Supplementary information

Table S1. Primer sequences used for qRT-PCR.

genes	primer	Sequence
TNFα	Forward	5’-CTG AAC TTC GGG GTG ATC GG-3’
	Reverse	5’-GGC TTG TCA CTC GAA TTT TGA GA-3’
IFNγ	Forward	5’-CTG CTG ATG GGA GGA GAT GT-3’
	Reverse	5’-TTT GTC ATT CGG GTG TAG TCA-3’
IL-6	Forward	5’-CTG CAA GAG ACT TCC ATC CAG-3’
	Reverse	5’-AGT GGT ATA GAC AGG TCT GTT GG-3’
β-actin	Forward	5’-TAG GCG GAC TGT TAC TGA GC-3’
	Reverse	5’-TGC TCC AAC CAA CTG CTG TC-3’

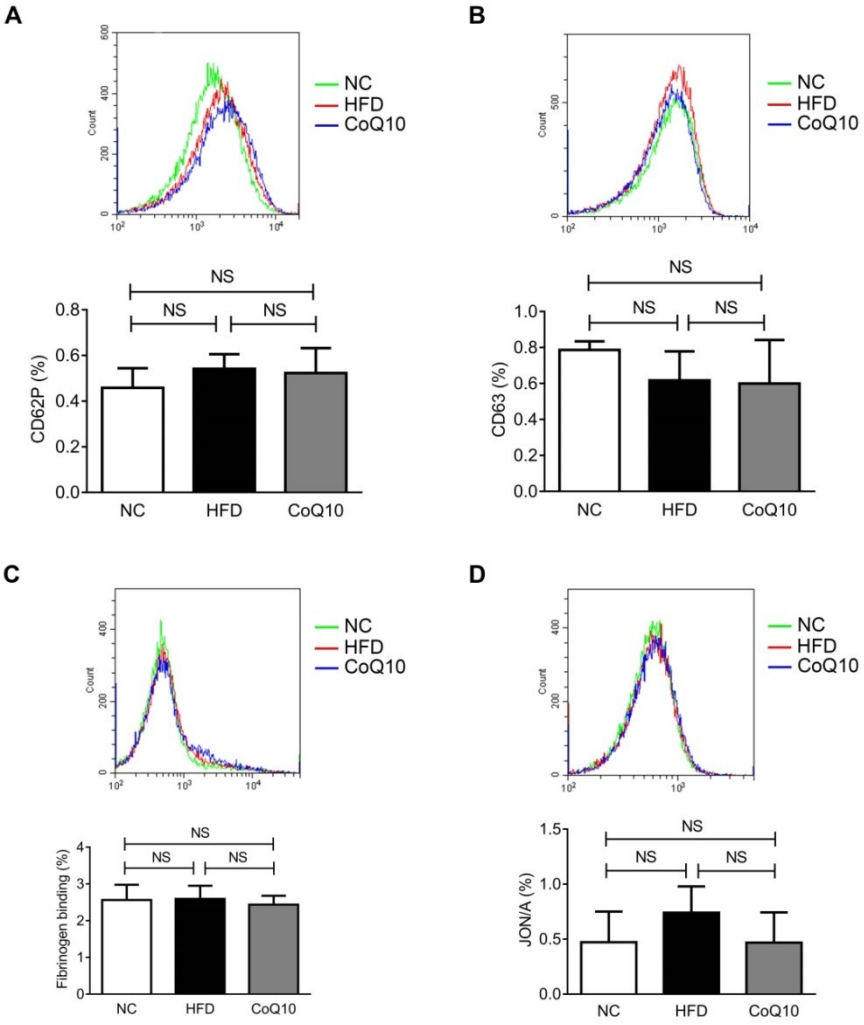

Figure S1. CoQ10 supplementation does not affect platelet surface CD62P or CD63 expression as well as fibrinogen or JON/A binding to unstimulated platelets in ApoE$^{-/-}$ mice. (A-D) Gel-filtered platelets are prepared from NC, HFD or CoQ10 mice. Platelet surface expression of CD62P **(A**, n=6**)** and CD63 **(B**, n=3**)** in resting platelets were analyzed by flow cytometry. Soluble FITC-labeled fibrinogen **(C)** or PE-labeled JON/A **(D)** binding to resting platelets (no agonist activation) were analyzed by flow cytometry (n=6). Data are expressed as the means ± SEM. Statistical significance is assessed by ANOVA followed by the Newman–Keuls test for multiple comparisons. NS, not significant difference.

