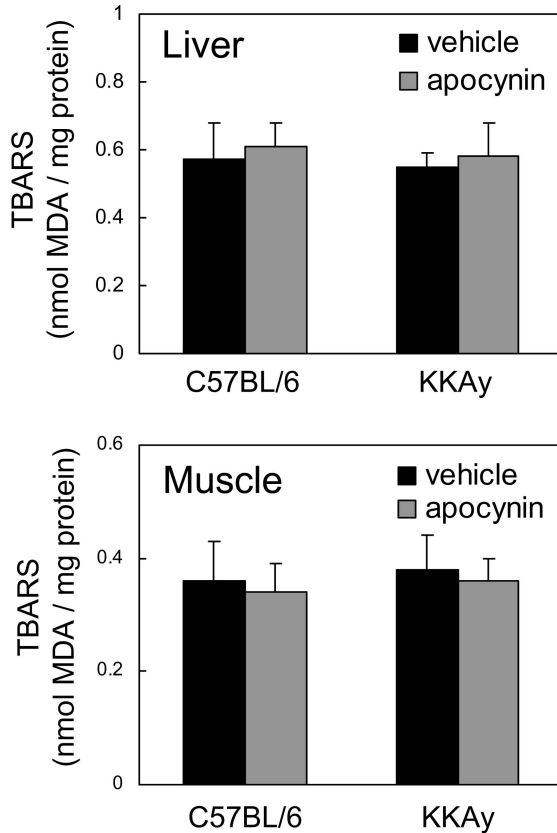
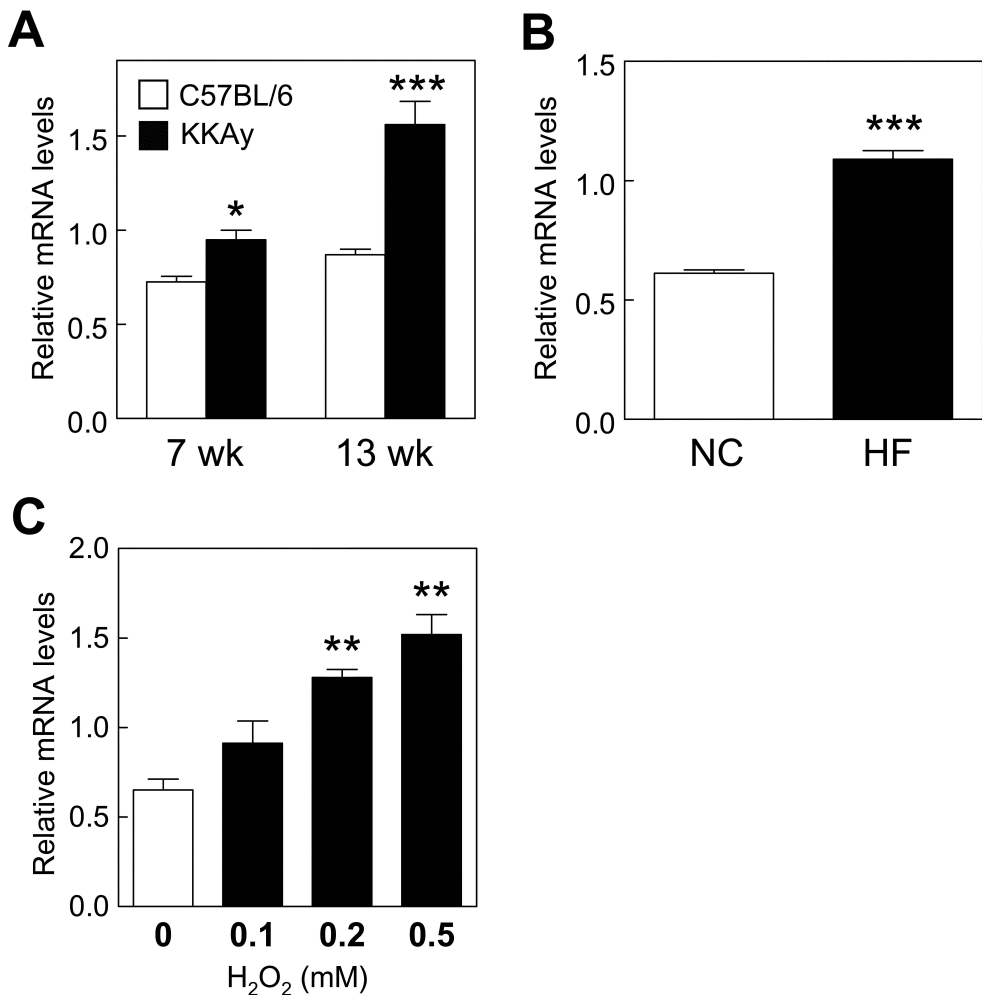


Supplementary Figure 1 Oxidative stress and mRNA expressions in *db/db* or diet-induced obese (DIO) mice. (A) Body weight, (B) epididymal WAT weight, (C) plasma levels of H₂O₂ and (D) plasma levels of lipid peroxidation in 8-week-old male lean (*db/+^m*) and obese (*db/db*) mice, or in high-fat (HF) diet-induced obese mice and lean control mice fed normal chow (NC). (E) Tissue levels of lipid peroxidation in WAT, liver and skeletal muscle of lean and obese mice. (F and G) The mRNA expressions of adiponectin, NADPH oxidase subunits, PU.1 and antioxidant enzymes in WAT (F), liver (G, left) and skeletal muscle (G, right). For comparison, the expression level of the genes in lean mice was arbitrarily set at 1. Values are expressed as mean ± SEM (*n* = 10; *db/db* mice, *n* = 4; DIO mice). **P* < 0.05; ***P* < 0.01; ****P* < 0.001, compared with lean control mice.



Supplementary Figure 2 In vivo effects of NADPH oxidase inhibitor, apocynin, on the levels of lipid peroxidation in the liver and skeletal muscle of KKAY mice. The levels of lipid peroxidation in tissue homogenate were measured as TBARS. Values are expressed as mean \pm SEM ($n = 8$).



Supplementary Figure 3 The mRNA expression of NOX4 in WAT of obese mice and 3T3-L1 adipocytes. **(A)** The mRNA expression of NOX4 in WAT of C57BL/6 (white bars) and KKAY (black bars) mice at 7 and 13 weeks of age. The mRNA amounts were quantified by real-time PCR. Values are normalized to the level of cyclophilin mRNA, and expressed as mean \pm SE ($n = 6-8$). * $P < 0.05$; *** $P < 0.001$, compared with C57BL/6 mice. **(B)** The mRNA expression of NOX4 in WAT of mice fed normal chow (NC) or high-fat diet (HF). Values are expressed as mean \pm SE ($n = 4$). *** $P < 0.001$, compared with lean control mice. **(C)** The mRNA expression of NOX4 in 3T3-L1 adipocytes exposed to H₂O₂. Values are expressed as mean \pm SE ($n = 3$). ** $P < 0.01$, compared with control.