

Supplementary Data

Supplementary Table 1. Main fatty acid composition of plasmalogens used in this study and their relative contents.

Supplementary Table 2. List of primers used in the qPCR experiments.

Supplementary Figure 1. Comparison the expression levels of selected genes in M, PLL, PLH, AG and control groups by qPCR. Genes were randomly selected, and the expression levels of all genes in the control group were set as 1. The expression levels of genes in M, PLL, PLH and AG groups were quantified relative to those in the control group, using the $2^{-\Delta\Delta Ct}$ method. *β -Actin* gene was the internal reference gene, and the results were mean $\pm$ standard deviation (SD) (n=3). Note: The lowercase letters indicate significant changes in expression levels across different groups.

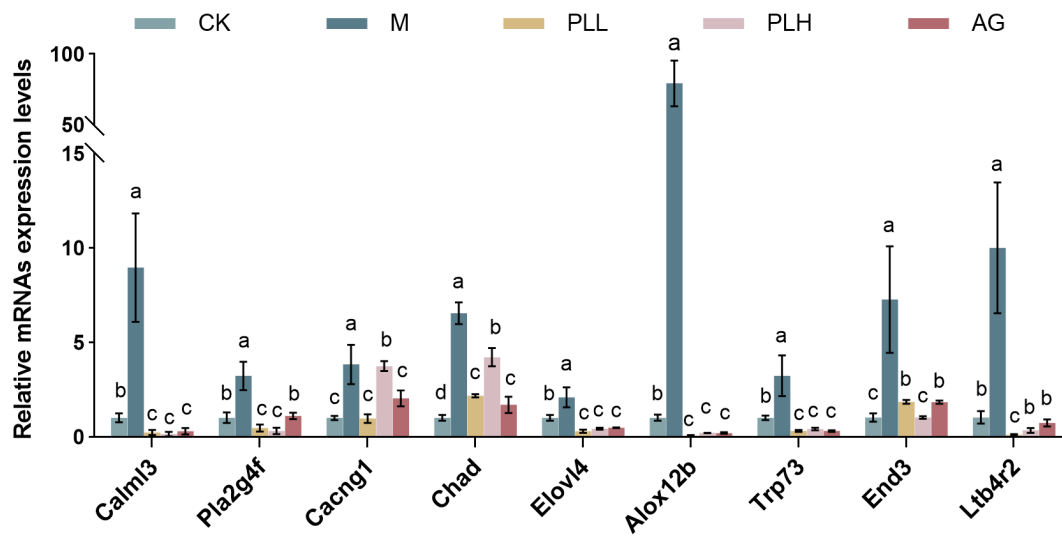
Supplementary Figure 2. The unprocessed scans of Western blots for quantify the levels of p38 MAPK, Calm4, Casp1 and TNF- α proteins. The lanes used in this study are highlighted within the red box. As the molecular weights of certain proteins are very similar (both Calm4 and TNF- α proteins are approximately 17 kDa, while p38 MAPK, β -actin and Casp1 are about 40 kDa), which made the separation of them on SDS-PAGE gels very difficult, thus Western blots were repeatedly conducted multiple times. The left section of the gel was used for detection Calm4 and p38 MAPK, while the right section was used for Casp1 and TNF- α .

Supplementary Table 1. Main fatty acid composition of plasmalogens used in this study and their relative contents.

Fatty acid composition	Relative contents (%)
C16:0	5.45 ± 0.17
C18:0	8.20 ± 0.42
C18:1	2.14 ± 0.25
C18:2	3.58 ± 0.38
C20:4	9.01 ± 0.47
C20:5	45.82 ± 0.62
C22:6	2.52 ± 0.08

Supplementary Table 2. List of primers used in the qPCR experiments.

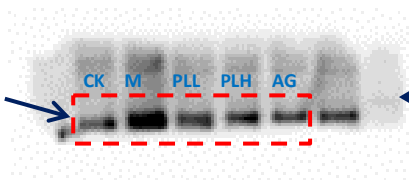
Gene Name	Forward Primers (5'-3')	Reverse Primers (5'-3')
<i>Alox12b</i>	GATTGTCCTATCTTCCTGCCGA	ACGTTGTACCGAGTGTGAGGGAT
<i>Cacng1</i>	TCCTACTTCAGGCACTTCAACC	AGTAGTGCTCTATCCAGACCGTGT
<i>Calml3</i>	GAAAGACACTGACAGCGAGGA	GTTCACTTGCCCATCACCATC
<i>Chad</i>	ACCACACTGAAACACGTCCATC	AGGGCATCTGTGTCACGAAT
<i>Edn3</i>	CTATTGCCACCTGGACATCATC	CCCGAAGGCTTTCTCTGTAGTT
<i>Elovl4</i>	CCTACTATGGGCTGACTGCG	GGGCAGTCGGTGTAGAGAGA
<i>Ltb4r2</i>	GCGTCAACCCAGTGCTCTAT	GAAGAGTCGAGTAAGGAACCGAG
<i>Pla2g4f</i>	CCTATGGCATGATGGATTTCAC	GCCTGATAGTCTCCTTGTTGTTT
<i>Trp73</i>	AGTGCTTCACTTCCCAAGGGT	AGGTCAAAGCCAAAGTCCG
<i>β-Actin</i>	GGTCATCACTATTGGCAACGAG	GAGGTCTTTACGGATGTCAACG



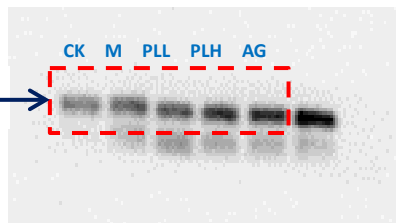
Supplementary Figure 1

p38 MAPK

p38 MAPK 38 kDa



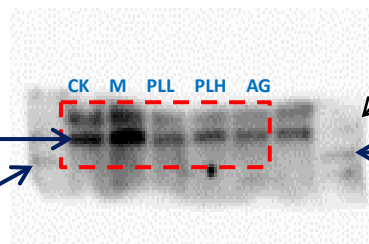
β-actin 42 kDa



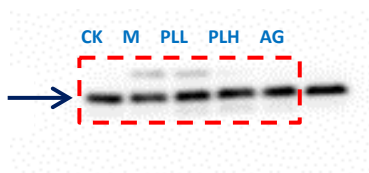
Calm4

Calm4 16.8 kDa

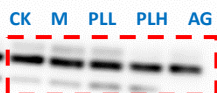
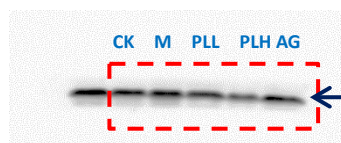
11 kDa protein marker



β-actin 42 kDa

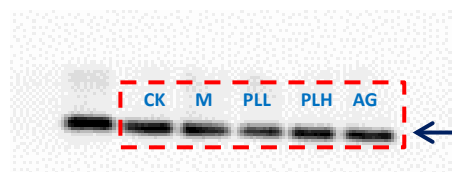
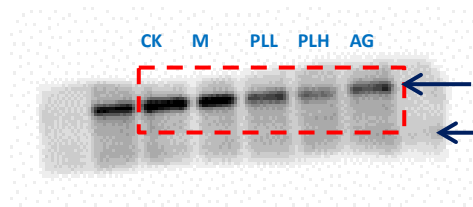


Casp1



β-actin 42 kDa

TNF-α



β-actin 42 kDa

Supplementary Figure 2