Deficiency of FcεR1 increases body weight gain but improves glucose tolerance in diet-induced obese mice

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Citation

Published Version
10.1210/en.2015-1184

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Figure 1

(A) Log [IgE] Concentration (ng/mL) vs. BMI

Rho = -0.33
P = 0.018

(B) Log [IgE] Concentration (ng/mL) vs. Body weight (kg)

Rho = -0.34
P = 0.016

(C) Log [IgE] Concentration (ng/mL) vs. Body fat mass (kg)

Rho = -0.34
P = 0.023
Figure 2

A. Body weight (g) over age (week) in WT (n=15) and Fcer1a−/− (n=15) with HFD. 

B. Food intake (g/day), lean mass (g), and fat mass (g) over age (week) in WT (n=8) and Fcer1a−/− (n=6).

C. Glucose levels (mg/dL) over time (minute) in WT (n=15) and Fcer1a−/− (n=15).

D. Plasma insulin (ng/mL) over time (minute) in WT (n=7) and Fcer1a−/− (n=7).

E. Insulin secretion (% islet insulin content) over IgE (μg/mL) in WT (n=15) and Fcer1a−/− (n=15). *P<0.001.

F. FcεRIa mRNA (fold change) over IgE (μg/mL) in BMDM.

G. Plasma IgE (ng/mL) in WT (n=15) and Fcer1a−/− (n=15). *P<0.003.

H. Plasma MCP-1 (ng/mL) in WT (n=15) and Fcer1a−/− (n=15). *P<0.022.

I. Plasma SAA (serum amyloid A) in WT (n=15) and Fcer1a−/− (n=15). *P<0.003.
Figure 6

A. Graph showing TUNEL (%) against Adipogenesis (day) for Control and IgE (50 μg/mL) conditions. 

B. Images of preadipocytes and adipocytes at Day 6 and Day 8 for Control and IgE conditions.

C. Images of preadipocytes and adipocytes at Day 6 and Day 8 for Control and IgE conditions.

D. Bar graph showing cell viability (OD495 nm, CCK-8) for different IgE concentrations.

E. Bar graph showing cytotoxicity (OD495 nm, LDH) for different IgE concentrations.

F. Bar graph showing 2DG6P (μM) uptake for different IgE concentrations.

G. Western blot images showing Glut4, p-AKT, AKT, and β-Actin for Control, IgE, IgE + IgE, and siRNA-FcεR1a conditions.

H. Western blot images showing Glut4, p-AKT, AKT, and β-Actin for Control, IgE, IgE + IgE, and siRNA-FcεR1a conditions.