

## Product datasheet for **RC208262**

### **RAD21 (NM\_006265) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	RAD21 (NM_006265) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	RAD21
Synonyms:	CDLS4; hHR21; HR21; HRAD21; MCD1; MGS; NXP1; SCC1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide  
Sequence:

&gt;RC208262 ORF sequence

Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGCATCGCC**

ATGTTCTACGCACATTTTGTTCAGTAAAAGAGGGCCTCTGGCCAAAATTTGGCTAGCGGCCATTGGG  
ATAAGAAGCTAACCAAAGCCCATGTGTTGAGTGTAAATTTAGAGAGCAGCGTGGAGAGTATCATCTCACC  
AAAGGTGAAAATGGCATTACGGACATCAGGACATCTCTTACTGGGAGTAGTTCGAATCTATCACAGGAAA  
GCCAAATACCTTCTTGCAGACTGTAATGAAGCATTATTAAGATAAAGATGGCTTTTCGGCCAGGTGTGG  
TTGACCTGCCTGAGGAAAATCGGGAAGCAGCTTATAATGCCATTACTTTACCTGAAGAATTCATGACTT  
TGATCAGCCACTGCCTGACTTAGATGACATCGATGTGGCCAGCAGTTCAGCTTGAATCAGAGTAGAGTG  
GAAGAGATAACCATGAGAGAAGAAGTTGGGAACATCAGTATTTACAAGAAAATGATTTTGGTGATTTTG  
GAATGGATGATCGTGAGATAATGAGAGAAGGCAGTGCTTTGAGGATGACGACATGTTAGTAAGCACTAC  
TACTTCTAACCTCTATTAGAGTCTGAACAGAGCACCAGCAATCTGAATGAGAAAATTAACCATTTAGAA  
TATGAAGATCAATATAAGGATGATAATTTGGAGAAGGAAATGATGGTGGAAATATTAGATGACAACTTA  
TTAGTAATAATGATGGCGGTATCTTTGATGATCCCCCTGCCCTCTCTGAGGCAGGGGTGATGTTGCCAGA  
GCAGCCTGCACATGACGATATGGATGAGGATGATAATGTATCAATGGGTGGGCTGATAGTCTGATTCA  
GTGGATCCCGTTGAACCAATGCCAACCATGACTGATCAACAACACTTGTTCAAATGAGGAAGAAGCAT  
TTGCATTGGAGCCTATTGATATAACTGTTAAAGAAAACAAAAGCCAAGAGGAAGAGGAAGCTAATTGTTGA  
CAGTGTCAAAGAGTTGGATAGCAAGACAATTAGAGCCCACTTAGTGATTATTCAGATATTGTTACTACT  
TTGGATCTGGCACCGCCCAAGAAATGATGATGTGGAAAGAGACAGGAGGAGTAGAAAAACTGTTTT  
CTTTACCTGCTCAGCCTTTGTGGAATAACAGACTACTGAAGCTCTTACACGCTGTCTTACACCGCTTGT  
ACCAGAAGACCTTAGAAAAAGGAGGAAAGGAGGAGGCAGATAATTTGGATGAATTCCTCAAAGAATTT  
GAAAATCCAGAGGTTCTAGAGAGGACCAGCAACAGCAGCATCAGCAGCGTGATGTTATCGATGAGCCCA  
TTATTGAAGAGCCAAGCCGCCTCCAGGAGTCAGTGATGGAGGCCAGCAGAACAACATAGATGAGTCAGC  
TATGCCTCCACCACCCTCAGGGAGTTAAGCGAAAAGCTGGACAAATTGACCCAGAGCCTGTGATGCCT  
CCTCAGCAGGTAGAGCAGATGGAATACCACCTGTAGAGCTTCCCCAGAAGAACCTCCAATATCTGTC  
AGCTAATACCAGAGTTAGAATCTGCCAGAAAAAGAGAAGGAGAAGAGAAGGAAAAAGAAGATGATGA  
AGAGGAAGAGGATGAAGATGCATCAGGGGGCGATCAAGATCAGGAAGAAAGAAGATGGAACAAAAGGACT  
CAGCAGATGCTTCATGGTCTTCAGCGTGCTCTTGCTAAAACCTGGAGCTGAATCTATCAGTTTGCTTGAGT  
TATGTCGAAATACGAACAGAAAACAAGCTGCCGCAAGTTCTACAGCTTCTTGGTCTTAAAAAGCAGCA  
AGCTATTGAGCTGACACAGGAAGAACCCTACAGTGACATCATCGCAACACCTGGACCAAGGTTCCATATT  
ATA

