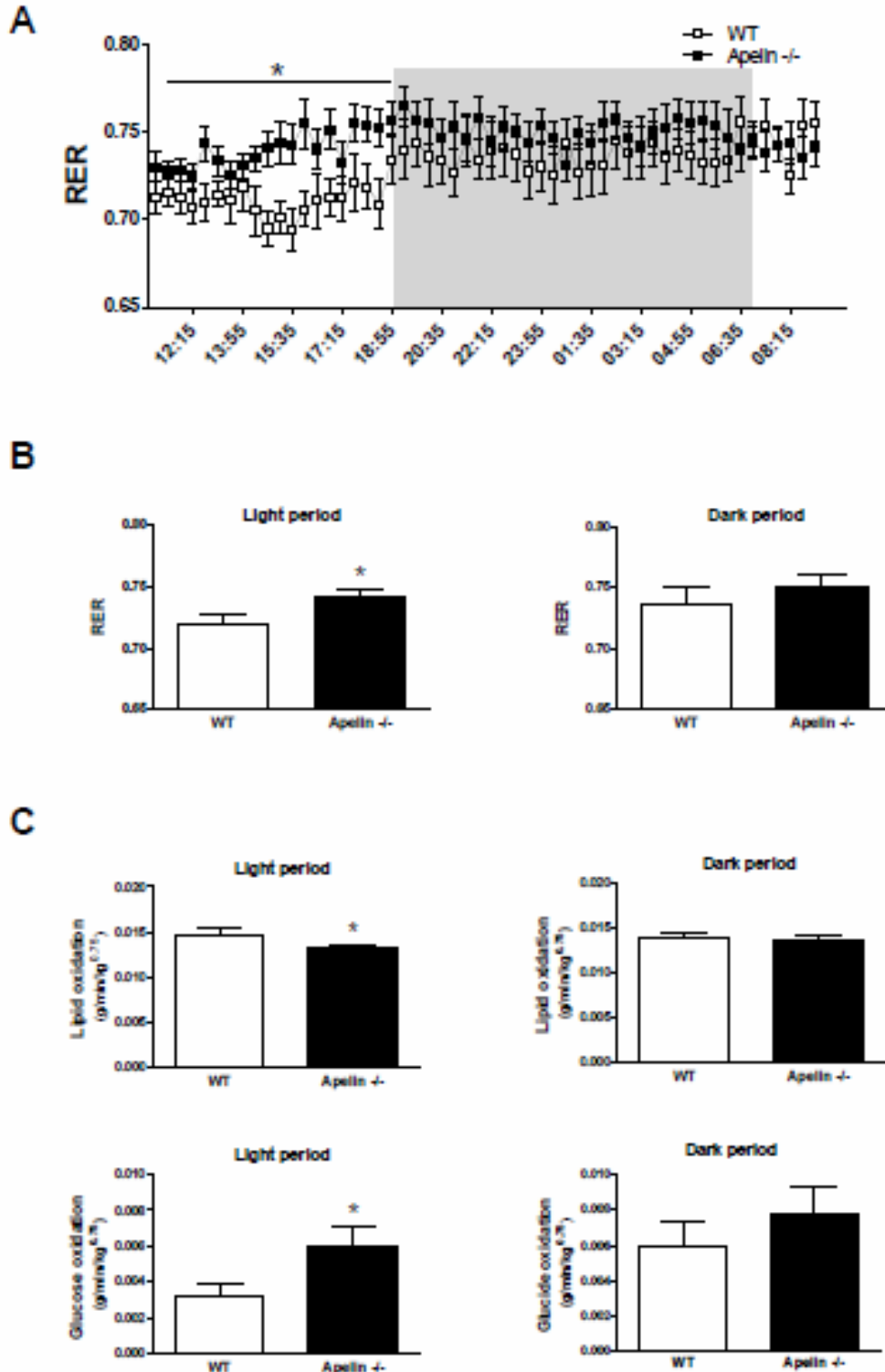


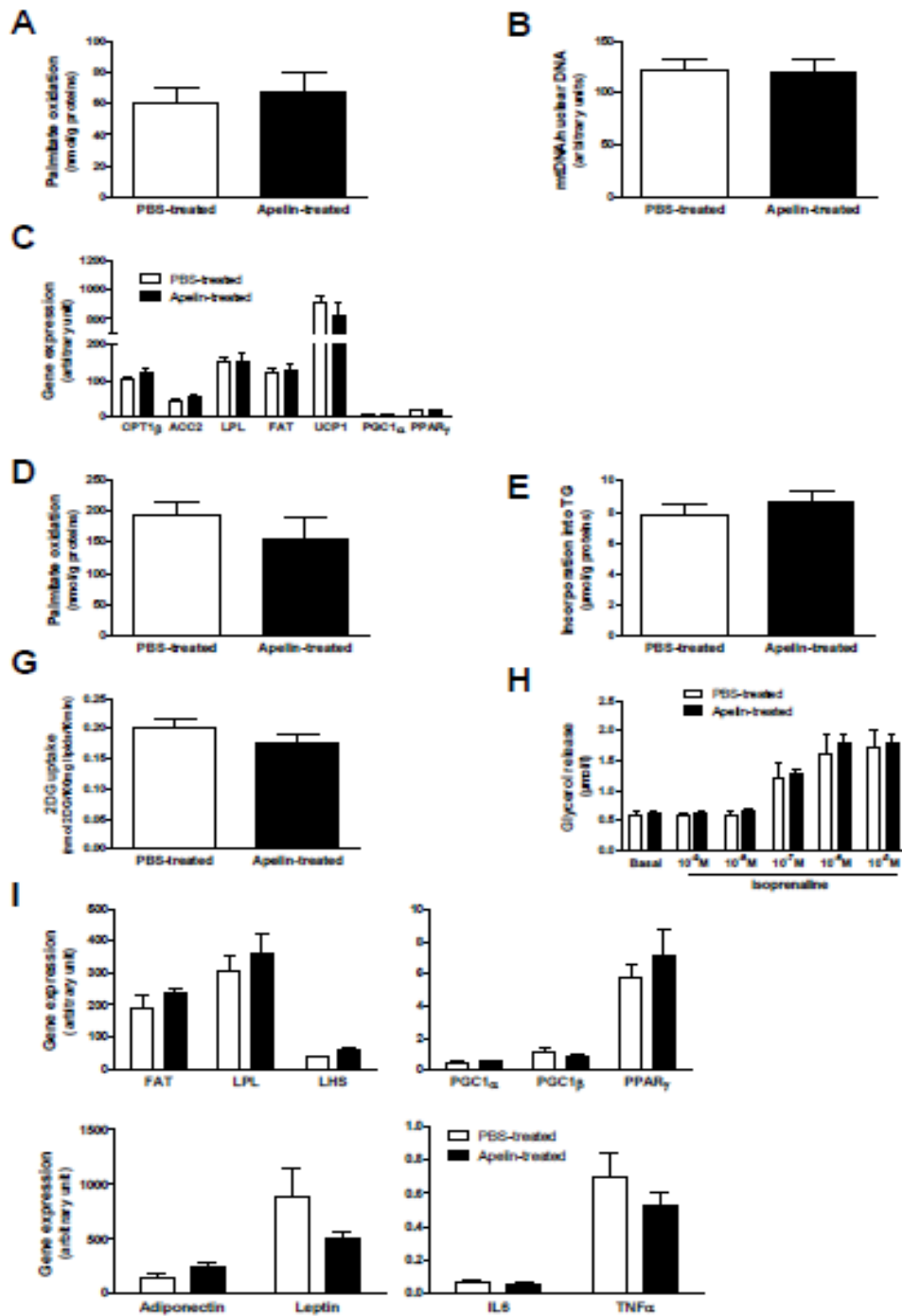
SUPPLEMENTARY DATA

Supplementary Figure 1. Whole-body substrate oxidation in WT and apelin-deficient mice. A) RER measurement during 24h in apelin $-/-$ mice (n=13) and the corresponding wild type (WT), (n= 11). Results are means \pm SEM. * $P \leq 0.05$; B) RER during the light (left) and dark period (right) in WT and apelin $-/-$ mice. Results are means \pm SEM. * $P \leq 0.05$; C) Amount of lipid and glucose oxidized during the light (left) and dark (right) period calculated as mentioned in Materials and Methods in WT and apelin $-/-$ mice. Results are means \pm SEM. * $P \leq 0.05$.



SUPPLEMENTARY DATA

Supplementary Figure 2. Effect of apelin treatment on brown (BAT) and white adipose tissue (WAT) in HFD mice. A) Total FAO in BAT; B) mtDNA quantity calculated as the ratio of COX1 to cyclophilin A DNA levels determined by real-time PCR in BAT of PBS-treated (n=7) and apelin-treated mice (n=7); C) Gene expression in BAT of PBS-treated (n=6) and apelin-treated mice (n=6). Results are means \pm SEM. D) Total FAO in WAT and E) Measure of [14 C]palmitate incorporation into TG in WAT of PBS- (n=3) and apelin-treated mice (n=4). Results are means \pm SEM; F) Isolated adipocytes from PBS- (n=3) and apelin-treated mice (n=4) were incubated without (basal) or with different isoprenaline concentrations