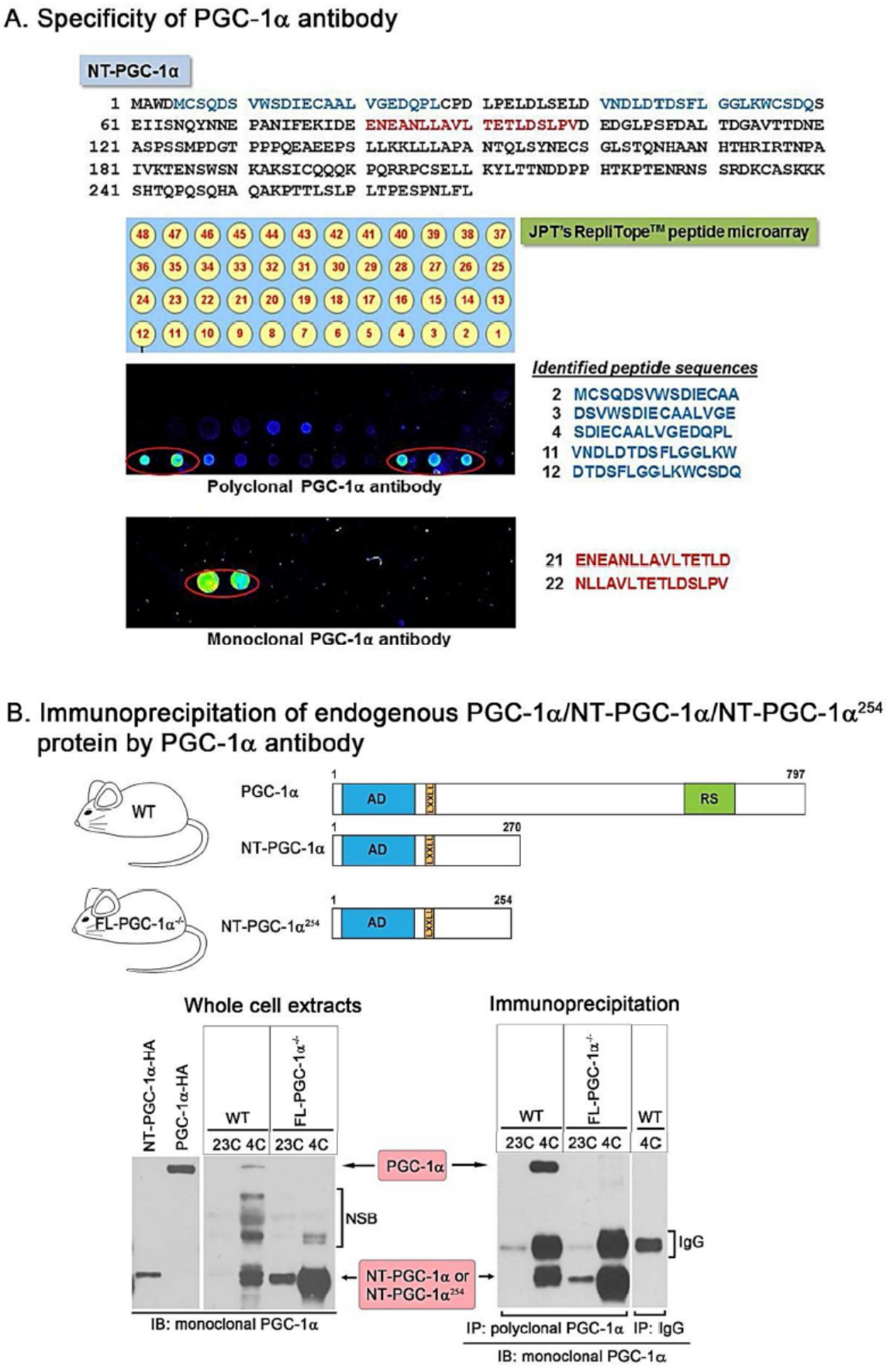
SUPPLEMENTARY DATA

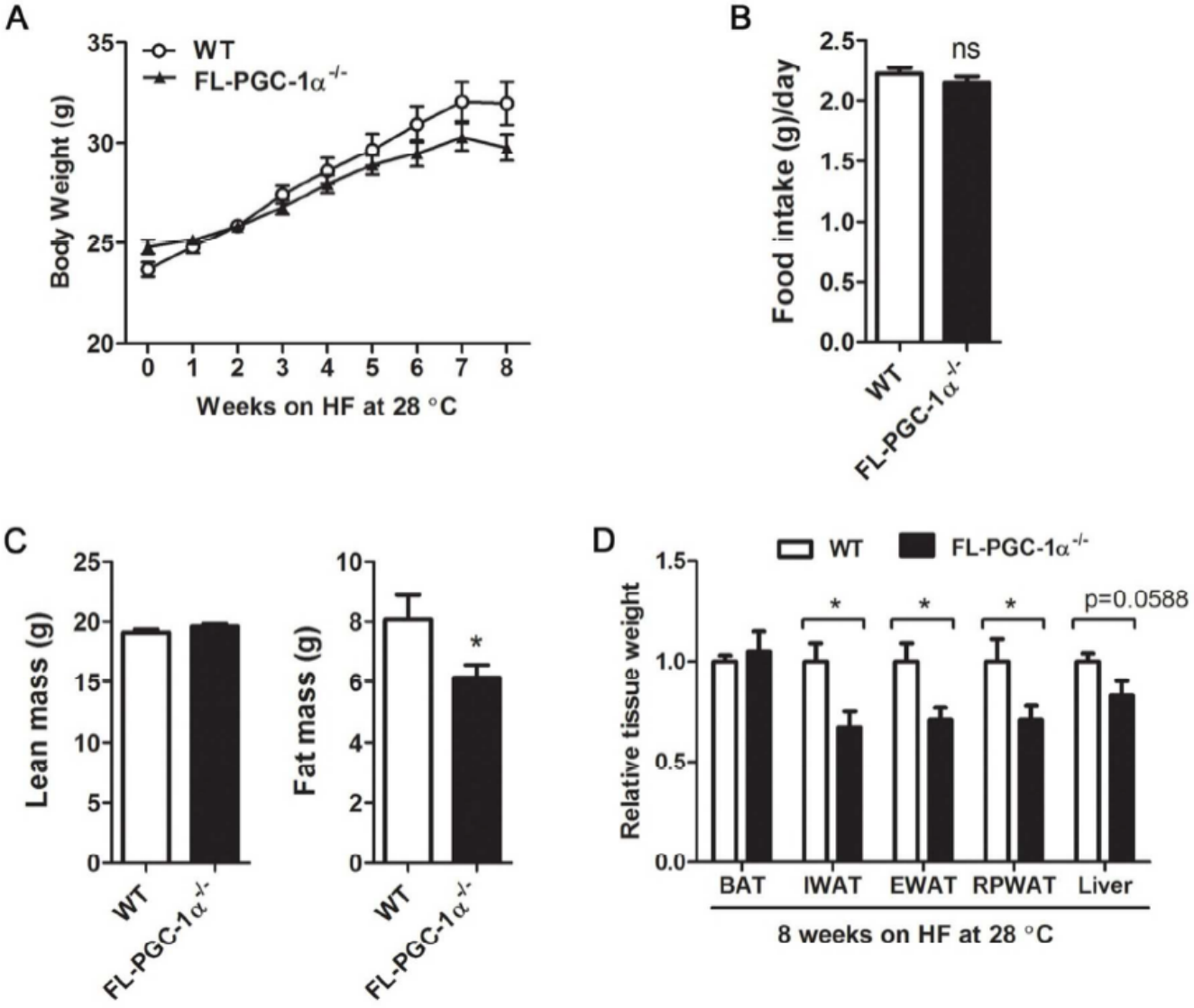
Supplementary Figure 1. Immunoprecipitation of endogenous NT-PGC-1α^{254} protein from brown adipose tissue of FL-PGC-1α$^{-/-}$ mice with a specific PGC-1α antibody. *A:* Peptide microarray analysis for PGC-1α antibody profiling. A rabbit polyclonal PGC-1α antibody raised against a GST fusion of PGC-1α (1-200aa) and a monoclonal PGC-1α antibody raised against a GST fusion of PGC-1α (1-120aa) were epitope-mapped using a series of overlapping 15-aa-long peptides corresponding to aa 1-200 of mouse PGC-1α (JPT Peptide Technologies). The 15-mer peptides were spotted onto glass slides and hybridized with each antibody to identify the specific sequences recognized by each antibody. *B:* Expression of endogenous NT-PGC-1α^{254} protein in FL-PGC-1α $^{-/-}$ mice. BAT lysates from WT and FL-PGC-1α$^{-/-}$ mice were immunoblotted with a monoclonal PGC-1α antibody (left panel) or immunoprecipitated with a rabbit PGC-1α antibody followed by immunoblotting with a monoclonal PGC-1α antibody (right panel). NSB represents non-specific bands.

