

## Product datasheet for MR226117

### Lclat1 (NM\_001177967) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Lclat1 (NM_001177967) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Lclat1
Synonyms:	Agpat8; A1181996; Alcat1; Gm91; Lycat
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>MR226117 representing NM_001177967 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGTGCATGGAAGGGGATTTACTTTATACTCTTCTGTTTGCTGGAAGCTTTTTGGAAGTATTTTAA  
TGCTCGGCCCATTTTACCTTTGATGTTTATAAACCTGTCGTGGTATCGCTGGATTAGCAGCCGCTTTGT  
GGCTACATGGCTCACACTTCTGTGGCATTGCTGGAGACCATGTTTGGTGTGAGAGTGGTTATAACAGGT  
GACGCCTTTGTGCTGGAGAGCGGAGCGTCATCATGAACCACCGACACGTGTGGACTGGATGTTCC  
TGTGGAAGTGTCTAATGAGGTACAGCTACCTCAGGGTGGAGAAGATTTGCCTCAAATCCAGTCTCAAAG  
TGTTCTGGATTCGGCTGGGCCATGCAAGTTGCGGCCTTTATCTTTATTCATAGGAAGTGAAGGATGAT  
AAGAGCCATTTTGAAGACATGATTGATTATTTTGTGCCATCCATGAACCACTACAGCTTCTCATTTTTTC  
CAGAAGGAACTGACCTCACAGAAAATAAAGGCTAGGAGTAATGATTTTGTGAGAAGAACGGACTTCA  
GAAATATGAGTATGTTTTACACCAAGAACCACTGGCTTTACCTTTGTGGTGGACCGCCTAAGAGAAGGG  
AAGAACCTCGATGCTGTTTCATGACATCACGGTCGCATATCCTTACAACATCCCTCAAAGTGAAGACACC  
TTCTCCTGGAGACTTTCCCAAGGAGATCCACTCCACGTCCAGCGGTATCCAGCTGACTCTTCCCAC  
ATCCAAGGAGGACCTTCAGCTCTGGTGCCACAGAAGGTGGGAAGAAAAGGAGGAGAGGCTTCGGTCTTC  
TACCAAGGAGAGAAAACTTCCACTTTACTGGCAGAGTACAGTCCACCTTGAAGTCTGAGCTCAGAG  
TCCTTGGTCAAGTCACTGTCCATAGTGTACTGGGCCTTGTCTGCTCTGCAATGTGCCTGCTCATATA  
TCTGTACAGCCCTGTTCCGGTGGTATTTTATAATCAGCATTGTGTTCTTCGTGCTGCAGGAGAGAATATT  
GGTGGACTGGAATCATTGAACTGCATGTTACCGTTTTTTACACAAGCACCCACATTTAAATTCAAAGA  
AAAATGAG

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >MR226117 representing NM\_001177967  
 Red=Cloning site Green=Tags(s)

MVSWKGIYFILFLFAGSFFGSI FMLGPILPLMFINLSWYRWISSRLVATWLTLPVALLETMFGVRVVITG  
 DAFVPGERSVIIMNHRTRVDMFLWNCLMRYSLRVEKICLKSSLKSVPGFGWAMQVAAFIFIHRKWKDD  
 KSHFEDMIDYFCAIHEPLQLLIFPEGDTLTENNKARSNDFAEKNGLQKYEVVLPRTTGFVVDRLREG  
 KNLDVAVHDITVAYPINIPQTEKHLLLGDFPKEIHFHVQRYPADSLPTSKEDLQLWCHRRWEEKEERLRSF  
 YQGEKNFHFTGQSTVPPCKSELRLVLVVKLLSIVYWALFCSAMCLLIYLYSPVRWYFIISIVFFVLQERIF  
 GGLEIIELACYRFLHKHPLHNSKKNE

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



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

**ACCN:** NM\_001177967

**ORF Size:** 1128 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\\_001177967.1](#), [NP\\_001171438.1](#)

**RefSeq Size:** 4455 bp

**RefSeq ORF:** 1131 bp

**Locus ID:** 225010

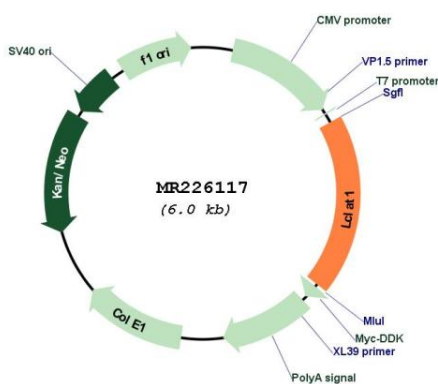
**UniProt ID:** [Q3UN02](#)

**Cytogenetics:** 17 E1.3- E2

**MW:** 44.4 kDa

**Gene Summary:** Exhibits acyl-CoA:lysocardiolipin acyltransferase (ALCAT) activity; catalyzes the reacylation of lyso-cardiolipin to cardiolipin (CL), a key step in CL remodeling (PubMed:15152008). Recognizes both monolysocardiolipin and dilyocardiolipin as substrates with a preference for linoleoyl-CoA and oleoyl-CoA as acyl donors (PubMed:15152008). Also exhibits 1-acyl-sn-glycerol-3-phosphate acyltransferase activity (AGPAT) activity; converts 1-acyl-sn-glycerol-3-phosphate (lysophosphatidic acid or LPA) into 1,2-diacyl-sn-glycerol-3-phosphate (phosphatidic acid or PA) by incorporating an acyl moiety at the sn-2 position of the glycerol backbone (By similarity). Possesses lysophosphatidylinositol acyltransferase (LPIAT) activity (PubMed:20668164). Possesses lysophosphatidylglycerol acyltransferase (LPGAT) activity (By similarity). Required for establishment of the hematopoietic and endothelial lineages (PubMed:17675553).[UniProtKB/Swiss-Prot Function]

### Product images:



Circular map for MR226117