

## **SUPPLEMENTARY FIGURE LEGENDS**

### **Supplementary Figure 1. Detection of SREBP2 mature form and precursor form in HepG2 cells without and with ANA treatment**

HepG2 cells were treated with vehicle DMSO or 5  $\mu$ M ANA for 24 h. Total cell lysates were isolated and protein levels of SREBP2 were examined by Western blotting. SREBP2-P refers to the precursor form and SREBP2-M refers to the processed and active mature form of SREBP2.

### **Supplementary Figure 2. Mice serum lipid levels**

Male C57BL/6J mice (n=16) were fed a normal diet for 1 week and then switched to a HFHC diet for two weeks. Four hour-fasted serum lipids were measured before and after the two week HFHC feeding.

### **Supplementary Figure 3. ANA treatment affected serum cholesterol levels and LDLR/PCSK9 expression in mice fed a normal chow diet.**

(A) Male C57BL/6J mice fed a normal chow diet were orally dosed 50 mg/kg/day ANA (n=8) or equal volume of vehicle (0.5% methyl cellulose) as the control group (n=8) for 10 days. Serum TC, HDL-C and LDL-C were measured at day 10 after the last dosing by commercial kits. Data are mean  $\pm$ SEM. Significant differences between control and ANA treatment were assessed by two-tailed Student's t-test.

(B) qPCR analysis of liver mRNA levels of LDLR and PCSK9 along with 4 additional SREBP-target genes and 3 LXR regulated genes in ANA-treated and vehicle-treated control mice. Values are mean  $\pm$  SEM of 8 mice per group. \*  $p < 0.05$  and \*\*  $p < 0.01$  compared to the vehicle group.

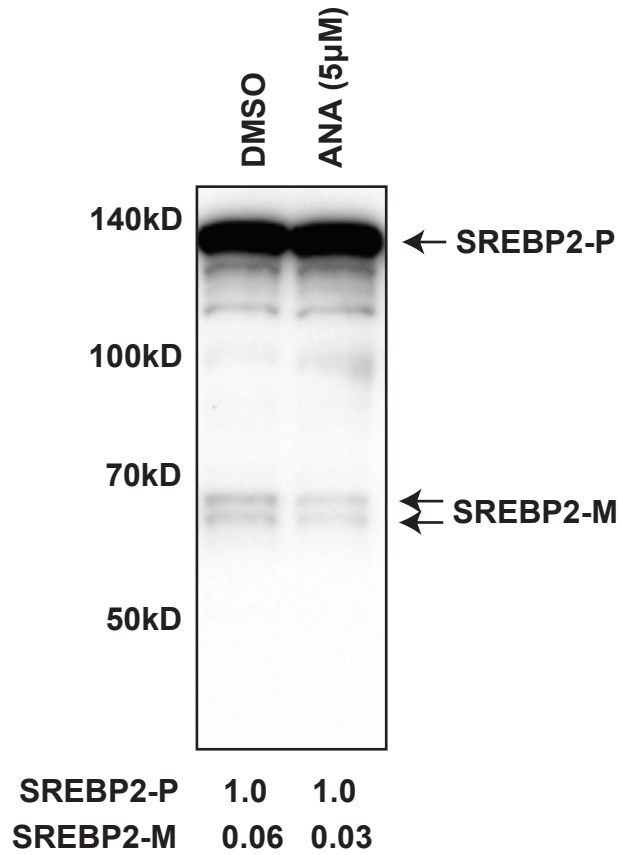
(C) Individual liver protein extracts were prepared and protein concentrations were determined. 50 µg of homogenate proteins of individual liver samples were resolved by SDS-PAGE and LDLR protein was detected by immunoblotting using anti-LDLR antibody. The membrane was reprobed with anti-β-actin antibody. Individual nuclear extracts isolated from liver homogenate from the ANA and vehicle groups were analyzed for SREBP2-M protein levels by Western blotting. The membrane was reprobed with anti-HDAC1 antibody as a control of equal nuclear protein loading.

