Supplemental Data
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The Role of Peroxisome Proliferator-Activated Receptor γ Coactivator-1β in the Pathogenesis of Fructose-Induced Insulin Resistance

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Table S1. Gene Expression in Liver Relative to Regular Chow-Fed Control ASO-Treated Rat

	Regular chow		Fructose chow	
	Control ASO	PGC-1β ASO	Control ASO	PGC-1β ASO
LXRα	1.00 ± 0.09	1.07 ± 0.07	0.93 ± 0.07	0.95 ± 0.06
SREBP-2	1.00 ± 0.29	0.66 ± 0.13$^{\#}$	0.79 ± 0.22	0.58 ± 0.10$^{\#}$
CYP7A	1.00 ± 0.12	0.69 ± 0.17$^{\#}$	0.80 ± 0.24	0.61 ± 0.12$^{\#}$
HMGCoAR	1.00 ± 0.06	1.12 ± 7.00	0.94 ± 0.08	0.72 ± 0.07$^{\#}$
LDL-R	1.00 ± 0.14	1.21 ± 0.10	1.12 ± 0.10	1.07 ± 0.11
ABCG8	1.00 ± 0.19	0.80 ± 0.10$^{\#}$	0.26 ± 0.11$^{\#\#\#}$	0.17 ± 0.09$^{\#\#\#}$
SR-BI	1.00 ± 0.06	0.71 ± 0.02$^{\#}$	0.92 ± 0.08	0.72 ± 0.05$^{\#,*}$

Data are means ± SEM; n = ~ 8 rats in each group.
$^{\#}P < 0.05$, $^{\#\#}P < 0.01$, $^{\#\#\#}P < 0.001$ vs. regular chow-fed control ASO-treated rats.
*P < 0.05, **P < 0.01, ***P < 0.001 vs. fructose chow-fed control ASO-treated rats.

Table S2. Gene Expression in WAT Relative to Regular Chow-Fed Control ASO-Treated Rat

	Regular chow		Fructose chow	
	Control ASO	PGC-1β ASO	Control ASO	PGC-1β ASO
PPARγ and target genes				
PPARγ	1.00 ± 0.25	0.44 ± 0.09$^{\#}$	0.95 ± 0.23	0.39 ± 0.07$^{\#\#}$
GLUT4	1.00 ± 0.19	0.29 ± 0.09$^{\#\#}$	1.14 ± 0.27	0.43 ± 0.06$^{\#}$,**
ACS	1.00 ± 0.21	0.35 ± 0.12$^{\#}$	1.03 ± 0.17	0.20 ± 0.11$^{\#\#}$
aP2	1.00 ± 0.14	0.42 ± 0.11$^{\#\#}$	0.95 ± 0.07	0.46 ± 0.11$^{\#\#}$,**
Adiponectin	1.00 ± 0.35	0.12 ± 0.07$^{\#\#}$	1.05 ± 0.22	0.25 ± 0.14$^{\#\#}$,**
Genes controlling GLUT4 trafficking and stability				
TUG	1.00 ± 0.16	0.57 ± 0.07$^{\#\#}$	0.86 ± 0.08	0.47 ± 0.05$^{\#\#}$,*
AS160	1.00 ± 0.18	0.49 ± 0.23$^{\#}$	0.95 ± 0.17	0.49 ± 0.19$^{\#}$,*
Daxx	1.00 ± 0.13	1.07 ± 0.14	0.64 ± 0.10	1.32 ± 0.37
IRAP	1.00 ± 0.14	0.41 ± 0.09$^{\#}$	0.88 ± 0.10	0.48 ± 0.1$^{\#}$
Rab8	1.00 ± 0.07	0.74 ± 0.13	0.93 ± 0.09	0.83 ± 0.10
Rab10	1.00 ± 0.12	0.53 ± 0.07$^{\#}$	0.78 ± 0.11	0.48 ± 0.07$^{\#\#}$
Sortilin	1.00 ± 0.15	0.30 ± 0.08$^{\#\#}$	0.91 ± 0.12	0.39 ± 0.09$^{\#\#}$,*
Syntaxin6	1.00 ± 0.08	0.74 ± 0.11$^{\#}$	1.06 ± 0.07	0.82 ± 0.12
Syntaxin16	1.00 ± 0.12	0.52 ± 0.12	0.82 ± 0.08	0.59 ± 0.09
Tankyrase	1.00 ± 0.11	0.61 ± 0.14	1.00 ± 0.13	1.27 ± 0.32
UBC9	1.00 ± 0.09	0.59 ± 0.08$^{\#}$	0.93 ± 0.11	0.71 ± 0.14

Data are means ± SEM; n = ~ 8 rats in each group.

