Deficiency of Fcε R1 increases body weight gain but improves glucose tolerance in diet-induced obese mice

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Figure 1

A

Log [IgE] Concentration (ng/mL)

BMI

Rho = -0.33

P = 0.018

B

Log [IgE] Concentration (ng/mL)

Body weight (kg)

Rho = -0.34

P = 0.016

C

Log [IgE] Concentration (ng/mL)

Body fat mass (kg)

Rho = -0.34

P = 0.023
Figure 2

A) Body weight (g)

B) Food intake (g/day)

C) Glucose (mg/dL)

D) Plasma insulin (ng/mL)

E) Insulin secretion (% islet insulin content)

F) FcεRIα mRNA (fold change)

G) Plasma IgE (µg/mL)

H) Plasma (ng/WAT)

I) Plasma SAA (serum amyloid A)
Figure 3
Figure 4
Figure 5

A. FcεR1α mRNA (fold change) vs. Adipogenesis (day) for FcεR1α (black), FcεR1β (red), FcεR1γ (green), showing asterisks for P<0.001.

B. Bar graphs showing fold change in FcεR1α (black), FcεR1β (red), and FcεR1γ (green) mRNA for control and IgE (50 μg/mL).

C. Oil-red O (OD510nm) vs. IgE (μg/mL) with positive and negative samples at 2 and 8 days, showing asterisks for P<0.01 and P<0.001.

D. Bar graphs showing fold change in C/EBPα mRNA for 0, 2, and 2 Day IgE, with asterisks for P<0.001 and P=0.007.

E. Bar graphs showing fold change in PPARγ mRNA for 0, 2, and 2 Day IgE, with asterisks for P<0.001.
**Figure 6**

A. Graph showing TUNEL (%) against Adipogenesis (day) with control and IgE (50 µg/mL) conditions. Asterisks indicate statistical significance: *P<0.05, **P<0.001.

B. Images showing control and IgE treatment on day 6 and day 8 for control and preadipocytes.

C. Images showing control and IgE treatment for adipocytes on day 6 and day 8.

D. Bar graph showing cell viability (OD 495 nm, CCK-8) with IgE concentration (µg/mL).

E. Bar graph showing cytotoxicity (OD 495 nm, LDH) with IgE concentration (µg/mL).

F. Bar graph showing 2DG6P (µM) uptake with IgE concentration (µg/mL).

G. Western blot analysis showing expression levels of Glut4, p-AKT, AKT, and β-Actin with IgE treatment.

H. Western blot analysis showing FcεR1a, Glut4, p-AKT, AKT, and β-Actin expression.