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Product datasheet for MG220772

Rad51b (NM_009014) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Rad51b (NM_009014) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Rad51b
Synonyms:	AI553500; mREC2; R51H2; Rad51l1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)

ORF Nucleotide Sequence:

>MG220772 representing NM_009014
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGAGCAGCAAGAAACTAAGACGAGTGGGTTTATCTCCAGAGCTGTGTGACCGTTTAAGCAGATACCAGA
TTGTTAACTGTCAGCACTTTTTAAGTCTCTCCCCACTAGAACTTATGAAAGTGACTGGCCTGAGTTACAG
AGGTGTCCACGAGCTTCTTCATACAGTAAGCAAGGCCTGTGCCCCGCAGATGCAAACGGCTTATGAGTTA
AAGACACGAAGGTCTGCACATCTCTCACCGGCATTCCTGTCTACTACCCTGTGCGCCTTGGATGAAGCAT
TGCACGGTGGTGTGCCTTGTGGATCTCTCACAGAGATTACAGGTCCACCAGGTTGCGGAAAAACTCAGTT
TTGCATAATGATGAGTGTCTTAGCTACATTACCTACCAGCCTGGGAGGATTAGAAGGGGCTGTGGTCTAC
ATCGACACAGAGTCTGCATTTACTGCTGAGAGACTGGTTGAGATTGCGGAATCTCGTTTTCCACAATATT
TTAACACTGAGGAAAAATTGCTTCTGACCAGCAGTAGAGTTCATCTTTGCCGAGAGCTCACCTGTGAGGG
GCTTCTACAAAGGCTTGAGTCTTTGGAGGAAGAGATCATTTCGAAAGGAGTTAAGCTTGTGATTGTTGAC
TCCATTGCTTCTGTGGTCAGAAAGGAGTTTGACCCGAAGCTTCAAGGCAACATCAAAGAAAGGAACAAGT
TCTTGGGCAAAGGAGCGTCCTTACTGAAGTACCTGGCAGGGGAGTTTTCAATCCCAGTTATCTTGACGAA
TCAAATTACGACCCATCTGAGTGGAGCCCTCCCTTCTCAAGCAGACCTGGTGTCTCCAGCTGATGATTTG
TCCCTGTCTGAAGGCACTTCTGGATCCAGCTGTTTGGTAGCTGCACTAGGAAACACATGGGGTCACTGTG
TGAACACCCGGCTGATTCTCCAGTACCTTGATTCAGAGAGAAGGCAGATTCTCATTGCCAAGTCTCCTCT
GGCTGCCTTCACCTCCTTTGTCTACACCATCAAGGGGGAAGGCCTGGTTCTTCAAGGCCACGAAAGACCA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

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Protein Sequence:

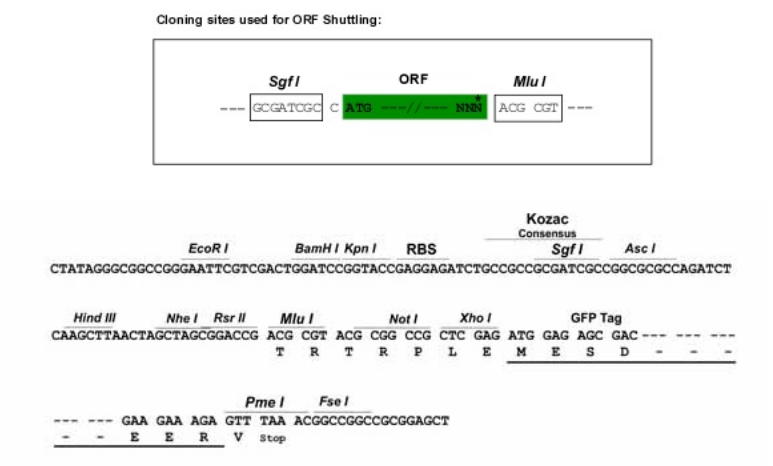
>MG220772 representing NM_009014
Red=Cloning site Green=Tags(s)

MSSKKLRRVGLSPELCDRLSRYQIVNCQHFLSLSPLELMKVTGLSYRGVHELLHTVSKACAPQMQTAYEL
KTRRSAHLSPAFLSTTLCALDEALHGGVPCGSLTEITGPPGCGKTQFCIMMSVLATLPTSLGGLEGAVVY
IDTESAFTAERLVEIAESRFPQYFNTEEKLLLTSSRVHLCRELTCEGLLQRLESLEEEIISKGVKLVIVD
SIASVVRKEFDPKLQGNIKERNKFLGKGASLLKYLAGEFSIPVILTNQITTHLSGALPSQADLVSPADDL
SLSEGTSGSSCLVAALGNTWGHCVNTRLILQYLDSERRQILIAKSPLAAFTSFVYTIKGEGLVLQGHERP

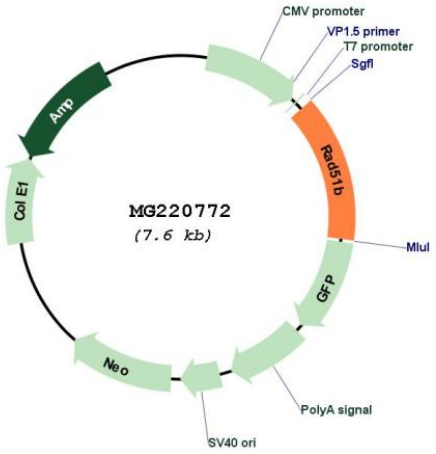
TRTRPLE – GFP Tag – V

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



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).
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_009014.3, NP_033040.2
RefSeq Size:	1858 bp
RefSeq ORF:	1053 bp
Locus ID:	19363
UniProt ID:	O35719
Cytogenetics:	12 C3
Gene Summary:	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]