Scientific Reports

Supporting Information

Kefir peptides alleviate high-fat diet-induced atherosclerosis by attenuating macrophage accumulation and oxidative stress in *ApoE* knockout mice

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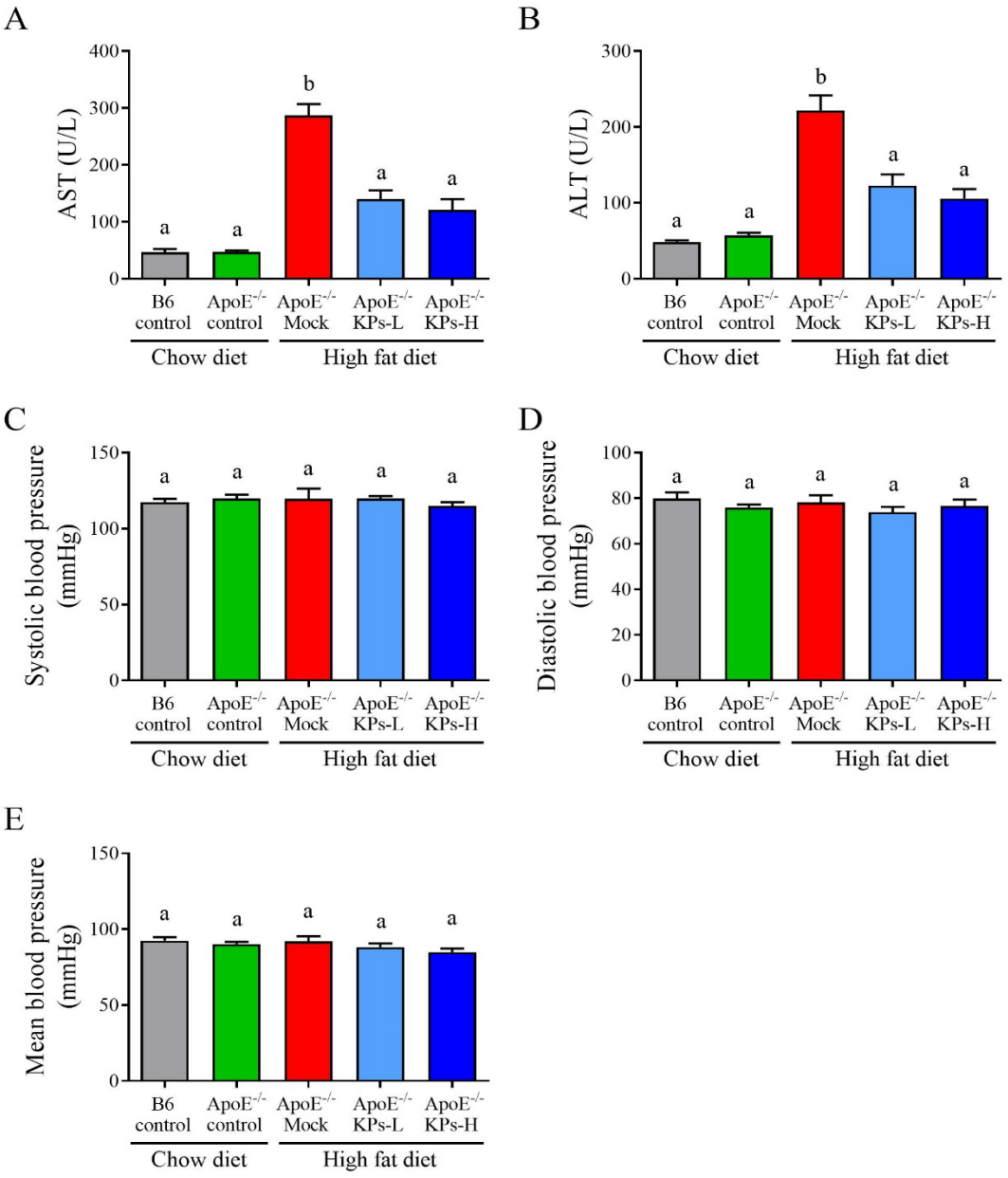
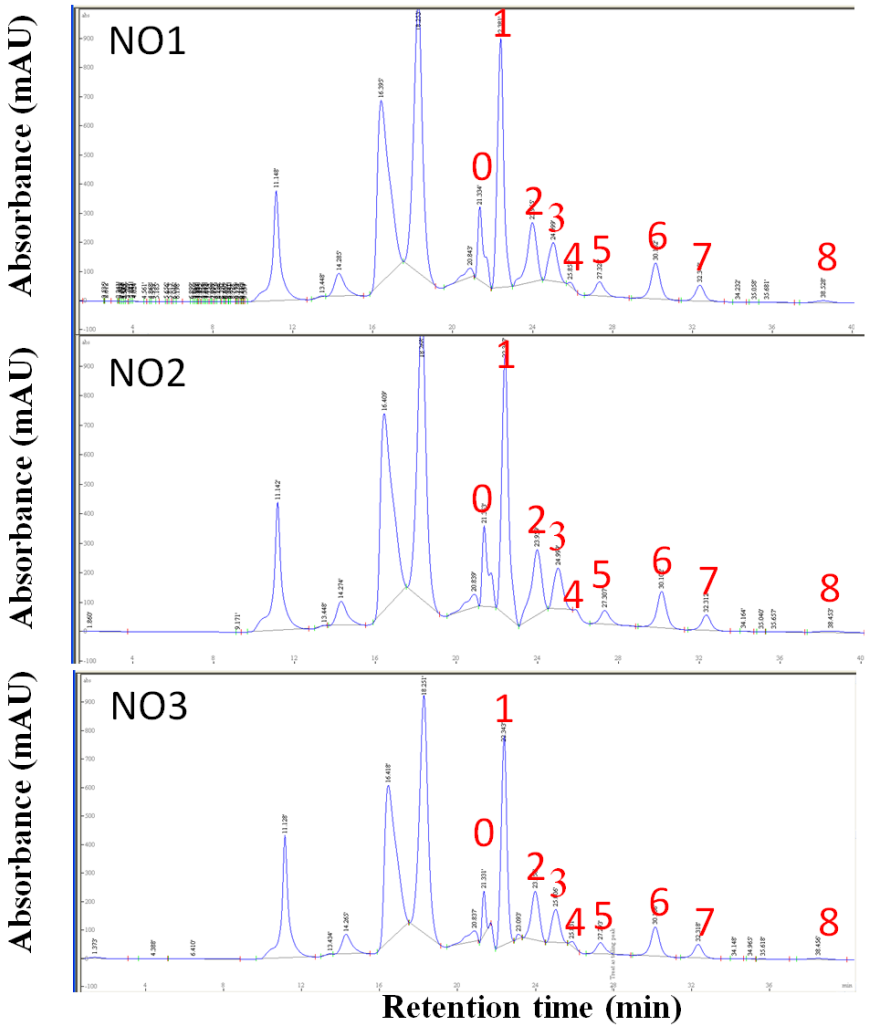
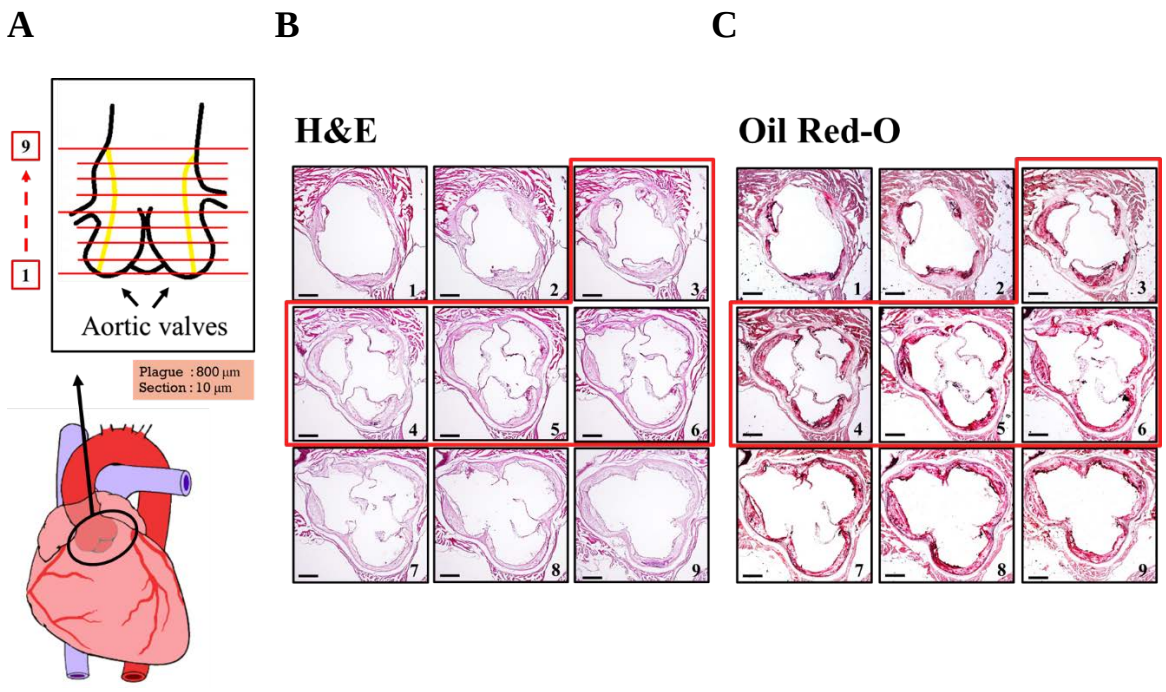


