

Product datasheet for **RC239739**

DNA Ligase I (LIG1) (NM_001289063) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	DNA Ligase I (LIG1) (NM_001289063) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	LIG1
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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ORF Nucleotide
Sequence:

>RC239739 representing NM_001289063
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGCAGCGAAGTATCATGGCGGCACTGAAGGAGTGAATGGAGTGGTGTCCGAGAGTGACTCTCCGGTGA
 AGAGGCCAGGGAGGAAGCGGCCCGGGTCTGGGCAGCGAAGGGGAAGAGGAGGATGAAGCCCTTAGCCC
 TGCTAAAGGCCAGAAGCCTGCCCTGGACTGCTCACAGGTCTCCCCGCCCGTCTGCCACATCTCCTGAG
 AACAAATGCTTCCCTCTCTGACACCTCTCCCATGGACAGTTCATCAGGGATTCCGAAGCGTCGCACAG
 CTCGGAAGCAGCTCCCGAAACGGACCATTCAGGAAGTCTGGAAGAGCAGAGTGAGGACGAGGACAGAGA
 AGCCAAGAGGAAGAAGGAGGAGGAAGAGGAGACCCCGAAAGAAAGCCTCACAGAGGCTGAAGTGGCCACA
 GAGAAGGAAGGAGAAGACGGGGACCAGCCACCACGCCTCCAAGCCCTAAAGACCTCAAAGCAGAGA
 CCCCAGCGAAAGCGTTTCAGAGCCTGAGGTGGCCACGAAGCAGGAAGTGCAGGAGGAGGAAGAGCAGAC
 CAAGCCTCCCCGACAGCTCCCAAGACGCTCAGCAGCTTCTTACCCCCGGAAGCCAGCAGTCAAAAAA
 GAAGTGAAGGAAGAGGAGCCAGGGGCTCCAGGAAAGGAGGGAGCTGCTGAGGGACCCCTGGATCCATCTG
 GTTACAATCCTGCCAAGAACAATATATCCCGTGAAGATGCCTGCTGGAACCCGGGCCAGAAGTTCC
 TTACCTGGCTGTGGCCCGGACGTTTGAGAAGATCGAGGAGGTGTCTGCTCGGCTCCGGATGGTGGAGACG
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 TCAACCACCTTGGGCCACCCAGCAGGGCTGGAGCTTGGCGTGGGTGATGGTGTCTTCTCAAGGCAGT
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 GTGGCCGAGAACGCCGACACCCAGAGGCTCATGCTGCCACCCTCCGCTACTGCCTCCGGGGTCT
 TCAGCAAGTTCGCGACATCGCCAGGCTCACTGGCAGTGTCTCCACAGCCAAGAAGATAGACATATCAA
 AGGCCTCTTTGTGGCCTGCCCACTCAGAAGCCCGTTTCATCGCTAGGTCCTGAGCGGACGGCTGCGC
 CTTGGGCTGGCAGAGCAGTCGGTGTGGCTGCCCTCTCCAGGCAGTGAGCCTCACGCCCCCGGGCCAAG
 AATCCCACAGCCATGGTGGATGCTGGGAAGGGCAAGACAGCAGAGGCCAGAAAGACGTGGCTGGAGGA
 GCAAGGCATGATCCTGAAGCAGACGTTCTGCGAGGTTCCCGACCTGGACCGAATTATCCCGTGTGCTG
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 ATATGACGGGCAGAGGGCACAGATCCACGCCCTGGAAGGCGGGGAGGTGAAGATCTCAGCAGGAATCAG
 GAAGACAACACTGGGAAGTACCCGGACATCATCAGCCGATCCCCAAGATTAACCTCCATCGGTACAT
 CCTTCATCCTGGACACCGAAGCCGTGGCTTGGGACCGGAAAAGAAGCAGATCCAGCCATCCAAGTGCT
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 GATGAGGAGCTGGAGGAGCATCACCAGAGCCTCAAGGCGCTGGTGTGCCAGCCACGCCCTTACGTGC
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 GTTTGTACCGGAAGCAAAGTCAGATTGAGAACCAACAAGGCGAGGACTCAGGCTCTGACCCTGAAGATAC
 CTAC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC239739 representing NM_001289063
Red=Cloning site Green=Tags(s)

MQRSIMAALKEWNGVSESDSPVKRPRKAARVLGSEGEEDALSPAKGQKPALDCSQVSPRPATSPE
NNASLSDTSPMDSSPSGIPKRRRTARKQLPKRTIQEVLEEQSEDEDREAKRKEEEEEETPKESL TEAEVAT
EKEGEDGDQPTTPPKPLKTSKAETPTESVSEPEVATKQELQEEEEQTKPPRRAPKTLSSFFTPRKPAVKK
EVKEEEPAGPGKEGAAEGPLDPSGYNPAKNNYHPVEDACWKPGQKVPYLAVARTFEKIEEVSARLRMVET
LSNLLRSVVALSPPDLLPVLYLSLNHLGPPQQGLELGVGDGVLLKAVAQATGRQLESVRAEAAEKGDVGL
VAENSRSTQRLMLPPPPLTASGVFSKFRDIARLTGSASTAKKIDIKGLFVACRHSEARFIARSLSGRLR
LGLAEQSVLAALSQAVSLTPPGQEFPPAMVDAGKGTAEARKTWLEEQGMILKQTFCEVPDLDRIPVLL
EHGLERLPEHCKLSPGIPLKPLAHPTRGISEVLKRFEAAFTCEYKYGQRAQIHALEGGEVKIFSRNQ
EDNTGKYPDIISRIPKIKLPSVTSFILDTEAVAWDREKKIQPFQVLTTRKRKEVDASEIQVQVCLYAFD
LIYLNAGESLVREPLSRRRQLLENFVETEGEFVFATSLDTKDIEQIAEFLEQSVKDSCEGLMVKTLDVD
TYEIAKRSHNWLKPKDYLDGVGDTLDLVVIGAYLGRGKRAGRYGGFLLASYDEDSEELQAICKLGTGFS
DEELEHHQSLKALVLPSPRPYVRIDGAVIPDHWLDPSAVWEVKCADLSLSPIYPAARGLVSDKGISLR
FPRFIRVREDKQPEQATTSQVACLRYKQSQIQNQGEDSGSDPEDTY

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: Sgfl-MluI

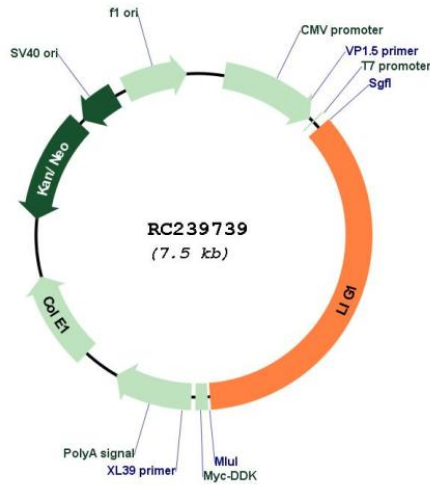
Cloning Scheme:

Cloning sites used for ORF Shutting:



* The last codon before the Stop codon of the ORF

Plasmid Map:



ACCN:	NM_001289063
ORF Size:	2664 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:	<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_001289063.2
RefSeq Size:	3317 bp
RefSeq ORF:	2667 bp
Locus ID:	3978
UniProt ID:	P18858
Cytogenetics:	19q13.33
Protein Families:	Druggable Genome
Protein Pathways:	Base excision repair, DNA replication, Mismatch repair, Nucleotide excision repair
MW:	98.7 kDa
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]