## **Supporting Information**

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## Camporez et al. 10.1073/pnas.1716990115

Table S1. Hepatic DAG species from WT and KO mice fed either RC or a HFD at 12 wk of age  $% \left( {{\rm T}_{\rm A}} \right)$ 

Species	WT (RC)	KO (RC)	WT (HFD)	KO (HFD)
PO	31.7 ± 4.3	51.9 ± 14.2	99.1 ± 14.1	212.4 ± 48.7
AE	317.2 ± 32.4	360.7 ± 44.3	487.6 ± 40.3	502.1 ± 98.7
AP	$3.0 \pm 0.2$	3.5 ± 0.3	$4.2 \pm 0.3$	$5.5 \pm 0.5$
AS	5.9 ± 0.5	6.3 ± 0.7	8.9 ± 0.6	9.6 ± 1.8
SS	3.7 ± 0.2	$4.2 \pm 0.2$	$7.4 \pm 0.7$	7.1 ± 0.6
LS	3.8 ± 0.4	7.7 ± 1.8	5.4 ± 0.4	14.7 ± 2.4
OS	2.9 ± 0.3	5.1 ± 1.3	$8.0 \pm 0.9$	21.2 ± 4.5
PP	6.2 ± 0.4	9.8 ± 1.9	17.1 ± 3.1	28.4 ± 6.2
SP	2.5 ± 0.2	3.5 ± 0.6	6.9 ± 0.9	12.0 ± 2.4
00	76.4 ± 6.7	112 ± 23.5	180.8 ± 18.6	446.7 ± 103.1
OL	26.5 ± 2.2	74.2 ± 24.2	46.4 ± 3.7	155.7 ± 31.3
LL	10.3 ± 1.4	45.6 ± 17.4	9.3 ± 0.9	48.8 ± 11.3
PL	56.8 ± 4.0	132.4 ± 38.4	101 ± 7.2	220.3 ± 34.4

DAG data are expressed as nanomole per gram. Data are represented as mean  $\pm$  SEM (n = 8–12 per group).

PO $17.8 \pm 1.7$ $33.6 \pm 1.7$ $65.0 \pm 8$ AE $6.9 \pm 0.6$ $13.0 \pm 0.6$ $23.4 \pm 1$ AP $0.9 \pm 0.1$ $1.8 \pm 0.1$ $2.8 \pm 0$ AS $0.8 \pm 0.1$ $1.6 \pm 0.1$ $2.3 \pm 0$ SS $1.5 \pm 0.1$ $2.9 \pm 0.1$ $4.4 \pm 0$ LS $2.9 \pm 0.2$ $5.5 \pm 0.2$ $9.1 \pm 0$ OS $4.0 \pm 0.4$ $7.6 \pm 0.4$ $13.6 \pm 1$	D) KO (HFD)
AP $0.9 \pm 0.1$ $1.8 \pm 0.1$ $2.8 \pm 0.1$ AS $0.8 \pm 0.1$ $1.6 \pm 0.1$ $2.3 \pm 0.1$ SS $1.5 \pm 0.1$ $2.9 \pm 0.1$ $4.4 \pm 0.1$ LS $2.9 \pm 0.2$ $5.5 \pm 0.2$ $9.1 \pm 0.1$ OS $4.0 \pm 0.4$ $7.6 \pm 0.4$ $13.6 \pm 1.1$	61.6 ± 3.9
AS $0.8 \pm 0.1$ $1.6 \pm 0.1$ $2.3 \pm 0.1$ SS $1.5 \pm 0.1$ $2.9 \pm 0.1$ $4.4 \pm 0.1$ LS $2.9 \pm 0.2$ $5.5 \pm 0.2$ $9.1 \pm 0.1$ OS $4.0 \pm 0.4$ $7.6 \pm 0.4$ $13.6 \pm 1.1$	1.2 26.3 ± 1.4
SS $1.5 \pm 0.1$ $2.9 \pm 0.1$ $4.4 \pm 0.1$ LS $2.9 \pm 0.2$ $5.5 \pm 0.2$ $9.1 \pm 0.1$ OS $4.0 \pm 0.4$ $7.6 \pm 0.4$ $13.6 \pm 1.1$	0.1 3.2 ± 0.1
LS $2.9 \pm 0.2$ $5.5 \pm 0.2$ $9.1 \pm 0.2$ OS $4.0 \pm 0.4$ $7.6 \pm 0.4$ $13.6 \pm 12$	0.1 2.6 ± 0.1
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	0.2 4.9 ± 0.2
	0.6 10.0 ± 0.6
	1.2 14.2 ± 0.9
PP $8.2 \pm 0.8$ $15.5 \pm 0.8$ $26.5 \pm 2$	2.2 25.0 ± 1.1
SP $2.4 \pm 0.2$ $4.6 \pm 0.2$ $7.7 \pm 0.2$	0.6 7.8 ± 0.3
OO 53.4 ± 5.2 100.0 ± 5.3 205.1 ± 2	24.2 211.6 ± 19.7
OL 23.9 ± 2.3 45.2 ± 2.4 87.4 ± 1	10.0 94.4 ± 9.4
LL $9.2 \pm 0.9$ $17.4 \pm 0.9$ $30.0 \pm 2$	2.9 34.2 ± 3.1
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	5.8 66.0 ± 4.5