#P < 0.05, ##P < 0.01, ###P < 0.001 vs. regular chow-fed control ASO-treated rats.
*P < 0.05, **P < 0.01, ***P < 0.001 vs. fructose chow-fed control ASO-treated rats.

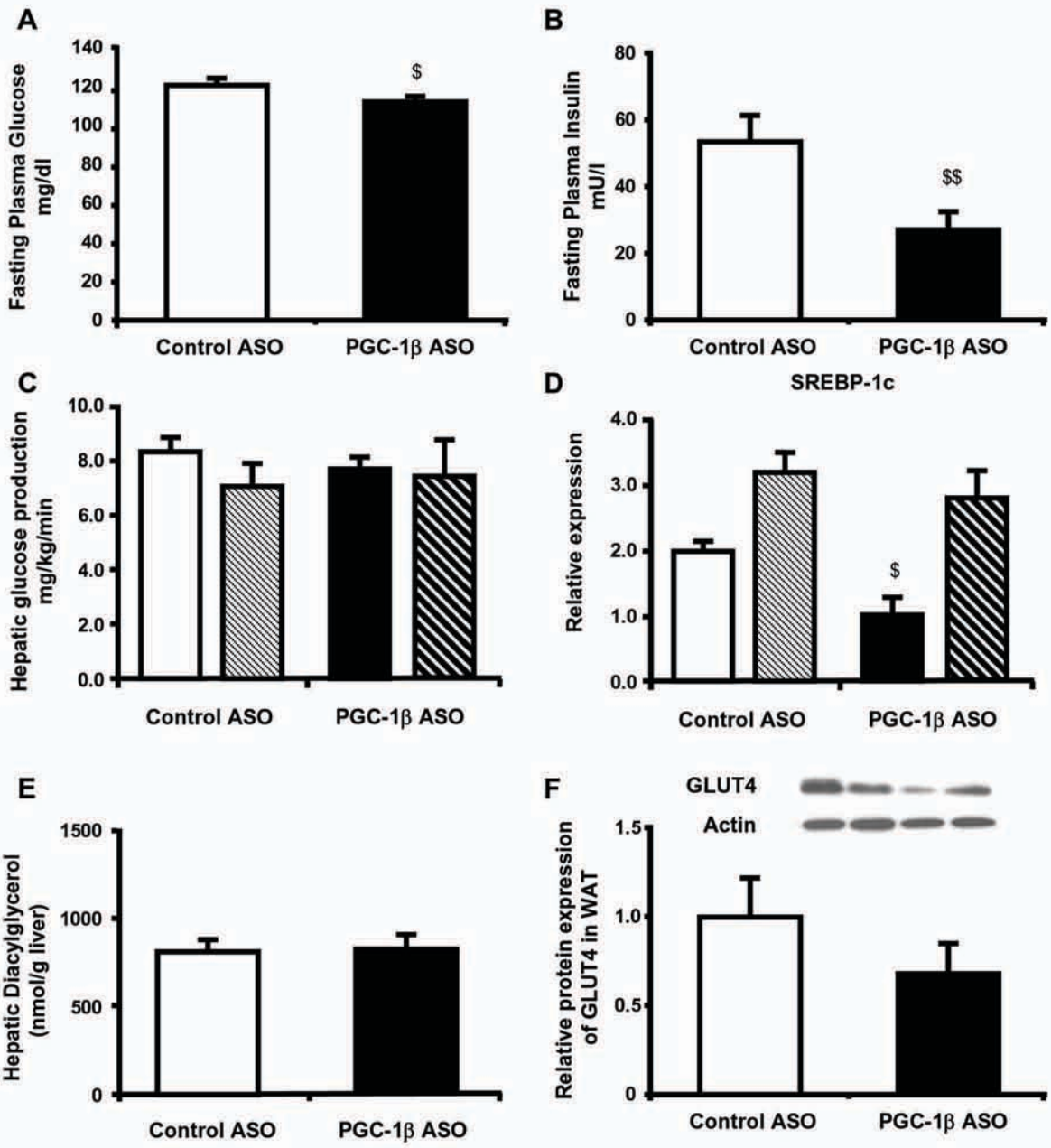

Figure S1. The Effect of PGC-1β ASO in High-Fat-Fed Rats Is Different from That in High-Fructose-Fed Rats

(A–C) Rats were fed with a high-fat diet with or without PGC-1β ASO treatment (50mg/kg per week) for 4 weeks. Shown are fasting plasma glucose (A), fasting plasma insulin (B), and hepatic glucose production (C). Solid bars represent basal values and striped bars represent clamped values.

(D) Total mRNA was isolated from fasted (solid bars) and fed (striped bars) liver and quantified using primers for SREBP-1c.

(E) Hepatic DAG content.

(F) GLUT4 protein expression in WAT. Two separate samples are shown for each group fraction. $^{\$}P < 0.05$ versus control ASO.