

## Product datasheet for **RG234998**

### LONP1 (NM\_001276479) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	LONP1 (NM_001276479) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	LONP1
Synonyms:	CODASS; hLON; LON; LonHS; LONP; PIM1; PRSS15
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG234998 representing NM\_001276479  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGCGGCGAGCACTGGCTACGTGCGACTGTGGGGAGCGGCGGTGCTGGGTGCTGCGGCGCCGATGC  
 TGGCCCGCCGCGGGGGGGGTTCCCACTGCAGCAGGAGCGTGGTTGCTCCGAGGCCCGGTACATAACGGC  
 GCTCACGCCCATGACGATCCCCGATGTGTTCCGCACCTGCCGCTCATCGCCATACCCGCAACCCGGTG  
 TTCCCGCCTTTATCAAGATTATCGAGGTTAAAAATAAGAAGTTGGTTGAGCTGCTGAGAAGGAAAGTTC  
 GTCTCGCCAGCCTTATGTGCGCGTCTTTCTAAAGAGAGATGACAGCAATGAGTCGGATGTGGTCGAGAG  
 CCTGGATGAAATCTACCACACGGGGACGTTTGCCAGATCCATGAGATGCAGGACCTTGGGGACAAGCTG  
 CGCATGATCGTCATGGGACACAGAAGAGTCCATATCAGCAGACAGCTGGAGGTGGAGCCCGAGGAGCCGG  
 AGGCGGAGAACAAGCACAAGCCCCGAGGAAGTCAAAGCGGGGCAAGAAGGAGGCGGAGGACGAGCTGAG  
 CGCCAGGCACCCGCGGAGCTGGCGATGGAGCCACCCCTGAGCTCCCGCTGAGGTGCTCATGGTGGAG  
 GTAGAGAACGTTGTCCACGAGGACTTCCAGGTCACGGAGGAGGTGAAAGCCCTGACTGCAGAGATCGTGA  
 AGACCATCCGGGACATCATTGCCTTGAACCTCTCTACAGGGAGTCAGTCTGCAGATGATGCAGGCTGG  
 CCAGCGGGTGGTGGACAACCCCATCTACCTGAGCGACATGGGCGCCGCGCTCACCGGGGCCGAGTCCCAT  
 GAGCTGCAGGACGTCCTGGAAGAGACCAATATTCTAAGCGGCTGTACAAGGCCCTCTCCCTGCTGAAGA  
 AGGAATTTGAACTGAGCAAGCTGCAGCAGCGCCTGGGGCGGGAGGTGGAGGAGAAGATCAAGCAGACCCA  
 CCGTAAGTACCTGCTGCAGGAGCAGCTAAAGATCATCAAGAAGGAGCTGGGCCTGGAGAAGGACGACAAG  
 GATGCCATCGAGGAGAAGTTCGGGAGCGCCTGAAGGAGCTCGTGGTCCCAAGCACGTCATGGATGTTG  
 TGGACGAGGAGCTGAGCAAGCTGGGCCTGCTGGACAACCACTCCTCGGAGTTCAATGTACCCCGCAACT  
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 CATTGCTCGTCCATCGCCCGGCCCTGAACCGAGAGTACTTCCGCTTACAGCTCGGGGGCATGACTGAC  
 GTGGCTGAGATCAAGGGCCACAGGCGGACCTACGTGGGCGCCATGCCCGGAAGATCATCCAGTGTGTTGA  
 AGAAGACCAAGACGAGAAACCCCTGATCCTCATCGACGAGGTGGACAAGATCGGCCGAGGCTACCAGGG  
 GGACCCGTCGTCGCACTGCTGGAGCTGCTGGACCCAGAGCAGAATGCCAACTTCTGGACCACTACCTG  
 GACGTGCCGTGGACTTGTCCAAGGTGCTGTTTCTGTCACGGCCAACTCACGGACACCATCCCCGAGC  
 CGCTGCGAGACCGTATGGAGATGATCAACGTGTCGGGCTACGTGGCCAGGAGAAGCTGGCCATTGCGGA  
 GCGCTACCTGGTGCCCCAGGCTCGCGCCCTGTGTGGCTTGGATGAGAGCAAGGCCAAGCTGTATCGGAC  
 GTGCTGACGCTGCTCATCAAGCAGTACTGCCGCGAGAGCGGTGTCCGCAACCTGCAGAAGCAAGTGGAGA  
 AGGTGTTACGGAAATCGGCCTACAAGATTGTCAGCGGCGAGGCCGAGTCCGTGGAGGTGACGCCCGAGAA  
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 GTCATGGGGTGGCCTGGACCGCAATGGGAGGCTCCACGCTGTTTGTGGAGACATCCCTGAGACGGCCAC  
 AGGACAAGGATGCCAAGGGTGACAAGGATGGCAGCCTGGAGGTGACAGGCCAGCTGGGGGAGGTGATGAA  
 GGAGAGCGCCCGCATAGCCTACACCTTCGCCAGAGCCTTCTCATGCAGCACGCCCCCGCAATGACTACT  
 CTGGTGACCTCACACATCCACCTGCATGTGCCGAGGGCCACCCCAAGGACGGCCCAAGCGCAGGCT  
 GCACCATCGTCACGGCCCTGCTGTCCCTGGCCATGGGCAGGCTGTCCGCGAGAATCTGGCCATGACTGG  
 CGAAGTCTCCCTCACGGGCAAGATCCTGCCTGTTGGTGGCATCAAGGAGAAGACCATTGCGGCCAAGCGC  
 GCAGGGGTGACGTGCATCGTCTGCCAGCCGAGAAACAAGAAGGACTTCTACGACCTGGCAGCCTTATCA  
 CCGAGGGCTGGAGGTGCACTTCGTGGAACACTACCGGGAGATCTTCGACATCGCCTTCCCGGACGAGCA  
 GGCAGAGGCGCTGGCCGTGGAACGG

