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

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Citation


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Figure 2

A. Body weight (g) over time with high-fat diet (HFD) for WT (n=15) and FcεR1α−/− (n=15), showing a significant difference (P<0.001).

B. Food intake (g/day) and lean mass (g) over time for WT (n=8) and FcεR1α−/− (n=6), with a significant difference (P<0.002, P<0.003).

C. Glucose levels (mg/dL) over time for WT (n=15) and FcεR1α−/− (n=15), with a significant difference (P<0.001).

D. Plasma insulin (ng/mL) over time for WT (n=7) and FcεR1α−/− (n=7), showing a significant increase (P<0.02, **P<0.001).

E. Insulin secretion (% islet insulin content) at different glucose concentrations (2.8 mM, 11.1 mM, 18.7 mM) for WT (n=15) and FcεR1α−/− (n=15), with a significant difference (P<0.001).

F. FcR1 mRNA (fold change) over time for WT (n=15) and FcεR1α−/− (n=15) with a significant increase.

G. Plasma IgE (µg/mL) for WT (n=15) and FcεR1α−/− (n=15) with a significant difference (P<0.003).

H. Plasma SAA (serum amyloid A) (µg/mL) for WT (n=15) and FcεR1α−/− (n=15) with a significant difference (P<0.003).

I. Plasma IL-6 (pg/mL) and MCP-1 (pg/mL) for WT (n=15) and FcεR1α−/− (n=15) with a significant difference (P<0.022).
Figure 5

A. FcεRIα mRNA (fold change) over adipogenesis (day).

B. FcεRIα, FcεRIβ, and FcεRIγ mRNA (fold change) for Control vs. IgE (50 µg/mL).

C. Oil-red O (OD510nm) assay with IgE (µg/mL) showing positive and negative controls with images of oil-red O staining at different time points.

D. C/EBPα mRNA (fold change) with IgE at different days.

E. PPARγ mRNA (fold change) with IgE at different days.
Figure 6

A

![Graph showing TUNEL (%) vs. Adipogenesis (day) with data points for Control and IgE (50 μg/mL).](image)

- **P<0.05**
- **P<0.001**

B

![Images of cells stained with control or IgE at Day 6 and Day 8.](image)

C

![Images of preadipocytes and adipocytes stained with control or IgE at Day 6 and Day 8.](image)

D

![Bar graph showing cell viability (OD495 nm, CCK-8) for control and IgE (0-50 μg/mL).](image)

E

![Bar graph showing cytotoxicity (OD495 nm, LDH) for IgE (0-50 μg/mL).](image)

F

![Bar graph showing 2DG6P (μM) uptake for IgE (0-50 μg/mL).](image)

G

![Western blot showing expression levels of Glut4, p-AKT, AKT, and β-Actin with and without IgE stimulation.](image)

H

![Western blot showing expression levels of FcεR1α, Glut4, p-AKT, AKT, and β-Actin with and without FcεR1α siRNA.](image)