Supporting Information

Perilipin 1 (Plin1) Deficiency Promotes Inflammatory Responses in Lean Adipose Tissue through Lipid Dysregulation

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Table S1. Fold changes of lipid metabolites released from SVC-derived adipocytes.

Metabolite feature (MW/rt)	METLIN Search	Class	Fold change (Log_2*Plin1*$^{-/-}$/*Plin1*$^{+/+}$)
455.391/31.24	Arachidyl carnitine	Fatty acyls (acyl carnitines)	1.181536
340.2932/29.95	Glycidyl stearate, 2-oxo-heneicosanoic acid		1.159548
770.5644/30	PC(35:2), PE(38:2)	Glycerophospholipids	1.068222
337.33/29.63	13Z-Docosenamide	Fatty acyls (fatty amides)	1.04465
768.5683/29.89	PA(41:3)	Glycerophospholipids	1.025215
769.5718/30.29	PC(35:3), PE(38:3)	Glycerophospholipids	1.024059
380.2851/21.28	24-Nor-5β-cholane-3α,7α,22,23-tetrol, MG(20:3)		0.857633
756.531/31.1	PG(O-36:4), PG(P-36:3)	Glycerophospholipids	0.822948
757.5348/31.05	PS(P-35:2)	Glycerophospholipids	0.803131
256.2366/21.45	Palmitic acid	Fatty acyls (fatty acids and derivatives)	0.68305
299.2787/20.34	Sphingosine, 3-ketosphinganine, Palmitoyl Ethanolamide	Organonitrogen compounds	0.666305
602.3848/2.28	PA(29:2)	Glycerophospholipids	0.597865
298.2469/17.77	9-hydroxy-13Z-octadecenoic acid, Ricinoleic acid	Fatty acyls (fatty acids and derivatives)	0.561922
720.4832/2.58	PA(28:6), PG(32:1)	Glycerophospholipids	0.454224
554.35/1.92	PG(21:0/0:0)	Glycerophospholipids	0.428229
740.5373/21.15	PA(39:3)	Glycerophospholipids	0.404163
712.4059/1.95	PI(25:0)	Glycerophospholipids	0.374166
370.3035/22.59	Docosanedioic acid	Fatty acyls (fatty acids and derivatives)	0.338426
620.295/16.36	PI(20:4)	Glycerophospholipids	0.319366
336.2963/20.9	5,13-docosadienoic acid	Fatty acyls (fatty acids and derivatives)	0.31618
328.2933/23.9	3R-hydroxy-eicosanoic acid	Fatty acyls (fatty acids and derivatives)	0.313408
364.1452/2.11	N-Acetylmuramoyl-Ala		0.303871
753.4682/2.39	PS(34:5)	Glycerophospholipids	0.28537
498.2883/2.12	PG(17:0/0:0)	Glycerophospholipids	0.284992
276.094/2.11	Glutamyl-glutamic acid		0.244705
215.1131/2.01	2-amino-8-oxo-9,10-epoxy-decanoic acid	Fatty acyls (fatty acids and derivatives)	0.234206
347.2755/21.3	Arachidonoyl Ethanolamide	Organonitrogen compounds Direct Parent N-acylethanolamines	0.233468
698.3905/1.94	PI(24:0)	Glycerophospholipids	0.218434
349.1957/2.1	Coutaric acid	Amino acids, peptides, and analogues	0.218434
282.252/15.83	Oleic Acid	Fatty acyls (fatty acids and derivatives)	0.210324
354.1423/4.15	S-Adenosylmethioninamine	5'-deoxyribonucleosides	0.207633
316.204/2.02	15-deoxy-δ-12,14-PGJ2, 19-Hydroxy-13-cis-retinoic acid	Fatty acyls (eicosanoids and derivatives)	0.184757
767.52/1.88	PS(O-36:5), PS(P-36:4)	Glycerophospholipids	0.173124
392.2848/22.78	1α,3α-Dihydroxy-5β-cholan-24-oic Acid		0.169472
282.1066/3.78	2,3-Diphenyl-1-indanone		0.157641
190.0968/10.09	Diaminopimelic acid, Alanyl-Threonine	Carboxylic acids and derivatives	0.157112
270.216/10.12	16-hydroxy-5-hexadecenoic acid, 5-keto palmitic acid	Fatty acyls (fatty acids and derivatives)	0.140856
368.1704/6.03	Testosterone sulfate	Steroids and steroid derivatives	0.139633
270.216/8.28	16-hydroxy-6-hexadecenoic acid	Fatty acyls (fatty acids and derivatives)	0.115991
444.3002/9.7	Stearyl citrate		0.115675
470.2931/2.67	PG(O-16:0)		0.112739
174.1021/8.45	N2-Acetyl-L-ornithine, Valyl-Glycine	Carboxylic acids and derivatives	0.11045
252.2057/8.41	7,10-hexadecadienoic acid	Fatty acyls (fatty acids and derivatives)	0.109846
220.1072/6.45	N-Acetyl-b-glucosaminylamine	Organooxygen compounds	0.105796
254.2211/13.54	cis-9-palmitoleic acid, 11-hexadecenoic acid	Fatty acyls (fatty acids and derivatives)	0.101884
378.293/9.86	cholesta-5,7,8(14),22E-tetraen-3-one		0.097712
298.2468/11.26	9-hydroxy-12Z-octadecenoic acid, Ricinoleic acid	Fatty acyls (fatty acids and derivatives)	0.097421
280.2365/12.52	Linoleic acid	Fatty acyls (fatty acids and derivatives)	0.094585
351.1579/7.05	Phenylalanyl-Tryptophan	Carboxylic acids and derivatives	0.086142
356.2492/9.56	PGF1α, 13,14-dihydro PGF2α	Fatty acyls (eicosanoids and derivatives)	0.076672
357.2623/15.32	Leucyl-leucyl-norleucine		0.073382
386.1804/5.59	6-bromo-eicosa-5E,9Z-dienoic acid		0.039522
400.147/2.61	N-Monodesmethyldiltiazem		0.03026
636.2893/14.35	Thalsimine		0.021127
164.0663/3.03	β-D-Fucose	Organooxygen compounds	0.011422
368.1578/3.6	PA(12:0)	Glycerophospholipids	-0.08932

Metabolites were identified by matching accurate mass (MW) data to METLIN database. Only data with p value less than 0.05 were represented. p value was calculated by Mann-Whitney U test (n = 3 per group). rt., retention time.