

## Product datasheet for **SC115426**

### **RAD54B (NM\_012415) Human Untagged Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	RAD54B (NM_012415) Human Untagged Clone
Tag:	Tag Free
Symbol:	RAD54B
Synonyms:	RDH54
Mammalian Cell Selection:	None
Vector:	<u><a href="#">pCMV6-XL5</a></u>
E. coli Selection:	Ampicillin (100 ug/mL)



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**Fully Sequenced ORF:** >OriGene ORF within SC115426 sequence for NM\_012415 edited (data generated by NextGen Sequencing)

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ATGAGACGATCTGCAGCACCAAGTCAGTTGCAGGGGAATTCCTTCAAAAAACAAAATTT
ATACCTCCAGGAAGAAGTAATCCAGGCTGAATGAAGAGATTACAAAACCTGAATCCAGAT
ATAAAATTATTTGAGGGTGTGCAATTAATAACACCTTTCTCCCGTCACAAAATGATCTT
AGAATATGCAGTTTAAATCTGCCTAGTGAAGAAAGTACTAGAGAAATCAATAACAGAGAT
AATTGCAGTGGAAAATATTGTTTTGAAGCACCTACACTGGCAACATTAGATCCACCTCAT
ACAGTTTATTTCGCTCCTAAAGAAGTAGCAGTGTCCAAGGAACAAGAAGAAAATCTGAT
AGCCTAGTTAAATATTTAGTGTGTTTTGGTGTAGCCTTCAAAGAAAAACATAAAAAAG
TGGGAAGGTGATGCTGTTCTTATTGTAAGGAAAGTCATTTATATTAAGAATTTGGAA
GGCAAAGACATTGGAAGAGGCATTGGTTATAAATCAAAGAGCTTGAAAAGATTGAAGAG
GGCCAAACACTGATGATTTGTGGAAGAAAATAGAAGTCATGGGTGTAATCTCTCCAGAT
GACTTCAGCAGTGGCAGGTGTTTTAGCTTGGAGGAGGAAGTACTGCTATCTCGCATTCT
TCTCAGGTTGCCAGGAAATGTTTTCTAACCTTTCAAAGTGTTTGTAACCAAGTTCA
AAGGAAAATAGACAGAATGATTTCCAAAATTGCAAACCAGCCATGACCCATATACGCCA
AATTCCTCGTTATGCCACGACCAGATAAGAATACCAGTGGGTATTCAATAAGAAGTGT
TTCCCTCTTGGGATGTAGTGATTGATCCTTACCTTGTATATCATCTTCGACCACATCAG
AAAGAAGGAATCATATTCCTTTATGAATGTGTAATGGGAATGAGAATGAATGGCAGATGT
GGAGCTATTCTTGCTGATGAAATGGGTTTAGGGAAGACATTGCAATGATTTTCGCTCATC
TGGACCCTGCAGTGTGAGGACCCTATGGAGGCAAGCCAGTAATAAAGAAGACACTAATT
GTCACACCTGGAAGCTTGGTGAATAATTGGAAGAAAGAAATTTCAAAAATGGCTAGGAAGT
GAAAGGATCAAGATATTTACTGTTGATCAGGACCACAAAGTTGAAGAATTCATCAAGTCT
ATATTTTATTCTGTTCTTATTATCAGTTATGAAATGTTACTTCGTTCCCTGGATCAAAT
AAGAATATAAAAATTTGATCTTCTAATCTGTGACGAGGGGATCGTTTGAAGAACAGTGCC
ATTAAGACAACACTACGCCCTCATTAGCCTTTCTGTGAGAAAAGAATAAATCTAACTGGT
ACTCCAATTCAGAATGATCTGCAAGAATTTTTGCATTAATTGATTTGTAAATCCAGGA
ATATTAGGCTCTTTGTCATCTTATAGGAAAATATATGAAGAACCACATCATTTTATCGAGA
GAACCTTCTGCTTCTGAGGAAGAAAAGGAGTTAGGAGAAAAGAAGAGCAGCTGAACCTACT
TGCCTCACTGGACTCTTATCCTTAGAAGAACCAAGAAATTATAAATAAATATCTCCCA
CCTAAAATAGAGAATGTTGTCTTTTGGCCAGCAGGAGCACTACAGATTGAGCTTTATCGA
AAGCTGTTAAATCTCAGGTTGTCAGGTTCTGCCTTCAAGGGTGTGGAAAATAGTCCC
CATCTAATATGTATAGGAGCTCTTAAAAAACTGTGCAATCACCCCTGCCTTTTGTCAAC
TCTATAAAGGAAAAGGAATGTAGCTCAACTTGTGATAAAAATGAAGAAAAGAGTCTATAC
AAAGGCTTGCTAAGTGTGTTTCTGCTGACTACAACCTCTCCTGTTTACTGAAAAGGAG
TCAGGAAAACACTACAGGTGTTGTCCAAGCTCTTAGCGGTTATCCACGAACTTCGACCTACT
GAAAAGGTGGTGTGGTATCCAACATAACAAAACCTTGAACATTTTACAAGAAGTATGT
AAGCGTCATGGATATGCTTATACAAGACTTGATGGACAAAACCAATCTCTCAAAGGCAG
CAGATTGTTGATGGCTTTAACAGTCAACACTCTCTTTTTTTATTTTTTTGTTAAGTTCA
AAAGCTGGTGGTGTAGGACTTAACTCATTGGAGGATCTCACTTAATTCTCTATGACATT
GATTGGAATCCAGCCACTGACATTCAGGCAATGTCTAGAGTATGGAGAGATGGTCAGAAA
TATCCTGTACATATTTACAGACTCCTAACTACAGGTACAATAGAAGAAAAGATCTATCAA
AGGCAGATCAGTAAGCAAGGTCTTTGTGGGGCAGTTGTCGACCTACCAAGACATCTGAA
CATATTCAGTTTTAGTAGAAGAACTTAAAAATTTGTTACATTACATGAAAAGTTCAGAT
TGTGTTACTCATGATCTGCTTACTGTGAGTGTACAGGAGAAGAAGTTCATACAGGTGAT
TCGTTGGAAAATTCATTGTCTCTAGAGATTGTCAGCTTGGTCCACATCACCAGAAATCT
AACTCCCTGAAACCTCTTTCTATGTCCCAGCTGAAGCAATGGAACATTTTTCTGGAGAT
CATTTAAATCTTACAGATCCTTTCTTGAAGAATAACAGAAAATGTGTCATTCATTTTT
CAGAATATAACCACTCAAGCTACTGGCACATAG

