

## Product datasheet for MR220772

### Rad51b (NM\_009014) Mouse Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Rad51b (NM\_009014) Mouse Tagged ORF Clone  
**Tag:** Myc-DDK  
**Symbol:** Rad51b  
**Synonyms:** AI553500; mREC2; R51H2; Rad5111  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**ORF Nucleotide Sequence:** >MR220772 representing NM\_009014  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGAGCAGCAAGAACTAAGACGAGTGGGTTTATCTCCAGAGCTGTGTGACCGTTAAGCAGATACCAGA  
 TTGTTAACTGTCAGCACTTTTTAAGTCTCTCCCACTAGAAGTTATGAAAGTGACTGGCCTGAGTTACAG  
 AGGTGTCCACGAGCTTCTTCATACAGTAAGCAAGGCCTGTGCCCCGAGATGCAAACGGCTTATGAGTTA  
 AAGACACGAAGGTCTGCACATCTCTCACCGGCATTCTGTCTACTACCCTGTGCGCCTTGGATGAAGCAT  
 TGCACGGTGGTGTGCCTTGTGGATCTCTCACAGAGATTACAGGTCACCAGGTTGCGGAAAACTCAGTT  
 TTGCATAATGATGAGTGTCTTAGCTACATTACCTACCAGCCTGGGAGGATTAGAAGGGGCTGTGGTCTAC  
 ATCGACACAGAGTCTGCATTTACTGCTGAGAGACTGGTTGAGATTGCGGAATCTCGTTTTCCACAATATT  
 TTAACACTGAGGAAAAATGCTTCTGACCAGCAGTAGAGTTATCTTTGCCGAGAGCTCACCTGTGAGGG  
 GCTTCTACAAAGGCTTGAGTCTTTGGAGGAAGAGATCATTTGAAAGGAGTTAAGCTTGTGATTGTTGAC  
 TCCATTGCTTCTGTGGTCAGAAAGGAGTTTGACCCGAAGCTTCAAGGCAACATCAAAGAAAGGAACAAGT  
 TCTTGGGCAAAGGAGCGTCTTACTGAAGTACCTGGCAGGGGAGTTTTCAATCCCAGTTATCTTGACGAA  
 TCAAATTACGACCATCTGAGTGGAGCCCTCCCTTCTCAAGCAGACCTGGTGTCTCCAGCTGATGATTTG  
 TCCCTGTCTGAAGCAGTCTGGATCCAGCTGTTGGTAGCTGCACTAGGAAACACATGGGGTCACTGTG  
 TGAACACCCGGCTGATTCTCCAGTACCTTGATTACAGAGAGAAGGCAGATTCTCATTGCCAAGTCTCTCT  
 GGCTGCCTTACCTCCTTTGTCTACACCATCAAGGGGAAGGCCTGGTCTTCAAGGCCACGAAAGACCA

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >MR220772 representing NM\_009014  
Red=Cloning site Green=Tags(s)

MSSKKLRRVGLSPELCDRLSRYQIVNCQHFLSLSPELEMKVTGLSYRGVHELLHTVSKACAPQMQTAYEL  
 KTRRSAHLSPAFLSTTLCALDEALHGGVPCGSLTEITGPPGCGKTQFCIMMSVLATLPTSLGGLEGAVVY  
 IDTESAF TAERLVEIAESRFPQYFNTEEKLLLTSRVHLCREL TCEGLLQRLESLEEEIIISKGVKLVIVD  
 STIASVVRKEFDPKLGNIKERNKFLGKGASLLKYLAGEFSIPVILTNQITTHLSGALPSQADLVSPADDL  
 SLSEGTSGSSCLVAALGNTWGHCVNTRLILQYLDSERRQILIAKSPLAAFTSFVYTIKGEGLVLQGHERP

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mm9058\\_e02.zip](https://cdn.origene.com/chromatograms/mm9058_e02.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\_009014

**ORF Size:** 1050 bp

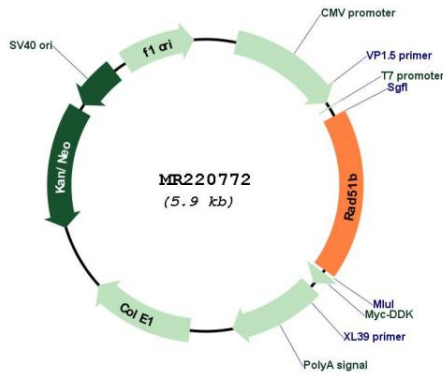
**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone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

<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_009014.3</a> , <a href="#">NP_033040.2</a>
<b>RefSeq Size:</b>	1858 bp
<b>RefSeq ORF:</b>	1053 bp
<b>Locus ID:</b>	19363
<b>UniProt ID:</b>	<a href="#">O35719</a>
<b>Cytogenetics:</b>	12 C3
<b>MW:</b>	38.2 kDa
<b>Gene Summary:</b>	<p>Involved in the homologous recombination repair (HRR) pathway of double-stranded DNA breaks arising during DNA replication or induced by DNA-damaging agents. May promote the assembly of presynaptic RAD51 nucleoprotein filaments. Binds single-stranded DNA and double-stranded DNA and has DNA-dependent ATPase activity. Part of the RAD21 paralog protein complex BCDX2 which acts in the BRCA1-BRCA2-dependent HR pathway. Upon DNA damage, BCDX2 acts downstream of BRCA2 recruitment and upstream of RAD51 recruitment. BCDX2 binds predominantly to the intersection of the four duplex arms of the Holliday junction and to junction of replication forks. The BCDX2 complex was originally reported to bind single-stranded DNA, single-stranded gaps in duplex DNA and specifically to nicks in duplex DNA. The BCDX2 subcomplex RAD51B:RAD51C exhibits single-stranded DNA-dependent ATPase activity suggesting an involvement in early stages of the HR pathway (By similarity).[UniProtKB/Swiss-Prot Function]</p>

Product images:



Circular map for MR220772