Supplementary Figure 1. Effects of kefir peptides on liver damage markers and blood pressure in HDF-induced atherosclerotic *ApoE*$^{-/-}$ mice. (A) Blood aspartate aminotransferase (AST) and (**B**) alanine aminotransferase (ALT) were measured by using a VetTestTM automatic colorimetrically analyzer. **(C)** Systolic blood pressure (SBP), (**D**) diastolic blood pressure (DBP), and (**E**) mean blood pressure (MBP) were measured by the Tail-Cuff detection system (BP-98A, Softron, Tokyo, Japan). Data are displayed as the mean ± SEM (n = 8). The labels at the top of columns without the same letters indicate significant differences between groups ($P < 0.05$).



Supplementary Figure 2. The quality controls of kefir peptides powder for the peptides separation and reproducibility. They were separated by semipreparative HPLC on a model PU-980 pump (Jasco, Japan) equipped with a UV detector and a 300 x 7.8 mm i.d., 5-µm particles TSK-GEL G2000SWXL column (Sigma-Aldrich, St Louis, MO). The mobile phase was 100 mM KH2PO4, 1 M NaCl and 1 mM EDTA (pH = 6.5) at a flow rate of 0.5 mL/min, and the wavelength was detected at 215 nm.



Supplementary Figure 3. Schematic images of aorta continuously serial sections for plaque formation examination in HFD-induced atherosclerotic *ApoE*$^{-/-}$ mic. The accumulation of lipid in the aortic roots of *ApoE*$^{-/-}$ mice was observed by Oil red-O staining and counterstained with H&E. Scale bars: 200 μm. **(A)** The relative dissection position of mouse aortic root in the anatomy view. (**B**) The H&E staining of 9 continuously serial sections from the root to ascending aortic region. (**C**) The Oil red-O staining of 9 continuously serial sections from the root to ascending aortic region. The middle of 4 sections labeled by red box (slides 3-6) were used to quantify the Oil red-O-positive staining area.

Figure 3A. Raw data

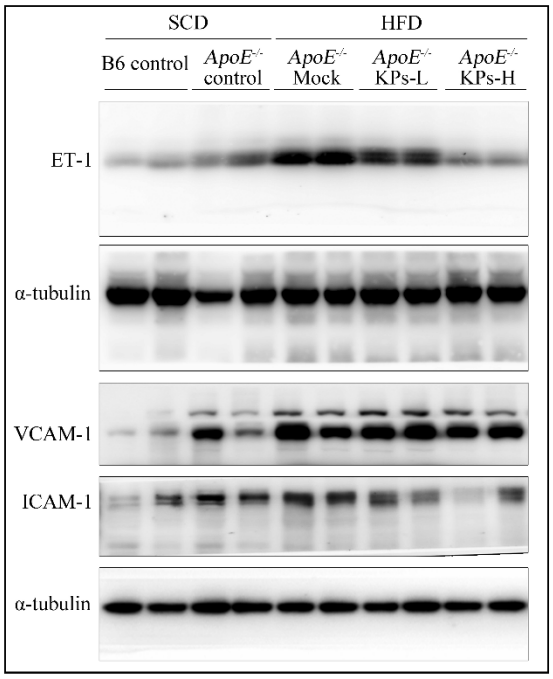


Figure 5E. Raw data

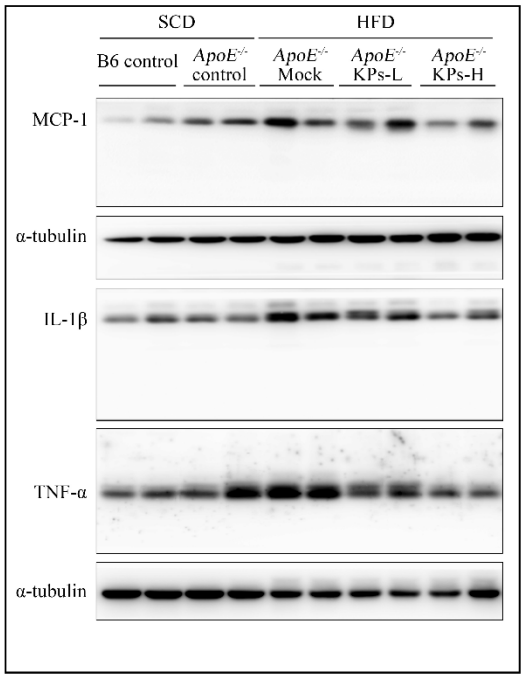
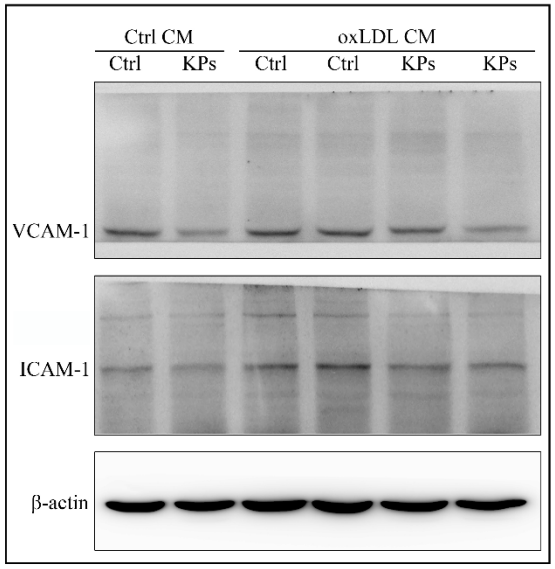


Figure 6D. Raw data



Supplementary Figure 4. Western blot raw data for Fig. 3A, Fig. 5E, and Fig. 6D.