

Product datasheet for **RG204952**

XRCC1 (NM_006297) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	XRCC1 (NM_006297) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	XRCC1
Synonyms:	RCC; SCAR26
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG204952 representing NM_006297
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGCCGGAGATCCGCCTCCGCCATGTCGTGTCCTGCAGCAGCCAGGACTCGACTCACTGTGCAGAAAATC
 TTCTCAAGGCAGACACTTACCGAAAATGGCGGGCAGCCAAGGCAGGCGAGAAGACCATCTCTGTGGTCCT
 ACAGTTGGAGAAGGAGGAGCAGATACACAGTGTGGACATTGGGAATGATGGCTCAGCTTTCTGTGGAGGTG
 CTGGTGGGCGAGTTCAGCTGGAGGCGCTGGGGAGCAAGACTATGAGGTCTTCTGGTCACCTCATCTTTCA
 TGTCCCTTCCGAGAGCCGAGTGGCTCAAACCCCAACCGCTTCGCATGTTTGGCCTGACAAGCTGGT
 CCGGGCAGCCGCCGAGAAGCGCTGGGACCGGTCAAATTTGTTTGCAGCCAGCCCTACAGCAAGGACTCC
 CCCTTTGGCTTGAGTTTGTACGGTTTCATAGCCCCCAGACAAAGATGAGGCAGAGGCCCGTCCCAGA
 AGGTGACAGTGACCAAGCTTGGCCAGTTCGTGTGAAGGAGGAGGATGAGAGCGCAACTCTCTGAGGCC
 GGGGGCTCTCTTTCAGCCGGATCAACAAGACATCCCCAGTACAGCCAGCGACCCAGCAGGACCTAGC
 TATGCAGCTGCTACCCTCCAGGCTTCTAGTGTGCCTCCTCAGCCTCTCCAGTCTCCAGGGCCATAGGCA
 GCACCTCCAAGCCCCAGGAGTCTCCCAAAGGGAAGAGGAAGTTGGATTTGAACCAAGAAGAAAAGAGAC
 CCCCAGCAAACCACAGCCAGCTGTCCGCATCTGTTCCCAAGAGACCTAAATTGCCAGCTCCAACCTCGT
 ACCCCAGCCACAGCCCCAGTCCCTGCCCGAGCAGGGGGCAGTACAGGCAAACCCCGAGGAGAAGGCA
 CCGAGCCCAGACGACCCCGAGCTGGCCAGAGGAGCTGGGGAAGATCCTTCAGGGTGTGGTAGTGGTGTCT
 GAGTGGCTTCCAGAACCCCTCCGCTCCGAGCTGCGAGATAAGGCCCTAGAGCTTGGGGCCAAGTATCGG
 CCAGACTGGACCCGGGACAGCAGCACCTCATCTGTGCCTTTGCCAACCCCAAGTACAGCCAGGTCC
 TAGGCCTGGGAGGCCGATCGTGGTAAGGAGTGGGTGCTGGACTGTACCCGATGCGTCCGGCGGTGCC
 CTTCCAGAGGTACCTCATGGCAGGGCCAGGTTCCAGCAGTGAGGAGGATGAGGCCCTCTCACAGCGGTGGC
 AGCGGAGATGAAGCCCCAAGCTTCTCAGAAGCAACCCAGACCAAAACCAAGCCCACTCAGGCAGCTG
 GACCCAGCTACCCAGAAAGCCCCAACCCCTGAAGAGACCAAAGCAGCCTCACCAGTGTCCAGGAAGA
 TATAGACATTGAGGGGTACAGTCAAGGACAGGACAATGGGGCGAAGATTCTGGGGACAGAGGAT
 GAGCTGAGGAGGGTGGCAGAGCAGAAGAACACAGACTGCCCCCTGGCCAGGAGGAGAATGGGGAAGACC
 CGTATGCAGGCTCCACGGATGAGAACACGGACAGTGAAGAACACCAGGAGCCTCTGATCTGCCAGTCCC
 TGAGTCCCAGATTTCTCCAGGCAAGCACTTCTTTCTTACGGGGAGTCCCTGGGGACGAGCGCGCG
 AAATCATCCGATACGTACAGCCTTCAATGGGGAGCTCGAGGACTATATGAGTGACCGGGTTCAGTTTG
 TGATCACAGCACAGGAATGGGATCCCAGCTTTGAGGAGGCCCTGATGGACAACCCCTCCCTGGCATTCTGT
 TCGTCCCCGATGGATCTACAGTTGCAATGAGAAGCAGAAGTTACTTCTCACCAGCTCTATGGGGTGGT
 CCGCAGGCC

ACGCGTACGCGGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>RG204952 representing NM_006297
 Red=Cloning site Green=Tags(s)

MPEIRLRHVVSCSSQDSTHCAENLLKADTYRKWRAAKAGEKTISSVVLQLEKEEQIHSVDIGNDGSFVEV
 LVGSSAGGAGEQDYEVLLVTSFMSPPSESRSGSNPNRVRMFGPDKLVRAAAEKRWDRVKIVCSQPYSKDS
 PFGLSFVRFHSPDPKDEAEAPSQKVTVTKLGQFRVKEEDESANSLRPGALFFSRINKTSPVTASDPAGPS
 YAAATLQASSAASASPVSRAIGSTSKPQESPKGKRKLDLNQEEKTPSKPPAQLSPVSPKRPKLPAPTR
 TPATAPVPARAQGAVTGKPRGEGTEPRRPRAGPEELGKILQGVVVVLSGFQNPFRSELKALELGAAYR
 PDWTRDSTHLICAFANTPKYSQVLGLGGRIVRKEWVLDCHRMRRRLPSQRYLMAGPGSSSEDEASHSGG
 SGDEAPKLPQKQPQTKTKPTQAAGPSSPQKPTPEETKAASPVLQEDIDIEGVQSEGQDNGAEDSGDTE
 ELRRVAEQKEHRLPPGQEENGEDPYAGSTDENTDSEEHQEPDLPVPELPDFFQGKHFFLYGEFPGDERR
 KLIRYVTAFNGELEDYMSDRVQFVITAQEWDPSEEFALMDNPSLAFVVRPRWIYSCNEKQKLLPHQLYGVV
 PQA

TRTRPLE – GFP Tag – V

Restriction Sites: Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



ACCN: NM_006297

ORF Size: 1899 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 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](#)

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_006297.1](#), [NP_006288.1](#)

RefSeq Size: 2083 bp

RefSeq ORF: 1902 bp

Locus ID: 7515

UniProt ID: [P18887](#)

Cytogenetics: 19q13.31

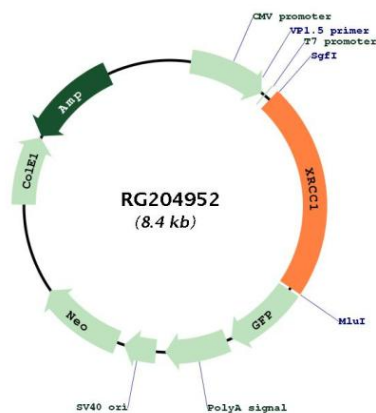
Domains: BRCT, XRCC1_N

Protein Families: Druggable Genome

Protein Pathways: Base excision repair

Gene Summary: The protein encoded by this gene is involved in the efficient repair of DNA single-strand breaks formed by exposure to ionizing radiation and alkylating agents. This protein interacts with DNA ligase III, polymerase beta and poly (ADP-ribose) polymerase to participate in the base excision repair pathway. It may play a role in DNA processing during meiosis and recombination in germ cells. A rare microsatellite polymorphism in this gene is associated with cancer in patients of varying radiosensitivity. [provided by RefSeq, Jul 2008]

Product images:



Circular map for RG204952