Supporting Information

Kotas et al. 10.1073/pnas.1301996110

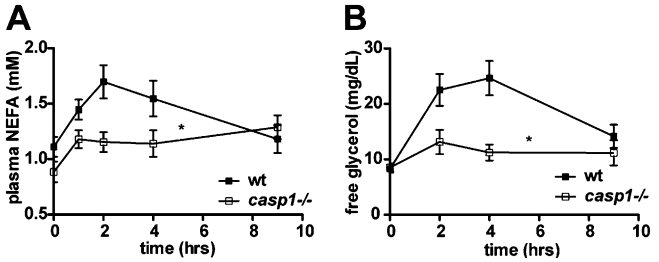

Fig. S1. Glycerol and nonesterified fatty acid (NEFA) parallel triglyceride (TG) during an oral fat tolerance test, demonstrating that TG hydrolysis and clearance are paired. (*A*) Glycerol (n = 7–8 per group) and (*B*) NEFA (*n* = 9–10 per group) after an oral lipid load. *$P < 0.05$ by ANOVA. Error bars represent SEM.

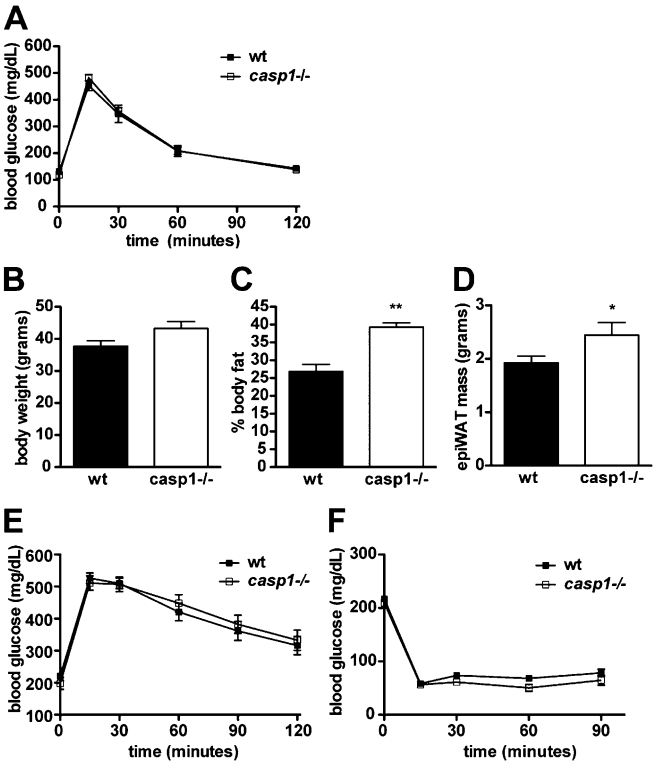

Fig. S2. Reduced plasma lipid does not confer protection against diet-induced obesity or insulin resistance. (*A*) Glucose tolerance test in chow-fed mice. (*B*) Body weight ($P = 0.06$), (*C*) percentage body fat, and (*D*) bilateral epididymal fat pad weight of 12-wk high-fat diet (HFD)-fed mice. (*E*) Glucose tolerance test, and (*F*) insulin tolerance test in HFD-fed mice. *$P < 0.05$, **$P < 0.001$; $n = 7–10$ per group. Error bars represent SEM.

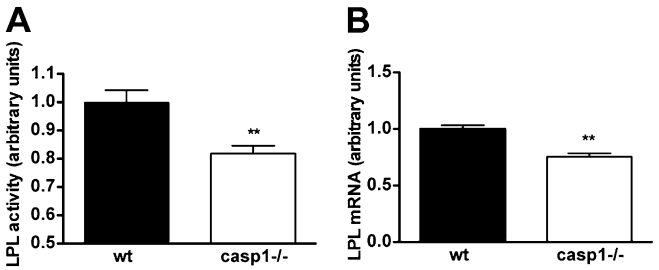

Fig. S3. Lipoprotein lipase (LPL) expression and activity are lower in brown adipose tissue (BAT) of *casp1*$^{-/-}$ mice. (*A*) Relative LPL activity measured from equal masses of homogenized intrascapular BAT. (*B*) Relative LPL mRNA expression in intrascapular BAT. $^{**}P < 0.005$; $n = 6$–8 per group. Error bars represent SEM.

