

	WT	KO
<b>Total Phospholipids</b>	19.4 ± 0.6	14.5 ± 0.2*
	<b>Genotype Effect</b>	
<b>Phosphatidylethanolamine (PE) Metabolites</b>	<b><math>\frac{KO}{WT}</math></b>	
1,2-dipalmitoyl-GPE (16:0/16:0) <sup>+</sup>	0.87	
1-palmitoyl-2-stearoyl-GPE (16:0/18:0) <sup>+</sup>	0.63*	
1-palmitoyl-2-oleoyl-GPE (16:0/18:1)	0.72*	
1-palmitoyl-2-linoleoyl-GPE (16:0/18:2)	0.18*	
1-palmitoyl-2-arachidonoyl-GPE (16:0/20:4) <sup>+</sup>	0.55*	
1-stearoyl-2-oleoyl-GPE (18:0/18:1)	1.04	
1-stearoyl-2-linoleoyl-GPE (18:0/18:2) <sup>+</sup>	0.43*	
1-oleoyl-2-linoleoyl-GPE (18:1/18:2) <sup>+</sup>	0.28*	
1,2-dilinoleoyl-GPE (18:2/18:2) <sup>+</sup>	0.30*	
1-stearoyl-2-arachidonoyl-GPE (18:0/20:4)	0.75*	
1-oleoyl-2-arachidonoyl-GPE (18:1/20:4) <sup>+</sup>	0.59*	
1-linoleoyl-2-arachidonoyl-GPE (18:2/20:4) <sup>+</sup>	0.70*	
<b>Phosphatidylcholine (PC) Metabolites</b>		
1,2-dipalmitoyl-GPC (16:0/16:0)	1.02	
1-palmitoyl-2-palmitoleoyl-GPC (16:0/16:1) <sup>+</sup>	1.15	
1-palmitoyl-2-stearoyl-GPC (16:0/18:0)	0.93	
1-palmitoyl-2-oleoyl-GPC (16:0/18:1)	0.95	
1-palmitoyl-2-linoleoyl-GPC (16:0/18:2)	0.67*	

1-palmitoyl-2-gamma-linolenoyl-GPC (16:0/18:3n6) <sup>+</sup>	0.67*
1-palmitoleoyl-2-linoleoyl-GPC (16:1/18:2) <sup>+</sup>	1.09
1-palmitoyl-2-arachidonoyl-GPC (16:0/20:4n6)	0.91
1,2-distearoyl-GPC (18:0/18:0)	1.65*
1-stearoyl-2-oleoyl-GPC (18:0/18:1)	1.67*
1-stearoyl-2-linoleoyl-GPC (18:0/18:2) <sup>+</sup>	1.10*
1,2-dioleoyl-GPC (18:1/18:1)	3.11*
1-oleoyl-2-linoleoyl-GPC (18:1/18:2) <sup>+</sup>	2.13*
1,2-dilinoleoyl-GPC (18:2/18:2)	0.70*
1-linoleoyl-2-linolenoyl-GPC (18:2/18:3) <sup>+</sup>	0.28*
1-stearoyl-2-arachidonoyl-GPC (18:0/20:4)	1.40*
1-linoleoyl-2-arachidonoyl-GPC (18:2/20:4n6) <sup>+</sup>	1.08
<b>Diacylglycerol Metabolites</b>	
diacylglycerol (12:0/18:1, 14:0/16:1, 16:0/14:1) [2] <sup>+</sup>	0.90
diacylglycerol (14:0/18:1, 16:0/16:1) [1] <sup>+</sup>	3.55*
diacylglycerol (14:0/18:1, 16:0/16:1) [2] <sup>+</sup>	1.42*
diacylglycerol (16:1/18:2 [2], 16:0/18:3 [1]) <sup>+</sup>	1.35
palmitoyl-palmitoyl-glycerol (16:0/16:0) [1] <sup>+</sup>	2.81*
palmitoyl-palmitoyl-glycerol (16:0/16:0) [2] <sup>+</sup>	0.94
palmitoyl-oleoyl-glycerol (16:0/18:1) [1] <sup>+</sup>	2.36*
palmitoyl-oleoyl-glycerol (16:0/18:1) [2] <sup>+</sup>	1.23*
palmitoyl-linoleoyl-glycerol (16:0/18:2) [1] <sup>+</sup>	1.00
palmitoyl-linoleoyl-glycerol (16:0/18:2) [2] <sup>+</sup>	0.76*

