

Product datasheet for **RG219964**

RAD17 (NM_133341) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	RAD17 (NM_133341) 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:

>RG219964 representing NM_133341
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGAATCAGCATGAACCTGCTGTGCATAAAAAGAAAATTGAAGAAGTCGAAACCTGGTTAAAAGCTCAAG
 TTTTAGAAAGGCAACCAAAACAGGGTGGATCTATTTTATTAATAACAGGTCTCCTGGATGTGAAAGAC
 AACGACCTTAAAAATACTATCAAAGGAGCATGGTATTCAAGTACAAGAGTGGATTAATCCAGTTTTACCA
 GACTTCCAAAAAGATGATTTCAAGGGGATGTTTAATACTGAATCAAGCTTCCATATGTTTCCCTATCAGT
 CTCAGATAGCAGTTTTCAAAGAGTTTCTACTAAGAGCGACAAAGTATAACAAGTTACAAATGCTTGGAGA
 TGATCTGAGAAGTATAAGAAGATAATTCTGGTTGAAGATTTACCTAACCAGTTTTATCGGGATTCTCAT
 ACTTTACATGAAGTTCTAAGGAAGTATGTGAGGATTGGTCGATGCCTCTTATATTTATAATCTCGGACA
 GTCTCAGTGGAGATAATAATCAAAGTTATTGTTTCCCAAAGAAATTCAGGAAGAGTGTCTATCTCAA
 TATTAGTTTCAACCTGTGGCACCAACAATTATGATGAAATTTCTTAATCGAATAGTGACTATAGAAGCT
 AACAGAATGGAGAAAAATTACTGTCCCTGACAAAATCTCTAGAGTTGCTCTGTGAGGGATGTTCTG
 GTGATATCAGAAGTGAATAAAACAGCCTCCAGTTTTCTTCTTCAAAGGAGAAAACAACTTACGGCCAAG
 GAAAAAGGAATGTCTTAAAAATCAGATGCTGTGCTGTCAAAATCAAACGAAGAAAAAACCTGATAGG
 GTTTTTGAAAAACAAGAGGTCCAAGCTATTGGTGGCAAAGATGTTTCTCTGTTTCTTTCAGAGCTTTGG
 GAAAAATCTATATTGTAAGAGCATCTTTAACAGAATTAGACTCACCTCGGTTGCCCTCTCATTTATC
 AGAATATGAACGGGATACATTACTTGTGAACCTGAGGAGGTAGTAGAAATGTACACATGCCTGGAGAC
 TTATTTAATTTATATCTTCAACAAAACATACATAGATTTCTTTCATGAAAATGATGATATTGTGAGAGCCA
 GTGAATTTCTGAGTTTTGCAGATATCCTCAGTGGTGACTGGAATACACGCCTTTTACTCGGGAATATAG
 CACATCTATAGCTACGAGAGGTGTGATGCATTCCAACAAAGCCCGAGGATATGCTCATTGCCAAGGAGGA
 GGATCAAGTTTTCGACCCTTGCACAAACCTCAGTGGTTTTCTAATAAATAAAAAGTATCGGAAAAATTGCC
 TGGCAGCAAAAGCACTTTTTCTGACTTCTGCCTACCAGCTTTATGCCTCCAACTCAGCTATTGCCATA
 CCTTGCTCTACTAACCATTCCAATGAGAAATCAAGCTCAGATTTCTTTTATCCAAGATATTGGAAGGCTC
 CCTCTGAAGCGACACTTTGGAAGATTGAAAATGGAAGCCCTGACTGACAGGGAACATGGAATGATAGACC
 CTGACAGCGGAGATGAAGCCAGCTTAATGGAGGACATTCTGCAGAGGAATCTCTGGGTGAACCCACTCA
 AGCCACTGTGCCGAAACCTGGTCTCTTCTTTGAGTCAAGATAGTGCCAGTGAAGTGCCTGCTAGCCAG
 CCCCAGCCTTTTAGCCCAAGGAGACATGGAAGAAAACATAATAATAGAAGACTACGAGAGTGATGGGA
 CA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG219964 representing NM_133341
 Red=Cloning site Green=Tags(s)

MNQHELAVHKKKIEEVETWLKAQVLERQPKQGGSELLITGPPGCGKTTTLKILSKEHGIQVQEWINPVL
 DFQKDDFKGMFNTESFHMFPYQSQIAVFKFLLRATKYNKQLMLGDDLRTDKKIILVEDLPNQFYRDSH
 TLHEVLRKYVRIGRCLIFIIISDSLSDNNQRLLFPKEIQEECSISNISFNVPVAPTIMMKFLNRIVITIEA
 NKNNGKITVDPKTSLELLCQGCSDIRSAINSLQFSSSKGENNLRPRKKGMSLKSDAVLSKSKRRKKPDR
 VFNQEVQAIIGGKDVSLFLFRALGKILYCKRASLTELDSPRLPSHLSEYERDILLVEPEEVVEMSHMPGD
 LFNLYLHQNYIDFFMEIDDIVRASEFLSFADILSGDWNTRSLREYSTSIATRGMVMSNKGARGYAHCOGG
 GSSFRPLHKPQWFLINKKYRENLAALKALFPDFCLPALCLQTQLLPYLALLTIPMRNQAQISFIQDIGRL
 PLKRHFGRKMEALTDREHGMIDPDSGDEAQLNGGHSAAEESLGEPTQATVPETWLSPLSQNSASELPASQ
 PQPFSAQGDMEENIIIEDYESDGT

TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-MluI

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:	<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:	NM_133341.2 , NP_579919.1
RefSeq Size:	2592 bp
RefSeq ORF:	1755 bp
Locus ID:	5884
UniProt ID:	O75943
Cytogenetics:	5q13.2
Protein Families:	Druggable Genome
Gene Summary:	The protein encoded by this gene is highly similar to the gene product of <i>Schizosaccharomyces pombe rad17</i> , 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]