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Product datasheet for MR210443

Rad54l (NM_001122958) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Rad54l (NM_001122958) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Rad54l
Synonyms:	RAD54
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>MR210443 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGAGGAGGAGCTTAGCTCCCAGCCAGTTGGCCAGGAGGAAACCAGAAGACAGATCATCAGATGATGAAG
ACTGGCAGCCTGGGACAGTAACTCCTAAGAAACGCAAGTCCAGCAGTGAGACCCAGGTCCAGGAGTGTTT
CCTGTCTCCTTTTCGGAAGCCCTTGACTCAGCTACTCAACCGGCCACCTTGTCTGGATAGCAGTCAACAT
GAAGCATTTATTCGAAGTATTTTGTCAAAGCCTTTCAAGGTCCCCATCCCAAATTATCAAGGTCCCCTGG
GCTCTCGTGCATTGGGCCTGAAAAGGGTTGGAGTTCGTCGTGCCCTTCATGACCCTCTGGAAGAAGGTGC
CTTGGTTCTCTATGAGCCTCCCCCACTCAGCGCCCATGACCAACTGAAGCTTGACAAGGAAAAACTCCCT
GTTCATGTGGTTGTTGATCCTATTCTCAGTAAGGTATTGCGGCCTCATCAGAGAGAGGGAGTGAAGTTCC
TATGGGAGTGTGTCACCAGTCGTCGAATTCCTGGAAGCCATGGCTGCATCATGGCTGATGAGATGGGCCT
GGGGAAGACACTGCAGTGCATCACATTGATGTGGACACTTTTACGCCAGAGCCCAGAATGCAAGCCAGAA
ATCGAGAAGGCAGTGGTGGTGTCACCTTCTAGCCTGGTGAAGAACTGGTACAATGAGGTTGAGAAATGGC
TTGGAGGGAGGATTCAACCTCTGGCCATCGATGGAGGCTCGAAGGACGAGATAGACCGAAAACTGGAAGG
ATTCATGAACCAGCGTGGAGCTAGAGTGCCTTCCCCCATCCTCATCATTTCCTATGAGACTTTCCGCCTG
CATGTTGGAGTTCTTAAAAAAGGAAATGTTGGACTGGTCATATGTGACGAGGGCCACAGGCTAAAGAACT
CTGAGAATCAGACTTACCAGGCTCTGGACAGCTTGAATACCAGCCGGCGGGTGCTAATCTCCGGGACCCC
CATCCAAAATGATTTGCTGGAGTATTTCAGCTTGGTGCACTTTGTAAATTCTGGCATTTTGGGAACTGCC
CATGAATTCAAGAAGCATTTTGAGTTGCCAATTTTGAAGAGTCGAGATGCAGCTGCCAGTGAGGCAGACA
GGCAGCGTGGGGAGGAGCGTCTGCGGGAGCTCATCGGTATTGTGAACAGGTGCCTGATACGGAGAACATC
TGATATCCTCTCTAAGTATCTGCCCGTGAAGATTGAGCAGGTGGTTTGTTGTAGGCTGACACCCCTTCAA
ACTGAGCTATACAAGAGATTTCTGAGACAGGCTAAGCCTGAAGAAGAATTGCGTGAGGGCAAGATGAGTG
TGTCTTCCCTGTCTTCTATCACCTCTCTAAAGAAGCTGTGTAATCATCCAGCTCTAATCTATGACAAGTG
TGTGGCAGAGGAGGATGGCTTTGAGGGCACTTTGGGTATCTTCCCACCTGGTTATAACTCTAAAGCTGTA
GAGCCACAGTTGTCAGGTAAGATGCTGGTCCTTGATTACATTCTGGCCGTGACTCGAAGCCGTAGCAGTG
ACAAAGTCGTGCTGGTGTCTAATTATACTCAGACATTGGATCTCTTTGAAAAGCTGTGCCGGGTTCGAAG
GTACTTGTATGTTCGCCTGGATGGCACGATGTCCATTAAGAAGCGAGCCAAGGTTGTGGAGCGCTTCAAT
AGCCCATCGAGCCCTGATTTTGTTTTCATGCTGAGCAGCAAAGCTGGGGGCTGTGGTCTTAACCTCATTG
GTGCTAACCGACTGGTCATGTTTGATCCTGACTGGAATCCAGCCAATGATGAACAAGCTATGGCCCGAGT
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ATCTTTCAGCGGCAGAGCCACAAGAAGGCTCTGAGCAGCTGTGTGGTGGACGAGGAGCAGGATGTGGAGC
GCCACTTTTCTCTTGGTGAGCTTAAAGAGCTGTTTACTCTGGATGAAGCAAGCCTCAGTGACACACATGA
CAGATTGCATTGCCGCCGTTGTGTAAACAACCGTCAGGTCTGGCCACCCCCTGATGGTTCTGACTGCACT
TCAGACCTGGCTCAGTGGAACCACAGCACAGATAAACGAGGGCTCCAGGATGAGGTACTCCAGGCTGCCT
GGGATGCTTCATCTACAGCCATCACCTTCGTCTTCCACCAGCGTTCTCATGAGGAGCAGCGCGGTCTTCA
C