during 90 min and glycerol release was measured as described materials and methods. G) Basal glucose uptake in isolated adipocytes of PBS-treated (n=3) and apelin-treated mice (n=4). Results are means \pm SEM; H) Gene expression in WAT of PBS-treated (n=6) and apelin-treated mice (n=6). Results are means \pm SEM.



SUPPLEMENTARY DATA

Supplementary Figure 3. Apelin mediates FAO and mitochondrial biogenesis through APJ receptor activation. A) Body weight gain (left panel) and fat gain (right panel) calculates as the difference of body weight and % of fat mass respectively between the beginning and the end of the different treatments. Standard mice were treated for 28 days with PBS, or APJ antagonist receptor (F13A) (0.2 μ mole/kg/day) or apelin-13 (0.1 μ mole/kg/day) or the combination of apelin-13 and F13A. Results are means \pm SEM; n= 5 in each group of mice; B) Fasted plasma glucose, insulin and calculated AUC from GTT before and after the different treatments. Results are means \pm SEM; n= 5 in each group of mice; C) Complete FAO measured in skeletal muscles at the end of the different treatments. Results are means \pm SEM; n= 5 in each group of mice; D) mtDNA quantity calculated as the ratio of COX1 to cyclophilin A DNA levels determined by real-time PCR in soleus muscle at the end of the different treatments. Results are means \pm SEM; n= 5 in each group of mice.

