

Product datasheet for **MG208107**

Pla2g3 (BC079556) Mouse Tagged ORF Clone

Product data:

| | |
|---------------------------|--|
| Product Type: | Expression Plasmids |
| Product Name: | Pla2g3 (BC079556) Mouse Tagged ORF Clone |
| Tag: | TurboGFP |
| Symbol: | Pla2g3 |
| Mammalian Cell Selection: | Neomycin |
| Vector: | pCMV6-AC-GFP (PS100010) |
| E. coli Selection: | Ampicillin (100 ug/mL) |



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ORF Nucleotide Sequence:

>MG208107 representing BC079556
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGGGTCTGGGGTACTTCTAGGAGTCTGGCTTTCCTAGAGGGCTCCCATACCCGTCCTGGGACA
 GTACCTCTGCCATTTGGTCCAGCCCATCCCTGGTAACCTCTGGGCTCCCTGAGCTTCTGGGCAAAGA
 TGCCCAAGGCCTGGCATTATTCCAGGCCTTCTGGGATACACACCACAGGCTGCAGGTTTGTATCAGGCAG
 GATGAATCTGAATTATCACAGCGTTTCAGGGCCCTCTGTGCTCATGAGCCTTTCAGCACTCCTTCATCC
 AAACCCCTGGACCTGCGCTGCAGAGAGCACTGGCCACTCTGCAGAGCCAGTGGGAGGCATGTCAAAGGTC
 TCAGGATAGTCTACAGGAGCCAGGGAGAAGCGAGCAATAGAGCAGAGTGGAGCACCTGACAGAGAGCAC
 CGTCGAAGGAGGAGGCTGGACCATTCTGGCACGCTGTGGTGGTGTGGGAACTCTGCTGAAAATG
 CCTCAGAACTGGGCGTGTCCACGGCCCTGACCTCTGCTGCCGGAAACACGATCAGTGCCCAAAACCAT
 TTCGCCCTTGAGTATAACTATGGCATCCGAAATTTCCGCTTCCACACCATCTCTACTGCGACTGTGAC
 GTCAGGTTTCAACAGTGCCTGAGGAGCCAGGGTACTCCATCTCCGACATCATGGGCGTGGCCTTCTTCA
 ACGTGTGGAGATCCCCTGCTTTGTGCTGAAGGAGCAGGAGGCCTGTGTGGCTTGGAACTGGTGGGGCGG
 GTGCAGGGCATATGGCTCCACGCCCTTGTCACTTCGGCCAGGATTTACTATAATGCCTCCTGGAAG
 GCTGAGGCCACCTCATATACTCCAGCCCCAAAGCCAGCACCCAGCAAACACCCACAGAAGAGGGGCC
 CACAGCAGACACAAGCCAGAGCTCACAGCAACTACCACTACACCTTCCAGACCCCTGCCATCTCCTC
 CAGACCTGATATGATCCCAGAGGCCAGCCAGGAGTCCACATCTGGGCTTCCAGGATGGCCAAAACAT
 CAAAGTGGCCACCGAGTCTGTGGAAGCCTTCGCCACCTGGACAGTGTGAGCACCAGATCAAGCCCCAGG
 AACCAAGTCCACCTGCTCAACAGTGGCCAGATGCCCTTTTCCACTGCGATTGCACCCGCCGTCTGC
 AGGTTTCTGAGGCTCCACAGCCCGCTGCAGGCCACCGACAAAGTTTGGGATCTCCTGGTACCACCTGC
 TTTAAGCTGGCCCCCAACTTGACTGTGCTGAGGGCAAAGGCTGTTCCAGAGACCACAGGGCCATTAAGG
 TGTGAGCTCGGCACTTGCAGAGGCTTACAAGAGCCGACTCCATTTAGGGATAAAGGCACAGGTGGGGC
 TCTGGCACAGCCTGTGGAGCCCCAGGGAGCACCATGTCATTCTACAGCCAGTGTCTGCAAGTAACCCAG
 GCAATCTGGAGACGCAGGGGACAGAAGAAATTCTGGAGCTCA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>MG208107 representing BC079556
 Red=Cloning site Green=Tags(s)

