SUPPLEMENTAL TABLES

Supplemental Table 1

Gene	Primer sequence
Gfp FW	AGA TCC GCC ACA ACA TCG AG
Gfp REV	GTC CAT GCC GAG AGT GAT CC
Human-*RPL32* FW	AGA AGT TCA TCC GGC ACC AG
Human-*RPL32* REV	CTT GAC GTT GTG GAC CAG GA
Human-*Cept1* FW	TTG GAT TGC CCT GGT TTT CTC T
Human-*Cept1* REV	TCC ACC CCC ATT CTC CTT AAT
Human-*Ppara* FW	CCC CTC CTC GGT GAC TTA TC
Human-*Ppara* REV	CTG CGG TCG CAC TTG TCA TA
Human-*Acox1* FW	GTG TGT GGC ATG GTG TCC TA
Human-*Acox1* REV	TCC AAG CTA CCT CCT TGC TT
Human-*Cpt1a* FW	AAG TTG GCG TCT GAG AAG CAT
Human-*Cpt1a* REV	AGT CAA ACA GCT CCA CTT GCT
Human-*Mcad* FW	CAC GGA CCT GGA GAT TGT AGT
Human-*Mcad* REV	GAT GCT GAA GAG CTC GGG G
Cre FW	CCC TGT TTC ACT ATC CAG GT
Cre REV	GGG TAA CTA AAC TGG TCG AG
Murine-*RPL34* FW	GTG GCC CTA TTG AGT GGC AG
Murine-*RPL34* REV	CAT GCG ACG GAG GAT GAC C
Murine-*Cept1* FW	AGT CTT CTA CTG CCC TAC AGC
Murine-*Cept1* REV	TCC AAG AAC CAC AAA AAC TGT CG
Murine-*Ppara* FW	TCG AAT ATG TGG GGA CAA GGC
Murine-*Ppara* REV	GTG TGA CAT CCC GAC AGA CA
Murine-*Acox1* FW	TCG AAG AAT GTC GGA TGG CT
Murine-*Acox1* REV	GCT CGG CAG GTC ATT CAA GT
Murine-*Cpt1a* FW	TGG GCC ATC TGT GGG AGT AT
Murine-*Cpt1a* REV	GCA GGT CCA CAT CAT TTG CC
Murine-*Mcad* FW	ATA TGT ATT CCC GGG GTG TCG
Murine-*Mcad* REV	GGC GGC CAT TAA GAC CAA AG

FW, Forward; REV, Reverse

Supplemental Table 1: RT-PCR primer sequences for human and mouse genes of interest.