Table S2. Muscle DAG species from WT and KO mice fed either RC or a HFD at 12 wk of age

DAG data are expressed as nanomole per gram. Data are represented as mean  $\pm$  SEM (n = 8–12 per group).

Table S3. Hepatic ceramides species from WT and KO mice fed either RC or a HFD at 12 wk of age  $% \left( {{\rm S}_{\rm s}} \right) = \left( {{\rm S}_{$ 

Species	WT (RC)	KO (RC)	WT (HFD)	KO (HFD)
C16	21.8 ± 0.7	21.0 ± 0.9	34.0 ± 2.3	37.5 ± 1.7
C18	$3.5 \pm 0.2$	3.4 ± 0.2	9.1 ± 0.9	10.7 ± 0.6
C20	22.6 ± 1.1	24.2 ± 1.8	136.6 ± 18.3	200.4 ± 12.6
C22	78.3 ± 5.2	86.9 ± 3.3	114.6 ± 8.1	103.4 ± 8.0
C24:1	32.2 ± 0.8	33.6 ± 0.9	29.0 ± 2.2	31.3 ± 1.8
C24	31.0 ± 1.5	35.6 ± 1.2	23.2 ± 1.3	$20.5\pm0.7$

Ceramides data are expressed as nanomole per gram. Data are represented as mean  $\pm$  SEM (n = 8–12 per group).

Table S4.	Muscle ceramides species from WT and KO mice fed		
either RC or a HFD at 12 wk of age			

Species	WT (RC)	KO (RC)	WT (HFD)	KO (HFD)
C16	17.3 ± 1.8	17.0 ± 2.3	9.4 ± 0.6	11.9 ± 0.7
C18	$4.6\pm0.4$	$4.6\pm0.6$	52.7 ± 0.9	52.2 ± 1.9
C20	$4.0\pm0.3$	$4.2 \pm 0.5$	33.3 ± 5.6	52.4 ± 9.0
C22	$42.4 \pm 4.5$	45.6 ± 6.3	20.0 ± 2.1	25.6 ± 3.3
C24:1	21.6 ± 2.1	22.0 ± 3.0	16.5 ± 2.0	16.9 ± 1.9
C24	22.5 ± 2.2	$23.6\pm3.2$	13.8 ± 1.8	13.8 ± 1.7

Ceramides data are expressed as nanomole per gram. Data are represented as mean  $\pm$  SEM (n = 8–12 per group).

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