

## Product datasheet for **MG218203**

### Lpcat2 (NM\_173014) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Lpcat2 (NM_173014) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Lpcat2
Synonyms:	A330042H22; Ayt11; Ayt11a; lpafat1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>MG218203 representing NM\_173014  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGAACCGATGCGCCGAGGCGGCCGCTGTGGCGGTACGGTCCCGGTTCCGGCGTCGGGGACGCCGGC  
 TGGCGCCACCCATGGTACCTCGCCAGGCGTCTTCTTCCGCGCCGGTGCCCAACCCCTTCGTCCAGCA  
 GACTACGATCAGTGCCTCCGAAGGCTGCAGATGTTTCTTCTTGAATTATTCTGCTCCAGTCCGTGCT  
 TTAAGTGGTGAATAATTTGCTGCTCGCATGGCCATTTGCTGTCATTTCAACAGCATGCTGCTGAA  
 AGCTGACCCATCCAATAAGCAATTGGAGGAGGAAGATCACTCGGCCCGCTTTGACATTTCTGGCGCTGC  
 CATGTTCTTCCATGGGTTTACGGTTACCGTGAAGGAAAGGTTGCAAGCCCTCTGGAAGCGCCATT  
 TTTGTCGTCGCTCCTATTCCACGTTCTTCGACGGAATGCTGTGTAGTAGCTGGGCTGCCTTCGCTGG  
 TATCACGGAATGAGAATGCACAGACCCCTCTGGTTGGCAGACTGTTACGGGCTTTCAGCCAGTTTTGGT  
 ATCCCGTGTGACCTGACTCCCGAAAAACACAATCAATGAAATCAAAAAGCGAGCGACATCAGGTGGA  
 GAATGGCCCCAGATACTAGTTTTCCAGAAAGTACTTGTACTAATCGCTCCTGTTTGATTACTTTTAAAC  
 CAGGAGCCTTCATCCAGGAGTCCAGTGCAGCCCGTCTCTCAGATACCCAAACAAGTTGGATACTGT  
 GACCTGGACCTGGCAAGGCTATACATTCCTCCAGCTGTGTGTGCTCACTTCTGTCAACTCTTCAGGAAG  
 GTGGAGATTGAGTTTATGCCTGTGCAAGCACCCAGTGAGGAAGAGAAGAACGATCCTGTCCTTTTCGCCA  
 GTAGAATCCGGAACTTAATGGCTGAAGCATTGAAATACCCGTGACGGATCACACCTACGAAGACTGCAG  
 GCTGATGATCTCAGCGGGACAGCTCACGTTGCCTATGGAGGCCGGCTGGTAGAATTTCAAAGATTAGC  
 CGAAACTGAAATTAGACTGGGATGGTATCCGGAAGCACTGGATGAATATGCGTCTATCGCAAGCTCTT  
 CCAAAGGAGGCAGAATTGGAATCGAGGAGTTTCCGGAATACTTGAAGCTACCTGTTCCGATGCTCAG  
 ACAACTTTTTGCACTCTTTGACAGGAATAATGATGGCAGTATTGACTTCGAGAGATATGTGATCGGCCTG  
 GCTGTCTTGTGCAACCCTGCCAATACAGAAGAGATCATCCAGGTGGCATTAAAGCTCTTTGATGTTGATG  
 AGGACGGCTACATAACAGAGGAGGAGTTTTGCACCATTCTGCAGGCTTCTTGGAGTGCCTGACCTTAA  
 TGTTTTCTGGTCTTTCAGAGAAATTGCCAACGGGACTCTGTTTCTACGAGGAATCAAAGTTTCGCC  
 CTAAGCACCCAGAATATGCCAAGATTTACCACATACCTAGACCTCCAGACATGCCATGTATTCTCCT  
 TGCCAGAAGAGGTCCAGACAGCTCCCTCTGTTGCTAGTAATAAAGTCAGTCTGAGAGCCAGGAGGGG  
 CACCTCAGACAAAAGGTGGAC

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA

**Protein Sequence:**

>MG218203 representing NM\_173014  
 Red=Cloning site Green=Tags(s)

MNRCAEAAVAATVPGSGVGDAGLRPPMVPVPRQASFFPPVPNPFVQQTIIASRRLQMFLGIIILLPVRA  
 LLVGIILLLAWPFAVISTACCPEKLTHPISNWRKTRPALTFLLARAMFFSMGFTVTVKGKVASPLEAPI  
 FVVAPHSTFFDGIACVAVGLPSLVSRNENAQTPLVGRLLRALQPVLVSRVDPDSRKNTINEIKKRATSGG  
 EWPQILVFPEGTCTNRSCLITFKPGAFIPGVVPVLLRYPNKLDVTWTWQGYTFLQLCVLTFQCQFTK  
 VEIEFMPVQAPSEEEKNDPVLFASRIRNLMAEALIPVTDHTYEDCRLMISAGQLTLPMEAGLVEFSKIS  
 RKLKLDWDGIRKHLDEYASIASSSKGGRIIEEFAEYLKLPVSDVLRQLFALFDRNNDGSIDFREYVIGL  
 AVL CNPANTEEIIQVAFKLFVDVDEGYITEEFCTILQASLGVPDLNVSGLFREIAQRDSVSYEEFKSFA  
 LKHPEYAKIFTTYLDLQCHVFSLPEEVQTAPSVASNKVSPESQEEGTSKDKVD

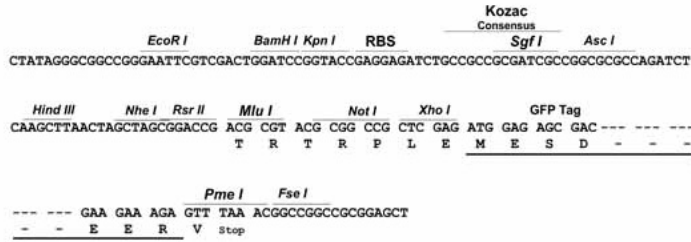
**TRTRPLE** - GFP Tag - V

**Restriction Sites:**

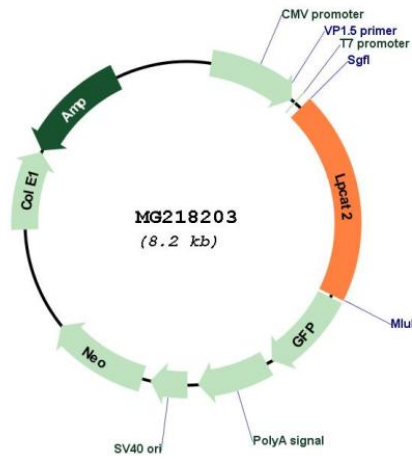
Sgfl-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shutting:



**Plasmid Map:**



<b>ACCN:</b>	NM_173014
<b>ORF Size:</b>	1632 bp
<b>OTI Disclaimer:</b>	<p>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 <a href="mailto:custsupport@origene.com">custsupport@origene.com</a> or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>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. <a href="#">More info</a></p>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"> <li>1. Centrifuge at 5,000xg for 5min.</li> <li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li> <li>3. Close the tube and incubate for 10 minutes at room temperature.</li> <li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li> <li>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.</li> </ol>
<b>RefSeq:</b>	<a href="#">NM_173014.2</a>
<b>RefSeq Size:</b>	2800 bp
<b>RefSeq ORF:</b>	1635 bp
<b>Locus ID:</b>	270084
<b>UniProt ID:</b>	<a href="#">Q8BYI6</a>
<b>Cytogenetics:</b>	8 C5

**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]