

Product datasheet for **RC222194**

RAD52 (NM_134424) Human Tagged ORF Clone

Product data:

| | |
|---------------------------|---|
| Product Type: | Expression Plasmids |
| Product Name: | RAD52 (NM_134424) Human Tagged ORF Clone |
| Tag: | Myc-DDK |
| Symbol: | RAD52 |
| Mammalian Cell Selection: | Neomycin |
| Vector: | pCMV6-Entry (PS100001) |
| E. coli Selection: | Kanamycin (25 ug/mL) |
| ORF Nucleotide Sequence: | >RC222194 representing NM_134424 Red=Cloning site Blue=ORF Green=Tags(s) |

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGTCTGGGACTGAGGAAGCAATCTTGGAGGACGTGACAGCCATCCTGCTGCTGGCGCGGCTCAGTGT
TATGCTTTGGACAGTGCCAGTACACAGCAGAAGAGTACCAGGCCATCCAGAAGGCCCTGAGGCAGAGGCT
GGGCCAGAATACATAAGTAGCCGCATGGCTGGCGGAGGCCAGAAGGTGTGCTACATTGAGGGTCATCGG
GTAATTAATCTGGCCAATGAGATGTTTGGTTACAATGGCTGGGCACACTCCATCACGCAGCAGAATGTGG
ATTTTGTGACCTCAACAATGGCAAGTTCTACGTGGGAGTCTGTGCATTTGTGAGGGTCCAGCTGAAGGA
TGTTTCATATCATGAAGATGTTGGTTATGGTGTAGTGAGGGCCCTCAAGTCCAAGGCTTTATCTTTGGAG
AAGGCAAGGAAGGAGGCGGTGACAGACGGGCTGAAGCGAGCCCTCAGGAGTTTTGGGAATGCACTTGGAA
ACTGTATTCTGGACAAAGACTACCTGAGATCACTAAATAAGCTTCCACGCCAGTTGCCTCTTGAAGTGGA
TTTAACTAAAGCGAAGAGACAAGATCTTGAACCGTCTGTGGAGGAGGCAAGATACAACAGCTGCCGACCG
AACATGGCCCTGGGACACCCACAGCTGCAGCAGGTGACCTCCCCTCCAGACCCAGCCATGCTGTGATAC
CGGCGGACCAGGACTGCAGCTCCCGAAGCCTGAGCTCATCCGCCGTGGAGAGCGAGGCCACGCACCAGCG
GAAGCTCCGGCAGAAGCAGCTGCAGCAGCAGTTCCGGGAGCGGATGGAGAAGCAGCAGGTTCCGAGTCTCC
ACGCCGTGAGTGAAGAGTGAGGCAGCGCCTCCGGCCCTCCTGTGACGCACAGCACTCCTGTAAGTGT
TCTCAGAACCACTCCTGGAGAAAGACTTCTTGCAGGAGTGACTCAAGAATTAATCAAGACTCTTGAAGA
CAACTCTGAAAAGTGGGCTGTGACTCCCGATGCAGGGGATGGTGTGGTCAAGCCCTCGTCTAGAGCAGAC
CCAGCCCAGACCTCTGACACATTAGCCTTGAACAACCAGATGGTGACCCAGAACAGGACTCCACACAGCG
TTTGCCACCAGAAACCACAAGCAAAATCTGGATCTTGGGACCTCCAAACTTATAGCGCTGACCAACGCAC
AACAGGAAACTGGGAATCTCATAGGAAGAGCCAGGACATGAAGAAAAGGAAATATGATCCATCT

ACGCGTACGCGGCGGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC222194 representing NM_134424
Red=Cloning site Green=Tags(s)

