

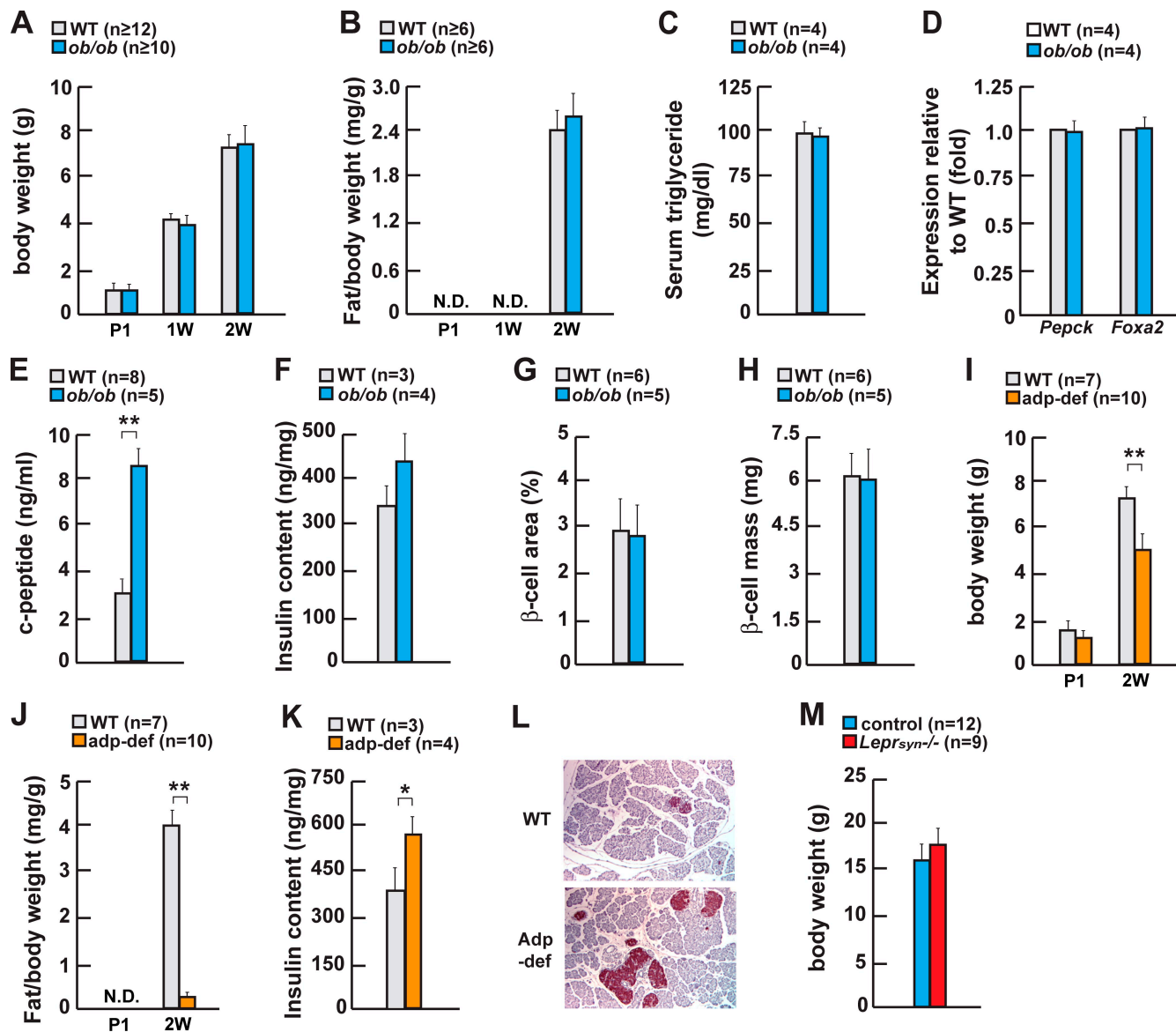
Hinoi et al., <http://www.jcb.org/cgi/content/full/jcb.200809113/DC1>

