

Product datasheet for **RG208262**

RAD21 (NM_006265) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	RAD21 (NM_006265) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	RAD21
Synonyms:	CDLS4; hHR21; HR21; HRAD21; MCD1; MGS; NXP1; SCC1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG208262 representing NM_006265
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGTTCTACGCACATTTTGTTCAGTAAAAGAGGGCCTCTGGCCAAAATTTGGCTAGCGGCCATTGGG
 ATAAGAAGCTAACCAAAGCCCATGTGTTGAGTGTAAATTTAGAGAGCAGCGTGGAGAGTATCATCTCACC
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 AGAGGAAGAGGATGAAGATGCATCAGGGGGCGATCAAGATCAGGAAGAAAAGAAGTGAACAAAAGGACT
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 AGCTATTGAGCTGACACAGGAAGAACCCTACAGTGACATCATCGCAACACCTGGACCAAGGTTCCATATT
 ATA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG208262 representing NM_006265
 Red=Cloning site Green=Tags(s)

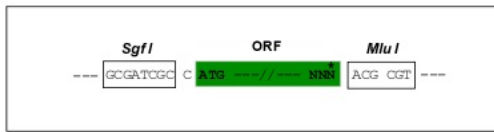
MFYAHFVLSKRGPLAKIWLAAHWDKCLKAHVFECNLESSVESIISPVKMALRTSGHLLLGVVRIYHRK
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 LDLAPPTKKLMMWKETGGVEKLFSLPAQPLWNNRLLKLFTRCLTPLVPEDLRKRKKGGEADNLEDFLKEF
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 PQQVEQMEIPPVELPPEEPPNICQLIPELELLPEKEKEKEKEKEDDEEEDEEDASGGDQDQEERRWNRK
 QQMLHGLQRALAKTGAESISLLELCRNTNRKQAAAKFYSLVLLKKQAIELTQEEPYSIDIATPGPRFHI
 I

TRTRPLE - GFP Tag - V

Restriction Sites: Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



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          Kozac
          Consensus
          Sgf I   Asc I
EcoR I   BamH I Kpn I   RBS
CTATAGGGCGGCCGGGAATTCGTGACTGGATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCCGGCGCCAGATCT

Hind III  Nhe I  Rsr II  Mlu I   Not I   Xho I   GFP Tag
CAAGCTTAAGTACTAGCTAGCGGACCG  ACG CGT  ACG CGG  CCG CTC GAG  ATG GAG  AGC GAC  - - - - -
          T   R   T   R   P   L   E   M   E   S   D   -   -   -

          Pme I   Fse I
- - - GAA GAA AGA GTT TAA ACGGCCGGCCGCGGAGCT
- - - E   E   R   V   Stop
    
```

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 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: 3647 bp

RefSeq ORF: 1896 bp

Locus ID: 5885

UniProt ID: [O60216](#)

Cytogenetics: 8q24.11

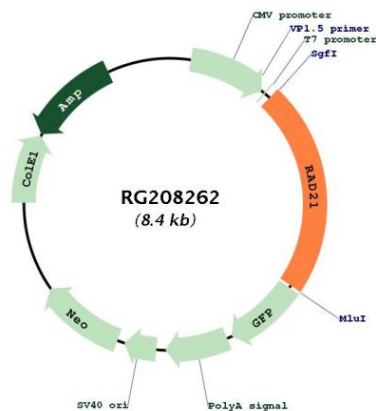
Domains: Rad21_Rec8, Rad21_Rec8_N

Protein Families: Druggable Genome

Protein Pathways: Cell cycle

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 RG208262