

Product datasheet for **RG209485**

LPCAT3 (NM_005768) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	LPCAT3 (NM_005768) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	LPCAT3
Synonyms:	C3F; LPCAT; LPLAT 5; LPSAT; MBOAT5; nesy; OACT5
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG209485 representing NM_005768
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCGTCTCAGCGGAGGGGACGAGGGGACTGTGGTGGCGCTGGCGGGGTTCTGCAGTCGGGTTTCC
 AGGAGCTGAGCCTTAACAAGTTGGCGACGTCCTGGGCGCGTCAGAACAGGCGCTGCGGCTGATCATCTC
 CATCTTCTGGGTTACCCCTTTGCTTTGTTTTATCGGCATTACCTTTTCTACAAGGAGACCTACCTCATC
 CACCTCTTCCATACCTTTACAGGCCTCTCAATTGCTTATTTAACTTTGGAAACCAGCTCTACCACTCCC
 TGCTGTGTATTGTCTCAGTTCCTCATCTTCGACTAATGGGCCGACCATCACTGCCGCTCCTCACTAC
 CTTTTGCTCCAGATGGCTACCTTCTGGCTGGATACTATTACACTGCCACCGGCAACTACGATATCAAG
 TGGACAATGCCACATTGTGTTCTGACTTTGAAGCTGATTGGTTTGGCTGTTGACTACTTTGACGGAGGGA
 AAGATCAGAATTCCTTGCTCTGAGCAACAGAAATATGCCATACGTGGTGTTCCTCCCTGCTGGAAGT
 TGCTGGTTTCTCCTACTTCTATGGGGCCTTCTTGGTAGGGCCCCAGTTCTCAATGAATCACTACATGAAG
 CTGGTGCAGGGAGAGCTGATTGACATACAGGAAAGATACCAAACAGCATCATTCCTGCTCTCAAGCGCC
 TGAGTCTGGGCCTTTTCTACCTAGTGGGCTACACACTGCTCAGCCCCACATCACAGAAGACTATCTCCT
 CACTGAAGACTATGACAACCACCCTTCTGGTCCGCTGCATGTACATGCTGATCTGGGGCAAGTTTGTG
 CTGTACAAATATGTCACCTGTTGGCTGGTCACAGAAGGAGTATGCATTTTGACGGGCTGGGCTTCAATG
 GCTTTGAAGAAAAGGGCAAGGCAAGTGGGATGCCTGTGCCAACATGAAGGTGTGGCTCTTTGAAACAAA
 CCCCCGCTTCACTGGCACCATTGCCTCATTCAACATCAACACCAACGCCTGGGTGGCCCGCTACATCTTC
 AAACGACTCAAGTTCTTGGAAATAAAGAACTCTCAGGGTCTCTCGTTGCTATTCTGGCCCTCTGGC
 ACGGCCTGCACCTCAGGATACCTGGTCTGCTTCCAGATGGAATTCCTCATTGTTATTGTGAAAGACAGC
 TGCCAGGCTCATTCAAGAGAGCCCCACCCTGAGCAAGCTGGCCGCCATTACTGTCCTCCAGCCCTTCTAC
 TATTTGGTGAACAGACCATCCACTGGCTCTTTCATGGGTTACTCCATGACTGCCTTCTGCCTCTTACAGT
 GGGACAAATGGCTTAAGGTGTATAAATCCATCTATTTCTTGGCCACATCTTCTCCTGAGCCTACTATT
 CATATTGCCTTATATTCACAAAGCAATGGTGCCAAAGAAAGAGAAGTTAAAGAAGATGGAA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG209485 representing NM_005768
 Red=Cloning site Green=Tags(s)

MASSAEGDEGTVVALAGVLQSGFQELSLNKLATSLGASEQALRLIISIFLGYPPALFYRHYLFYKETYLI
 HLFHTFTGLSIAYFNFGNQLYHSLLCIVLQFLILRLMGRITITAVLTTFCFQMayLLAGYYYATGNyDIK
 WTMPHCVLTLKLIGLAVDYFDGGKDQNSLSSEQQKYAIRGVPSLLEVAGFSYFYGAFLVGPQFSMNHYMK
 LVQGEIDIPGKIPNSIIPALKRSLGLFYLVGYTLLSPHITEDYLLTEDYDNHPFWFRMYMLIWGKFV
 LYKYVTCWLVTEGVCILTGLGFNGFEEKKAKWDACANMKVWLFETNPRFTGTIASFNINTNAWVARYIF
 KRLKFLGNKELSQLSLLFLALWHGLHSGYLVCFQMEFLIVIVERQAARLIQESPTLSKLAAITVLQPFY
 YLVQQTIIHWLFMGYSMTAFCLFTWDKWLKVKYSIYFLGHIFFLSLLFILPYIHKAMVPRKEKLLKME

TRTRPLE - GFP Tag - V

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 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](#)

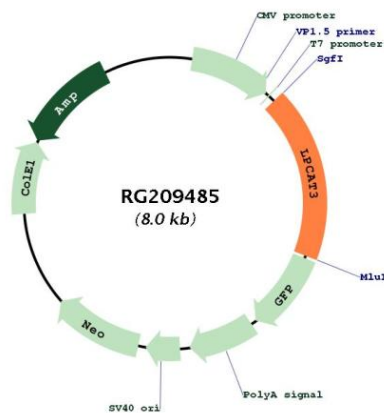
Cytogenetics: 12p13.31

Domains: MBOAT

Protein Families: Transmembrane

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 RG209485