Figure S1. **The characterization of *ob/ob* and adipocyte-deficient mice.** (A and B) Body weight and fat mass in *ob/ob* mice. (C) Serum triglyceride in 2-wk-old *ob/ob* mice. (D) Expression of markers of insulin sensitivity in liver of 2-wk-old *ob/ob* mice. (E) Serum c-peptide in 2-wk-old *ob/ob* mice. (F–H) Insulin content, β-cell area, and β-cell mass in 2-wk-old *ob/ob* mice. (I and J) Body weight and fat mass in adipocyte-deficient (*adp-def*) mice. (K and L) Insulin content and insulin immunostaining in pancreas of 2-wk-old adipocyte-deficient mice. (M) Body weight in 1-mo-old *Lep^{rsyn}^{-/-}* mice. *, $P < 0.05$; **, $P < 0.01$. P1, newborn; 1W, 1 wk old; 2W, 2 wk old.

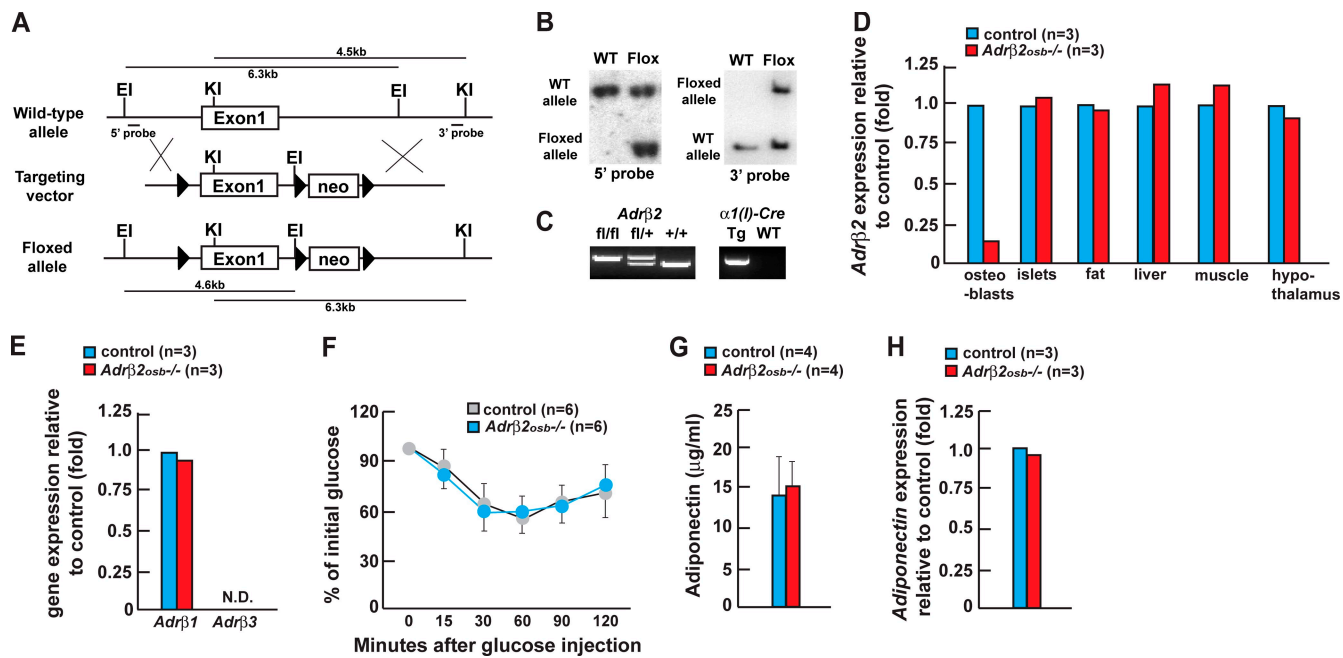


Figure S2. **Generation of *Adrβ2*^{osb-/-} mice.** (A) Targeting construct for conditional inactivation of *Adrβ2*. Black triangles, LoxP sites; EI, EcoRI; KI, KpnI. (B) Southern blot analysis of *Adrβ2*-floxed clone. The 5' probe detected a 6.3-kb WT and 4.6-kb targeted band, whereas the 3' probe detected a 4.5-kb WT and 6.3-kb targeted band. (C) PCR genotyping of *Adrβ2*^{osb-/-} mice. WT and floxed allele yield 250 bp and 290 bp products, respectively. *α1(I) collagen-Cre* transgenic mice harbor a transgene-specific band. (D) *Adrβ2* expression in several tissues of *Adrβ2*^{osb-/-} mice. (E) *Adrβ1* and *Adrβ3* expression