

## Product datasheet for RC204939

### LIAS (NM\_006859) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	LIAS (NM_006859) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	LIAS
Synonyms:	HGCLAS; HUSSY-01; LAS; LIP1; LS; PDHLD
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC204939 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGTCTCTACGCTGCGGGGATGCAGCCCGACCCTGGGGCCCCGGGTATTTGGGAGATATTTTTGCAGCC  
CAGTCAGACCGTTAAGCTCCTTGCCAGATAAAAAAGGAACTCTACAGAATGGACCAGACCTTCAAGA  
TTTTGTATCTGGTATCTGCAGACAGGAGCACCTGGGATGAATATAAAGGAAACCTAAAACGCCAGAAA  
GGAGAAAGGTTAAGACTACCTCCATGGCTAAAGACAGAGATCCCATGGGAAAAATTACAATAAAGTGA  
AAAATACTTTGCGGAATTTAAATCTCCATACAGTATGTGAGGAAGCTCGATGTCCCAATATTGGAGAGTG  
TTGGGGAGGTGGAGAATATGCCACCGCCACAGCCACGATCATGTTGATGGGTGACACATGTACAAGAGGT  
TGCAGATTTTGTCTGTTAAGACTGCAAGAAATCCTCCTCCACTGGATGCCAGTGAGCCCTACAATACTG  
CAAAGGCAATTGCAGAATGGGGTCTGGATTATGTTGTCCTGACATCTGTGGATCGAGATGATATGCCTGA  
TGGGGGAGCTGAACACATTGCAAAGACCGTATCATATTTAAAGGAAAGGAATCCAAAAATCCTTGTGGAG  
TGTCTTACTCCTGATTTTCGAGGTGATCTCAAAGCAATAGAAAAAGTTGCTCTGTGAGGATTAGATGTGT  
ATGCACATAATGTAGAAACAGTCCCGGAATTACAGAGTAAGGTTTCGTGATCCTCGGGTCAATTTTGATCA  
GTCCCTACGTGTACTGAAACATGCCAAGAAGGTTACGCTGATGTTATTTCTAAAACATCTATAATGTTG  
GGTTTAGGCGAGAATGATGAGCAAGTATATGCAACAATGAAAGCACTTCGTGAGGCAGATGAGACTGCT  
TGACTTTAGGACAATATATGCAGCCAACAAGCGTCACCTTAAGGTTGAAGAATATATTACTCCTGAAAA  
ATTCAAATACTGGAAAAAGTAGGAAATGAACTTGGATTTCACTATACTGCAAGTGGCCCTTTGGTGCCT  
TCTTCATATAAGCAGGTGAATTTTCTGAAAAATCTAGTGGCTAAAAGAAAAACAAAGACCTC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC204939 protein sequence  
 Red=Cloning site Green=Tags(s)

MSLRCCGDAARTLGPRVFGRYFCSPVRPLSSLPDKKKELLQNGPDLQDFVSGDLADRSTWDEYKGNLKRQK  
 GERLRLPPWLKTEIPMGKNYNKLNKNTLRNLNLHTVCEEARCPNIGECWGGGEYATATATIMLMGDTCTRG  
 CRFCSVKTARNPPPLDASEPYNTAKAIAEWGLDYVVLTSVDRDDMPDGGAEHIAKTVSYLKERNPKILVE  
 CLTPDFRGDLKAIKVALSGLDVYAHNVETVPELQSKVRDPRVNFQSLRVLKHAKKVQPDVISKTSIML  
 GLGENDEQVYATMKALREADVDCLTLGQYMQPTRRHLKVEEYITPEKFKYWEKVGNELGFHYTASGPLVR  
 SSYKAGEFFLKNLVAKRRTKDL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6065\\_f05.zip](https://cdn.origene.com/chromatograms/mk6065_f05.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



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

**ACCN:** NM\_006859

**ORF Size:** 1116 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\\_006859.1](#)

**RefSeq Size:** 1764 bp

**RefSeq ORF:** 1119 bp

**Locus ID:** 11019

**UniProt ID:** [O43766](#)

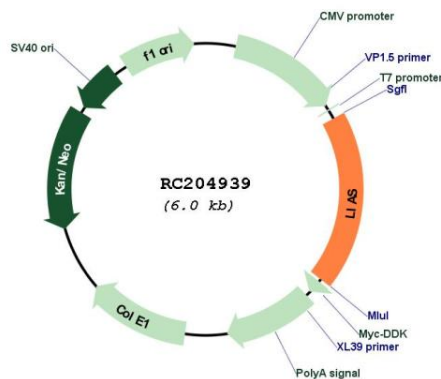
**Cytogenetics:** 4p14

**Protein Pathways:** Lipoic acid metabolism, Metabolic pathways

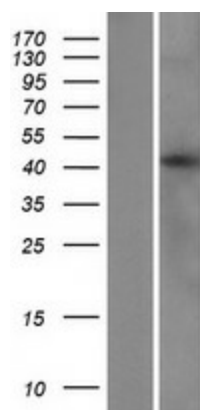
**MW:** 41.9 kDa

**Gene Summary:** The protein encoded by this gene belongs to the biotin and lipoic acid synthetases family. Localized in the mitochondrion, this iron-sulfur enzyme catalyzes the final step in the de novo pathway for the biosynthesis of lipoic acid, a potent antioxidant. The deficient expression of this enzyme has been linked to conditions such as diabetes, atherosclerosis and neonatal-onset epilepsy. Alternative splicing occurs at this locus, and several transcript variants encoding distinct isoforms have been identified. [provided by RefSeq, Aug 2020]

### Product images:



Circular map for RC204939



Western blot validation of overexpression lysate (Cat# [LY402050]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC204939 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).