SUPPLEMENTARY DATA



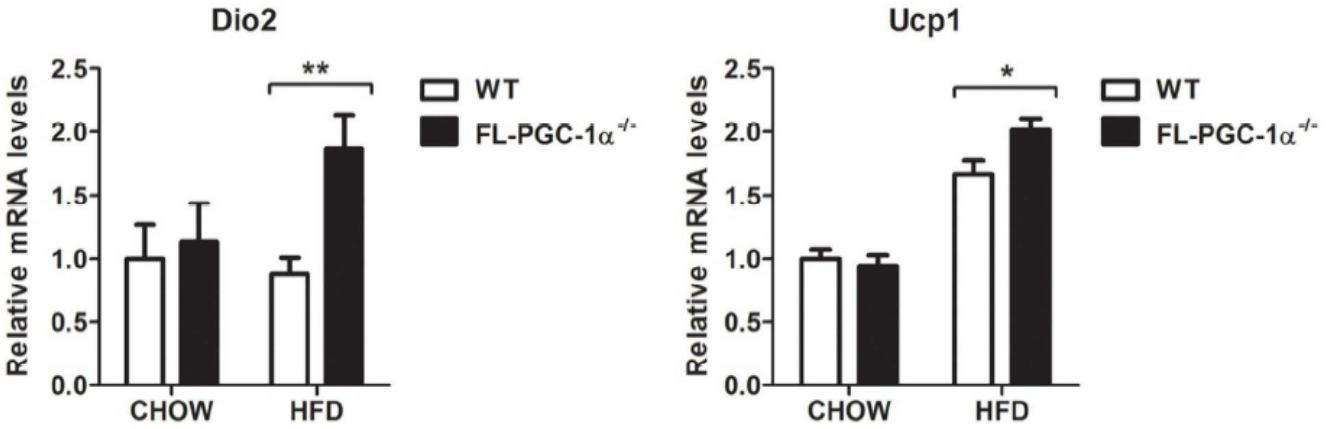
SUPPLEMENTARY DATA

Supplementary Figure 2. Attenuation of body fat accumulation in FL-PGC-1α$^{-/-}$ mice on HFD at thermoneutrality. *A:* Body weights of WT and FL-PGC-1α$^{-/-}$ male mice (n=12 per group) at 28°C during the 8 weeks of HFD. *B:* Average food intake of WT and FL-PGC-1α$^{-/-}$ mice on HFD at 28°C. *C:* Body composition of WT and FL-PGC-1α$^{-/-}$ mice determined by NMR after 8 weeks of HFD-feeding at 28°C. *D:* Relative weights of BAT, IWAT, EWAT, RPWAT fat pads and livers from WT and FL-PGC-1α$^{-/-}$ mice. All data are presented as the mean ± SEM. * $P < 0.05$ determined by Student's *t* test.



SUPPLEMENTARY DATA

Supplementary Figure 3. Transcript levels of DIO2 and UCP1 in BAT from WT and FL-PGC-1α$^{-/-}$ mice fed either chow or HFD. Quantitative real-time PCR analysis of DIO2 and UCP1 in BAT from WT and FL-PGC-1α$^{-/-}$ mice (n=8 per group) fed either chow or HFD for 16 weeks. All data are presented as the mean ± SEM. * P < 0.05, ** P < 0.01 determined by Student's *t* test.



Supplementary Table 1. Multiple regression model for energy expenditure (kJ/h) in WT and FL-PGC-1α$^{-/-}$ mice fed HFD. *Estimated change in mean EE per unit change in the independent variable. SE: standard error of the coefficient estimate. Lean mass, fat mass, activity, and genotype are significant independent determinants of EE.

Independent variable	Coefficient* ± SE	*P*
Intercept	0.5785 ± 0.095	< 0.0001
Lean mass (g)	0.0489 ± 0.006	< 0.0001
Fat mass (g)	0.0181 ± 0.004	< 0.0001
Activity (counts)	0.0003 ± 5.975e-6	< 0.0001
Genotype	0.0156 ± 0.007	0.0241