

## Product datasheet for RR201717

### Rad50 (NM\_022246) Rat Tagged ORF Clone

#### Product data:

Product Type: Expression Plasmids  
 Product Name: Rad50 (NM\_022246) Rat Tagged ORF Clone  
 Tag: Myc-DDK  
 Symbol: Rad50  
 Vector: pCMV6-Entry (PS100001)  
 E. coli Selection: Kanamycin (25 ug/mL)  
 Cell Selection: Neomycin  
 ORF Nucleotide Sequence: >RR201717 representing NM\_022246  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCCCGGATCGCC

ATGTCCCGGATCGAAAAGATGAGCACTCTGGGCGTGCGAAGTTTTGGGATAGAGGATAAAGATAAGCAAA  
 TTATCTCTTTCTCAGCCCCCTCACAATTTTGGTTGGACCAATGGGGCGGGGAAGACGACCATCATTGA  
 ATGTCTAAAGTATATTTGTACTGGAGATTTCCCTCCTGGAACCAAGGAAATACATTTGTTTCATGATCCC  
 AAGGTTGCTCAAGAAACAGATGTGCGTGCCAAATTCGCCTGCAGTTTCGTGATGTCATGGAGAGATGG  
 TACTTGTGCAGAGGTCCATGCTTTGCAGTCAGAAAAGTAAAAAACCGAATTTAAAAACCTGGAAGGAGT  
 CATTACTAGAATAAAGCACGGTAAAAAGTCAGTCTCAGCTCCAATGTGCAGAAATCGACCGAGAAATG  
 ATAAGTTGCTTTGGGTTTCCAAGTCTGTGCTAAACAATGTTATTTTCTGCCACCAAGAAGACTCAAATT  
 GGCCTCTAAGTGAAGGAAAGGCTCTGAAGCAGAAATTTGATGAGATTTTTTCAGCAACAAGGTACATTAA  
 AGCCCTAGATACGCTTCGACAGGTACGACAGACACAAGGTCAGAAAGTAAAAGAATGTCAAACAGAATTG  
 AAATATCTGAGGCAAAATAAGGAGAAAGCTTGTGAGATCCGAGATCAGATCACTAGTAAGGAAGCCAGT  
 TAGCATCTTCACGGGAAATTGTCAAAGCCTATGAGAATGAGCTTGAGCCATTGAAGAATCGCCTGAAAGA  
 GATTGAACATAACCTCTCTAAAATAATGAGACTTGACAATGAAATTTAAAGCCTTGATAGCAGAAAGAAG  
 CAAATGGAAAAAGATAACAGTGAATTAGAACAGAAAGATGGAAAAGGTTTTTCAAGGGACTGATGAGCAGC  
 TAAATGACTTGTATCACAATCACCAGAGAACTGTAAGGGAGAAAGAAAGGCGCTTGGTAGACTGTCAGCG  
 TGAAGTGGAGAAGCTGAGTAAAGAAGCTCGGCTCCTCAACCAGGAAAGAGCAGAGCTGCTTGTGGAGCAG  
 GGTGCTTACAACACAGGCAGATCGACATCAAGAGCATATCCGAGCCAGAGACTCACTGATTGAGTCTT  
 TGGCAGCACATCTTGAATTGGATGGTTTTGAGCGTGGACCATTGAGTAAAGACAGATTAACAACTTTCA  
 TGAAGTGTGAGAGAGAGACAGGAGAGAGAAGCTAAAAGTCCAGCCAGCTCTTGGAGCAGCTTACAGAC  
 AAAGAAGCGCTGAAGCAGAGACAGATGGATGAGATGAGGACAGAAGAAGAGCGGGCTGGGGAGGATGATT  
 AGCTGAAGACCGAGATCCTGACGAAGAAGCAGACTGAGCTGAGGAACGTGAGGAATGAGCTGCAGCAGCT  
 GGAGGGCTCCTCGGACAGGATTCTGGAGCTGGACCAGGAGCTCACAAAAGCGGAACGTGAACTAAGCAAG  
 GCTGAGAAAAATAGCAGCATAGAAACCCTAAAAGCAGAAATACTAAACCTCCAAAGTGAAGAAAGCGGACC  
 TGGACAGGAACCTGCGGAAACTGGATCAGGAGATGGAGCAGTTAAACCATCATACAACAACCCGCACACA  
 GATGGAGATGCTTACCAAAGACAAAAGTACAAAAGATGAACAGATCAGAAAAATAAAGTCCAGGCACAGT