MGVLGVLLGVLAFLGSHTRHWDSTSCHLVQPIPNPLGSLSFLGKDAQGLALFQAFWDTHRLQVCIRQ
 DESELITAFRALCAHEPLQHSFIQTGPALQRALATLQSQWEACQRSQDSPTGAREKRAIEQSGAPDREH
 RRRRRGWITPGTLWCGVGNSENAESELGVFHGPDLCREHDQCPQTISPLQYNYGIRNFRFHTISHCDD
 VRFQQLRSQGDSISDIMGVAFNVLEIPCFVLKEQEACVAWNNWGGCRAYGSTPLAHLRPRIYNASWK
 AEATSYTPSPQSPAPSKHPQKRGPOQTQARRHSTTTTTPFQTPAISSRPDMI PRGQPGVPHLGFQDGPKH
 QSAHRVCRSLRHLDQCEHQIKPQETKFHLLNSAQMPLFHCDCTRRLARFLRLHSPAGTDKVDLLGTTTC
 FKLAPQLDCAEGKCSRDRHRAIKVSARHLQLRHLKSRHFRDKGTGGALAQPVPEPPGSTMSFYSQCLQVTV
 AIWRRRGQKFWSS

TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: BC079556

ORF Size: 1514 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: [BC079556](#), [AAH79556](#)

RefSeq Size: 2642 bp

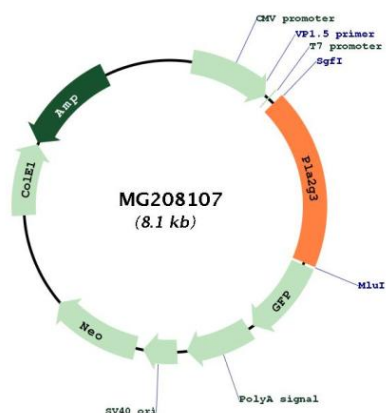
RefSeq ORF: 1514 bp

Locus ID: 237625

Cytogenetics: 11 A1

Gene Summary: Secretory calcium-dependent phospholipase A2 that primarily targets extracellular phospholipids. Hydrolyzes the ester bond of the fatty acyl group attached at sn-2 position of phospholipids without apparent head group selectivity (PubMed:20424323). Contributes to phospholipid remodeling of low-density lipoprotein (LDL) and high-density lipoprotein (HDL) particles. Hydrolyzes LDL phospholipids releasing unsaturated fatty acids that regulate macrophage differentiation toward foam cells (By similarity). May act in an autocrine and paracrine manner (PubMed:23624557). Secreted by immature mast cells, acts on nearby fibroblasts upstream to PTGDS to synthesize prostaglandin D2 (PGD2), which in turn promotes mast cell maturation and degranulation via PTGDR (PubMed:23624557). Secreted by epididymal epithelium, acts on immature sperm cells within the duct, modulating the degree of unsaturation of the fatty acyl components of phosphatidylcholines required for acrosome assembly and sperm cell motility (PubMed:20424323). Facilitates the replacement of fatty acyl chains in phosphatidylcholines in sperm membranes from omega-6 and omega-9 to omega-3 polyunsaturated fatty acids (PUFAs) (PubMed:20424323). Coupled to lipoxygenase pathway, may process omega-6 PUFAs to generate oxygenated lipid mediators in the male reproductive tract (PubMed:20424323). At pericentrosomal preciliary compartment, negatively regulates ciliogenesis likely by regulating endocytotic recycling of ciliary membrane protein (By similarity). Coupled to cyclooxygenase pathway provides arachidonate to generate prostaglandin E2 (PGE2), a potent immunomodulatory lipid in inflammation and tumorigenesis (By similarity). At colonic epithelial barrier, preferentially hydrolyzes phospholipids having arachidonate and docosahexaenoate at sn-2 position, contributing to the generation of oxygenated metabolites involved in colonic stem cell homeostasis (PubMed:28947740). Releases C16:0 and C18:0 lysophosphatidylcholine subclasses from neuron plasma membranes and promotes neurite outgrowth and neuron survival (PubMed:17868035).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MG208107