in osteoblasts of *Adrβ2*^{osb-/-} mice. ND, not detected. (F) ITT in 2-mo-old *Adrβ2*^{osb-/-} mice. (G) Serum adiponectin in *Adrβ2*^{osb-/-} mice. (H) Adiponectin expression in fat of *Adrβ2*^{osb-/-} mice. Results are given as mean ± SEM.

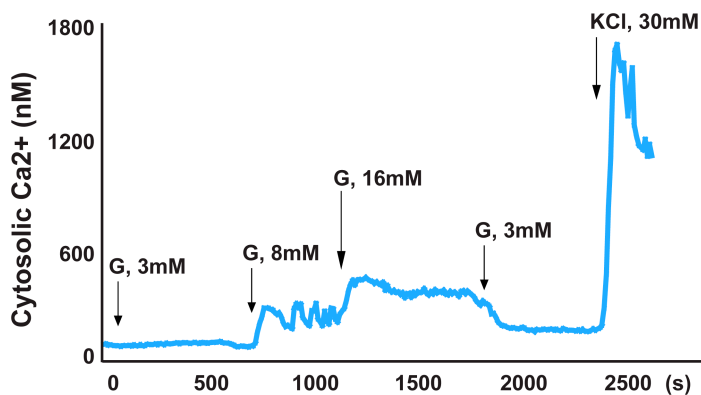


Figure S3. **Intracellular calcium imaging assay performed on untreated WT mice islets at different concentrations of glucose.**

Table S1. **Insulin sensitivity analysis of 2-mo-old *ob/ob* and *ob/ob;Esp^{-/-}* mice analyzed by hyperinsulinemic-euglycemic clamps**

Genotype	WT	<i>ob/ob</i>	<i>ob/ob;Esp^{-/-}</i>
Body weight (g)	17.8 ± 0.4	38.0 ± 1.7	31.5 ± 1.0
Glucose infusion rate (mg/kg/min)	64.9 ± 4.7	0.0 ± 0.0	0.0 ± 0.0
Basal glucose (mM)	6.6 ± 0.9	16.6 ± 1.5	11.5 ± 1.9
Clamp glucose (mM)	6.4 ± 0.6	13.8 ± 1.8	11.0 ± 1.4
[³ H]Glucose-specific activity (10 ³ dpm/mg)	200.2 ± 5.8	279.6 ± 14.9	321.6 ± 19.5
Basal hepatic glucose production (mg/kg/min)	15.9 ± 2.9	17.0 ± 1.2	15.1 ± 3.1
Clamp hepatic glucose production (mg/kg/min)	-1.0 ± 4.2	20.7 ± 0.4	23.0 ± 1.6
Glucose turnover (mg/kg/min)	63.9 ± 2.5	20.7 ± 0.4	23.0 ± 1.6
Glycogen synthesis (mg/kg/min)	30.3 ± 1.9	4.4 ± 2.6	1.1 ± 0.4
Muscle glucose uptake (mg/kg/min)	65.4 ± 3.3	25.2 ± 5.7	22.3 ± 1.9
White adipose glucose uptake (mg/kg/min)	4.5 ± 0.9	1.2 ± 0.3	1.4 ± 0.2

For WT, *ob/ob*, and *ob/ob;Esp^{-/-}* mice, n = 4.