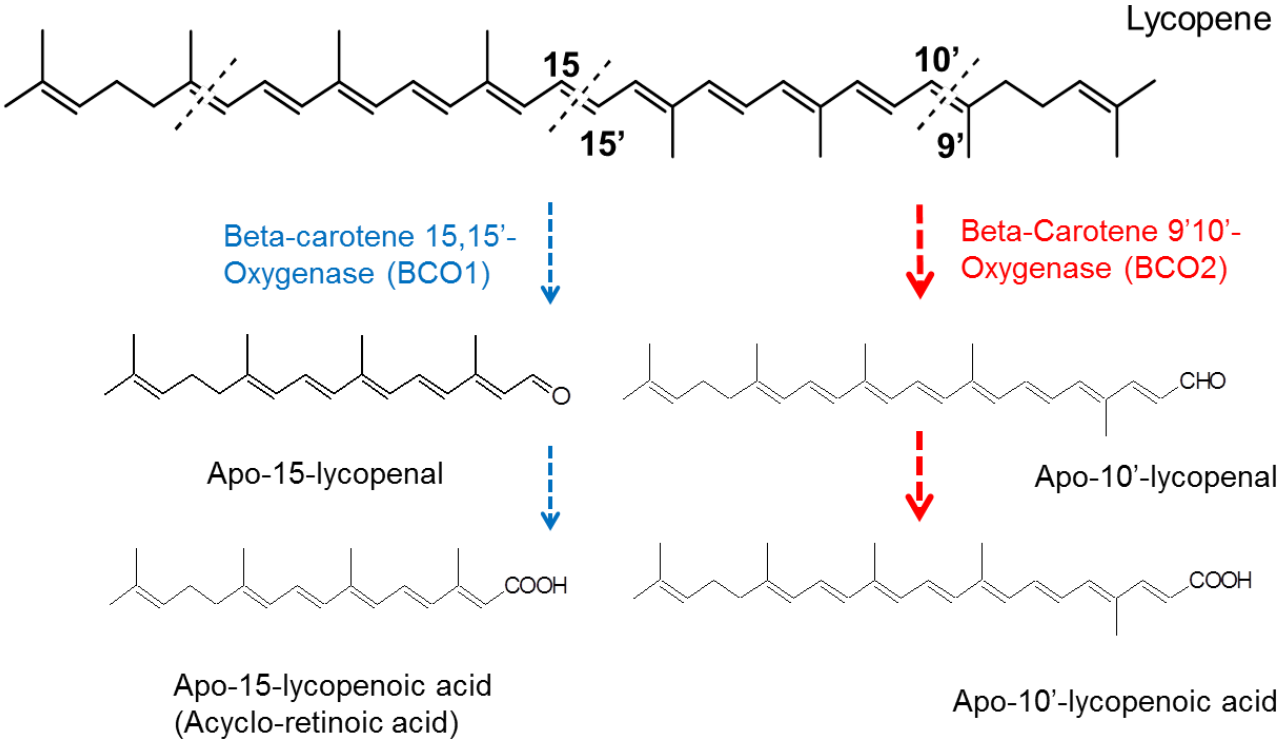
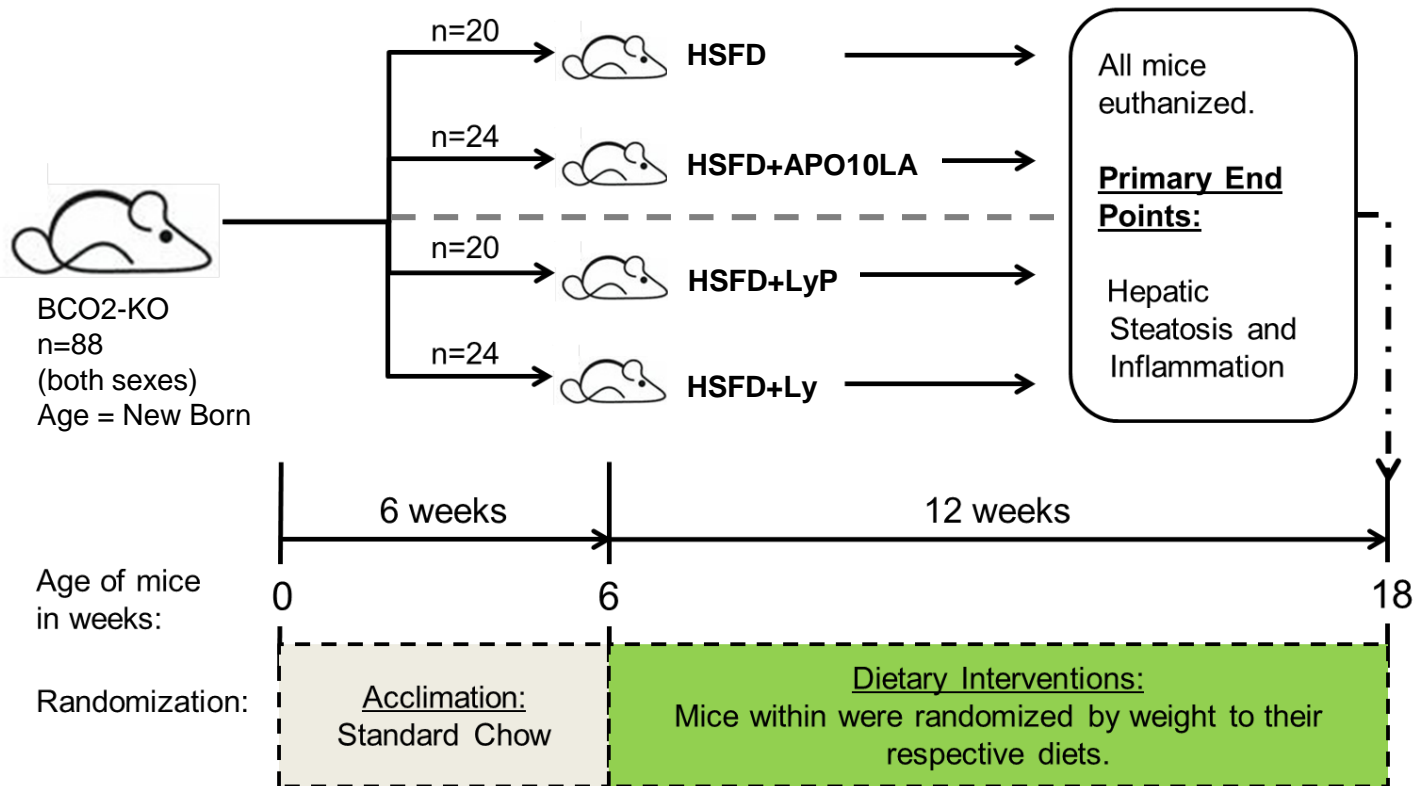


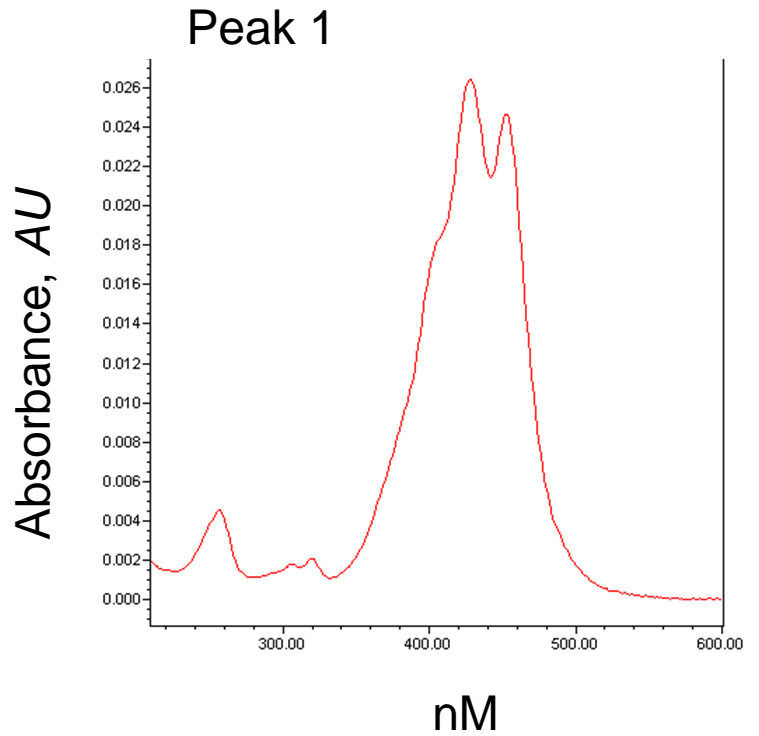
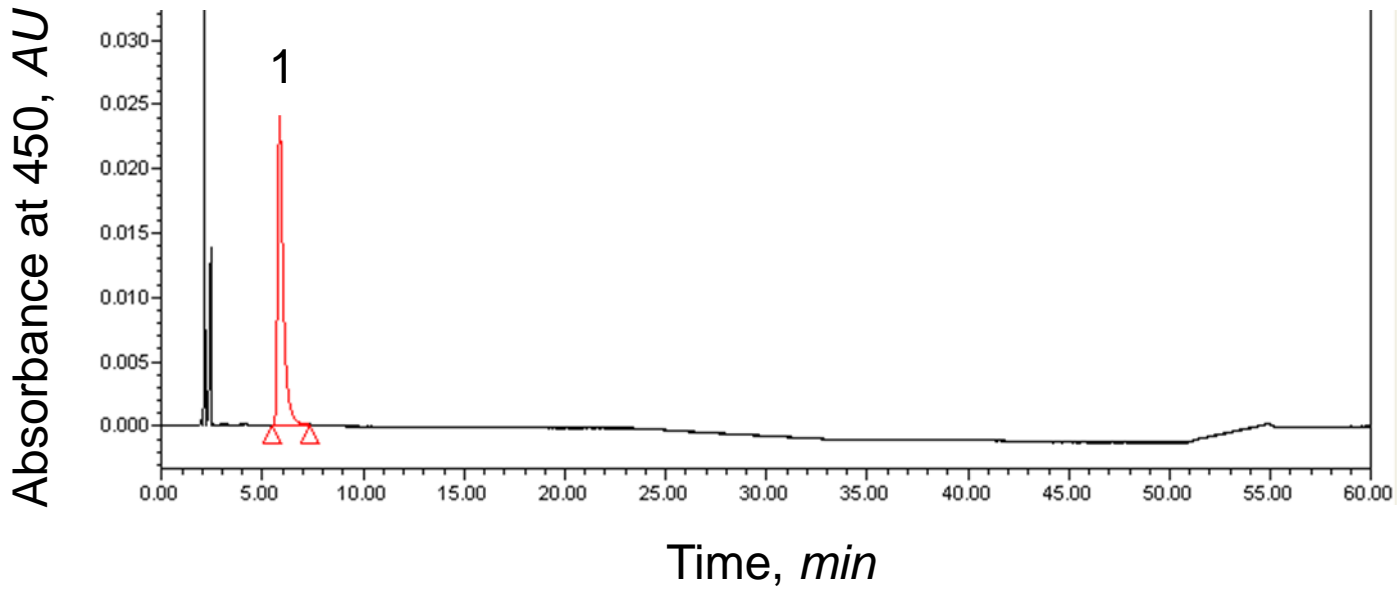
Supplemental Figure 1. Chemical structure of lycopene and apo-10'-lycopenoic acid (APO10LA)



Supplemental Figure 2. Animal experimental design of BCO2-KO mice fed a HFD with or without lycopene supplementation for 12 weeks. APO10LA, Apo-10'-lycopenoic acid; HSFD, high saturated fat diet; HSFD+APO10LA, BCO2-KO mice supplemented with HSFD+APO10LA; HSFD+Ly, BCO2-KO mice supplemented with