

Product datasheet for SC120115

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:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Cell Selection:	None
Fully Sequenced ORF:	>NCBI ORF sequence for NM_033551, the custom clone sequence may differ by one or more nucleotides

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ATGGCCACTCAGGTGGAGCCGCTGCTGCCTGGGGGCGCCACGCTCTTGCAGGCCGAAGAGCACGGGGGGC
TGTTGAGGAAGAAGCCGCGCCGCGCCGAGGGCAAGGGCGAGCCGGGCCAAACGACGTCGCGGGGG
GGAGCCGGACGGCAGCGCTCGGAGACCCCGCCGCTCGCCAAAGCCGACAAGGAGGGCACCGGGCAG
CAGGAGCGCGAGAGCCCGCGCCGCTGCAGCTGCCCGGCGCCGAAGGCCCGCCATCAGCGACGGGGAGG
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GGACAGTCCCCCCAGAACACTCTGCTCCAGCCAAGGTGGTGAGGGCAGCTGTTCTAAACAGCGCAAAG
GCAGCAAGGTTGGTGACTTTGGAGATGCAATCAATTGGCCACACCTGGAGAGATAGCCACAAGAGTGT
TCAGCCACAGTCCCACAAGCCTCAGCCTACCCGTAACCTGCCACCCAAGAAGGACATGAAGGAACAGGAG
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AGACAGAGTCGGCACCTGGCTCTCCTCGTGAGTACACCCAGTGCCAACCAAAACAGAGGAGGTCAGCAA
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AAGAAGAGGCCTCGGCCATCCCCAGCACGGCCCAAGAAGTCAGAGGAGTCCAGATTTTCCCACCTGACCT
CTCTGCCTCAGCAGCTGCCTTCCCAGCAGCTGATGTCCAAGGATCAGGATGAGCAAGAGGAACTGGATTT
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TCCCCCATGGGTGAGGAGGGCAACCAAGCGACACTCAGTGGTAGCAGGAGGTGGCGGGGTGAGGGC
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CCGGCCAGCCTGTCCGGGAAGATGCCAAATGGACAAGCCAGCACTCGAACACACAGACTTTGGGAAAGTG
A
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5' Read Nucleotide Sequence:

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>OriGene 5' read for NM_033551 unedited
TTTGAATACGACTCACTATAGGGCGGCCGGAATTCGGCACGAGGGTGGAGCGGGAATC
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TGGATGTGCCTGGGCTTGGACTGGCTAGAATCTTCTCTGGACTGTTGCATGTACAGTGC
CTCCATCCTGGAGGCAAGAGAGTTGGGAGTGGCTCGAATCAGAGCCGTGCCAAGATATC
CCTGCTGTTGCATCGTTTGAAGCTGACGTCCTGTGTCTGTACTGCTGCCACTGTTGTG
TCCTCGCTCTGCTTGCTGTTGCCTCACGCCAGGCCCGTCTGCCGTGACACCCTTCATC
CTACCCTTGGAACCCCAAGGCCAAGTTGGTTCAAACCTGTTGGAGAACAGAGTTGGCCTGC
ATCTGGAACACACTTGTCTCAGCTTACCATCTCCTCACACCCAGAGTGGAAGGTGAA
CACCTGCAGCTGAGGCTTGGAAACGTTTCTTGTGTTGCCCTGAAAATCTTTGAGACCTC
AGGGAGGCTCTGTCTCTTAAAAGGTGGAGAAAGATGCCATTCTCTCCCTAAGGTCTGG
TGGAGTCTCCCATCTTGCATACCCTTCTGCAAGCCATCTATCTCTGCTCACTCTCCAAT
TGACCCGCTGGGAACAAGGGATGAGGAGGAGTTGGGGCTGGGGGAATCCTGCCAGTT
GGTGAAGCCCTGTGGCAGGAAGTATATGTGGACATAGAGTATACCTGATTCTCTTTCTTC
ANCCCTGACTGCTTGGGTNGNGCTGTGAATGATAATGGAATGGNCTGAGTCTGCTGNTGT
CAAAAGGCAGGAGGNTGATGAAGGACTGACCACATGGACTGGNATGGGTGTCGGNTTGGG
CATGACTGCACGTCACCTAATGGNGACTGGCA
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3' Read Nucleotide Sequence: >OriGene 3' read for NM_033551 unedited
NCGTATTCTATGNACCGCGCCGATTCTANGATCGAGTTTTTTTTTTTTTTTTTTGCCTT
TTCAATGTTTTATTTTTATACATTTTTTTGTATTAATAAGAAAAGCTAATTACCACAAATT
ACAAAGGACTAAAGCAGGACTAGAATAATGAATGAATCACTTCAGCCTGGAAAGCAGATA
CTCTCAATAATATTAATGTTATAATAACAAGCTCATTCAAGTATTTTACATTTTTTTGTCC
TTTTAAATATGATATCCTAGCACATAGTAAAGATAATGTACTACGAGCGTAAGGTGGAAC
CTTCTCCGCAAAGCCAGATGACAAGTTTTCTCTCCAGTGAGAAATGGGCTCCAAGTTCT
TATCTTCTCTGCCACTCAGCATGGCTGAAGGGGAGAGGGTGGGTGTTAGGGAAAATCCA
GGGACCCTTCCACACAGGAGGTACTCTGGGTTCCATTCAAGAGGGTGCCAGATAATTCA
GATCACTCTACCCAGGCTTTTTGGCAAAAAACAACCCTCACCTCCGTAAGTACTAGTCATCT
TCCTTGCCCTCCTCCTCACTTCCCTTCCAGGGCCTTCTAAGCAGCTTACTTTCTTTTGT
AAAATCAATCACCAGGAAAGGGGAAAAAAAAAAAAAAAAAGAGCTACAATGGAACAAAACAA
AAACATTTAACTTTGACACAGGGGCTCAGCACCTCTATCTGAGCCCCAGGGTCCAG
GCTGGGACAGGCTGGATGGCCCTTCTCTACTGGTAGTGCCTTTGCTCCCAAGTGCAGGA
AGAGGGCTAAAGAGAAACCTGCCCTTAAACAGGGCTGAGGCACACAGACCTGCTGATGTC
TGATGCCCAAAAGTTATGTTGGCCATGGACCAACCTTGAAGGGATAGGATGAACAGG

Restriction Sites: NotI-NotI

ACCN: NM_033551

Insert Size: 2750 bp

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).

RefSeq: NM_033551.1, NP_291029.1

RefSeq Size: 7280 bp

RefSeq ORF: 162 bp

Locus ID: 23367

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]