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Clone variation with respect to NM\_012415.3

**5' Read Nucleotide Sequence:**

>OriGene 5' read for NM\_012415 unedited  
 GCATTTGTATACGACTCACTATAGGCGGCNCGGAATTCGCACGAGGGCTTCGTGAGGC  
 GGGATCCTTGAGCTTCTCCGCGCGCAGGGGATAGCTGGTTACCAGAAGGACTTCTTTGC  
 AGGGCCAGTGGTTTCTGTGAGATTTTCGCCGTCACGACTGCTGAATATGAGACGATCTG  
 CAGCACCAGTCAAGTGCAGGGGAATTCCTTCAAAAACCAAAATTTATACCTCCAGGAA  
 GAAGTAATCCAGGTCTGAATGAAGAGATTACAAAATGAATCCAGATATAAAATATTTG  
 AGGGTGTGCAATTAATAACACCTTTCTCCCGTCACAAAATGATCTTAGAATATGCAGTT  
 TAAATCTGCCTAGTGAAGAAAGTACTAGAGAAATCAATAACAGAGATAATTGCAGTGGAA  
 AATATTGTTTTGAAGCACCTACACTGGCAACATTAGATCCACCTCATAACAGTTTCATTGCG  
 CTCCTAAAGAAGTAGCAGTGTCCAAGGAACAAGAAGAGAAATCTGATAGCCTAGTTAAAT  
 ATTTAGTGTGTTTGGTGAAGCCTTCAAGAAAAACATAAAAAGTGGGAAGGTGATG  
 CTGTTCTATTGTAAGGAAAGTCATTTATATTAAGAATTTGGAAGGCAAAGACATTG  
 GAAGAGGCATTGGTTATAAATTCAAAGAGCTTGAAAAGATTGAAGAGGGCCAAACACTGA  
 TGATTTGTGAAAAGAAATAGAAGTCATGGGTGAATCTCTCCAGATGACTTCAGCAGTG  
 GCAGGTGTTTTAGCTTGAGGGGAGAAGTACTGCTATCTCGCATTCTCNCTCAGNTGCCA  
 GAANATGTTNCTCAAACCTTTCAANAAGTGTGTAACCAAGNTCANAGGNAATAGA  
 CAGAATGATTTCCANAATTGCAACCACGCCATGACCCATATACGCCAATTCCTCGTT  
 ATGCCACGACCANATAAN