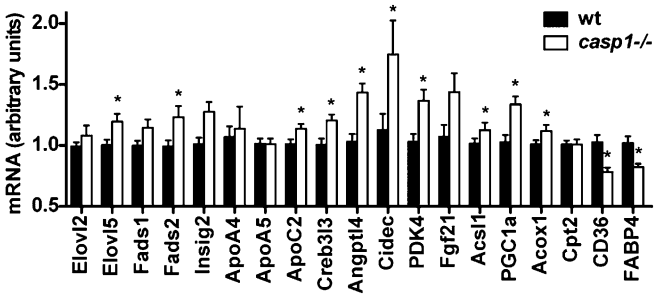

Fig. S4. Gene expression in WT and *casp1*$^{-/-}$ livers. $^{*}P < 0.05$; $n = 14$–16 per group. Error bars represent SEM.

Table S1. Indirect calorimetry shows similar whole-body metabolism in *casp1*$^{-/-}$ and WT mice

	Light cycle			Dark cycle		
Parameter	WT	*casp1*$^{-/-}$	*P* value	WT	*casp1*$^{-/-}$	*P* value
Regular chow diet						
n	6	7		6	7	
VO2 (mL/h)	148.96 ± 8.84	149.67 ± 4.74	0.94	170.10 ± 10.52	177.14 ± 5.36	0.55
VCO2 (mL/h)	130.98 ± 7.30	133.92 ± 3.89	0.72	167.14 ± 8.96	174.75 ± 5.30	0.46
RER	0.88 ± 0.01	0.89 ± 0.01	0.28	0.98 ± 0.01	0.99 ± 0.01	0.77
Heat (kcal/h)	0.73 ± 0.04	0.74 ± 0.02	0.88	0.86 ± 0.05	0.89 ± 0.03	0.52
Activity (counts/h)	89.23 ± 9.41	94.59 ± 22.87	0.84	270.90 ± 51.29	370.44 ± 75.29	0.32
Food intake (g/h)	0.10 ± 0.01	0.11 ± 0.01	0.53	0.24 ± 0.03	0.25 ± 0.03	0.78
High-fat diet						
n	10	7		10	7	
VO2 (mL/h)	99.73 ± 3.58	103.31 ± 1.59	0.44	113.61 ± 3.38	117.08 ± 1.86	0.44
VCO2 (mL/h)	79.50 ± 2.57	82.04 ± 1.05	0.44	90.75 ± 2.33	92.22 ± 1.44	0.64
RER	0.80 ± 0.00	0.79 ± 0.01	0.68	0.80 ± 0.00	0.79 ± 0.01	0.18
Heat (kcal/h)	0.48 ± 0.02	0.50 ± 0.01	0.44	0.54 ± 0.02	0.56 ± 0.01	0.44
Activity (counts/h)	53.82 ± 10.41	54.01 ± 13.14	0.99	135.74 ± 21.28	144.18 ± 28.57	0.81
Food intake (g/h)	0.06 ± 0.01	0.06 ± 0.01	0.74	0.11 ± 0.01	0.09 ± 0.01	0.40

RER, respiratory exchange ratio; VCO2, CO2 production rate; VO2, oxygen consumption rate.

Table S2. List of genes examined by quantitative RT-PCR

Symbol	Gene name
Acox1	Acyl-CoA oxidase 1, palmitoyl
Acsl1	Acyl-CoA synthetase long-chain family member 1
Angptl4	Fasting-induced adipose factor; angiopoietin-like 4
ApoA4	Apolipoprotein A4
ApoA5	Apolipoprotein A5
ApoC1	Apolipoprotein C1
ApoC2	Apolipoprotein C2
CD36	Fatty acid translocase
Cidec	Cell death-inducing DFFA-like effector c
Cpt2	Carnitine palmitoyltransferase 2
Creb3l3	cAMP responsive element binding protein 3-like 3; CREB-H
Elovl2	Elongation of very long-chain fatty acids 2
Elovl5	Elongation of very long-chain fatty acids 5
FABP4	Fatty acid binding protein 4
Fads1	Fatty acid desaturase 1
Fads2	Fatty acid desaturase 2
Fgf21	Fibroblast growth factor 21
Insig2	Insulin-induced gene 2
Nlrp3	NLR family, pyrin domain containing 3
PDK4	Pyruvate dehydrogenase kinase, isozyme 4
PGC1a	Peroxisome proliferator-activated receptor gamma coactivator-1 α
Pycard	PYD and CARD domain containing

CARD, caspase recruitment domain; CREB, cAMP responsive element binding protein; DFFA, DNA fragmentation factor; PYD, pyrin domain.