

Product datasheet for **MR218203**

Lpcat2 (NM_173014) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Lpcat2 (NM_173014) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Lpcat2
Synonyms:	A330042H22; Ayt11; Ayt11a; lpafat1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>MR218203 representing NM_173014
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGAACCGATGCGCCGAGGCGGCCGCTGTGGCGGTACGGTCCCGGGTTCGGGCGTCGGGGACGCCGGC
 TCGCGCCACCCATGGTACCTCGCCAGGCGTCCTTCTCCGCGCGGGTGCCTCAACCCCTTCGTCCAGCA
 GACTACGATCAGTGCCTCCGAAGGCTGCAGATGTTTCTTCTTGAATTATTCTGCTCCAGTCCGTGCT
 TTAAGTGGTGAATAATTTGCTGCTCGCATGGCCATTTGCTGTCATTTCAACAGCATGCTGCTGAA
 AGCTGACCCATCCAATAAGCAATTGGAGGAGGAAGATCACTCGGCCCGCTTTGACATTTCTGGCGGTG
 CATGTTCTTCCATGGGGTTACGGTTACCGTAAAGGAAAGGTTGCAAGCCCTCTGGAAGCGCCATT
 TTTGTCGTCGCTCCTATTCCACGTTCTCGACGGAATGCTGTGTAGTAGCTGGGCTGCCTTCGCTGG
 TATCACGGAATGAGAATGCACAGACCCCTCTGGTTGGCAGACTGTTACGGGCTTTCAGCCAGTTTTGGT
 ATCCCGTGTGACCTGACTCCCGAAAAACACAATCAATGAAATCAAAAAGCGAGCGACATCAGGTGGA
 GAATGGCCCCAGATACTAGTTTTCCAGAAAGTACTTGTACTAATCGCTCCTGTTTGATTACTTTAAAC
 CAGGAGCCTTCATCCAGGAGTCCAGTGCAGCCCGTCTCTCAGATACCCAAACAAGTTGGATACTGT
 GACCTGGACCTGGCAAGGCTATACATTCCTCCAGCTGTGTGTGCTCACTTCTGTCAACTCTTACGAAG
 GTGGAGATTGAGTTTATGCCTGTGCAAGCACCCAGTGAGGAAGAGAAGAACGATCCTGTCCTTTTCGCCA
 GTAGAATCCGGAACTTAATGGCTGAAGCATTGGAATACCCGTGACGGATCACACCTACGAAGACTGCAG
 GCTGATGATCTCAGCGGGACAGCTCACGTTGCCTATGGAGGCCGGGCTGGTAGAATTTCAAAGATTAGC
 CGAAACTGAAATTAGACTGGGATGGTATCCGGAAGCACTTGGATGAATATGCGTCTATCGCAAGCTCTT
 CAAAGGAGGCAGAAATTGGAATCGAGGAGTTTCCGGAATACTTGAAGCTACCTGTTCCGATGTCCTGAG
 ACAACTTTTTGCACTCTTTGACAGGAATAATGATGGCAGTATTGACTTCGAGAGTATGTGATCGGCCTG
 GCTGTCTTGTGCAACCCTGCCAATACAGAAGAGATCATCCAGGTGGCATTAAAGCTCTTTGATGTTGATG
 AGGACGGCTACATAACAGAGGAGGAGTTTTGCACCATTCTGCAGGCTTCTTGGAGTGCCTGACCTTAA
 TGTTTTCTGGTCTTTCAGAGAAATTGCCAACGGGACTCTGTTTCTACGAGGAATCAAAGTTTCGCC
 CTAAGACCCAGAAATGCCAAGATTTACCACATACCTAGACCTCCAGACATGCCATGTATTCTCT
 TGCCAGAAAGGTCAGACAGCTCCCTCTGTTGCTAGTAATAAAGTCAGTCTGAGAGCCAGGAGGAGG
 CACCTCAGACAAAAGGTGGAC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR218203 representing NM_173014
 Red=Cloning site Green=Tags(s)

MNRCAEAAAVAATVPGSGVGDAGLRPPMVPRQASFFPPVPNPFVQQTISASRRLQMFLGLIILLPVRA
 LLVGIILLLAWPFAVISTACCPEKLTHPISNWRKITRPALTFLARAMFFSMGFTVTVKGKVASPLEAPI
 FVVAPHSTFFDGIACVVAGLPSLVSRNENAQTPLVGRLLRALQPVLVSRVDPDSRKNITINEIKKRATSGG
 EWPQILVFPEGTCTNRSCLITFKPGAFIPGVPVQPVLLRYPNKLDVTWTWQGYTFLQCLVLTFCQLFTK
 VEIEFMPVQAPSEEEKNDPVLFASRIRNLMAEALIPVTDHTYEDCRLMISAGQLTLPMEAGLVEFSKIS
 RKLKLDWDGIRKHLDEYASIASSSKGRIGIEEFAEYLKLPVSDVLRQLFALFDRNNDGSDIFREYVIGL
 AVLCPANTEEIIQVAFKLFVDEDEGYITEEFCTILQASLGVPDLNVSGLFREIAQRDSVSYEEFKSFA
 LKHPEYAKIFTTYLDLQCHVFSLPEEVQTAPSVASNKVSPESQEEGTSDDKKVD

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/ja1745_g09.zip

Restriction Sites:

SgfI-MluI

Cloning Scheme:



ACCN: NM_173014

ORF Size: 1632 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).

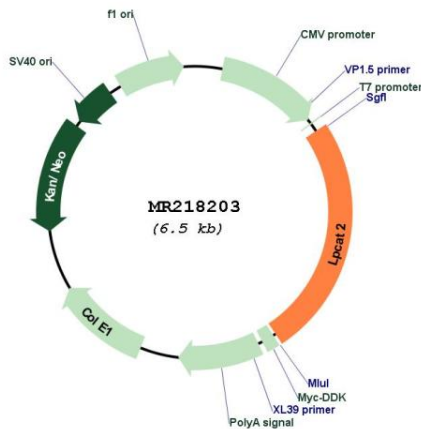
- Reconstitution Method:
1. Centrifuge at 5,000xg for 5min.
 2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
 3. Close the tube and incubate for 10 minutes at room temperature.
 4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid 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_173014.2](#)

RefSeq Size: 2800 bp
 RefSeq ORF: 1635 bp
 Locus ID: 270084
 UniProt ID: [Q8BYI6](#)
 Cytogenetics: 8 C5
 MW: 60.7 kDa

Gene Summary: Possesses both acyltransferase and acetyltransferase activities (PubMed:17182612, PubMed:18156367). Activity is calcium-dependent (PubMed:17182612). Involved in platelet-activating factor (PAF) biosynthesis by catalyzing the conversion of the PAF precursor, 1-O-alkyl-sn-glycero-3-phosphocholine (lyso-PAF) into 1-O-alkyl-2-acetyl-sn-glycero-3-phosphocholine (PAF) (PubMed:17182612). Also converts lyso-PAF to 1-O-alkyl-2-acyl-sn-glycero-3-phosphocholine (PC), a major component of cell membranes and a PAF precursor (PubMed:17182612, PubMed:18156367). Under resting conditions, acyltransferase activity is preferred (PubMed:17182612). Upon acute inflammatory stimulus, acetyltransferase activity is enhanced and PAF synthesis increases (PubMed:17182612). Also catalyzes the conversion of 1-acyl-sn-glycero-3-phosphocholine to 1,2-diacyl-sn-glycero-3-phosphocholine. Involved in the regulation of lipid droplet number and size (By similarity).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR218203