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

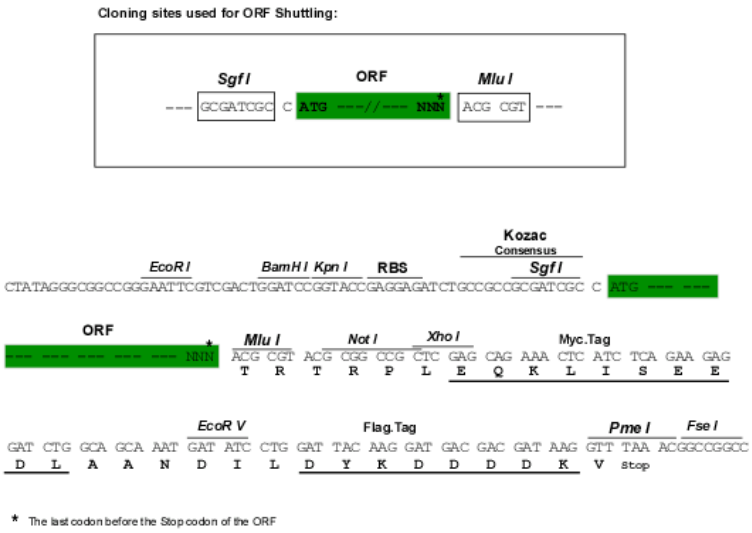
>MR210443 protein sequence
Red=Cloning site Green=Tags(s)

MRRSLAPSQLARRKPEDRSSDDEDWQPGTVTPKKRKSSSETQVQECFLSPFRKPLTQLLNRPPCLDSSQH
EAFIRSILSKPFKVPIPNYQGPLGSRALGLKRVGVRRALHDPLEEGALVLYEPPPLSAHDQLKLDKEKLP
VHVVVDPILSKVLRPHQREGVKFLWECVTSRRIPGSHGCIMADEMGLGKTLQCITLMWTLLRQSPECKPE
IEKAVVVSPSSLVKNWYNEVEKWLGGRIQPLAIDGGSKDEIDRKLEGFMNQRGARVPSPILIISYETFRL
HVGVLKKGNVGLVICDEGHRLKNSENQTYQALDSLNTSRRVLISGTPIQNDLLEYFSLVHFVNSGILGTA
HEFKKHFELPILKSRDAAASEADRQRGEERLRELIGIVNRCLIRRTSDILSKYLPVKIEQVVCCRLTPLQ
TELYKRFLRQAKPEEELREGKMSVSSLSSITSLKKLCNHPALIYDKCVAEEDGFEGTLGIFPPGYNSKAV
EPQLSGKMLVLDYILAVTRSRSSDKVVLVSNYTQTLDLFEKLCRVRRYLYVRLDGTMSIKKRAKVVERFN
SPSSPDFVFMLSSKAGGCGLNLIGANRLVMFDPDWNPANDEQAMARVWRDGQKKICYIYRLLSAGTIEEK
IFQRQSHKKALSSCVVDEEQDVERHFSLGELKELFTLDEASLSDTHDRLHCRRCVNNRQVWPPPDGSDCT
SDLAQWNHSTDKRGLQDEVLQAAWDASSTAITFVFHQRSHEEQRGLH

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_001122958

ORF Size: 2244 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_001122958.1, NP_001116430.1

RefSeq Size: 2763 bp

RefSeq ORF: 2244 bp

Locus ID: 19366

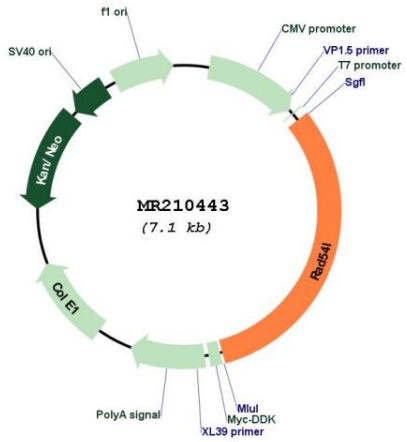
UniProt ID: P70270

Cytogenetics: 4 D1

MW: 84.7 kDa

Gene Summary: Involved in DNA repair and mitotic recombination. Functions in the recombinational DNA repair (RAD52) pathway. Dissociates RAD51 from nucleoprotein filaments formed on dsDNA. Could be involved in the turnover of RAD51 protein-dsDNA filaments (By similarity). Deficient mice also show significantly shorter telomeres than wild-type controls, indicating that the protein activity plays an essential role in telomere length maintenance in mammals. Deficiency also resulted in an increased frequency of end-to-end chromosome fusions involving telomeres compared to the controls, suggesting a putative role in telomere capping. Non-homologous end joining (NHEJ) and homologous recombination (HR) represent the two major pathways of DNA double-strand break (DSB) repair in eukaryotic cells. LIG4 and RAD54L cooperate to support cellular proliferation, repair spontaneous DSBs, and prevent chromosome and single chromatid aberrations.[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR210443