

Product datasheet for **KN400935**

LARP1 Human Gene Knockout Kit (CRISPR)

Product data:

Product Type:	Knockout Kits (CRISPR)
Format:	2 gRNA vectors, 1 linear donor
Donor DNA:	EF1a-GFP-P2A-Puro
Symbol:	LARP1
Locus ID:	23367



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Components:
KN400935G1, LARP1 gRNA vector 1 in pCas-Guide CRISPR vector (GE100002)

KN400935G2, LARP1 gRNA vector 2 in pCas-Guide CRISPR vector (GE100002)

KN400935D, Linear donor DNA containing LoxP-EF1A-tGFP-P2A-Puro-LoxP:

The sequence below is cassette sequence only. The linear donor DNA also contains proprietary target sequence.

LoxP-EF1A-tGFP-P2A-Puro-LoxP (2739 bp)

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ATAACTTCGT ATAATGTATG CTATACGAAG TTATCGTGAG GCTCCGGTGC CCGTCAGTGG GCAGAGCGCA
CATCGCCAC AGTCCCGAG AAGTTGGGG GAGGGGTCGG CAATTGAACC GGTGCCTAGA GAAGGTGGCG
CGGGTAAC TGGAAAGTG ATGTCGTGTA CTGGCTCCG CTTTTCCCG AGGGTGGGG AGAACCGTAT
ATAAGTCAG TAGTCGCCG GAACGTTCT TTTCCGAAC GGTTCGCCG CAGAACACAG GTAAGTGCCG
TGTGTGGTTC CCGCGGGCT GGCCTCTTA CGGGTTATG CCCTTGCGTG CCTTGAATTA CTTCCACCTG
GCTGCAGTAC GTGATTCTG ATCCCGAGCT TCGGGTTGGA AGTGGGTGG AGAGTTCGAG GCCTTGCCTG
TAAGGAGCCC CTTCGCCTG TGCTTGAGT GAGGCCTGG CTGGGCGTG GGGCCCGCG GTGCGAATCT
GGTGGCACCT TCGCGCCTG CTCGCTGCT TCGATAAGT TCTAGCCATT TAAAATTTT GATGACCTGC
TGCAGCGCT TTTTCTGGC AAGATAGTCT TGTAATGCG GGCCAAGATC TGCACACTGG TATTTTCGTT
TTTGGGGCG CGGGCGGCA CGGGGCCCG GCGTCCCAGC GCACATGTTC GGCAGGCGG GGCCTGCGAG
CGCGGCCACC GAGAATCGGA CGGGGTAGT CCAAGCTGG CCGGCCTGCT CTGGTGCCTG GCCTCGCGCC
GCCGTGTATC GCCCGCCCT GGGCGGAAG GCTGGCCCG TCGGCACCAG TTGCGTGAGC GGAAAGATGG
CCGTTCCCG GCCCTGTGC AGGGAGCTCA AAATGGAGGA CGCGGCGCTC GGGAGAGCGG GCGGGTGAAGT
CACCCACACA AAGGAAAAG GCCTTCCGT CCTCAGCCG CGCTTCATGT GACTCCACGG AGTACCGGGC
GCCGTCAGG CACCTCGAT AGTTCTGAG CTTTGGAGT ACGTCGTCT TAGGTTGGGG GGAGGGGTTT
TATGCGATGG AGTTTCCCA CACTGAGTG GTGAGACTG AAGTTAGGCC AGCTTGGCAG TTGATGTAAT
TCTCCTTGG AATTGCCCT TTTGAGTTG GATCTTGGT CATTCTCAAG CCTCAGACAG TGGTTCAAAG
TTTTTTCTT CCATTTCAAG TGTCGTGAAT GGAGAGCGAC GAGAGCGGCC TGCCCGCCAT GGAGATCGAG
TGCCGCATCA CCGGCACCCT GAACGGCGTG GAGTTCGAGC TGGTGGGCGG CGGAGAGGGC ACCCCCGAGC
AGGGCCGCAT GACCAACAAG ATGAAGAGCA CCAAAGGCGC CCTGACCTTC AGCCCTACC TGCTGAGCCA
