

## Product datasheet for **RC206457**

### Rad51L1 (RAD51B) (NM\_133509) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Rad51L1 (RAD51B) (NM_133509) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Rad51L1
Synonyms:	R51H2; RAD51L1; REC2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC206457 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGGTAGCAAGAACTAAAACGAGTGGGTTTATCACAAGAGCTGTGTGACCGTCTGAGTAGACATCAGA  
TCCTTACCTGTCAGGACTTTTTATGTCTTTCCCACTGGAGCTTATGAAGGTGACTGGTCTGAGTTATCG  
AGGTGTCCATGAACCTTATGTATGGTCAGCAGGGCTGTGCCCAAAGATGCAAACGGCTTATGGGATA  
AAAGCACAAGGTCTGCTGATTTCTCACCAGCATTCTTATCTACTACCTTTCTGCTTTGGACGAAGCCC  
TGCATGGTGGTGTGGCTGTGGATCCCTCACAGAGATTACAGGTCCACCAGGTTGTGAAAACTCAGTT  
TTGTATAATGATGAGCATTGGCTACATTACCCACCAACATGGGAGGATTAGAAGGAGCTGTGGTGATC  
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TTAACTGAAGAAAAGTTACTTTTGACAAGTAGTAAAGTTTATCTTTATCGGAACTCACCTGTGATGA  
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TCAGATTACAACCCATCTGAGTGGAGCCCTGGCTTCTCAGGCAGACCTGGTGTCTCCAGCTGATGATTTG  
TCCCTGTCTGAAGCAGTCTGGATCCAGCTGTGTGATAGCCGCACTAGGAAATACCTGGAGTCAAGTGT  
TGAATACCCGGCTGATCCTCCAGTACCTTGATTGAGAGAGAAGACAGATTCTTATTGCCAAGTCCCTCT  
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TCTGTACCCAAAGCTGAACTGAACTGGGCTCCAGAAATCTCCACCTCAGCCTCCTGAGCAGCTAGGAC  
TACAGATGTGCCACCATACCCAGCTAATTTTT

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC206457 protein sequence  
Red=Cloning site Green=Tags(s)

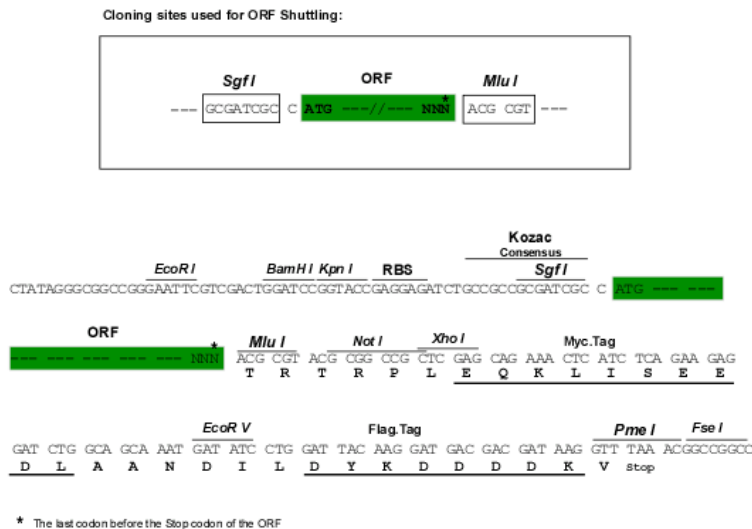
MGSKLLKRVGLSQELCDRLSRHQILTCQDFLCLSPLELMKVTGLSYRGVHELLCMVSRACAPKMQTAYGI  
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 IDTESAFSAERLVEIAESRFPFYFNTEEKLLLTSKVVHLYRELTCDEVLQRIESLEEEIISKGIKLVLD  
 SVASVVRKEFDAQLQGNLKERNKFLAREASSLYLAEEFSIPVILTNQITTHLSGALASQADLVSPADDL  
 SLSEGTSGSSCVIAALGNTWHSVNTRLILQYLDSERRQILIAKSPLAPFTSFVYTIKEEGLVLQETTF  
 SVTQAELNWAPEILPPQPPEQLGLQMCHHTQLIF

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6521\\_h02.zip](https://cdn.origene.com/chromatograms/mk6521_h02.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_133509

**ORF Size:** 1152 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\\_133509.4](#)

**RefSeq Size:** 2650 bp

**RefSeq ORF:** 1155 bp

**Locus ID:** 5890

**UniProt ID:** [O15315](#)

**Cytogenetics:** 14q24.1

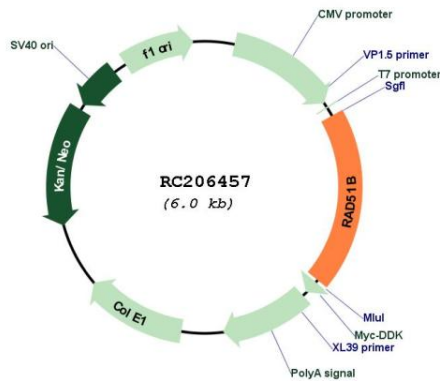
**Protein Families:** Druggable Genome

**Protein Pathways:** Homologous recombination

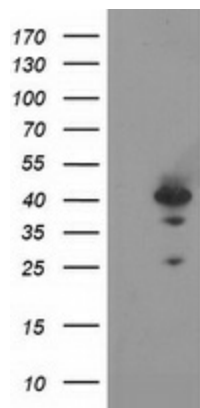
**MW:** 42.2 kDa

**Gene Summary:** The protein encoded by this gene is a member of the RAD51 protein family. RAD51 family members are evolutionarily conserved proteins essential for DNA repair by homologous recombination. This protein has been shown to form a stable heterodimer with the family member RAD51C, which further interacts with the other family members, such as RAD51, XRCC2, and XRCC3. Overexpression of this gene was found to cause cell cycle G1 delay and cell apoptosis, which suggested a role of this protein in sensing DNA damage. Rearrangements between this locus and high mobility group AT-hook 2 (HMGA2, GeneID 8091) have been observed in uterine leiomyomata. [provided by RefSeq, Mar 2016]

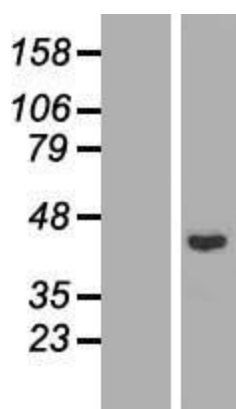
Product images:



Circular map for RC206457



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY RAD51L1 (Cat# RC206457, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-RAD51L1 (Cat# [TA503550]). Positive lysates [LY408768] (100ug) and [LC408768] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY408768]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC206457 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).