

Product datasheet for **RG216025**

RAD17 (NM_133339) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	RAD17 (NM_133339) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	RAD17
Synonyms:	CCYC; HRAD17; R24L; RAD17SP; RAD24
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG216025 representing NM_133339
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGTCAAAAACCTTTCTTAGACCAAAGGTATCTCCACAAAGGTAACAGACTGGGTTGACCCATCATTTG
 ATGATTTTCTAGAGTGTAGTGGCGTCTCTACTATTACTGCCACATCATTAGGTGTGAATAACTCAAGTCA
 TAGAAGAAAAAATGGGCCTTCTACATTAGAAAGCAGCAGATTTCCAGCGAGAAAAAGAGGAAATCTATCT
 TCCTTAGAACAGATTTATGGTTTAGAAAATTCAAAAGAATATCTGTCTGAAAATGAACCATGGGTGGATA
 AATATAAACAGAACTCAGCATGAACCTGCTGTGCATAAAAAGAAAATTGAAGAAGTCGAAACCTGGTT
 AAAAGCTCAAGTTTTAGAAAGGCAACCAAAACAGGGTGGATCTATTTTATAATAACAGGTCCTCCTGGA
 TGTGGAAGACAACGACCTTAAAAATACTATCAAAGGAGCATGGTATTCAAGTACAAGAGTGGATTAATC
 CAGTTTTACCAGACTTCCAAAAAGATGATTTCAAGGGGATGTTTAACTGAATCAAGCTCCATATGTT
 TCCCTATCAGTCTCAGATAGCAGTTTTCAAAGAGTTTCTACTAAGAGCGACAAAGTATAACAAGTTACAA
 ATGCTTGGAGATGATCTGAGAACTGATAAGAAGATAATTCCTGGTTGAAGATTTACCTAACAGTTTTATC
 GGGATTCTCATCTTTACATGAAGTTCTAAGGAAGTATGTGAGGATTGGTCGATGTCCTCTTATATTTAT
 AATCTCGGACAGTCTCAGTGGAGATAATAATCAAAGGTTATTGTTTCCCAAAGAAATTCAGGAAGAGTGT
 TCTATCTCAAAATATTAGTTTCAACCCTGTGGCACCACAAATTAATGATGAAATTTCTTAATCGAATAGTGA
 CTATAGAAGCTAACAAGAATGGAGGAAAAATTACTGTCCCTGACAAAACCTCTCTAGAGTTGCTCTGTCA
 GGGATGTTCTGGTGATATCAGAAGTGAATAAACAGCCTCCAGTTTTCTTTCAAAGGAGAAAAACAAC
 AACCTGATAGGGTTTTTAAAAATCAAGAGTCCAAGCTATTGGTGGCAAAGATGTTTCTCTGTTTCTCTT
 CAGAGCTTTGGGAAAAATCTATATTGTAAGAGCATCTTAAACAGAATTAGACTCACCTCGGTTGCC
 TCTCATTATCAGAATATGAACGGGATACATTACTTGTGAACCTGAGGAGGTAGTAGAAATGTCACACA
 TGCCTGGAGACTTATTTAATTTATCTTCACCAAACTACATAGATTTCTTCATGGAAATTGATGATAT
 TGTGAGAGCCAGTGAATTTCTGAGTTTTGCAGATATCCTCAGTGGTACTGGAATACACGCTCTTTACTC
 AGGGAATATAGCACATCTATAGCTACGAGAGGTGTGATGCATTCCAACAAAGCCCGAGGATATGCTCATT
 GCCAAGGAGGAGGATCAAGTTTTCGACCCTTGACAAAACCTCAGTGGTTCTAATAAATAAAAAGTATCG
 GAAAAATTGCCTGGCAGCAAAAGCACTTTTCTGACTTCTGCCTACCAGCTTTATGCCTCCAACTCAG
 CTATTGCCATACCTTGCTCTACTAACCATTCCAATGAGAAATCAAGCTCAGATTTCTTTTATCCAAGATA
 TTGGAAGGCTCCCTCTGAAGCGACACTTTGGAAGATTGAAAATGGAAGCCCTGACTGACAGGGAACATGG
 AATGATAGACCCTGACAGCGGAGATGAAGCCAGCTTAATGGAGGACATTCTGCAGAGGAATCTCTGGGT
 GAACCCACTCAAGCCACTGTGCCGAAACCTGGTCTCTTCTTTGAGTCAGAATAGTGCCAGTGAAGTGC
 CTGCTAGCCAGCCAGCCCTTTTCAGCCCAAGGAGACATGGAAGAAAACATAATAATAGAAGACTACGA
 GAGTGATGGGACA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG216025 representing NM_133339
 Red=Cloning site Green=Tags(s)

MSKTFLRPKVSSTKVTDWVDPFDDFLECSGVSTITATSLGVNNSSHRRKNGPSTLESSRFPARKRGNLS
 SLEQIYGLENSKEYLSENEPWVDKYPETQHELAVHKKKIEEVEWTLKAQVLERQPKQGSILLITGPPG
 CGKTTTTLKILSKEHQIQVQEWINPVLPDFQKDDFKGMFNTSSFHMFYQSQIAVFEKFLLRATKYNKLQ
 MLGDDLRTDKKIILVEDLPNQFYRDSHTLHEVLRKYVRIGRCPLIFIIISDSLSGDNNQRLLPKEIQECC
 SISNISFPNPVAPTIMMKFLNRIVTIEANKNGGKITVDPKTSLELLCQGCSDIRSAINSLQFSSSKGENN
 LRPRKKGMSLKSDAVLSKSKRRKKPDRVFENQEVQAIGGKDVSLFLFRALGKILYCKRASLTEDSPRLP
 SHLSEYERDTHLLVEPEEVVEMSHMPGDLFNLYLHQNYIDFFMEIDDIVRASEFLSFADILSGDWNTRSL
 REYSTSIATRGMHSNKARGYAHCQGGSSFRPLHKPQWFLINKKYRENCLAAKALFPDFCLPALCLQTQ
 LLPYLALLTIPMRNQAQISFIQDIGRLPLKRHFGRLEKMEALTDREHGMIDPDSGDEAQLNGGHSAAEESL
 EPTQATVPETWSLPLSQNSASELPASQPQPFSAQGDMEENIIIEDYESDGT

TRTRPLE - GFP Tag - V

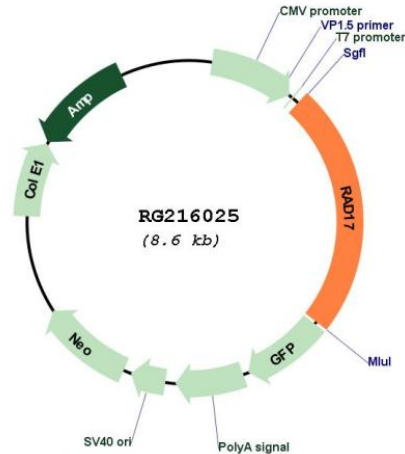
Restriction Sites:

SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



Plasmid Map:


ACCN: NM_133339

ORF Size: 2043 bp

OTI Disclaimer: 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_133339.2](#)

RefSeq Size: 2633 bp

RefSeq ORF: 2046 bp

Locus ID: 5884

UniProt ID: [O75943](#)

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]