

Product datasheet for **RC227119**

RAD54 (RAD54L) (NM_001142548) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	RAD54 (RAD54L) (NM_001142548) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	RAD54
Synonyms:	hHR54; HR54; hRAD54; RAD54A
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide
Sequence:

>RC227119 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGGATCGCC**

ATGAGGAGGAGCTTGGCTCCCAGCCAGCTGGCCAAGAAAAACCTGAAGGCAGGTCTGTGATGATGAAG
ACTGGCAACCTGGCCTAGTGACTCCTAGGAAACGAAATCCAGCAGTGAGACCCAGATCCAGGAGTGTTT
CCTGTCTCCTTTTCGAAACCTTTGAGTCAGCTAACCAATCAACCACCTTGTCTGGACAGCAGTCAGCAT
GAAGCATTTATTGAAGCATTGTCAAAGCCTTTCAAAGTCCCCATTCCAAATTATCAAGGTCCTCTGG
GCTCTCGAGCATTGGGCCTGAAAAGGGCTGGGGTCCGCCGGGCCCTCCATGACCCCTGGAAAAAGATGC
CTTGTTCTGTATGAGCCTCCCCGCTGAGCGCTCATGACCAGCTGAAGCTTGACAAGGAGAAAACTCCT
GTCCATGTGGTTGTTGACCCTATTCTCAGTAAGGTTTTGCGGCCATCAGAGAGAGGGAGTGAAATTCC
TGTGGGAGTGTGCACCAGTCGGCGCATCCCTGGCAGCCATGGTGCATCATGGTGATGAGATGGGCCCT
AGGAAAGACGCTGCAGTGCATCACATTGATGTGGACACTTTACGCCAGAGTCCAGAGTGAAGCCAGAA
ATTGACAAGGCAGTGGTGGTGTGCCTTCCAGCCTGGTGAAGAAGTGGTACAATGAGGTTGGGAAATGGC
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ATTCATGAACCAGCGTGGAGCCAGGGTGTCTTCTCCCATCCTCATATTTCTATGAGACCTTCCGCCTT
CATGTTGGAGTCTCCAGAAAGGAAGTGTGGTCTGGTCAATGTGACGAGGGACACAGGCTCAAGAAGT
CTGAGAATCAGACTTACCAAGCCCTGGACAGCTTGAACACCAGCCGGCGGGTGTCTATCTCCGAACTCC
CATCCAGAATGATCTGCTTGAGTATTTCAAGCTTGGTACATTTTGTAAATCCGGCATCCTAGGGACTGCC
CATGAATTCAGAAGCATTGTTGAATTGCCAATTTGAAGGGTCGAGACGCTGCTGCTAGTAGGGCAGACA
GGCAGCTAGGAGAGGAGCGGCTGCGGGAGCTCACCAGCATTGTGAATAGATGCCTGATACGGAGGACTTC
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GTACTTATACGTCGCCCTGGATGGCAGCATGTCCATTAAGAAGCGAGCCAAGGTTGTAGAACGTTCAAT
AGTCCATCGAGCCCTGACTTTGTCTTCATGCTGAGCAGCAAAGCTGGGGCTGTGGCCTCAATCTCATTG
GGGCTAACCGGCTGGTCAATGTTGACCCTGACTGGAACCCAGCCAATGATGAACAAGCCATGGCCCGGT
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ATCTTCCAGCGTCAGAGCCACAAGAAGGCACTGAGCAGCTGTGTGGTGGATGAGGAGCAGGATGTAGAGC
GCCACTTCTCTGGGCGAGTTGAAGGAGCTGTTATCCTGGATGAAGCTAGCCTCAGTGACACACATGA
CAGGTTGCACTGCCGACGTTGTGTCAACAGCCGTGAGTCCGGCCACCCCTGATGGTTCTGACTGCACT
TCAGACCTGGCAGGGTGAACCACTGCACTGATAAGTGGGGCTCCGGGATGAGGTACTCCAGGCTGCCT
GGGATGCTGCCTCACTGCTATCACCTTCGCTTCCACCAGCGTTCTCATGAGGAGCAGCGGGCCCTCCG
C

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC227119 protein sequence
Red=Cloning site Green=Tags(s)