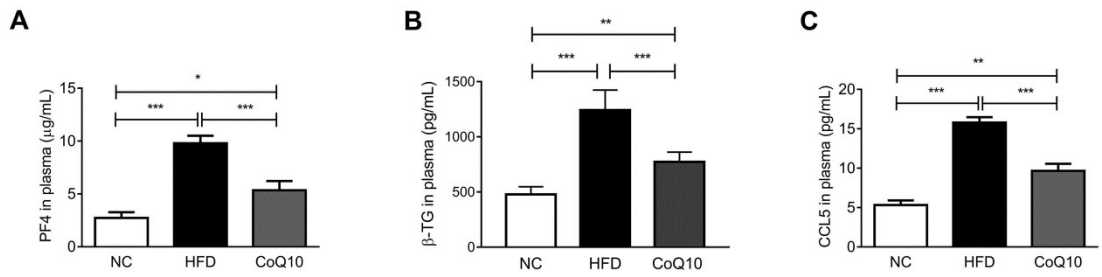

Figure S2. CoQ10 supplementation decreases plasma levels of PF4, β-TG and CCL5 in ApoE$^{-/-}$ mice. The plasma levels of PF4 **(A)**, β-TG **(B)** and CCL5 **(C)** in ApoE$^{-/-}$ mice after 12-week intervention are determined (n=5). Data are expressed as the means ± SEM. **P* < 0.05, ***P* < 0.01 and ****P* < 0.001 as assessed by ANOVA followed by the Newman–Keuls test for multiple comparisons.

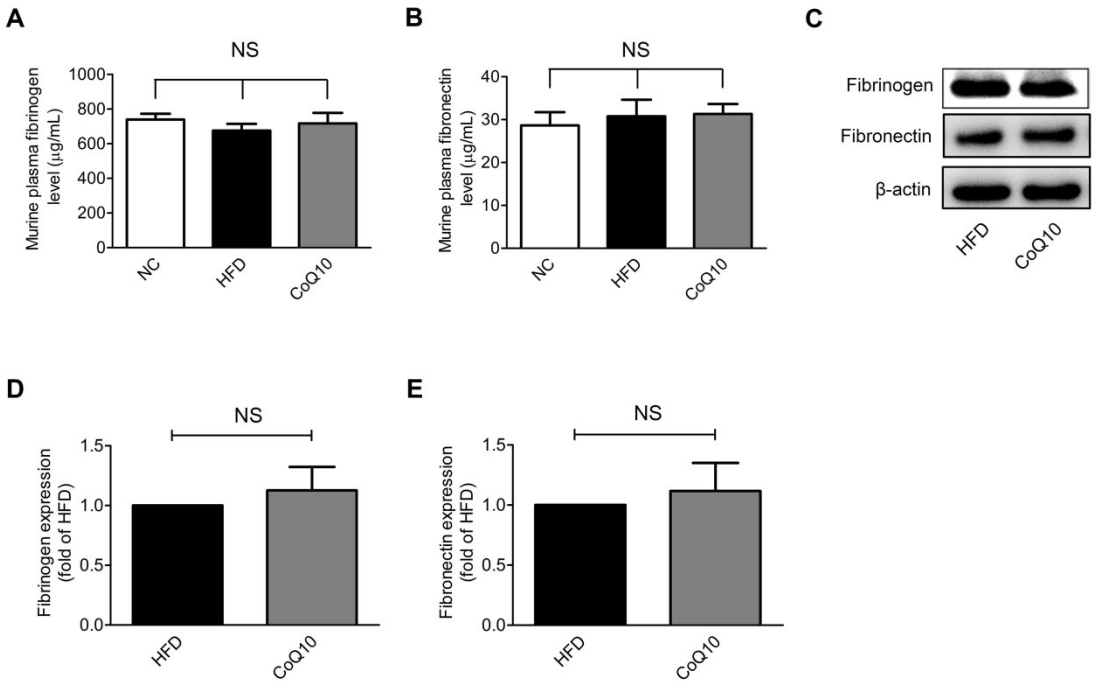

Figure S3. CoQ10 supplementation does not affect plasma levels and platelet expression levels of Fg and fibronectin in ApoE$^{-/-}$ mice. (A-B) Plasma levels of Fg **(A)** and fibronectin **(B)** in ApoE$^{-/-}$ mice following 12-week feeding are determined by ELISA (n=10). **(C-E)** Platelet lysates from HFD or CoQ10-supplemented ApoE$^{-/-}$ mice are analyzed by Western blotting using a specific antibody against Fg **(D)**, or fibronectin **(E)**. Representative immunoblots **(C)** are presented (n=3). All data are expressed as the means ± SEM. Statistical significance is determined by ANOVA followed by the Newman–Keuls test for multiple comparisons in **A** and **B**, and by using unpaired *t*-tests in **D** and **E**. NS, not significant difference.

