Sequencing)

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ATGTTCTACGCACATTTTGTCTCAGTAAAAGAGGGCCTCTGGCCAAAATTTGGCTAGCG
GCCATTGGGATAAGAAGCTAACCAAAGCCCATGTGTTTCGAGTGAATTTAGAGAGCAGC
GTGGAGAGTATCATCTCACCAAAGGTGAAAATGGCATTACGGACATCAGGACATCTTTA
CTGGGAGTAGTTCGAATCTATCACAGGAAAGCCAAATACCTTCTTGCAGACTGTAATGAA
GCATTCATTAAGATAAAGATGGCTTTTCGGCCAGGTGTGGTTGACCTGCCTGAGGAAAAT
CGGAAGCAGCTTATAATGCCATTACTTTACCTGAAGAATTTTCATGACTTTGATCAGCCA
CTGCCTGACTTAGATGACATCGATGTGGCCAGCAGTTCAGCTTGAATCAGAGTAGAGTG
GAAGAGATAACCATGAGAGAAGAAGTTGGGAACATCAGTATTTTACAAGAAAATGATTTT
GGTGATTTTGGAAATGGATGATCGTGAGATAATGAGAGAAGGCAGTGCTTTTGGAGATGAC
GACATGTTAGTAAGCACTACTACTTCTAACCTCCTATTAGAGTCTGAACAGAGCACCAGC
AATCTGAATGAGAAAATTAACCATTTAGAATATGAAGATCAATATAAGGATGATAATTTT
GGAGAAGGAAATGATGGTGGAAATATTAGATGACAACTTATTAGTAATAATGATGGCGGT
ATCTTTGATGATCCCCCTGCCCTCTCTGAGGCAGGGGTGATGTTGCCAGAGCAGCCTGCA
CATGACGATATGGATGAGGATGATAATGTATCAATGGGTGGGCCTGATAGTCCTGATTC
GTGGATCCCGTTGAACCAATGCCAACCATGACTGATCAAACAACACTTGTTCAAATGAG
GAAGAAGCATTTGCATTGGAGCCTATTGATATAACTGTTAAAGAAAACAAAAGCCAAGAGG
AAGAGGAAGCTAATTGTTGACAGTGTCAAAGAGTTGGATAGCAAGACAATTAGAGCCCAA
CTTAGTGATTATTCAGATATTGTTACTACTTTGGATCTGGCACCGCCACCAAGAAATTTG
ATGATGTGGAAAGAGACAGGAGGAGTAGAAAACTGTTTTCTTTACCTGCTCAGCCTTTG
TGAATAACAGACTACTGAAGCTCTTTACACGCTGTCTTACACCGCTTGTACCAGAAGAC
CTTAGAAAAAGGAGGAAAGGAGGAGAGGCAGATAATTTGGATGAATTCCTCAAAGAAATTT
GAAAATCCAGAGGTTCTAGAGAGGACCAGCAACAGCAGCATCAGCAGCGTGATGTTATC
GATGAGCCATTATTGAAGAGCCAAGCCGCTCCAGGAGTCAGTGATGGAGGCCAGCAGA
ACAAACATAGATGAGTCAGTATGCCTCCACCACCACCTCAGGGAGTTAAGCGAAAAGCT
GGACAAATTGACCAGAGCCTGTGATGCCTCCTCAGCAGGTAGAGCAGATGGAAATACCA
CCTGTAGAGCTTCCCCAGAGAACCTCCAAATATCTGTCAGCTAATACCAGAGTTAGAA
CTTCTGCCAGAAAAGAGAAGGAGAAAGAGAAGGAAAAAGAAGATGATGAAGAGGAAGAG
GATGAAGATGCATCAGGGGGCGATCAAGATCAGGAAGAAAGAAGATGGAACAAAAGGACT
CAGCAGATGCTTCATGGTCTTCAGCGTGCTCTTGCTAAAACCTGGAGCTGAATCTATCAGT
TTGCTTGAGTTATGTCGAAATACGAACAGAAAACAAGCTGCCGCAAAGTTCTACAGCTTC
TTGTTTCTTAAAAAGCAGCAAGCTATTGAGCTGACACAGGAAGAACCGTACAGTGACATC
ATCGCAACACCTGGACCAAGGTTCCATATTATATAA

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Clone variation with respect to NM\_006265.2