MSGTEEAILGGRDShPAAGGGSVL CFGQCQYTAEEYQAIQKALRQRLGPEYISSRMAGGGQKVCYIEGHR
 VINLANEMFGYNGWAHSITQQNVDFVDL NNGKFYVGVC AFVRVQLKDGSYHEDVGYGVSEGLKSKALSLE
 KARKEAVTDGLKRALRSFGNALGNCILDKDYLRSLNKLPRQLPLEVDLTKAKRQDLEPSVEEARYNSCRP
 NMALGHPQLQQVTSPSRPShAVIPADQDCSSRSLSSSAVESEATHQRKLRQKQLQQQFRERMEKQQVRVS
 TPSAEKSEAAPPAPPVTHSTPVTYSEPLLEKDFLAGVTQELIKTLEDNSEKWAVTPDAGDGVVKPSSRAD
 PAQTSDTLALNNQMVTQNRTPHSVCHQKPAKSGSWDLQTYADQRTTGNWESHRSQDMKKRKYDPS

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk8041_a04.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_134424

ORF Size: 1254 bp

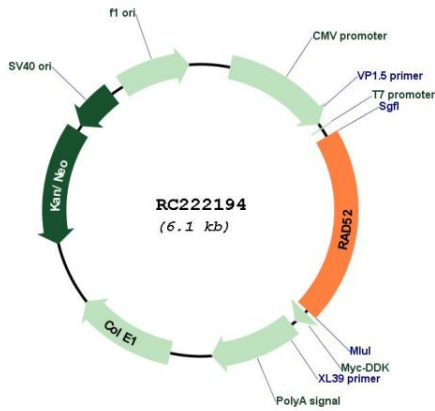
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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.

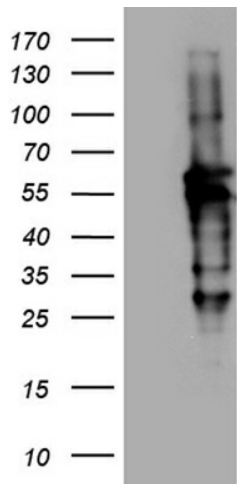
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

| | |
|-------------------------------|---|
| 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: | NM_134424.4 |
| RefSeq Size: | 2673 bp |
| RefSeq ORF: | 1257 bp |
| Locus ID: | 5893 |
| UniProt ID: | P43351 |
| Cytogenetics: | 12p13.33 |
| Protein Families: | Druggable Genome |
| Protein Pathways: | Homologous recombination |
| MW: | 46 kDa |
| Gene Summary: | <p>The protein encoded by this gene shares similarity with <i>Saccharomyces cerevisiae</i> Rad52, a protein important for DNA double-strand break repair and homologous recombination. This gene product was shown to bind single-stranded DNA ends, and mediate the DNA-DNA interaction necessary for the annealing of complementary DNA strands. It was also found to interact with DNA recombination protein RAD51, which suggested its role in RAD51 related DNA recombination and repair. A pseudogene of this gene is present on chromosome 2. Alternative splicing results in multiple transcript variants. Additional alternatively spliced transcript variants of this gene have been described, but their full-length nature is not known. [provided by RefSeq, Jul 2014]</p> |

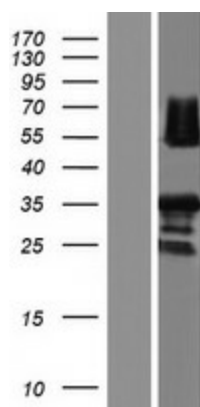
Product images:



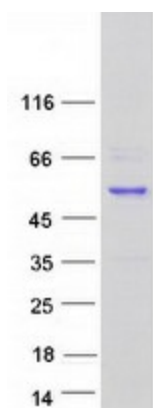
Circular map for RC222194



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY RAD52 (Cat# RC222194, 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-RAD52 antibody (Cat# [TA890144]). Positive lysates [LY408748] (100ug) and [LC408748] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY408748]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC222194 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified RAD52 protein (Cat# [TP322194]). The protein was produced from HEK293T cells transfected with RAD52 cDNA clone (Cat# RC222194) using MegaTran 2.0 (Cat# [TT210002]).