GATGAACTAACTTCACTGTTGGGATATTTTCTAACAAAAACAGCTTGAAGACTGGCTTCATTCTAAAT  
CCAAAGAGATTAATCAGACCAGGGACAGACTTGCCAACTGAACAAAGAACTAGCTTCAGCCGAACAAA  
TAAAAATCATATAAATAATGAGCTAAAGAAAAAGGAAGAGCAGCTGTCTAGTTATGAAGATAAACTGTTT  
GATGTTTGTGGTAGCCAAGATTTTGAAGTGACTTAGACAGACTTAAAGAAGATATTGAAAAATCCTCAA  
AGCAGCGAGCCATGCTGGCTGGAGCCACAGCAGTTTACTCCCAGTTCATCACTCAGCTGACAGATGAAA  
CCAGTCTGTGGCCAGGCTGTCCAGAGTATTTCCAGCGAAGCTGAATTACAGGAAGTCATCAGTGAC  
TTGCAGTCCAAGCTGAGGCTTGTCCAGATAAACTCAAGTCAACAGAATCAGAATAAAAAAAGAGC  
GGCGCCGTGATGAAATGCTGGGGCTTGTGCCATGAGGCAAGCATAATTGATTTGAAGGAAAAGGAAAT  
ACCAGAATTAAGAAACAGACTGCAGAGTGTCAATAGAGACATACAGCGCCTAAAGATGACATAGAGGAG  
CAGGAGACACTCTTGGGTACAGTGATGCCCGAAGAGGAAAGTGCTAAAGTGTGCCTGACAGACGTCACGA  
TCATGGAGAGGTTCCAGATGGAGCTAAAAGACGTTGAAAGGAAAATTGCACAGCAGGCAGCTAAGCTGCA  
GGGGGTAGACTTGGATCGGACTGTCCAGCAGGTTAACCAGGAAAAACAAGAAAAACAACAAAACTGGAT  
ACAGTTTCCAGTAAGATTGAATTGAACCGTAAGCTTATACAGGACCAGCAGGAACAAATTCAGCACCTGA  
AAAGTAAAACAAATGAGCTGAAATCAGAGAACTGCAGATAGCCACCAATTTGCAACGGCGTCAGCAAT  
GGAGGAGCAGACTGTGGAATTATCCACTGAAGTTCAGTCTTTGAACAGAGAAATAAAGGATGCTAAAGAG  
CAATAAACCCCTTGGAGATAGCACTGGAAAAGTTGCAGCAGGAAAAAGAGAATTGATCCACAGAAAA  
ATACAAGTAACAAAATGGCTCAGGATAAGATCAATGATATCAAAGAGAAAAGTTAAAAATATTCATGGTTA  
CATGAAAGACATAGAAATTATATTCAAGATGGAAAAGATGACTATAAGAAGCAAAAAGAAAAGTGAACCT  
AATGAAGTTGTCATTCACTAAATGAATGTGACAAACCAAAAGAAAAGATAAATAAAGAAATGGGAACCA  
TGAGGCAAGATATTGACACGAAGAAGATACAGGAAAGGTGGTTACAGGATAACCTTACACTGAGAAAAAG  
AAGAGAGGAACAAAAGAAGTTGAAGAGGAACGAAAGCAACATTTGAAGGAGATGGGACAGATGCAAGTT  
TTACAGATGAAAAATGAGCACCAGAAGTTGGAAGAGAACATAGACACGATAAAGAGAAATCACAGTTTGG  
CATTGGGGCGACAGAAAGGCTATGAAGAAGAAATTTCTCACTTTAAGAAGGAGCTCCGAGAACCTCAGTT  
TCGGGATGCAGAGGAGAAGTACAGAGAAATGATGATTGTCATGAGAACCACAGAGCTGGTGAATAAGGAC  
CTGGACATCTACTACAAAATCTTGATCACGCAATAATGAAATTTACAGTATGAAAATGGAAGAAATCA  
ACAAAATATTCGTGATCTTTGGCGGAGTACCTATCGTGGCAAGATATTGAATACATAGAAATTCGATC  
CGATGCTGATGAAAATGTATCAGCTTCTGATAAAAGGCGAAATTAACAACCTACCGAGTGGTGTGCTGAAG  
GGGGATACAGCCTTGGACATGCGCGGACGATGCAGTGCTGGACAGAAGGTGCTGGCCTCTCTCATCATCC  
GACTGGCCCTGGCCGAAACCTTCTGTCTGAAGTGCAGCCTCTTGCCTTGGATGAGCCTACAACAAACCT  
GGACCGAGAAAACATCGAGTCTCTGGCACATGCTTTGGTTGAGATTATAAAAAGTCGCTCGCAGCAGCGC  
AACTTCCAGCTTCTGGTATCACTCACGATGAAGATTTTGTGGAGCTCCTAGGACGATCTGAGTATGTGG  
AGAAATCTACAGAGTGAAGAAGAACATCGACCAGTGCTCAGAGATTGTCAAGAGCAGCATCAACTCTCT  
GGGCTCTTATGTTTAC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RR201717 representing NM\_022246  
 Red=Cloning site Green=Tags(s)