**5' Read Nucleotide Sequence:**

>OriGene 5' read for NM\_006265 unedited  
 GTAACACGACTCTACTATAGGGCGGCCGCGAATTCGGCACGAGGGCCGATTTGAACCGAG  
 GATTTGGGCGGCAGGAAGAGCCGCGGCGTAACGGCAGCCATCTTGTGTTTGTGAGTGAAT  
 CGGAAAGGAGGCGCCGGCTGTGGCGGCGGGGAGCTGCTCGGAAAGCTACACCTCGCAAG  
 GGCTCCCCCTTTCCCCACCCCTCCCCGACCCTTTCCCTCCCCGGGCCACCCAGCC  
 CGCCCAACTCCCAGCGGAGAGCAAGGTTTCTTCTGTTTTATAGCCAGCCAGAACAATG  
 TTCTACGCACATTTTGTCTCAGTAAAAGAGGGCCTCTGGCCAAAATTTGGCTAGCGGCC  
 CATTGGGATAAGAAGCTAACCAAAGCCCATGTGTTTCGAGTGTAATTTAGAGAGCAGCGTG  
 GAGAGTATCATCTCACCAAAGGTGAAAATGGCATTACGGACATCAGGACATCTCTTACTG  
 GGAGTAGTTCGAATCTATCACAGGAAAGCCAAATACCTTCTTGCAGACTGTAATGAAGCA  
 TTCATTAAGATAAAGATGGCTTTTCGGCCAGGTGTGGTTGACCTGCCTGAGGAAAATCGG  
 GAAGCAGCTTATAATGCCATTACTTTACCTGAAGAATTCATGACTTTGATCAGCCACTG  
 CCTGACTTAGATGACATCGATGTGGCCAGCAGTTCAGCTTGAATCAGAGTAGAGTGAA  
 GAGATAACCATGAGAGAAGAAGTTGGGAACATCAGTATTTTACAAGAAATGATTNTGGTG  
 ATTTGGNAATGGATGATCGTGAGATATGANAGAAGCAGTGCTTTTGGATGACGACATGT  
 ANTAGCACTACTTCTAACCTCTATANATCTGACAGACACCACATCTGATGAGAAATA  
 C

**3' Read Nucleotide Sequence:**

>OriGene 3' read for NM\_006265 unedited  
 TTTTNNNNNNNNNNNNNTTTTTTCTGTGNNANCNCGNCCGCATTTNANGATCGAG  
 TTTTTTTTTTTTTTTTTTTTTTTTACAGCTTATAACACAACCTTTTATTAGAAAAGTTA  
 TACATAACATAGCATCAACTATTTCAAGAACAATATTAACCCGATAAGCAACAAAAAC  
 CAGACTAACAAAATGTGTAAACAAGAACTAATGACCTTCTAAAAATCAAACATTCAATTA  
 TCTACAATGTCTTTTTACAAACGGGGGAAAACCTTGGTTTACAGGCACATCATATTGA  
 ATATANAAGNCCTGGCAATAGCAATTTATACAATTACACTCTGAAGAAGTGAATCATAA  
 AACAGTAATACGAGTTCACAATTTAAAACATTTAACATAATTTTTAAATTATTGGGGGT  
 TCCCCTGGAAATTTGGGGTTTTAAAAAAGGGGATTTTTTTTTTTCCCCACAAGTTAA  
 AACTTTAAGCCAAAACCTTTGGGGGAACTTGCCCCCAAAAAGGTGAAAAAATTTTC  
 TGGGAAAAGTAAACACCGCCCCCGGATTTTGGGGGCTTTGGGGGGGGGAAAAA  
 GGGGTTTTTTTGGGGTTTTTTTTTTCCCCCCCCCTTTTTTTTTTTTCCCCACCCACAA  
 CGGGTGGTTCTCTTGGGGAAAGAAACCTCTCCCCCCCCCCCCAAAAAATA  
 TGAAAAAAGGAGCGTTTTTTTTTCTACCCCCCTTTTTTTTTTAAAAAAGG  
 GGGCGGGGGGGGGGCCCCCCCCCCCACGCGGGGGCGGGG

**Restriction Sites:**

NotI-NotI

**ACCN:**

NM\_006265

**Insert Size:**

4000 bp

<b>OTI Disclaimer:</b>	<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 <a href="mailto:custsupport@origene.com">custsupport@origene.com</a> 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. <a href="#">More info</a></p>
<b>Components:</b>	<p>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).</p>
<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>	<a href="#">NM_006265.1</a> , <a href="#">NP_006256.1</a>
<b>RefSeq Size:</b>	3647 bp
<b>RefSeq ORF:</b>	1896 bp
<b>Locus ID:</b>	5885
<b>UniProt ID:</b>	<a href="#">O60216</a>
<b>Cytogenetics:</b>	8q24.11
<b>Domains:</b>	Rad21_Rec8, Rad21_Rec8_N
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Cell cycle
<b>Gene Summary:</b>	<p>The protein encoded by this gene is highly similar to the gene product of <i>Schizosaccharomyces pombe rad21</i>, a gene involved in the repair of DNA double-strand breaks, as well as in chromatid cohesion during mitosis. This protein is a nuclear phospho-protein, which becomes hyperphosphorylated in cell cycle M phase. The highly regulated association of this protein with mitotic chromatin specifically at the centromere region suggests its role in sister chromatid cohesion in mitotic cells. [provided by RefSeq, Jul 2008]</p>