Supplemental Table 2

Sample	Species	Formula	Most Abundant Mass
IS	PC14:0/14:0	C 36 H 73 O 8 N 1 P 1	678.5073798
1	PC30:0	C 38 H 77 O 8 N 1 P 1	706.53868
2	PC30:1	C 38 H 75 O 8 N 1 P 1	704.5230299
3	PC30:2	C 38 H 73 O 8 N 1 P 1	702.5073798
4	PC32:0	C 40 H 81 O 8 N 1 P 1	734.5699801
5	PC32:1	C 40 H 79 O 8 N 1 P 1	732.55433
6	PC32:2	C 40 H 77 O 8 N 1 P 1	730.53868
7	PC34:0	C 42 H 85 O 8 N 1 P 1	762.6012802
8	PC34:1	C 42 H 83 O 8 N 1 P 1	760.5856302
9	PC34:2	C 42 H 81 O 8 N 1 P 1	758.5699801
10	PC34:3	C 42 H 79 O 8 N 1 P 1	756.55433
11	PC36:1	C 44 H 87 O 8 N 1 P 1	788.6169303
12	PC36:2	C 44 H 85 O 8 N 1 P 1	786.6012802
13	PC36:3	C 44 H 83 O 8 N 1 P 1	784.5856302
14	PC36:4	C 44 H 81 O 8 N 1 P 1	782.5699801
15	PC36:5	C 44 H 79 O 8 N 1 P 1	780.55433
16	PC38:2	C 46 H 89 O 8 N 1 P 1	814.6325803
17	PC38:3	C 46 H 87 O 8 N 1 P 1	812.6169303
18	PC38:4	C 46 H 85 O 8 N 1 P 1	810.6012802
19	PC38:5	C 46 H 83 O 8 N 1 P 1	808.5856302
20	PC38:6	C 46 H 81 O 8 N 1 P 1	806.5699801
21	PC40:3	C 48 H 91 O 8 N 1 P 1	840.6482304
22	PC40:4	C 48 H 89 O 8 N 1 P 1	838.6325803
23	PC40:5	C 48 H 87 O 8 N 1 P 1	836.6169303
24	PC40:6	C 48 H 85 O 8 N 1 P 1	834.6012802
25	aPC30:0	C 38 H 79 O 7 N 1 P 1	692.5594154
26	aPC30:1	C 38 H 77 O 7 N 1 P 1	690.5437653
27	aPC32:0	C 40 H 83 O 7 N 1 P 1	720.5907155
28	aPC32:1	C 40 H 81 O 7 N 1 P 1	718.5750655
29	aPC32:2	C 40 H 79 O 7 N 1 P 1	716.5594154
30	aPC34:0	C 42 H 87 O 7 N 1 P 1	748.6220157
31	aPC34:1	C 42 H 85 O 7 N 1 P 1	746.6063656
32	aPC34:2	C 42 H 83 O 7 N 1 P 1	744.5907155
33	aPC36:1	C 44 H 89 O 7 N 1 P 1	774.6376657
34	aPC36:2	C 44 H 87 O 7 N 1 P 1	772.6220157
35	aPC36:3	C 44 H 85 O 7 N 1 P 1	770.6063656
36	aPC36:4	C 44 H 83 O 7 N 1 P 1	768.5907155
37	aPC38:2	C 46 H 91 O 7 N 1 P 1	800.6533158
38	aPC38:3	C 46 H 89 O 7 N 1 P 1	798.6376657
39	aPC38:4	C 46 H 87 O 7 N 1 P 1	796.6220157
40	aPC38:5	C 46 H 85 O 7 N 1 P 1	794.6063656
41	SPM34:1	C 39 H 80 N 2 O 6 P 1	703.5753998
42	SPM34:2	C 39 H 78 N 2 O 6 P 1	701.5597498

43	SPM36:1	C 41 H 84 N 2 O 6 P 1	731.6066999
44	SPM36:2	C 41 H 82 N 2 O 6 P 1	729.5910499
45	SPM38:1	C 43 H 88 N 2 O 6 P 1	759.6380001
46	SPM39:1	C 44 H 90 N 2 O 6 P 1	773.6536501
47	SPM40:1	C 45 H 92 N 2 O 6 P 1	787.6693002
48	SPM41:1	C 46 H 94 N 2 O 6 P 1	801.6849503
49	SPM42:1	C 47 H 96 N 2 O 6 P 1	815.7006003
50	SPM42:2	C 47 H 94 N 2 O 6 P 1	813.6849503
51	SPM42:3	C 47 H 92 N 2 O 6 P 1	811.6693002
52	pPC34:2	C 42 H 81 O 7 N 1 P 1	742.5750655
53	pPC36:4	C 44 H 81 O 7 N 1 P 1	766.5750655
54	pPC38:5	C 46 H 83 O 7 N 1 P 1	792.5907155

IS, Internal Standard

Supplemental Table 2: Summary of phosphatidylcholine (PC), alkyl ether PC (aPC), sphingomyelin (SPM), and plasmalogen PC (pPC) species evaluated in arterial intima tissue and ECs using electrospray ionization mass spectrometry.