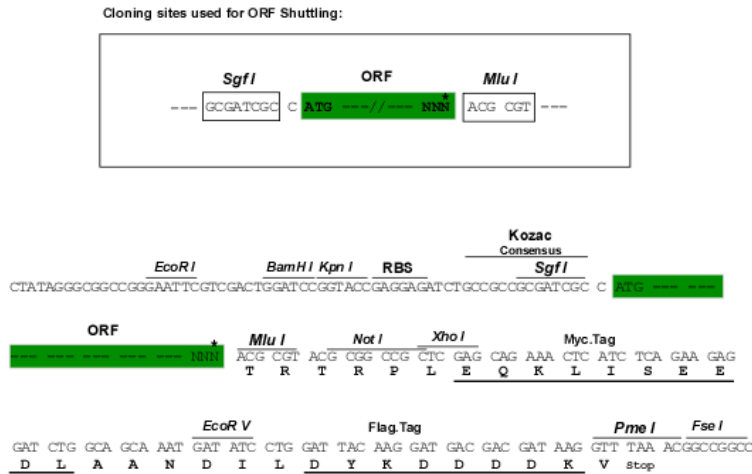
MSRIEKMSTLGVRSFGIEDKDKQIISFFSPLTILVGPNGAGKTTIECLKYICTGDFPPGKNTFVHDP  
 KVAQETDVRAQIRLQFRDVGEMVLVQRSMLCSQKSKKTEFKTLEGVITRIKHGEKVSLSSKCAEIDREM  
 ISCLGVSKSVLNNVIFCHQEDSNWPLSEGKALKQKFDEIFSATRYIKALDTRLRQVRQTGGQKVKECQTEL  
 KYLRQNKEKACEIRDQITSKEAQLASSREIVKAYENELEPLKNRLKEIEHNLKIMRLDNEIKALDSRKK  
 QMEKDNSELEQKMEKVFQGTDEQLNDLYHNHQRTVREKERRLVDCQRELEKL SKEARLLNQERAELLVEQ  
 GRLQLQADRHQEHIRARDSLIQSLAAHLELDGFERGPF SERQIKNFHELVRERQEREAKTASQLLSDLTD  
 KEALKQRQMDMRDKKSGLRMIELKTEILTKKQTELRNVRNELQQLEGSSDRILELDQELTKAERELSK  
 AEKNSSIETLKAELNLQSEKADLDRNLRLKLDQEMQLNHHTTTRTQMMLTKDKTDKDEQIRKIKSRHS  
 DELTSLGYPNKKQLEDWLHSSKKEINQTRDLAKLNKELASAEQKNHNINNELKKKEEQSSYEDKLF  
 DVCQSQDFESDLDRLKEDIEKSSQRAMLGATAVYSQFITQLTDENQSCCPGCQRFVQTEAELQEVIDSD  
 LQSKLRLAPDKLKSTESLKKKERRRDEMLGLVPMRQSIIDLKEKEIPELRNRLQSVNRDIQRLKNDIEE  
 QETLLGTVMPEEESAKVCLTDVTIMERFQMEKLDVERKIAQQAALQGVLDRTVQQVNQEKQEKQHKLD  
 TVSSKIELNRKLIQDQEQIQHLKSKTNELKSEKLQIATNLQRRQMEEQTVELSTEVQSLNREIKDAKE  
 QINPLEIALEKLQQEKEELIHRKNTSNKMAQDKINDIKEKVKNIHGYMKDIENYIQDGKDDYKKQKETE  
 NEVVIQLNECDKHKEKINKEMGMTMRQDIDTKKIQRWLQDNLTLRKRREELKEVEEERKQHLKEMGMQV  
 LQMKNHQKLEENIDTIKRNHSLALGRQKGYEEEILHFKEKELREPQFRDAEEKYREMMIVMRTTELVNKD  
 LDIIYYKTLDAIMKFHSMKMEEINKIIRDLWRSTYRGQDIEYIEIRSDADENVSASDKRRNRYRVVMLK  
 GDTALDMRGRCSAGQKVLASLIIRLALAEFTCLNCGILALDEPTTNDRENIESLAHALVEIIKSRSQQR  
 NFQLLVITHDEDFVELLGRSEYVEKFYRVKKNIDQCSEIVKSSINSLGSYVH

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

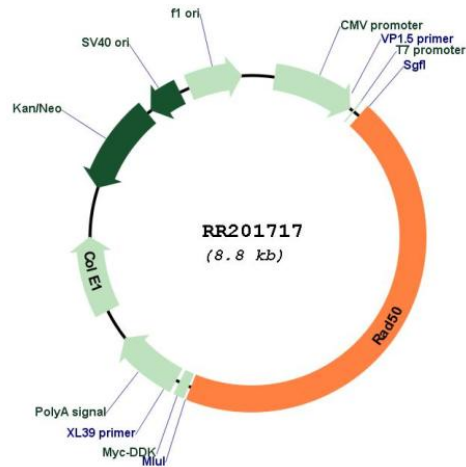
Restriction Sites:

SgfI-MluI

Cloning Scheme:



\* The last codon before the Stop codon of the ORF

**Plasmid Map:**


**ACCN:** NM\_022246

**ORF Size:** 3936 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\\_022246.1](#), [NP\\_071582.1](#)

**RefSeq Size:** 4444 bp

**RefSeq ORF:** 3939 bp

**Locus ID:** 64012

**UniProt ID:** [Q9JIL8](#)

**Cytogenetics:** 10q22  
**MW:** 153.8 kDa  
**Gene Summary:** involved in DNA double-strand break repair [RGD, Feb 2006]