

Product datasheet for **RG210760**

DNA Ligase I (LIG1) (NM_000234) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	DNA Ligase I (LIG1) (NM_000234) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	DNA Ligase I
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG210760 representing NM_000234
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGCAGCGAAGTATCATGTTCATTTTTCCACCCCAAGAAAGAGGGTAAAGCAAAGAAGCCTGAGAAGGAGG
 CATCCAATAGCAGCAGAGAGACGGAGCCCTCCAAGGCGGCACTGAAGGAGTGAATGGAGTGGTGTCT
 CGAGAGTGACTCTCCGGTGAAGAGGCCAGGGAGGAAGGCGGCCCGGGTCTGGGACGCAAGGGGAAGAG
 GAGGATGAAGCCCTTAGCCCTGTAAAGGCCAGAAGCCTGCCCTGGACTGCTCACAGGTCTCCCCGCCCC
 GTCCTGCCACATCTCTGAGAACAATGCTTCCCTCTGTACACCTCTCCCATGGACAGTTCCCCATCAGG
 GATTCCGAAGCGTCGCACAGCTCGGAAGCAGCTCCCGAAACGGACCATTAGGAAGTCTTGAAGAGCAG
 AGTGAGGACGAGGACAGAGAAGCAAGAGGAAGAAGGAGGAGGAAGAAGAGGAGACCCCGAAAGAAAGCC
 TCACAGAGGCTGAAGTGGCCACAGAGAAGGAAGGAGAAGACGGGGACCAGCCACCACGCCTCCCAAGCC
 CCTAAAGACCTCCAAGCAGAGACCCCGACGAAAGCGTTTCAGAGCCTGAGGTGGCCACGAAGCAGGAA
 CTGCAGGAGGAGGAAGAGCAGACCAAGCCTCCCGCAGAGCTCCAAGACGCTCAGCAGCTTCTTACCC
 CCCGGAAGCCAGCAGTCAAAAAAGAAAGTGAAGGAAGAGGAGCCAGGGGCTCCAGGAAAGGAGGGAGCTGC
 TGAGGGACCCCTGGATCCATCTGGTTACAATCCTGCCAAGAACAATATCATCCCGTGAAGATGCCTGC
 TGGAAACCGGGCCAGAAGGTTCTTACCTGGCTGTGGCCCGGACGTTTGAGAAGATCGAGGAGGTGTCTG
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 GATGGTGTCTTCTCAAGGCAGTGGCCAGGCCACAGTGGCAGCTGGAGTCCGTCCGGGCTGAGGCAG
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 TCCGCTACTGCCTCCGGGGTCTTCAGCAAGTTCCGCGACATCGCCAGGCTCACTGGCAGTGTCTCCACA
 GCCAAGAAGATAGACATCATCAAAGGCCTCTTGTGGCTGCCGCCACTCAGAAGCCCGTTTCATCGCTA
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 GAGCCTCAGCCCCCGGGCAAGAATCCACCAGCCATGGTGGATGCTGGGAAGGGCAAGACAGCAGAG
 GCCAGAAAGACGTGGCTGGAGGAGCAAGGCATGATCCTGAAGCAGACGTTCTGCGAGGTTCCCGACTGG
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 GATTCCCTGAAACCAATGTTGGCCATCCACCCTGGGATCAGCGAGGCTCTGAAACGCTTTGAGGAG
 GCAGCTTTCACCTGCGAATACAAATATGACGGGCAGAGGGCACAGATCCACGCCCTGGAAGCGGGGAGG
 TGAAGATCTTCAGCAGGAATCAGGAAGACAACACTGGGAAGTACCCGGACATCATCAGCCGATCCCCAA
 GATTAACCTCCATCGGTACATCCTTATCCTGGACACCGAAGCCGTGGCTTGGGACCGGGAAAAGAAAG
 CAGATCCAGCCATTCCAAGTGTCAACCACCCGAAACGCAAGGAGGTGGATGCGTCTGAGATCCAGGTGC
 AGGTGTGTTTGTACGCTTCGACCTCATCTACCTCAATGGAGAGTCCCTGGTACGTGAGCCCTTTCCCG
 GCGCCGGCAGTGTCTCCGGGAGAACTTTGTGGAGACAGAGGGCGAGTTTGTCTTCGCCACCTCCCTGGAC
 ACCAAGGACATCGAGCAGATCGCCGAGTTCCTGGAGCAGTCAAGTAAAGACTCCTGCGAGGGGCTGATGG
 TGAAGACCCTGGATGTTGATGCCACCTACGAGATCGCCAAGAGATCGCAACTGGCTCAAGCTGAAGAA
 GGACTACCTTGATGGCGTGGGTGACACCCTGGACCTGGTGGTGTATCGGCGCCTACCTGGGCGGGGAAG
 CGGGCCGGCCGGTACGGGGGCTTCTGCTGGCCTCCTACGACGAGGACAGTGAAGGAGCTGACAGCCATAT
 GCAAGCTTGAAGTGGCTTCAAGTGTGAGGAGCTGGAGGAGCATCACCAGAGCCTCAAGGCGCTGGTGTCT
 GCCAGCCACGCCCTTACGTGCGGATAGATGGCGCTGTGATTCCCGACCACTGGCTGGACCCAGCGCT
 GTGTGGGAGGTGAAGTGCCTGACCTCTCCCTCTCCCATCTACCCTGTGCGCGGGCCTGGTGGATA
 GTGACAAGGGCATCTCCCTTCGCTTCCCTCGTATTTCGAGTCCGTGAAGACAAGCAGCCGGAGCAGGC
 CACCACCAGTGTCAAGTGGCCTGTTTGTACCGGAAGCAAAGTCAAGATTCAGAACCAACAAGGCGAGGAC
 TCAGGCTCTGACCCTGAAGATACCTAC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG210760 representing NM_000234
 Red=Cloning site Green=Tags(s)