Supplemental Table 3

Sample	Species	Formula	Most abundant mass
IS	PE14:0/14:0	C 33 H 65 N 1 O 8 P 1	634.4447796
1	PE34:1	C 39 H 75 N 1 O 8 P 1	716.5230299
2	PE34:2	C 39 H 73 N 1 O 8 P 1	714.5073798
3	PE36:2	C 41 H 77 N 1 O 8 P 1	742.53868
4	PE36:3	C 41 H 75 N 1 O 8 P 1	740.5230299
5	PE36:4	C 41 H 73 N 1 O 8 P 1	738.5073798
6	PE38:4	C 43 H 77 N 1 O 8 P 1	766.53868
7	PE38:5	C 43 H 75 N 1 O 8 P 1	764.5230299
8	PE38:6	C 43 H 73 N 1 O 8 P 1	762.5073798
9	PE40:5	C 45 H 79 N 1 O 8 P 1	792.55433
10	PE40:6	C 45 H 77 N 1 O 8 P 1	790.53868
11	PE40:7	C 45 H 75 N 1 O 8 P 1	788.5230299
12	PE40:8	C 45 H 73 N 1 O 8 P 1	786.5073798
13	pPE34:1	C 39 H 75 N 1 O 7 P 1	700.5281153
14	pPE34:2	C 39 H 73 N 1 O 7 P 1	698.5124652
15	pPE36:2	C 41 H 77 N 1 O 7 P 1	726.5437653
16	pPE36:3	C 41 H 75 N 1 O 7 P 1	724.5281153
17	pPE36:4	C 41 H 73 N 1 O 7 P 1	722.5124652
18	pPE38:4	C 43 H 77 N 1 O 7 P 1	750.5437653
19	pPE38:5	C 43 H 75 N 1 O 7 P 1	748.5281153
20	pPE38:6	C 43 H 73 N 1 O 7 P 1	746.5124652
21	pPE40:5	C 45 H 79 N 1 O 7 P 1	776.5594154
22	pPE40:6	C 45 H 77 N 1 O 7 P 1	774.5437653
23	pPE40:7	C 45 H 75 N 1 O 7 P 1	772.5281153

IS, Internal Standard

Supplemental Table 3: Summary of phosphatidylethanolamine (PE) and plasmenyl PE (pPE) species evaluated in arterial intima tissue and ECs using electrospray ionization mass spectrometry.

Supplemental Table 4

		All Patients N = 31	Non-Diabetic N = 18	Diabetes N = 13	*P* value
Gender					
	Male	67.7%	66.7%	61.5%	0.54
	Female	32.3%	33.3%	38.5%	
Age (years)					
	55-64	41.9%	53.8%	27.8%	0.27
	65-74	38.7%	23.1%	50%	0.13
	>75	19.4%	23.1%	22.2%	0.67
Smoking					
	Never	16.1%	7.7%	22.2%	0.29
	Former §	51.6%	53.8%	50.0%	0.84
	Current	32.3%	38.5%	22.2%	0.55
Co-Morbidities					
	Hyperlipidemia	74.2%	69.2%	77.8%	0.61
	Hypertension	90.3%	100%	77.8%	0.13
	Coronary Artery Disease	41.9%	53.8%	33.3%	0.27
	Cerebrovascular Disease	29.0%	30.8%	22.2%	0.86
Medications					
	Statin	71.0%	72.2%	69.2%	0.86
	Insulin	25.8%	0%	61.5%	<0.001

§ Former smoking was reported as smoking > 1 year prior to recruitment

Supplemental Table 4: Demographics of 31 patients (18 non-diabetic, and 13 diabetic) with severe peripheral arterial disease who were enrolled in institutional biobank to collect peripheral arterial segments for molecular and biochemical analysis.

Supplemental Table 5

Diabetes Status	No Diabetes				Diabetes			
Arterial Segment	Max		Min		Max		Min	
Gender	Male	Female	Male	Female	Male	Female	Male	Female
# of Patients	11	4	12	5	4	3	4	4
Average	0.64	0.78	0.71	0.74	0.81	0.90	0.90	0.90
SEM	0.04	0.06	0.03	0.06	0.08	0.03	0.10	0.04
P value		0.09		0.61		0.36		0.98

SEM , Standard Error of the Mean

Supplemental Table 5: Max and Min arterial intima specimens from both patients with or without diabetes, and male and female. No differences were observed in *cept1* gene expression relative to patient gender.

Supplemental Table 6

Genotype	*Cept1Lp/Lp Cre-*		*Cept1Lp/Lp Cre+*		*Cept1Lp/Lp Cre-*		*Cept1Lp/Lp Cre+*	
Sex	Male	Female	Male	Female	Male	Female	Male	Female
# of Mice	4	3	6	4	12	2	8	2
Doppler Perfusion	0.83	0.49	0.49	0.46	0.58	0.40	0.50	0.22
SEM	0.10	0.06	0.12	0.16	0.05	0.04	0.05	0.07
P value		0.09		0.86		0.23		0.08

SEM , Standard Error of the Mean

Supplemental Table 6: Both male and female mice sexes were evaluated in hind-limb ischemia experiments, and no significant differences were observed in the Doppler perfusion relative to mouse sex.