

## Product datasheet for **MG205059**

### Rad51 (NM\_011234) Mouse Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Rad51 (NM\_011234) Mouse Tagged ORF Clone  
**Tag:** TurboGFP  
**Symbol:** Rad51  
**Synonyms:** AV304093; Rad51a; Reca  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-AC-GFP (PS100010)  
**E. coli Selection:** Ampicillin (100 ug/mL)  
**ORF Nucleotide Sequence:** >MG205059 representing NM\_011234  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGGCTATGCAAATGCAGCTTGAAGCAAGTGCAGATACTTCAGTGAAGAAGAAAGTTTTGGTCCACAGC  
 CTATTTACGGTTAGAGCAGTGTGGCATAAATGCCAATGATGTGAAGAAATTAGAAGAAGCCGGTTACCA  
 TACAGTGGAGGCTGTTGCTTATGCACCGAAGAAGGAACAATAAATATTAAGGGAATTAGTGAAGCCAAA  
 GCTGACAAAATTCTGACTGAGGCAGCAAATTTGGTTCCAATGGGTTTACCACGGCAACTGAGTTTCACC  
 AGCGCCGGTCAGAGATCATAAGATAACTACTGGCTCCAAGAGCTGGACAAGCTGCTTCAAGGTGGAAT  
 TGAGACTGGATCTATCACAGAGATGTTTGGAGAATTCGAACTGGGAAGACACAGATCTGTACATAGTTG  
 GCTGTTACATGCCAGCTCCCCATTGACCGTGGTGGAGGTGAAGGGAAGGCCATGTACATTGACACCGAGG  
 GCACCTTTAGGCCGGAGCGGCTGCTAGCAGTAGCTGAGAGATACGGTCTCTCTGGCAGCGATGTCCTAGA  
 TAATGTAGCATATGCGCGAGGGTTCAACACAGACCACCAGACCAGCTCCTTTACCAAGCGTCAGCCATG  
 ATGGTAGAATCCAGGTATGCACTGCTTATTGTAGACAGTGTACTGCCCTTTACAGAACAGACTACTCAG  
 GGCGGGGAGAGCTTTAGCCAGGCAATGCATTTGGCCAGATTTCTGAGGATGCTGCTTCGACTTGCTGA  
 TGAGTTTTGGTGTGCGAGTGGTAATCACCAACCAGGTAGTAGCCCAAGTAGATGGAGCAGCCATGTTTCGCT  
 GCAGATCCAAAAAACCATTGGAGGGAACATCATCGCTCATGCGTCAACCACCAGGCTGTACCTGAGAA  
 AAGGAAGAGGGGAGACCAGAATCTGAAAAATCTATGACTCTCCCTGTCTTCTCTGAAGCTGAAGCTATGTT  
 TGCCATTAATGCAGATGGAGTGGCGGATGCCAAAGAC

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >MG205059 representing NM\_011234  
 Red=Cloning site Green=Tags(s)

MAMQMQLLEASADTSVEEESFGPQPISRLEQCGINANDVKKLEEAGYHTVEAVAYAPKKELINIKGISEAK  
 ADKILTEAAKLVPMGFTTATEFHQRSEIIQITTGSKELDKLLQGGIETGSITEMFGEFRTGKTQICHTL  
 AVTCQLPIDRGGGEGKAMYIDTEGTFRPERLLAVAERYGLSGSDVLDNVAYARGFNTDHQTQLLYQASAM  
 MVESRYALLIVDSATALYRTDYSGRGEL SARQMHLARFLRMLRLADEFGVAVVITNQVVAQVDGAAMFA  
 ADPKKPIGGNIIAHASTTRLYLKRGGETRICKIYDSPCLPEAEAMFAINADGVGDAKD

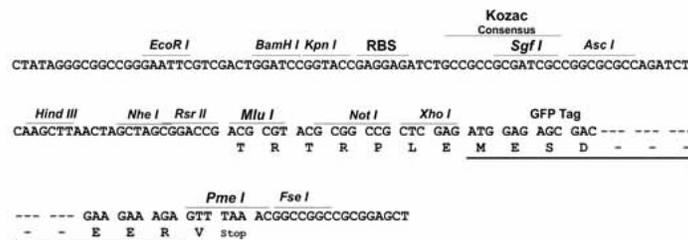
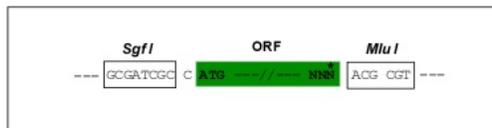
TRTRPLE - GFP Tag - V

**Chromatograms:** [https://cdn.origene.com/chromatograms/ja1952\\_e12.zip](https://cdn.origene.com/chromatograms/ja1952_e12.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



**ACCN:** NM\_011234

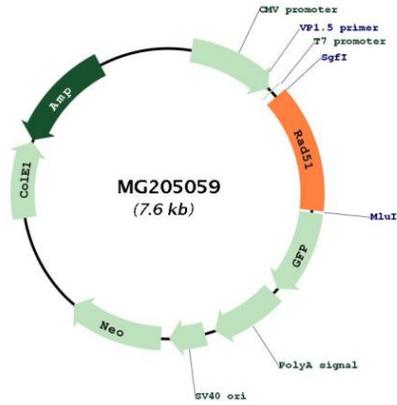
**ORF Size:** 1017 bp

**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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](#)

<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_011234.5</a>
<b>RefSeq Size:</b>	2139 bp
<b>RefSeq ORF:</b>	1020 bp
<b>Locus ID:</b>	19361
<b>UniProt ID:</b>	<a href="#">Q08297</a>
<b>Cytogenetics:</b>	2 59.92 cM
<b>Gene Summary:</b>	Plays an important role in homologous strand exchange, a key step in DNA repair through homologous recombination (HR) (PubMed:15834424). Binds to single and double-stranded DNA and exhibits DNA-dependent ATPase activity. Catalyzes the recognition of homology and strand exchange between homologous DNA partners to form a joint molecule between a processed DNA break and the repair template. Binds to single-stranded DNA in an ATP-dependent manner to form nucleoprotein filaments which are essential for the homology search and strand exchange. Part of a PALB2-scaffolded HR complex containing BRCA2 and RAD51C and which is thought to play a role in DNA repair by HR. Plays a role in regulating mitochondrial DNA copy number under conditions of oxidative stress in the presence of RAD51C and XRCC3. Also involved in interstrand cross-link repair (By similarity). [UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MG205059