MQRSIMSFFHPKKEGKAKKPEKEASNSSRETEPPPKAALKEWNGVVSESDSPVKRPGRKAARVLGSEGEE
 EDEALSPAKGQKPALDCSQVSPRRPATSPENNASLSDTSPMDSSPSGIPKRRTARKQLPKRTIQEVLEEQ
 SEDEDREAKRKKEEEEETPKESL TEAEVATEKEGEDGDQPTTPPKPLKTSKAETPTESVSEPEVATKQE
 LQEEEEQTKPPRRAPKTLSSFFTPRKPAVKKEVKEEPEGAPGKEGAAEGPLDPSGYNPAKNNYHPVEDAC
 WKPGQKVPYLAVARTFEKIEEVSARLRMVETLSNLLRSVVALSPPDLLPVLYLSLNLHGPPQQGLELGVG
 DGVLLKAVAQATGRQLESVRAEAAEKGDVGLVAENSRSTQRLMLPPPPLTASGVFSKFRDIARLTGSAST
 AKKIDI I KGLFVACRHSEARFIARSLSGRLRLGLAEQSVLAALSQAVSLTPPGQEFPPAMVDAGKGTAE
 ARKTWLEEQGMILKQTFCEVPDLDRIPVLLHGLERLPEHCKLSPGIPLKPLAHPTRGISEVLKRFEE
 AAFTEYKYDGGQRAQIHALEGGEVKIFSRNQEDNTGKYPDIISRIPKIKLPSVTSFILDTEAVAWDREKK
 QIQPFQVLTTRKRKEVDASEIQVQVCLYAFDLIYLNESLVREPLSRRRQLLRENFVETEGEFVFATSLD
 TKDIEQIAEFLEQSVKDSCEGLMVKTLVDATYEIAKRSHNWLKLDKDYLDGVGDTLDLVVIGAYLGRGK
 RAGRYGGFLLASYDEDESEELQAICKLGTGFSDDELEEHQSLKALVLPSPRPYVRIDGAVIPDHWLDPSA
 VWEVKCADLSLSP IYPAARGLVDSKDGISLRFPRFIRVREDKQPEQATTS AQVACLRYKQSQIQNQGED
 SGSDPEDTY

TRTRPLE - GFP Tag - V

Restriction Sites:

SgfI-MluI

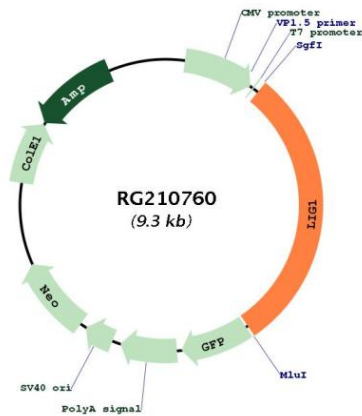
Cloning Scheme:



ACCN:	NM_000234
ORF Size:	2757 bp
OTI Disclaimer:	<p>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.</p> <p>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</p>
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:	<ol style="list-style-type: none"> 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_000234.3
RefSeq Size:	3083 bp
RefSeq ORF:	2760 bp
Locus ID:	3978
UniProt ID:	P18858
Cytogenetics:	19q13.33
Domains:	DNA_ligase
Protein Families:	Druggable Genome
Protein Pathways:	Base excision repair, DNA replication, Mismatch repair, Nucleotide excision repair

Gene Summary:

This gene encodes a member of the ATP-dependent DNA ligase protein family. The encoded protein functions in DNA replication, recombination, and the base excision repair process. Mutations in this gene that lead to DNA ligase I deficiency result in immunodeficiency and increased sensitivity to DNA-damaging agents. Disruption of this gene may also be associated with a variety of cancers. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Jan 2014]

Product images:

Circular map for RG210760