

## Product datasheet for **SC326847**

### **RAD51 (NM\_001164270) Human Untagged Clone**

#### Product data:

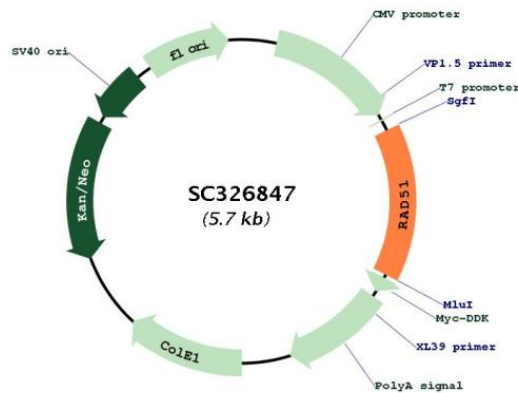
Product Type:	Expression Plasmids
Product Name:	RAD51 (NM_001164270) Human Untagged Clone
Tag:	Tag Free
Symbol:	RAD51
Synonyms:	BRCC5; FANCR; HRAD51; HsRad51; HsT16930; MRMV2; RAD51A; RECA
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>SC326847 representing NM_001164270. Blue=Insert sequence Red=Cloning site Green=Tag(s)

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GCTCGTTTGTAGTGAACCGTCAGAATTTGTAAACGACTACTATAGGGCGCCGGGAATTCGTCGACTG
GATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC
ATGGCAATGCAGATGCAGCTTGAAGCAAATGCAGATACTTCAGTGAAGAAGAAAGCTTTGGCCACAA
CCCATTTACGGTTAGAGCAGTGTGGCATAAATGCCAACGATGTGAAGAAATTGGAAGAAGCTGGATTC
CATACTGTGGAGGCTGTTGCCTATGCGCCAAAGAAGGAGCTAATAAATATTAAGGGAATTAGTGAAGCC
AAAGCTGATAAAATCTGGCTGAGGCAGCTAAATAGTTCCAATGGGTTTCACTGCAACTGAATTC
CACCAAAGCGGTCAGAGATCATACAGATTACTACTGGCTCCAAAGAGCTTGACAACTACTTCAAGGT
GGAATTGAGACTGGATCTATCACAGAAATGTTTGGAGAATTCGAACTGGGAAGACCCAGATCTGTCAT
ACGCTAGCTGTACCTGCCAGCTTCCCATTGACCGGGTGGAGGTGAAGGAAAGGCCATGTACATTGAC
ACTGAGGGTACCTTTAGGCCAGAACGGCTGCTGGCAGTGGCTGAGAGGTATGGTCTCTCTGGCAGTGAT
GTCCTGGATAATGTAGCATATGCTCGAGCGTTCAACACAGACCACCAGACCCAGCTCCTTTATCAAGCA
TCAGCCATGATGGTAGAATCTAGGTATGCACTGCTTATTGTAGACAGTGCACCGCCCTTTACAGAACA
GACTACTCGGGTCGAGGTGAGCTTTAGCCAGGCAGATGCACTTGGCCAGGTTTCTGCGGATGCTTCTG
CGACTCGCTGATGAGATTGTATCTGAGGAAAGGAAAGAGGGGAAACCAGAATCTGCAAAATCTACGACTC
TCCCTGTCTTCTGA
ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGAT
TACAAGGATGACGACGATAAGGTTTAAACGGCCGGC
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Restriction Sites: Sgfl-MluI



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**Plasmid Map:**


**ACCN:** NM\_001164270

**Insert Size:** 843 bp

**OTI Disclaimer:** Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

**OTI Annotation:** This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.

**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\\_001164270.1](#)

**RefSeq Size:** 2177 bp

**RefSeq ORF:** 843 bp

Locus ID:	5888
UniProt ID:	<a href="#">Q06609</a>
Cytogenetics:	15q15.1
Protein Families:	Druggable Genome, Stem cell - Pluripotency, Transcription Factors
Protein Pathways:	Homologous recombination, Pancreatic cancer, Pathways in cancer
MW:	31 kDa

**Gene Summary:** The protein encoded by this gene is a member of the RAD51 protein family. RAD51 family members are highly similar to bacterial RecA and *Saccharomyces cerevisiae* Rad51, and are known to be involved in the homologous recombination and repair of DNA. This protein can interact with the ssDNA-binding protein RPA and RAD52, and it is thought to play roles in homologous pairing and strand transfer of DNA. This protein is also found to interact with BRCA1 and BRCA2, which may be important for the cellular response to DNA damage. BRCA2 is shown to regulate both the intracellular localization and DNA-binding ability of this protein. Loss of these controls following BRCA2 inactivation may be a key event leading to genomic instability and tumorigenesis. Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Aug 2009]

Transcript Variant: This variant (3) uses an alternate exon in the 5' coding region and lacks an alternate exon in the 3' coding region resulting in a frameshift, compared to variant 2. The resulting isoform (3) contains a distinct segment near the N-terminus and has a shorter and distinct C-terminus, compared to isoform 2. Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.