(D) The protein abundance of LDLR was quantified with the Alpha View Software with normalization by signals of β-actin. Values are mean ± SEM of 8 samples per group. The protein abundance of SREBP2-M was quantified with normalization by signals of HDAC1. Values are mean ± SEM of 8 samples per group.

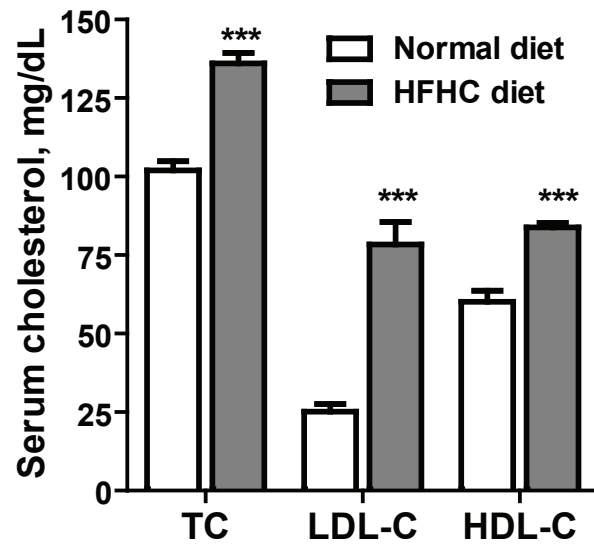
(E) Individual serum PCSK9 levels were quantified by ELISA. Values are mean ± SEM of 8 mice per group. \*  $p < 0.05$  as compared to vehicle group.

(F) Cholesterol levels in vehicle and ANA-treated liver samples were measured. Values are mean ± SEM of 8 mice per group. \*\*  $p < 0.01$  as compared to vehicle group.

