

Product datasheet for **RC239606**

LONP2 (NM_001300948) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	LONP2 (NM_001300948) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	LONP2
Synonyms:	LONP; LONPL; PLON; PSLON
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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ORF Nucleotide Sequence:

>RC239606 representing NM_001300948
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGTCATCAGTGAGCCCCATCCAGATCCCCAGTCGCCTCCGCTGCTGCTCACCCACGAGGGCGTCTCTGC
 TGCCCGGCTCCACCATGCGCACCAGCGTGGACTCGGCCCGCAACCTGCAGCTGGTGCGGAGCCGCTTCT
 GAAGGGCACGTCGCTGCAAAGCACCATCCTGGCGTCATCCCAACACGCCTGACCCCGCAGCGACGCG
 CAGGACCTGCCGCGCTGCACAGGATTGGCACAGCTGCACTGGCCGTTACAGTTGTGGGAGTAAGTGGC
 CCAAGCCCCACTACACTCTGTTGATTACAGGCCTATGCCGTTTCCAGATTGTACAGGCTTAAAAGAGAA
 GCCATATCCATTGCTGAAGTGGAGCAGTTGGACCGACTTGAGGAGTTCCCAACACCTGAAAATGAGG
 GAGGAGCTAGGAGAACTATCAGAGCAGTTTTACAATAATGCAGTACAAATTTAGATGCTGTGAGCCTAG
 AGGAGCGGTTCAAGATGACTATACCACTGCTTGCAGACAAATTGAAGGCCTGAAATTGCTTCAAAAAAC
 CAGAAAACCAAGCAAGATGATGATAAGAGGGTTATAGCAATACGCCCTATTAGGAGAATTACACATATC
 TCAGGTACTTTAGAAGATGAAGATGAAGATGAAGATAATGATGACATTGTCATGCTAGAGAAAAAATAC
 GAACATCTAGTATGCCAGAGCAGGCCATAAAAGTCTGTGCAAAGAGATAAAGAGACTCAAAAAATGCC
 TCAGTCAATGCCAGAATATGCTCTGACTAGAAATATTTGGAAGTATGGTAGAAGTCTTCTGGAACAAA
 AGTACAAGTACCGCCTGGACATTAGGGCAGCCCGGATTTCTTGGATAATGACCATTACGCCATGGAAA
 AATTGAAGAAAAGAGTACTGGAATACTTGGCTGTGAGACAGCTCAAAAAAACCTGAAGGGCCCAATCCT
 ATGCTTTGTTGGCCCTCCTGGAGTTGGTAAAACAAGTGTGGGAAGATCAGTGGCAAGACTCTAGGTCGA
 GAGTTCCACAGGATTGCACTTGGAGGATATGTGATCAGTCTGACATTCGAGGACACAGGCGCACCTATG
 TTGGCAGCATGCCTGGTCGCATCATCAACGGCTTGAAGACTGTGGGAGTGAACAACCCAGTGTTCCTATT
 AGATGAGGTTGACAAACTGGGAAAAAGTCTACAGGGTGATCCAGCAGCAGCTCTGCTTGGAGTGTGGAT
 CCTGAACAAAACATAAATTCACAGATCATTATCTAAATGTGGCCTTTGACCTTTCTCAAGTCTTTTTTA
 TAGCTACTGCCAACACCACTGCTACCATTCCAGCTGCCTTGTGGACAGAATGGAGATCATTAGGTTCC
 AGGTTATACACAGGAGGAGAAGATAGAGATTGCCCATAGGCAGTTCATCCCAAGCAGCTGGAACAACAT
 GGGCTGACTCCACAGCAGATTAGATACCCAGGTCACCACTCTTGCATCATCACCAGGTATACCAGAG
 AGGCAGGGTTCGTTCTCTGGATAGAAAACCTGGGGCCATTTGCCGAGCTGTGGCCGTGAAGGTGGCAGA
 AGGACAGCATAAGGAAGCCAAGTTGGACCGTCTGATGTGACTGAGAGAGAAGGTTGCAGAGAACACATC
 TTAGAAGATGAAAACCTGAATCTATCAGTGACACTACTGACTTGGCTCTACCACCTGAAATGCCGATTT
 TGATTGATTTCCATGCTCTGAAAGACATCCTTGGGCCCCCGATGTATGAAATGGAGGTATCTCAGCGTTT
 GAGTCAGCCAGGAGTAGCAATAGGTTTGGCTTGGACTCCCTTAGGTGGAGAAATCATGTTCTGTTGGAGCG
 AGTCGAATGGATGGCGAGGGCCAGTTAACTCTGACCGGCCAGCTCGGGGACGTGATGAAGGAGTCCGCC
 ACCTCGTATCAGCTGGCTCCGAGCAACGCAAGAAGTACCAGCTGACCAATGCTTTTGGAAAGTTTGA
 TCTTCTTGACAACACAGACATCCATCTGCACCTCCAGCTGGAGCTGTACAAAAGATGGACCATCTGCT
 GGAGTTACCATAGTAACCTGTCTCGCTCACTTTTGTAGTGGGCGGCTGGTACGTTTCAGATGTAGCCATGA
 CTGGAGAAATTACACTGAGAGGTCTTGTCTTCCAGTGGGTGGAATTAAGACAAAAGTGTGGCGGCACA
 CAGAGCGGGACTGAAGCAAGTCATTATTCCTCGGAGAAAATGAAAAGACCTTGGGGAATCCCAGGCAAC
 GTACGACAGGATTTAAGTTTTGTACAGCAAGCTGCCTGGATGAGGTTCTTAATGCAGCTTTTGTGGTG
 GCTTTACTGTCAAGACCAGACCTGGTCTGTAAATAGCAAAGT

