

## Product datasheet for **MR228837**

### Rad51b (NM\_001252562) Mouse Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Rad51b (NM\_001252562) Mouse Tagged ORF Clone  
**Tag:** Myc-DDK  
**Symbol:** Rad51b  
**Synonyms:** AI553500; mREC2; R51H2; Rad511  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**Cell Selection:** Neomycin  
**ORF Nucleotide Sequence:** >MR228837 representing NM\_001252562  
**Red=Cloning site Blue=ORF Green=Tags(s)**

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**GCGATCGCC**

ATGAGCAGCAAGAACTAAGACGAGTGGGTTTATCTCCAGAGCTGTGTGACCGTTAAGCAGATACCAGA  
TTGTAACTGTCAGCACTTTTTAAGTCTCTCCCACTAGAACTTATGAAAGTGACTGGCCTGAGTTACAG  
AGGTGTCCACGAGCTTTCATACAGTAAGCAAGGCCTGTGCCCGCAGATGCAAACGGCTTATGAGTTA  
AAGACACGAAGGTCTGCACATCTCTCACCGGCATTCTGTCTACTACCCTGTGCGCCTTGGATGAAGCAT  
TGCACGGTGGTGTGCCTTGTGGATCTCTCACAGAGATTACAGGTCCACCAGGTTGCGGAAAACTCAGTT  
TTGCATAATGATGAGTGTCTTAGCTACATTACCTACCAGCCTGGGAGGATTAGAAGGGGCTGTGGTCTAC  
ATCGACACAGAGTCTGCATTTACTGCTGAGAGACTGGTTGAGATTGCGGAATCTCGTTTTCCACAATATT  
TTAACTGAGGAAAAATTGCTTCTGACCAGCAGTAGAGTTTATCTTTGCCGAGAGCTCACCTGTGAGGG  
GCTTCTACAAAGGCTTGAGTCTTGGAGGAAGAGATCATTTCAAAGGAGTTAAGCTTGTGATTGTTGAC  
TCCATTGCTTCTGTGGTCAGAAAGGAGTTTGACCCGAAGCTTCAAGGCAACATCAAAGAAAGGAACAAGT  
TCTTGGCAAAGGAGCGTCCTTACTGAAGTACCTGGCAGGGGAGTTTTCAATCCCAGTTACATTTCAACC  
GATC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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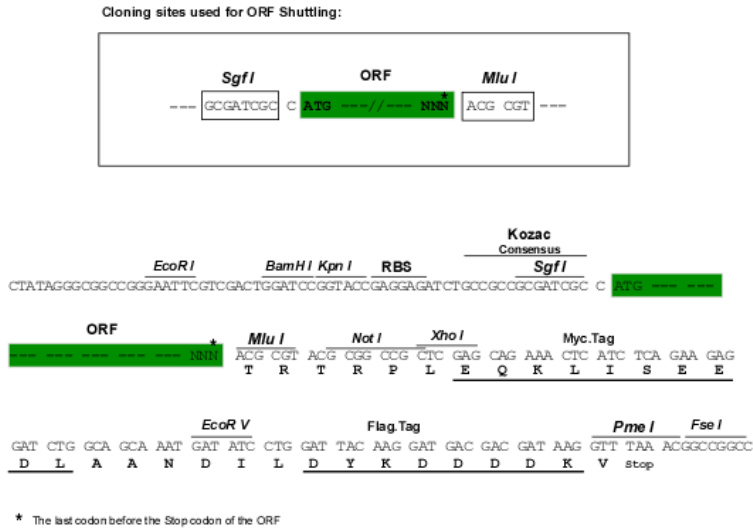
**Protein Sequence:** >MR228837 representing NM\_001252562  
 Red=Cloning site Green=Tags(s)

MSSKKLRRVGLSPELCDRLSRYQIVNCQHFLSLSPELEMKVTGLSYRGVHELLHTVSKACAPQMQTAYEL  
 KTRRSAHLSPAFLSTTLCALDEALHGGVPCGSLTEITGPPGCGKTQFCIMMSVLATLPTSLGGLEGAVVY  
 IDTESAFTAERLVEIAESRFPQYFNTEEKLLLTSSRVHLCRELTCEGLLQRLESLEEEIISKGVKLVIVD  
 SIASVVRKEFDPKLQGNIKERNKFLGKGASLLKYLAGEFSIPVTFQPI

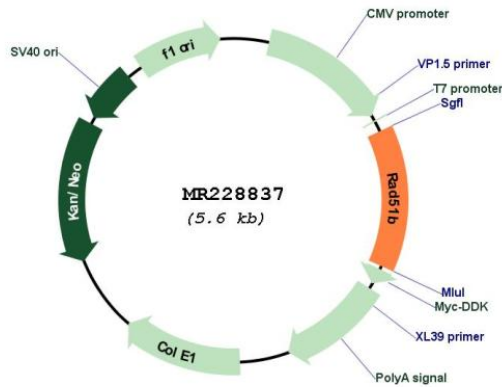
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**Plasmid Map:**



**ACCN:** NM\_001252562  
**ORF Size:** 774 bp

<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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_001252562.1</a> , <a href="#">NP_001239491.1</a>
<b>RefSeq Size:</b>	1757 bp
<b>RefSeq ORF:</b>	777 bp
<b>Locus ID:</b>	19363
<b>UniProt ID:</b>	<a href="#">O35719</a>
<b>Cytogenetics:</b>	12 C3
<b>MW:</b>	28.9 kDa
<b>Gene Summary:</b>	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]