CGTGATGGC TACGGCTTCT ACCACTTCG CACCTACCC AGCGGCTACG AGAACCCCTT CCTGCACGCC
ATCAACAACG GCGGCTACAC CAACACCCG ATCGAGAAGT ACGAGGACGG CGGCGTGCTG CACGTGAGCT
TCAGCTACCG CTACGAGGCC GGCCGCTGA TCGGCGACTT CAAGGTGATG GGCACCGGCT TCCCGGAGGA
CAGCGTGATC TTCACCGACA AGATCATCCG CAGCAACGCC ACCGTGGAGC ACCTGCACCC CATGGCGGAT
AACGATCTGG ATGGCAGCTT CACCCGACC TTCAGCCTGC GCGACGGCGG CTACTACAGC TCCGTGGTGG
ACAGCCACAT GCACTTCAAG AGCGCCATCC ACCCCAGCAT CCTGCAGAAC GGGGGCCCA TGTTCCCTT
CCGCCCGTG GAGGAGGATC ACAGCAACAC CGAGTGGGC ATCGTGGAGT ACCAGCACGC CTTCAAGACC
CCGGATGAG ATGCCGGTGA AGAAAGAGGA AGCGGAGCTA CTAACCTCAG CCTGCTGAAG CAGGCTGGAG
ACGTGGAGGA GAACCTGGA CCTATGACCG AGTACAAGC CACGGTGC GCCTGCCACC GCGACGACGT
CCCCAGGGC GTACGCACC TCGCCGCCG GTTCGCCGAC TACCCGCCA CGGCCACAC CGTCGATCCG
GACCGCCACA TCGAGCGGT CACCGAGCTG CAAGAATCT TCCTCACGG CGTCGGGCTC GACATCGGCA
AGGTGTGGT CGCGGACGAC GGCGCCCGG TGGCGTCTG GACCACGGC GAGAGCGTGC AAGCGGGGGC
GGTGTTCGCC GAGATCGGCC CGCGCATGGC CGAGTTGAGC GGTTCGGGC TGGCCCGCA GCAACAGATG
GAAGGCCTCC TGCGCCGCA CCGGCCAAG GAGCCCGCT GTTCTCTGG CACCCTCGG GTCTCGCCG
ACCACCAGG CAAGGTCTG GGCAGCGCG TCGTGTCCC CGGAGTGGAG GCGGCCGAGC GCGCCGGGT
GCCCGCTTC CTGGAGACT CCGCGCCCG CAACCTCCC TTCTACGAG GGCTCGGCT CACCGTCACC
GCCGACGTC AGGTGCCGA AGGACCGCG ACCTGGTGA TGACCCGCA GCCCGGTGCC TGAAACTTGT
TTATTGCAGC TTATAATGGT TACAAATAA GCAATAGCAT CACAAATTC ACAAATAAG CATTTTTTTC
ACTGCATTCT AGTTGTGGT TGTCCAACT CATCAATGA TCTTAATAAC TTCGTATAAT GTATGCTATA CGAAGTTAT
    
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Disclaimer:	These products are manufactured and supplied by OriGene under license from ERS. The kit is designed based on the best knowledge of CRISPR technology. The system has been functionally validated for knocking-in the cassette downstream the native promoter. The efficiency of the knock-out varies due to the nature of the biology and the complexity of the experimental process.
RefSeq:	<u>NM_015315</u> , <u>NM_033551</u> , <u>NM_001367713</u> , <u>NM_001367714</u> , <u>NM_001367716</u> , <u>NM_001367717</u> , <u>NM_001367718</u> , <u>NM_001367715</u> , <u>NM_001367719</u>
UniProt ID:	<u>Q6PKG0</u>
Synonyms:	LARP
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]

Product images:

