

Product datasheet for **SC318495**

LARP1 (NM_033551) Human Untagged Clone

Product data:

Product Type: Expression Plasmids
Product Name: LARP1 (NM_033551) Human Untagged Clone
Tag: Tag Free
Symbol: LARP1
Synonyms: Lar1; LARP; Lhp1
Vector: pCMV6 series
Fully Sequenced ORF: >NCBI ORF sequence for NM_033551, the custom clone sequence may differ by one or more nucleotides

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ATGCCACTCAGGTGGAGCCGCTGCTGCCTGGGGCGCCACGCTCTTGACGGCCGAAGAG
CACGGGGGCTGGTGAGGAAGAAGCCGCGCCGCGCCGAGGGCAAGGGCGAGCCCGGG
CCAAACGACGTCGCGGGGGGAGCCGGACGGCAGCGCTCGGAGACCCCGCCGCGCTGC
GCCAAGCCGCACAAGGAGGGCACCGGGCAGCAGGAGCGCGAGAGCCCGCGCCGCTGCAG
CTGCCCGCGCCGAAGGCCCGGCCATCAGCGACGGGGAGGAGGGCGGGCGGAGCCAGGC
GCTGGCGGAGGAGCTGCCGGAGCCGCGGGCGGGGCGCGGGGACTTCGTGGAAGCCCC
CCGCCAAAGTGAACCCGTGGACTAAGAACGCATTGCCCGGGTCTGACCACCGTGAAC
GGACAGTCCCCCAGAACACTCTGCTCCAGCCAAGGTGGTGAGGGCAGCTGTTCTTAAA
CAGCGCAAAGGCAGCAAGTTGGTGACTTTGGAGATGCAATCAATTGGCCACACCTGGA
GAGATAGCCACAAAGAGTGTTCAGCCACAGTCCCACAAGCCTCAGCCTACCCGTAACCTG
CCACCCAGAAGGACATGAAGGAACAGGAGAAAGGAGAAGGGAGTGATAGTAAGGAGAGT
CCAAAAACCAATCAGATGAATCAGGGGAGGAAAAGAATGGAGATGAGGATTGCCAGCGA
GGCGGGCAGAAGAAGAAAGGAAACAAACACAAGTGGGTCCATTACAAATAGACATGAAG
CCTGAAGTGCCAGAGAGAACTGGCTTACGCCCCACTCGCCACCGGAGCCTAGACAC
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CCCCCACCAGCCTGGCAACCAGAGATCAAACCGGAGCCTGCCTGGCAGCAGCAGGAT
GAGACATCGAGTGTGAAGAGTGATGGGGCTGGTGGGGCGCGGGCTTCTTCCGTGGCCGT
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GAACTGCTCAAAGACTACATCAAGCGCCAGATTGAATACTACTTACAGCTGGACAATTTA
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CTAAAGGACAGCAAGGTGGTGGAGATCGTTGATGAGAAAGTTCTGAGGAGGGAGGAACCA
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CTACCAAGGGCCTGTCTGCCAGCCTGCCTGACCTGGATTCTGAGAACTGGATTGAAGTG
AAGAAGAGGCCTCGGCCATCCCCAGCACGGCCAAAGAAGTCAGAGGAGTCCAGATTTTCC

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CACCTGACCTCTCTGCCTCAGCAGCTGCCTTCCCAGCAGCTGATGTCCAAGGATCAGGAT
 GAGCAAGAGGAACTGGATTTTCTGTTTGACGAGGAGATGGAGCAGATGGATGGGCGGAAG
 AACACCTTCACTGCCTGGTCTGATGAGGAATCTGACTATGAGATTGATGACAGGGATGTC
 AACAAAGATCCTCATTGTACCCAGACACCACATTACATGCGCCGGCACCCAGGGGGGAC
 CGCACAGGCAACCACACCTCGCGTGCCAAGATGAGCGCGAACTGGCCAAGGTCATTAAT
 GATGGCCTCTTCTACTATGAGCAGGACCTGTGGGCTGAAAAGTTTGAACCTGAGTATTCC
 CAGATCAAGCAAGAAGTCGAGAAGTTCAAAAAGGTCAATATGATCAGCCGGGAGCAGTTT
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 CGGTTCCAGCAAGTTCCTACGGATGCCCTGGCCAACAAGTTGTTTGGTGCTCCTGAGCCC
 TCCACCATCGCCCGCTCTCTACCAACCACTGTCCCAGAGTCACCAAACTACCGCAACACC
 AGGACCCCTCGCACTCCCCGGACACCACAGCTCAAAGACTCAAGCCAGACATCACGGTTT
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 CACAGGCCCGTACTGCTTCCATCAGCTCCAGCCCCTCAGAAGGGACGCCTACAGTTGGC
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 AAGGAAAATGGCTTACACAACACGTCTACCATAGTATCGTAGGCGCTGCCTAATGAG
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 GAGGACGCCAAAGAAGGCTACAGATATGGTTTGGAGTGCCTTTTTCGATACTACAGTTAT
 GGCCTGAAAAGAAGTTCCGGCTGGACATATTC AAGGATTTTCAGGAGGAAACGGTGAAG
 GACTATGAAGCTGGCCAAGTGTATGGGCTGGAGAAGTTCTGGGCCTTCTTGAATATTCC
 AAAGCCAAAAATTTGGACATTGACCCCAAAGTCAAGAATACCTCGGCAAATTCGACGT
 CTTGAAGACTTCCGAGTAGATCCCCCATGGGTGAGGAGGGCAACCACAAGCGACACTCA
 GTGGTAGCAGGAGGTGGCGGCGGTGAGGGCAGGAAGCGGTGCCCTCCCAGTCTTCCAGC
 AGGCCTGCTGCCATGATCAGCAACCCCTACACCACCCACCGGCCAGCCTGTCCGGGAA
 GATGCCAATGGACAAGCCAGCACTCGAACACACAGACTTTGGGAAAAG

- Restriction Sites:** Please inquire
- ACCN:** NM_033551
- OTI Disclaimer:** Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
- OTI Annotation:** This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.
- 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_033551.2](#), [NP_291029.2](#)

RefSeq Size: 7280 bp

RefSeq ORF: 3291 bp

Locus ID: 23367

Cytogenetics: 5q33.2

Gene Summary: RNA-binding protein that regulates the translation of specific target mRNA species downstream of the mTORC1 complex, in function of growth signals and nutrient availability (PubMed:20430826, PubMed:23711370, PubMed:24532714, PubMed:25940091, PubMed:28650797, PubMed:28673543, PubMed:29244122). Interacts on the one hand with the 3' poly-A tails that are present in all mRNA molecules, and on the other hand with the 7-methylguanosine cap structure of mRNAs containing a 5' terminal oligopyrimidine (5'TOP) motif, which is present in mRNAs encoding ribosomal proteins and several components of the translation machinery (PubMed:23711370, PubMed:25940091, PubMed:28650797, PubMed:29244122, PubMed:26206669, PubMed:28379136). The interaction with the 5' end of mRNAs containing a 5'TOP motif leads to translational repression by preventing the binding of EIF4G1 (PubMed:25940091, PubMed:28650797, PubMed:29244122, PubMed:28379136). When mTORC1 is activated, LARP1 is phosphorylated and dissociates from the 5' untranslated region (UTR) of mRNA (PubMed:25940091, PubMed:28650797). Does not prevent binding of EIF4G1 to mRNAs that lack a 5'TOP motif (PubMed:28379136). Interacts with the free 40S ribosome subunit and with ribosomes, both monosomes and polysomes (PubMed:20430826, PubMed:24532714, PubMed:25940091, PubMed:28673543). Under normal nutrient availability, interacts primarily with the 3' untranslated region (UTR) of mRNAs encoding ribosomal proteins and increases protein synthesis (PubMed:23711370, PubMed:28650797). Associates with actively translating ribosomes and stimulates translation of mRNAs containing a 5'TOP motif, thereby regulating protein synthesis, and as a consequence, cell growth and proliferation (PubMed:20430826, PubMed:24532714). Stabilizes mRNAs species with a 5'TOP motif, which is required to prevent apoptosis (PubMed:20430826, PubMed:23711370, PubMed:25940091, PubMed:28673543).[UniProtKB/Swiss-Prot Function]