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC239606 representing NM_001300948
 Red=Cloning site Green=Tags(s)

MSSVSPIQIPSRLPLLLTHEGVLLPGSTMRTSVDSARNLQLVRSRLLKGTSLQSTILGVIPTNTPDPASDA
 QDLPLHRIGTAALAVQVVGSNWPKPHYTLITGLCRFQIVQVLKEKPYPIAEVEQLDRLEEFNTCKMR
 EELGELSEQFYKYAVQIILDAVSLERFKMTIPLLVRQIEGLKLLQKTRPKQDDDKRVIAIRPIRRITHI
 SGTLEDEDEEDNDDIVMLEKKIRTSSMPEQAHKVCVKEIKRLKKMPQSMPEYALTRNYLELMVELPWNK
 STTDRLDIRAARILLDNDHYAMEKLLKRVLEYLAVRQLKNNLKGPILCFVGGPPGVKTSVGRSVAKTLGR
 EFHRIALGGVCDQSDIRGHRRTYVGSMPGRIINGLKTVGVNPNVFLLEVDKLGKSLQGDPAALLEVLD
 PEQNHNFTHYLNVAFDLSQVLFIAATNTATIPAALLDRMEIIQVPGYTQEEKIEIAHRHLIPKQLEQH
 GLTPQQIQIPQVTTLDIITRYTREAGVRSRDRKLGAI CRAVAVKVAEGQHKEAKLDRSDVTEREGCREHI
 LEDEKPEISDITDIALPEMPILIDFHAKDILGPPMYEMEVSRQLSQPGVAIGLAWTPLGGEIMFVEA
 SRMDGEGQLTLTGQLGDMKESAHLAISWLRNNAKYYQLTNAFGSFDLLDNTDIHLHFPAGAVTKDGPSA
 GVTIVTCLASLFSGRLVRSDVAMTGEITLRLVLPVGGIKDKVLAHRAGLKQVIIPRRNEKDLEGIPGN
 VRQDLSFVTASCLDEVLNAAFDGGFTVKTRPGLLNSKL

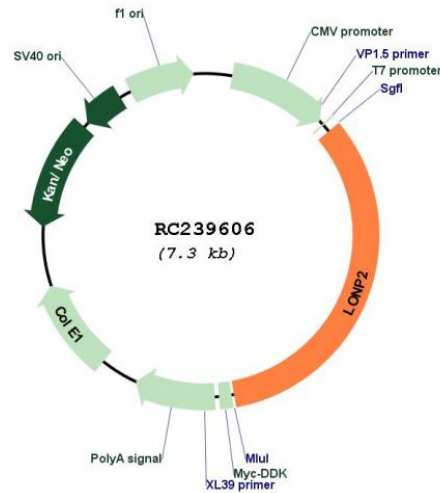
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfi-MluI

Cloning Scheme:



Plasmid Map:


ACCN: NM_001300948

ORF Size: 2424 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:

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_001300948.3](#)

RefSeq Size: 4826 bp

RefSeq ORF: 2427 bp

Locus ID: 83752

UniProt ID: [Q86WA8](#)

Cytogenetics: 16q12.1

Protein Families: Druggable Genome, Protease

MW: 90.1 kDa

Gene Summary: In human, peroxisomes function primarily to catalyze fatty acid beta-oxidation and, as a by-product, produce hydrogen peroxide and superoxide. The protein encoded by this gene is an ATP-dependent protease that likely plays a role in maintaining overall peroxisome homeostasis as well as proteolytically degrading peroxisomal proteins damaged by oxidation. The protein has an N-terminal Lon N substrate recognition domain, an ATPase domain, a proteolytic domain, and, in some isoforms, a C-terminal peroxisome targeting sequence. Alternative splicing results in multiple transcript variants encoding distinct isoforms. [provided by RefSeq, Jan 2017]