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC208262 protein sequence  
 Red=Cloning site Green=Tags(s)

MFYAHFVLSKRGPLAKIWLAAHWKDKLTKAHVFECNLESSVESIISPKVKMALRTSGHLLLGVVRIYHRK  
 AKYLLADCNEAFIKIKMAFRPGVVDLPEENREAYNAITLPEEFHDFDQPLPDLDDIDVAQQFSLNQRSRV  
 EEITMREEVGNISILQENDFGDFGMDREIMREGSAFEDDDMLVSTTTSNLLLESEQSTSNLNEKINHLE  
 YEDQYKDDNFGEKNDGGILDDKLI SNNDGGIFDDPPALSEAGVMLPEQPAHDDMDEDDNVSMGGPDPSPDS  
 VDPVPEPMTMTDQTTLVPNEEEAFALEPIDITVKETKAKRKRKLI VDSVKELDSKTI RAQLSDYSDIVTT  
 LDLAPPTKKLMMWKETGGVEKLFSLPAQPLWNNRLLKLFTRCLTPLVPEDLRKRRKGGEADNLDEFKLF  
 ENPEVPREDQQQHQQRDVIDEPIIEEPSRLQESVMEASRTNIDESAMPPPPPQGVKRAKAGIDPEPVMP  
 PQQVEQMEIPPVELPPEEPPNICQLIPELELLPEKEKEKEKEKEDDEEEDEEDASGGDQDQEERRWNRKRT  
 QQMLHGLQRALAKTGAESISLLELCRNTNRKQAAAKFYSFLVLKKQQAIELTQEEPYSDIATPGPRFHI  
 I

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6090\\_e03.zip](https://cdn.origene.com/chromatograms/mk6090_e03.zip)

**Restriction Sites:** Sgfl-MluI

**Cloning Scheme:**



**ACCN:** NM\_006265

**ORF Size:** 1893 bp

**OTI Disclaimer:** 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](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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](#)

**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:**

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\\_006265.3](#)

**RefSeq Size:** 3773 bp

**RefSeq ORF:** 1896 bp

**Locus ID:** 5885

**UniProt ID:** [O60216](#)

**Cytogenetics:** 8q24.11

**Domains:** Rad21\_Rec8, Rad21\_Rec8\_N

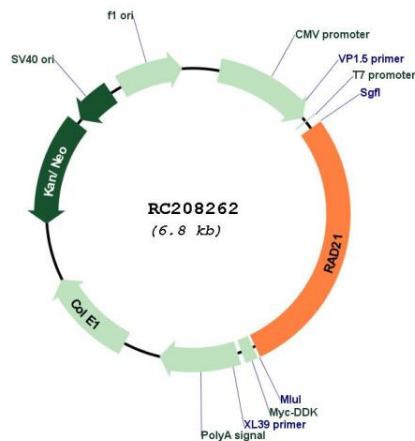
**Protein Families:** Druggable Genome

**Protein Pathways:** Cell cycle

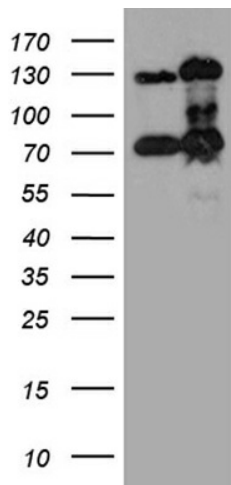
**MW:** 71.7 kDa

**Gene Summary:**

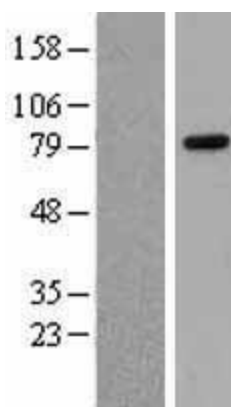
The protein encoded by this gene is highly similar to the gene product of *Schizosaccharomyces pombe rad21*, a gene involved in the repair of DNA double-strand breaks, as well as in chromatid cohesion during mitosis. This protein is a nuclear phospho-protein, which becomes hyperphosphorylated in cell 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]

**Product images:**


Circular map for RC208262



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY RAD21 (Cat# RC208262, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-RAD21 (Cat# [TA811222])(1:2000). Positive lysates [LY401887] (100ug) and [LC401887] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY401887]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC208262 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).