HSFD+lycopene; HSFD+LyP, BCO2-KO mice supplemented with HSFD+lycopene placebo; Ly, lycopene; LyP, lycopene placebo.



Supplemental Figure 3. HPLC profiles at 450 nm of lipid extracts of lycopene supplement.



Supplemental Figure 4: Mesenteric adipose mRNA expression in BCO2-KO male mice that were or were not supplemented with lycopene or APO10LA for 12 weeks. mRNA expression in mesenteric adipose tissue lysates (HFD, HFD+APO10LA, HFD+LyP, HFD+Ly). Graphical representation of fold changes in: *Acad-M*, *Acox1*, *Cd36*, *Cysc*, *Fatp1*, *Pck1*, *Pgc1 α* , *Pnpla2*, *PPAR γ* , *Slc2a4*, *Ucp1*. Fold changes normalized to HFD or HFD+LyP. Values are means \pm SEMs, n=10-12. #Different from HFD+LyP, P < 0.05. Acad, acyl-CoA dehydrogenase; Acox, acyl-CoA oxidase; APO10LA, Apo-10'-lycopenoic acid; Cysc, cytochrome c; Fatp, fatty acid transport protein; HFD, high saturated fat diet; Ly, lycopene; LyP, lycopene placebo; MAT, mesenteric adipose tissue; Pgc1 α , PPAR γ coactivator 1 α ; Pck, phosphoenolpyruvate carboxykinase; Pnpla2, patatin-like phospholipase domain containing 2; Slc, solute carrier family; Ucp, uncoupling protein.