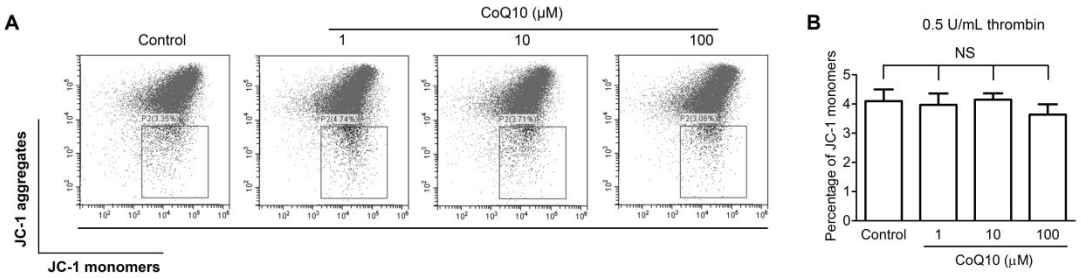

Figure S4. CoQ10 does not significantly alter platelet mitochondrial membrane potential (Δψm) in human platelets *in vitro*. Gel-filtered human platelets were pre-incubated with CoQ10 (1, 10, or 100 μM) or vehicle control (DMSO) for 50 min, and then activated by 0.5 U/mL thrombin for 2 min. JC-1 was used to assess the dissipation of the ΔΨm by flow cytometry. Representative images **(A)** and summary data **(B)** were shown (n=3). Data are expressed as the means ± SEM. Statistical significance is determined by ANOVA followed by the Newman–Keuls test for multiple comparisons. NS, not significant difference.

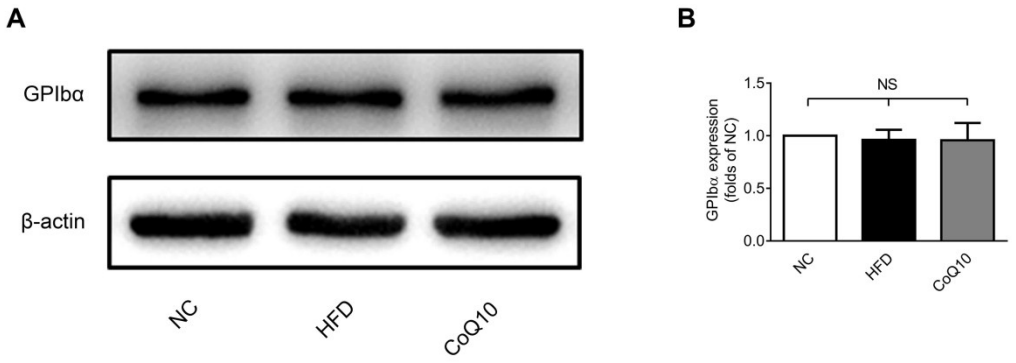

Figure S5. CoQ10 supplementation does not affect platelet expression levels of GPIbα in ApoE$^{-/-}$ mice. Platelet lysates from NC, HFD or CoQ10-supplemented ApoE$^{-/-}$ mice are analyzed by Western blotting using a specific antibody against GPIbα. Representative immunoblots **(A)** and summary data **(B)** are presented (n=3). Data are expressed as the means ± SEM. Statistical significance is determined by ANOVA followed by the Newman–Keuls test for multiple comparisons. NS, not significant difference.