# Supplementary Figure 1

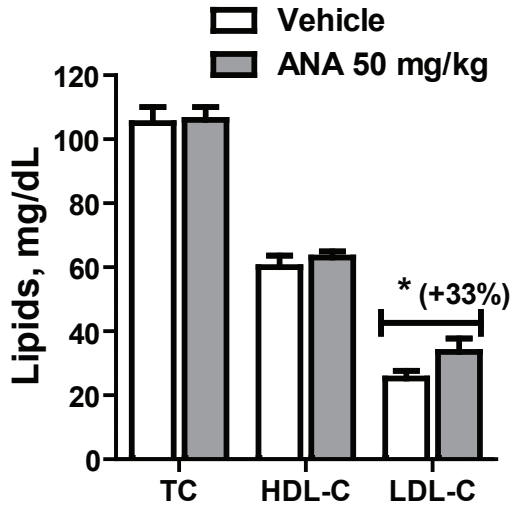


## Supplementary Figure 2

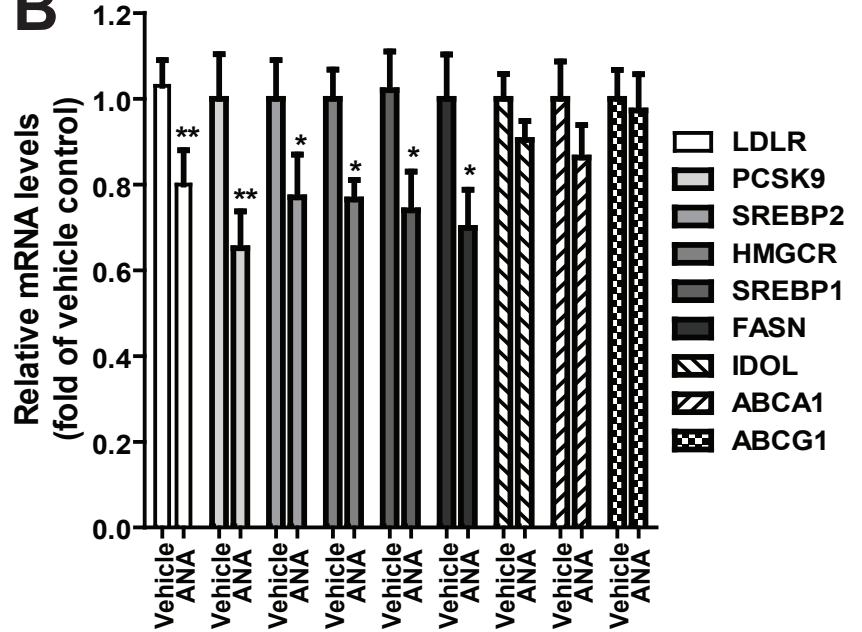


# Supplementary Figure 3

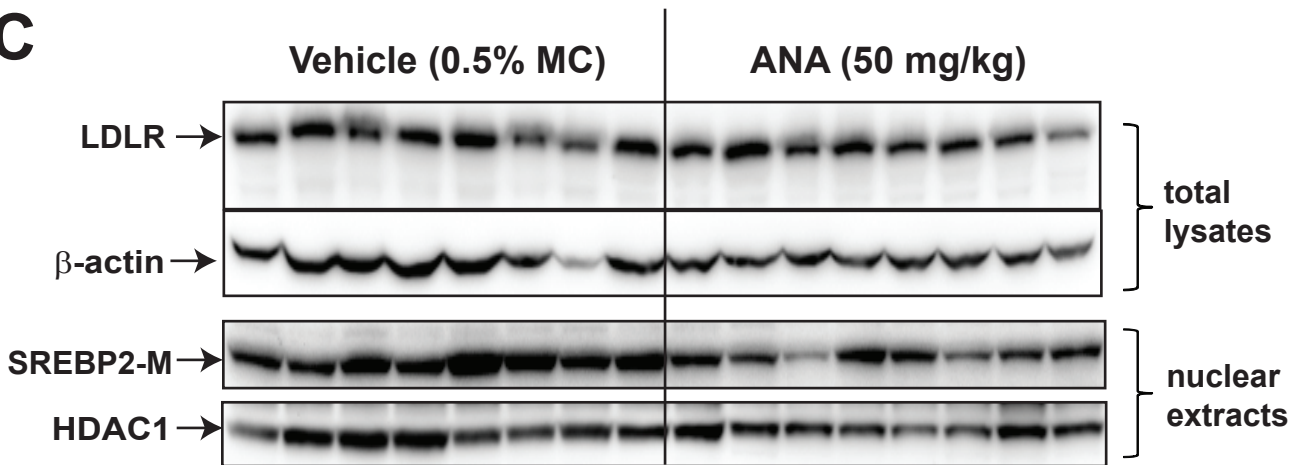
**A**



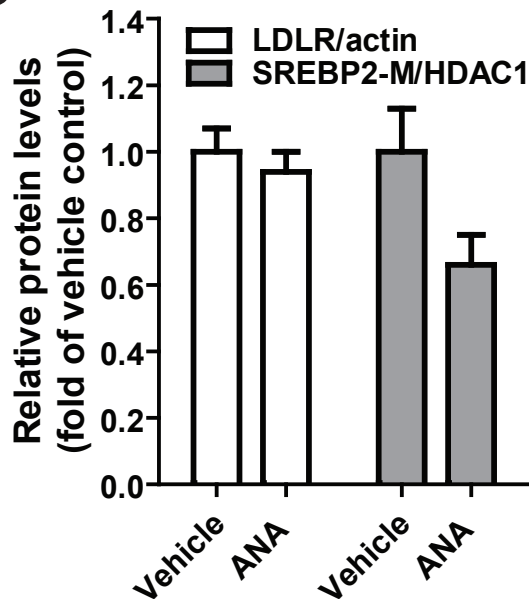
**B**



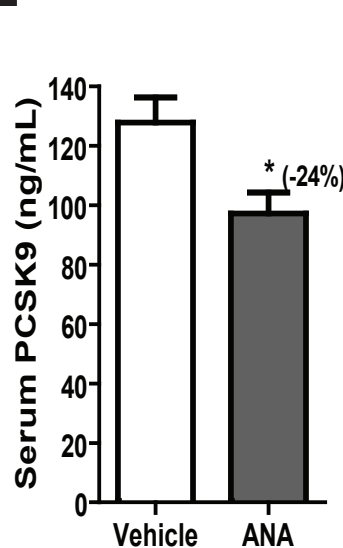
**C**



**D**



**E**



**F**

