

## Product datasheet for **RC209485**

### LPCAT3 (NM\_005768) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	LPCAT3 (NM_005768) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	LPCAT3
Synonyms:	C3F; LPCAT; LPLAT 5; LPSAT; MBOAT5; nesy; OACT5
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC209485 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGGCGTCTCAGCGGAGGGGACGAGGGGACTGTGGTGGCGCTGGCGGGGTTCTGCAGTCGGGTTTCC  
 AGGAGCTGAGCCTTAACAAGTTGGCGACGTCCTGGGCGCGTCAGAACAGGCGCTGCGGCTGATCATCTC  
 CATCTTCTGGGTTACCCCTTTGCTTTGTTTTATCGGCATTACCTTTTCTACAAGGAGACCTACCTCATC  
 CACCTCTTCCATACCTTTACAGGCCTCTCAATTGCTTATTTAACTTTGGAAACCAGCTCTACCACTCCC  
 TGCTGTGTATTGTGCTTCAGTTCCTCATCTTCGACTAATGGGCCGACCATCACTGCCGCTCTCACTAC  
 CTTTTGCTCCAGATGGCTACCTTCTGGCTGGATACTATTACACTGCCACCGGCAACTACGATATCAAG  
 TGGACAATGCCACATTGTGTTCTGACTTTGAAGCTGATTGGTTTGGCTGTGACTACTTTGACGGAGGGA  
 AAGATCAGAATTCCTTGCTCTGAGCAACAGAAATATGCCATACGTGGTGTTCCTTCCCTGCTGGAAGT  
 TGCTGGTTTCTCCTACTTCTATGGGGCCTTCTTGGTAGGGCCCCAGTTCTCAATGAATCACTACATGAAG  
 CTGGTGCAGGGAGAGCTGATTGACATACAGGAAAGATACCAAACAGCATCATTCCTGCTCTCAAGCGCC  
 TGAGTCTGGGCCTTTTCTACCTAGTGGGCTACACACTGCTCAGCCCCACATCACAGAAGACTATCTCCT  
 CACTGAAGACTATGACAACCACCCTTCTGGTCCGCTGCATGTACATGCTGATCTGGGGCAAGTTTGTG  
 CTGTACAAATATGTCACCTGTTGGCTGGTCACAGAAGGAGTATGCATTTTGACGGGCTGGGCTTCAATG  
 GCTTTGAAGAAAAGGGCAAGGCAAGTGGGATGCCTGTGCCAACATGAAGGTGTGGCTCTTTGAAACAAA  
 CCCCCGCTTCACTGGCACCATTGCCTCATTCAACATCAACACCAACGCCTGGGTGGCCCGCTACATCTTC  
 AAACGACTCAAGTTCTTGGAAATAAAGAACTCTCAGGGTCTCTCGTTGCTATTCTGGCCCTCTGGC  
 ACGGCTGCACCTCAGGATACCTGGTCTGCTTCCAGATGGAATTCCTCATTGTTATTGTGGAAAGACAGGC  
 TGCCAGGCTCATTCAAGAGAGCCCCACCCTGAGCAAGCTGGCCGCCATTACTGTCTCCAGCCCTTCTAC  
 TATTTGGTGCAACAGACCATCCACTGGCTCTTCATGGGTTACTCCATGACTGCCTTCTGCCTCTTACAGT  
 GGGACAAATGGCTTAAGGTGTATAAATCCATCTATTTCTTGGCCACATCTTCTCCTGAGCCTACTATT  
 CATATTGCCTTATATTCAAAAGCAATGGTGCCAAAGAAAGAGAAGTTAAAGAAGATGGAA

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC209485 protein sequence  
 Red=Cloning site Green=Tags(s)

MASSAEGDEGTVALAGVLQSGFQELSLNKLATSLGASEQALRLIISIFLGYPPALFYRHYLFYKETYLI  
 HLFHTFTGLSIAYFNFQNQLYHSLLCIVLQFLILRLMGRITITAVLTTFCFQMayLLAGYYYYATGNyDIK  
 WTMPHCvLTLKLIGLAVDYFDGGKQNSLSSEQQKYAIRGVPSLLEVAGFSYFYGAFLVGPQFSMNHYMK  
 LVQGEIIdIPGkIPNSIIPALKRLSLGLFYLVGYTLLSPHITEDYLLTEDYDNHPFWFRcMYMLIWGKFV  
 LYKYVTCWLVTEGVCILTGLGFNGFEEKGKAKWDACANMKVWLFETNPRFTGTIASFNINTNAWVARYIF  
 KRlKFLGNKELsQGLSLLFLALWHGLHSGYLvcfQMEFLIVIVERQAARLIQESPTLSKLAaitVLPFY  
 YLVQQTiHwLfmGYSMTAFclFTWdKwLkVYKSIYFLGHIFFLSLLFIlPYIHKAMVPRKEKlKKME

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk6127\\_g07.zip](https://cdn.origene.com/chromatograms/mk6127_g07.zip)

**Restriction Sites:**

Sgfl-MluI

Cloning Scheme:



ACCN: NM\_005768

ORF Size: 1461 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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\\_005768.6](#)

RefSeq Size: 2297 bp

RefSeq ORF: 1464 bp

Locus ID: 10162

UniProt ID: [Q6P1A2](#)

Cytogenetics: 12p13.31

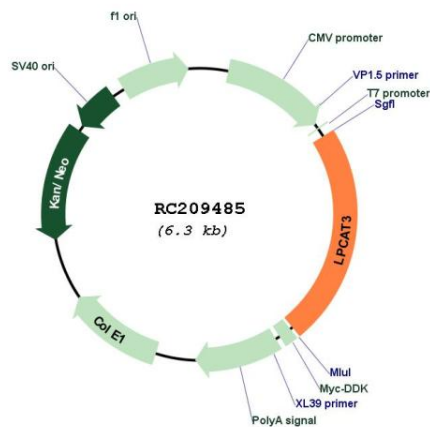
Domains: MBOAT

Protein Families: Transmembrane

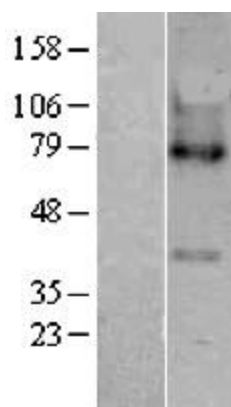
MW: 56 kDa

**Gene Summary:** Acyltransferase which mediates the conversion of lysophosphatidylcholine (1-acyl-sn-glycero-3-phosphocholine or LPC) into phosphatidylcholine (1,2-diacyl-sn-glycero-3-phosphocholine or PC) (LPCAT activity). Catalyzes also the conversion of lysophosphatidylserine (1-acyl-2-hydroxy-sn-glycero-3-phospho-L-serine or LPS) into phosphatidylserine (1,2-diacyl-sn-glycero-3-phospho-L-serine or PS) (LPSAT activity). Has also weak lysophosphatidylethanolamine acyltransferase activity (LPEAT activity). Favors polyunsaturated fatty acyl-CoAs as acyl donors compared to saturated fatty acyl-CoAs. Seems to be the major enzyme contributing to LPCAT activity in the liver. Lysophospholipid acyltransferases (LPLATs) catalyze the reacylation step of the phospholipid remodeling pathway also known as the Lands cycle.[UniProtKB/Swiss-Prot Function]

### Product images:



Circular map for RC209485



Western blot validation of overexpression lysate (Cat# [LY401759]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC209485 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).