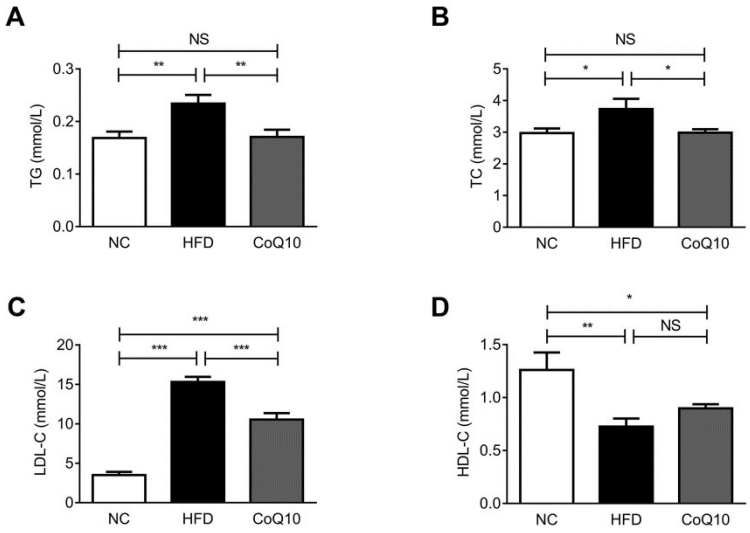

Figure S6. CoQ10 supplementation improves plasma lipid profiles in ApoE$^{-/-}$ mice. Plasma levels of triglyceride (TG) **(A)**, total cholesterol (TC) **(B)**, low density lipoprotein cholesterol (LDL-C) **(C)** and high density lipoprotein cholesterol (HDL-C) **(D)** are measured in NC, HFD or CoQ10-supplemented mice after 12-week intervention (n=10). Data are expressed as the means ± SEM. **P* < 0.05, ***P* < 0.01 and ****P* < 0.001 as assessed by ANOVA followed by the Newman–Keuls test for multiple comparisons. NS, not significant difference.

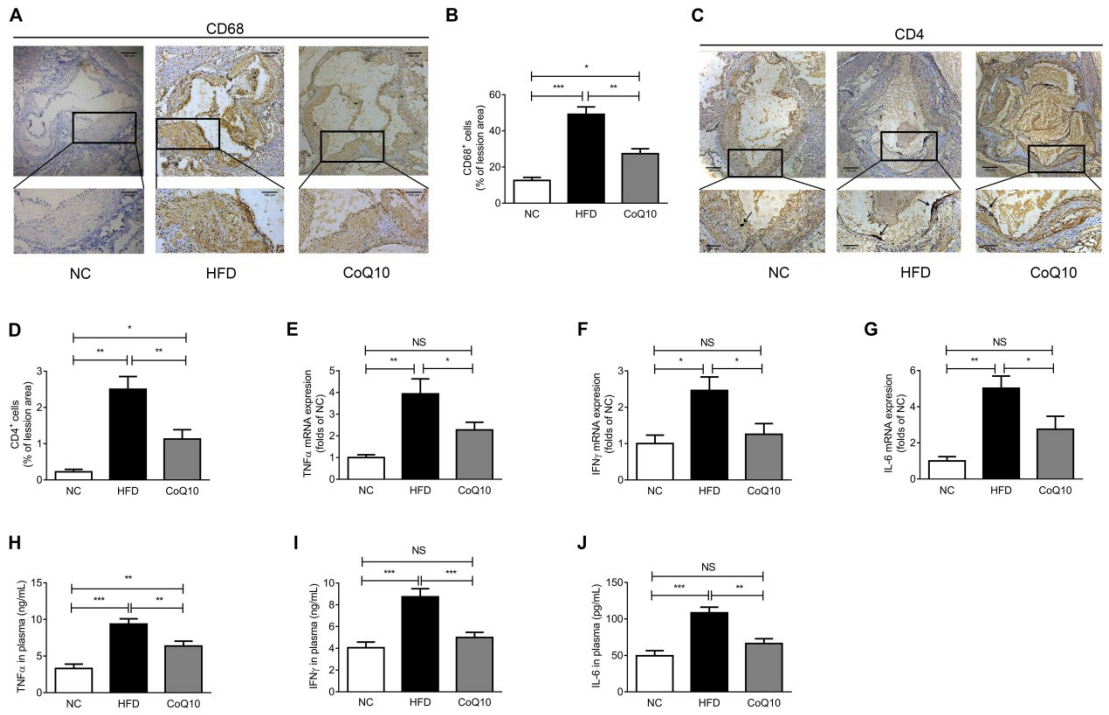

Figure S7. CoQ10 supplementation decreases inflammatory responses in ApoE$^{-/-}$ mice. (A-D) Representative images of CD68-stained **(A)** and CD4-stained **(C)** aortic sinus atherosclerotic lesions are presented and the mean stained areas of CD68 **(B)** and CD4 **(D)** in lesions are determined (n=5). Scale bars indicate 100 μm. Overview (*upper*) and detailed view (*lower*) of the staining are given in **A** and **C**. CD4-positive areas are marked with arrows in **C**. **(E-G)** Relative mRNA expression of TNFα **(E)**, IFNγ **(F)**, and IL-6 **(G)** in whole aortae from NC, HFD or CoQ10-supppemented ApoE$^{-/-}$ mice are shown after 12-week intervention (n=5). **(H-J)** The plasma levels of TNFα **(H)**, IFNγ **(I)**, and IL-6 **(J)** from NC, HFD or CoQ10 mice are determined (n=5). Data are expressed as the means ± SEM. **P* < 0.05, ***P* < 0.01 and ****P* < 0.001 as assessed by ANOVA followed by the Newman–Keuls test for multiple comparisons. NS, not significant difference.