

## Product datasheet for **RC210875**

### **LONP2 (NM\_031490) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	LONP2 (NM_031490) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	LONP2
Synonyms:	LONP; LONPL; PLON; PSLON
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

ORF Nucleotide  
Sequence:

>RC210875 representing NM\_031490  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGCATCGCC**

ATGTCATCAGTGAGCCCCATCCAGATCCCCAGTCGCCTCCCGCTGCTGCTCACCCACGAGGGCGTCTCTGC  
TGCCCGGCTCCACCATGCGCACCCAGCGTGGACTCGGCCCGCAACCTGCAGCTGGTGGGAGCCGCTTCT  
GAAGGGCACGTCGCTGCAAAGCACCATCCTGGCGTCCATCCCAACACGCCTGACCCCGCCAGCGACGCG  
CAGGACCTGCCGCGCTGCACAGGATTGGCACAGCTGCACTGGCCGTTCCAGTTGTGGGAGTAAGTGGC  
CCAAGCCCCACTACACTCTGTTGATTACAGGCCTATGCCGTTTCCAGATTGTACAGGTCTTAAAAGAGAA  
GCCATATCCATTGCTGAAGTGGAGCAGTTGGACCGACTTGAGGAGTTTCCCAACACCTGTAAAATGAGG  
GAGGAGCTAGGAGAACTATCAGAGCAGTTTTACAATATGCAGTACAATTGGTTGAAATGTTGGATATGT  
CTGTCCCTGCAGTTGCTAAATTGAGACGCTTTTTAGATAGTCTTCCAAGGGAAGCTTTACCAGACATCTT  
GACATCAATTATCCGAACAAGCAACAAAGAGAACTCCAGATTTTAGATGCTGTGAGCCTAGAGGAGCGG  
TTCAAGATGACTATACCACTGCTTGTGACACAAATGAAGGCCTGAAATGCTTCAAAAAACCAGAAAAAC  
CCAAGCAAGATGATGATAAGAGGGTTATAGCAATACGCCCTATTAGGAGAATTACACATATCTCAGGTAC  
TTTAGAAGATGAAGATGAAGATGAAGATAATGATGACATTGTCATGCTAGAGAAAAAATACGAACATCT  
AGTATGCCAGAGCAGGCCATAAAGTCTGTGTCAAAGAGATAAAGAGACTCAAAAAATGCCTCAGTCAA  
TGCCAGAATATGCTCTGACTAGAAATATTTGGAACCTTATGGTAGAATTCCTTGGAAACAAAAGTACAAC  
TGACCGCTGGACATTAGGGCAGCCCGGATTCTTCTGGATAATGACCATTACGCCATGGAAAAATGAAG  
AAAAGAGTACTGGAATACTTGGCTGTGACAGAGCTCAAAAAAACCTGAAGGGCCCAATCCTATGCTTTG  
TTGGCCCTCCTGGAGTTGGTAAAACAAGTGTGGGAAGATCAGTGGCCAAGACTCTAGTTCGAGAGTCCA  
CAGGATTGCACCTGGAGGAGTATGTGATCAGTCTGACATTTCGAGGACACAGGCGCACCTATGTTGGCAGC  
ATGCCTGGTCGCATCATCAACGGCTTGAAGACTGTGGGAGTGAACAACCCAGTGTTCCTATTAGATGAGG  
TTGACAACTGGGAAAAAGTCTACAGGGTATCCAGCAGCAGCTCTGCTTGGAGTGTGGATCCTGAACA  
AAACCATAACTTCACAGATCATTATCTAAATGTGGCCTTTGACCTTTCTCAAGTCTTTTTATAGCTACT  
GCCAACACCCTGCTACCATTCCAGCTGCCTTGTGGACAGAATGGAGATCATTAGGTTCCAGTTATA  
CACAGGAGGAGAAGATAGAGATTGCCATAGGCCTTGTCCCAAGCAGCTGGAACAACATGGGCTGAC  
TCCACAGCAGATTAGATACCCAGGTCACCCTTGTGACATCATCACCAGGTATACCAGAGAGGCAGGG  
GTTTCGTTCTCGATAGAAAACCTGGGGCCATTTGCCAGCTGTGGCCGTGAAGGTGGCAGAGGACAGC  
ATAAGGAAGCCAAGTTGGACGTTCTGATGTGACTGAGAGAGAAGGTTGCAGAGAACACATCTTAGAAGA  
TGAAAAACCTGAATCTATCAGTGACACTACTGACTTGGCTCTACCACCTGAAATGCCGATTTTGATTGAT  
TTCCATGCTCTGAAAGACATCCTTGGGCCCCGATGTATGAAATGGAGGTATCTCAGCGTTTGAGTCAGC  
CAGGAGTAGCAATAGGTTTGGCTTGGACTCCCTTAGGTGGAGAAATCATGTTTCGTGGAGGCGAGTCGAAT  
GGATGGCAGGGCCAGTTAACTTGACCGGCCAGCTCGGGACGTGATGAAGGAGTCCGCCACCTCGCT  
ATCAGTGGCTCCGCAGCAACGCAAGAAGTACCAGCTGACCAATGCTTTTGGAAAGTTTGTATCTTCTG  
ACAACACAGACATCCATCTGCACCTCCAGCTGGAGCTGTACAAAAGATGGACCATCTGCTGGAGTTAC  
CATAGTAACTGTCTCGCTCACTTTTTAGTGGCGGCTGGTACGTTTCAGATGTAGCCATGACTGGAGAA  
ATTACACTGAGAGGTCTTGTCTTCCAGTGGGTGGAATTAAGACAAAGTGTGGCGGCACACAGAGCGG  
GACTGAAGCAAGTCATTATTCCTCGAGAAATGAAAAAGACCTTGAGGGAATCCCAGGCAACGTACGACA  
GGATTTAAGTTTTGTACAGCAAGCTGCCTGGATGAGGTTCTTAATGCAGCTTTTGTGGTGGCTTTACT  
GTCAAGACCAGACCTGGTCTGTTAAATAGCAAAGT

**ACCGGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC210875 representing NM\_031490  
 Red=Cloning site Green=Tags(s)

MSSVSPIQIPSRLPLLLTHEGVLLPGSTMRTSVDSARNLQLVRSRLLKGTSLQSTILGVIPNTPDPASDA  
 QDLPLHRIGTAALAVQVVGSNWPKPHYTLLITGLCRFQIVQLKEKYPPIAEVEQLDRLEEFNTCKMR  
 EELGELSEQFYKYAVQLVEMLDMSVPAVAKLRRLDLSLPREALPDILTSIIRTSNKEKLQILDVLSLEER  
 FKMTIPLLVRQIEGLKLLQKTRKPKQDDDKRVIAIRPIRRITHISGTLEDEDEDEDNDDIVMLEKKIRTS  
 SMPEQAHKVCVKEIKRLKMPQSMPEYALTRNYLELMVELPWNKSTTDRDLDIRAARILLDNDHYAMEKLLK  
 KRVLEYLAVRQLKNLKGPIILCFVGPVGVGKTSVGRSVAKTLGREFHRIALGGVCDQSDIRGHRRTYVGS  
 MPGRIINGLKTGVNPNVFLLEVDKLGKSLQGDPAALLEVLDPEQNHNFTHYLNVAFDLSQVLFIAI  
 ANTTATIPAALLDRMEIIQVPGYTQEEKIEIAHRHLIPKLEQHGLTPQQIQIPQVTTLDIITRYTREG  
 VRSLDRKLGAI CRAVAVKVAEGQHKEAKLDRSDVTEREGCREHILEDEKPEISDITDLALPPEMPILID  
 FHALKDILGPPMYEMEVSQLSQPGVAIGLAWTPLGGEIMFVEASRMDGEGQLTLTGQLGDMVKESAHLA  
 ISWLRNNAKKYQLTNAFGSFDLLDNTDIHLHFPAGAVTKDGPAGVTIVTCLASLFSRGLVRSDVAMTGE  
 ITRLGLVLPVGGIKDKVLAHRAGLKQVIIPRRNEKDLEGIPGNVRQDL SFVTASCLDEVLNAAFDGGFT  
 VKTRPGLLNLSK

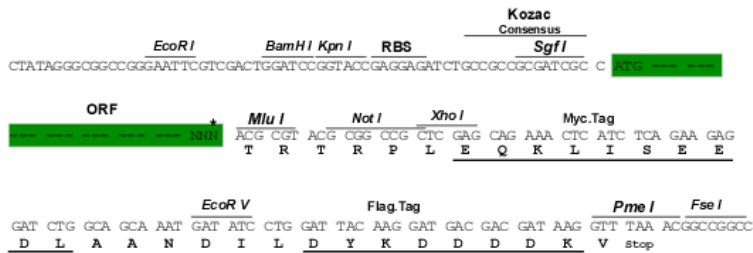
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk8114\\_f03.zip](https://cdn.origene.com/chromatograms/mk8114_f03.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

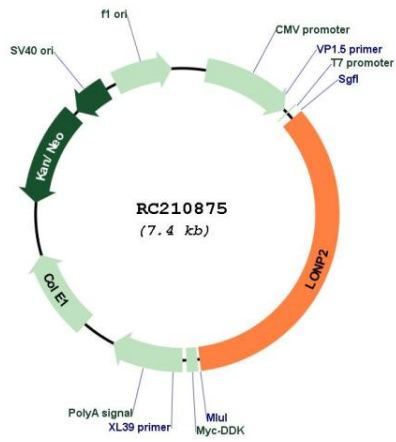
Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

<b>ACCN:</b>	NM_031490
<b>ORF Size:</b>	2556 bp
<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_031490.5</a>
<b>RefSeq Size:</b>	4342 bp
<b>RefSeq ORF:</b>	2559 bp
<b>Locus ID:</b>	83752
<b>UniProt ID:</b>	<a href="#">Q86WA8</a>
<b>Cytogenetics:</b>	16q12.1
<b>Domains:</b>	Lon_C, AAA, AAA
<b>Protein Families:</b>	Druggable Genome, Protease
<b>MW:</b>	94.4 kDa
<b>Gene Summary:</b>	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]

Product images:



Circular map for RC210875