palmitoyl-linolenoyl-glycerol (16:0/18:3) [2] <sup>+</sup>	0.99
palmitoleoyl-linoleoyl-glycerol (16:1/18:2) [1] <sup>+</sup>	1.61
palmitoyl-dihomo-linolenoyl-glycerol (16:0/20:3n3 or 6) [2] <sup>+</sup>	1.40
palmitoyl-arachidonoyl-glycerol (16:0/20:4) [1] <sup>+</sup>	0.93
palmitoyl-arachidonoyl-glycerol (16:0/20:4) [2] <sup>+</sup>	1.15
palmitoyl-docosahexaenoyl-glycerol (16:0/22:6) [1] <sup>+</sup>	1.37*
palmitoyl-docosahexaenoyl-glycerol (16:0/22:6) [2] <sup>+</sup>	2.05*
stearoyl-linoleoyl-glycerol (18:0/18:2) [2] <sup>+</sup>	1.01
oleoyl-oleoyl-glycerol (18:1/18:1) [1] <sup>+</sup>	5.20*
oleoyl-oleoyl-glycerol (18:1/18:1) [2] <sup>+</sup>	2.43*
oleoyl-linoleoyl-glycerol (18:1/18:2) [1]	1.75*
oleoyl-linoleoyl-glycerol (18:1/18:2) [2]	1.36*
oleoyl-linolenoyl-glycerol (18:1/18:3) [2] <sup>+</sup>	1.53
linoleoyl-linoleoyl-glycerol (18:2/18:2) [1] <sup>+</sup>	0.73*
linoleoyl-linoleoyl-glycerol (18:2/18:2) [2] <sup>+</sup>	0.68*
linoleoyl-linolenoyl-glycerol (18:2/18:3) [2] <sup>+</sup>	0.92
stearoyl-arachidonoyl-glycerol (18:0/20:4) [1] <sup>+</sup>	1.33
stearoyl-arachidonoyl-glycerol (18:0/20:4) [2] <sup>+</sup>	1.14
oleoyl-arachidonoyl-glycerol (18:1/20:4) [1] <sup>+</sup>	1.47
oleoyl-arachidonoyl-glycerol (18:1/20:4) [2] <sup>+</sup>	1.64*
linoleoyl-arachidonoyl-glycerol (18:2/20:4) [1] <sup>+</sup>	1.44
linoleoyl-arachidonoyl-glycerol (18:2/20:4) [2] <sup>+</sup>	1.29
stearoyl-docosahexaenoyl-glycerol (18:0/22:6) [2] <sup>+</sup>	1.19*

linoleoyl-docosahexaenoyl-glycerol (18:2/22:6) [2] <sup>+</sup>	0.48*
<b>Ceramide Metabolites</b>	
ceramide (d18:1/14:0, d16:1/16:0) <sup>+</sup>	1.19*
ceramide (d18:1/17:0, d17:1/18:0) <sup>+</sup>	1.58*
ceramide (d18:1/20:0, d16:1/22:0, d20:1/18:0) <sup>+</sup>	0.89
ceramide (d18:2/24:1, d18:1/24:2) <sup>+</sup>	1.49*
glycosyl ceramide (d18:2/24:1, d18:1/24:2) <sup>+</sup>	1.79*
eicosanoylsphingosine (d20:1) <sup>+</sup>	0.83
<b>Sphingolipid Metabolites</b>	
palmitoyl dihydrosphingomyelin (d18:0/16:0) <sup>+</sup>	0.79*
behenoyl dihydrosphingomyelin (d18:0/22:0) <sup>+</sup>	0.28*
palmitoyl sphingomyelin (d18:1/16:0)	0.80*
stearoyl sphingomyelin (d18:1/18:0)	0.90
behenoyl sphingomyelin (d18:1/22:0) <sup>+</sup>	0.25*
tricosanoyl sphingomyelin (d18:1/23:0) <sup>+</sup>	0.64*
lignoceroyl sphingomyelin (d18:1/24:0)	0.36*
sphingomyelin (d18:1/14:0, d16:1/16:0) <sup>+</sup>	0.51*
sphingomyelin (d17:1/16:0, d18:1/15:0, d16:1/17:0) <sup>+</sup>	0.38*
sphingomyelin (d18:2/16:0, d18:1/16:1) <sup>+</sup>	0.53*
sphingomyelin (d18:1/17:0, d17:1/18:0, d19:1/16:0)	0.56*
sphingomyelin (d18:1/18:1, d18:2/18:0)	0.74*
sphingomyelin (d18:1/20:0, d16:1/22:0) <sup>+</sup>	0.41*
sphingomyelin (d18:1/20:1, d18:2/20:0) <sup>+</sup>	0.45*

sphingomyelin (d18:1/21:0, d17:1/22:0, d16:1/23:0) <sup>+</sup>	0.17*
sphingomyelin (d18:1/22:1, d18:2/22:0, d16:1/24:1) <sup>+</sup>	0.21*
sphingomyelin (d18:2/23:0, d18:1/23:1, d17:1/24:1) <sup>+</sup>	0.29*
sphingomyelin (d18:1/24:1, d18:2/24:0) <sup>+</sup>	0.68*
sphingomyelin (d18:2/24:1, d18:1/24:2) <sup>+</sup>	0.47*
sphingomyelin (d18:2/23:1) <sup>+</sup>	0.26*
sphingomyelin (d18:2/21:0, d16:2/23:0) <sup>+</sup>	0.12*
sphingomyelin (d18:1/25:0, d19:0/24:1, d20:1/23:0, d19:1/24:0) <sup>+</sup>	0.23*
sphingomyelin (d18:1/22:2, d18:2/22:1, d16:1/24:2) <sup>+</sup>	0.22*
sphingomyelin (d18:0/20:0, d16:0/22:0) <sup>+</sup>	0.34*
sphingomyelin (d18:0/18:0, d19:0/17:0) <sup>+</sup>	0.54*
sphingomyelin (d18:1/19:0, d19:1/18:0) <sup>+</sup>	0.33*

**Table S1. Hepatic Phosphatidylethanolamine (PE), Phosphatidylcholine (PC),**

**Diacylglycerol, Ceramide, and Sphingolipid Metabolites.** Data are mean ± SEM for n = 8-9

mice per group. \*p<0.05 vs. wildtype (WT). <sup>+</sup>indicates compounds that have not been officially confirmed based on a standard.