**3' Read Nucleotide Sequence:**

>OriGene 3' read for NM\_012415 unedited  
 GGGGGGNNNGGNGNNGNNGNNGNNGGTTTTTTGAGACCTACTTCTTT  
 TTTGCATTTAACACTTGATATTTACAAAACATTAACCACTCAATTTTGACTATTGTATC  
 AAAAGTGATATATTTGCAACATATACTGTAATTTAAATAATTCTATTAATTTTCAAAA  
 GTACATTTAATTACCATACTAATTTTCAAAGAAGAGCAATGGAATGTCAGAAGTAATCT  
 TTCATATGTGCCAGTAGCTTGAGTGGTTATATCTCTGATAAAATGAATGACACATTTTC  
 TGTTATTTCTTCAAGAAAAGGATCTGTAAGATTTAAATGATCTCCACAAAATGTTTCCA  
 TTGCTTCAGCTGGGACATTAGAAAAGAGTTTCAGGGAGTTAGATTTCTGGTGATGTGGAC  
 CAAGCTGACAATCTCTAGAGACAATGAATTTTCCAACGAATCACCTGTATGAACCTCTT  
 CTCCTGTACACTCACAGTCAAGCAGATCATGAGTAACACAATCTGAACTTTCATGTAATG  
 TGAACAAAATTTTAAAGTTCTTTTACTGAAAATGAATATGTCCAGATGTCTTGGTGAGG  
 CTATATCTGCTCAACAAGACCTTGCTTACTGATCTGACTTTTGATTCATCTTTTCTTTTT  
 TTGCACCTGCTGCTAGGAGTTCGCTCAATTTGTCAGGATATTTCTGCCCATTTCTTTT  
 CATACTCTACACATTGTCTGAATGGCACTGGCGCGGATTTCCATCCCTGGCCTATCAAA  
 CATAACTCGAGATCCTCCACGTGGTTAATCTCCTAACACCACACTCTTTTGAACCTTA  
 TCAAAATATTCTAAACAACAAGAGTTTGGCCCGGTCAAACCGCTCACCAATTTTGTCT  
 TCCCTTTCCAAAATCCGCTGATTTTGCCCTCAA

**Restriction Sites:**

NotI-NotI

**ACCN:**

NM\_012415

**Insert Size:**

3090 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](#)

**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\\_012415.2](#), [NP\\_036547.1](#)

**RefSeq Size:** 3057 bp

**RefSeq ORF:** 2733 bp

**Locus ID:** 25788

**UniProt ID:** [Q9Y620](#)

**Cytogenetics:** 8q22.1

**Domains:** SNF2\_N, DEAD, helicase\_C

**Protein Families:** Druggable Genome

**Protein Pathways:** Homologous recombination

**Gene Summary:** The protein encoded by this gene belongs to the DEAD-like helicase superfamily. It shares similarity with *Saccharomyces cerevisiae* RAD54 and RDH54, both of which are involved in homologous recombination and repair of DNA. This protein binds to double-stranded DNA, and displays ATPase activity in the presence of DNA. This gene is highly expressed in testis and spleen, which suggests active roles in meiotic and mitotic recombination. Homozygous mutations of this gene were observed in primary lymphoma and colon cancer. [provided by RefSeq, Jul 2008]

Transcript Variant: This variant (1) encodes the longest isoform (1).