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MRRSLAPSQLAKRKPEGRSCDDEDWQPGLVTPRKRKSSSETQIQECFLSPFRKPLSQLTNQPPCLDSSQH
EAFIRSIILSKPFKVIPNYQGPLGSRALGLKRAGVRRALHDPLEKDALVLYEPPPLSAHDQLKLDKEKLP
VHVVDVPIILSKVLRPHQREGVKFLWECVTSRRIPGSHGCIMADEMGLGKTLQCITLMWTLRLRQSPECKPE
IDKAVVSPSSLVKNWYNEVGKWLGGRIQPLAIDGGSKDEIDQKLEGFMNQRGARVSSPILIIISYETFRL
HVGVLQKGSVGLVICDEGHRLKNSNQTYQALDSLNTSRRVLSGTPIQNDLLEYFSLVHFVNSGILGTA
HEFKKHFEPLILKGRDAAASEADRQLGEERLRELT SIVNRCLIRRTSDILSKYLPVKIEQVVCRLTPLQ
TELYKRFLRQAKPAEELLE GKMSVSSLSSITSLKLCNHPALIYDKVEEEDGFVGDLDLFPFGYSSKAL
EPQLSGKMLVLDYILAVTRSRSSDKVVLVSNTQTLDLFEKLCRARRYL YVRLDGTMSIKKRAKVVERFN
SPSSPDFVFMSSKAGGCGNLIGANRLVMFDPDWNPANDEQAMARVWRDGGKTCYIYRLLSAGTIEEK
IFQRQSHKKALSSCVDEEQDVERHFSLGELKELFILDEASLSDTHDRLHCRRCVNSRQIRPPPDSGDC
SDLAGWNHCTDKWGLRDEVLQAAWDAASTAITFVFHQRSHEEQRLR
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TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6442_a02.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_001142548

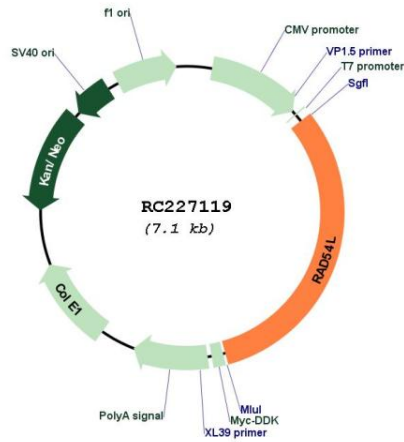
ORF Size: 2241 bp

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](#)

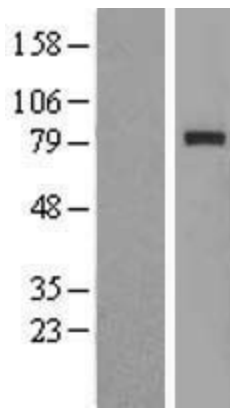
OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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:	<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:	<u>NM_001142548.1, NP_001136020.1</u>
RefSeq Size:	2567 bp
RefSeq ORF:	2244 bp
Locus ID:	8438
UniProt ID:	<u>Q92698</u>
Cytogenetics:	1p34.1
Protein Families:	Druggable Genome, Stem cell - Pluripotency
Protein Pathways:	Homologous recombination
MW:	84.4 kDa
Gene Summary:	The protein encoded by this gene belongs to the DEAD-like helicase superfamily, and shares similarity with <i>Saccharomyces cerevisiae</i> Rad54, a protein known to be involved in the homologous recombination and repair of DNA. This protein has been shown to play a role in homologous recombination related repair of DNA double-strand breaks. The binding of this protein to double-strand DNA induces a DNA topological change, which is thought to facilitate homologous DNA pairing, and stimulate DNA recombination. Alternative splicing results in multiple transcript variants encoding the same protein.[provided by RefSeq, Dec 2008]

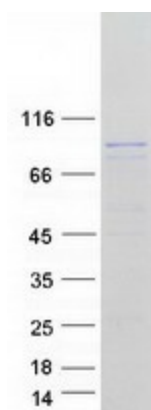
Product images:



Circular map for RC227119



Western blot validation of overexpression lysate (Cat# [LY428166]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC227119 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified RAD54L protein (Cat# [TP327119]). The protein was produced from HEK293T cells transfected with RAD54L cDNA clone (Cat# RC227119) using MegaTran 2.0 (Cat# [TT210002]).