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA

**Protein Sequence:** >RG234998 representing NM\_001276479  
 Red=Cloning site Green=Tags(s)

MAASTGYVRLWGAARCWVLRPMLAAAGGRVPTAAGAWLLRGPVITALTPMTIPDVFPHLPLIAITRNPV  
 FPRFIKIIIEVKNKKLVELLRKVRLAQPYVGVFLKRDDSNEVDVVEVSLDEIYHTGTFAQIHEMQDLGDKL  
 RMIVMGHRRVHISRQLEVEPEEPEAENKHKPRKSKRGKKEAEDELSARHPAELAMEPTPELPAEVL MVE  
 VENVVHEDFQVTEEVKALTAIEIVKTIRDIIALNPLYRESVLQMMQAGQRVVDNPIYLSDMGAALTGAESH  
 ELQDVLEETNIPKRLYKALSLKKFEFELSKLQQRLLGREVEEKIKQTHRKYLLQEQLKIIKKELGLEKDDK  
 DAIEEFRRERLKVVPKHVMDVVDEELSKLGLLDNHSSEFNVTRNYLDWLT SIPWKYSNENLDLARAQ  
 AVLEEDHYGMEDVKKRILEFIAVSQLRGSTQGKILCFYGPVGVGKTSIARSIARALNREYFRFSVGGMTD  
 VAEIKGHRRTYVGAMPGKIIQCLKTKTENPLILIDEVDKIGRGYQGDPSALLELLDPEQANFLDHYL  
 DVPVDLSKVLFICTANVTDTIPEPLRDRMEMINVSGYVAQEKLAIAERYLVPQARALCGLDESKAKLSSD  
 VLTLLIKQYCRESGVRNLQKQVEKVLKRSAYKIVSGEAEVETPENLQDFVGKPVFTVERMYDVTPPGV  
 VMGLAWTAMGGSTL FVETSLRRPQDKDAKGDKGSLEVTGQLGEVMKESARIAYTFARAFMLQHPANDY  
 LVTSHIHLHVPEGATPKDGPSAGCTIVTALLSLAMGRPVRQNLAMTGEVSLTGKILPVGGIKEKTKIAAKR  
 AGVTCIVLPAENKKDFYDLAAFITEGLEVHFVEHYREIFDIAFPDEQAEALAVER

TRTRPLE - GFP Tag - V

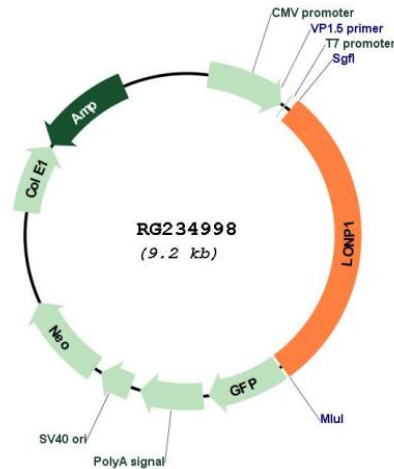
**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**



## Plasmid Map:



ACCN: NM\_001276479

ORF Size: 2685 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](#)

**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:	<a href="#">NM_001276479.2</a>
RefSeq Size:	2936 bp
RefSeq ORF:	2688 bp
Locus ID:	9361
UniProt ID:	<a href="#">P36776</a>
Cytogenetics:	19p13.3
Protein Families:	Druggable Genome, Protease
Gene Summary:	<p>This gene encodes a mitochondrial matrix protein that belongs to the Lon family of ATP-dependent proteases. This protein mediates the selective degradation of misfolded, unassembled or oxidatively damaged polypeptides in the mitochondrial matrix. It may also have a chaperone function in the assembly of inner membrane protein complexes, and participate in the regulation of mitochondrial gene expression and maintenance of the integrity of the mitochondrial genome. Decreased expression of this gene has been noted in a patient with hereditary spastic paraplegia (PMID:18378094). Alternatively spliced transcript variants have been found for this gene. [provided by RefSeq, Feb 2013]</p>