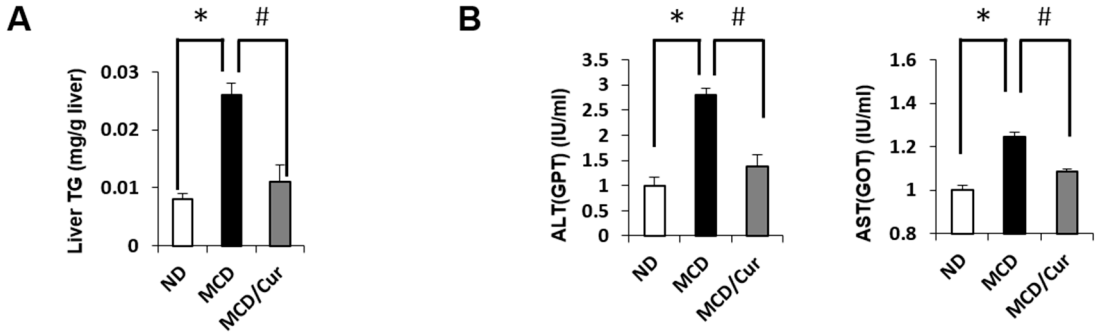

Figure S1. ND, MCD diet, and curcumin + MCD diet-fed mice. Mice were fed ND, MCD diet, or MCD + curcumin diet for 3 weeks. (**A**) Body weight and liver TG levels, and (**B**) serum ALT and AST levels were measured. Data are mean ± SD (n = 7/group). * $p < 0.05$ vs. ND group and # $p < 0.05$ vs. MCD group.

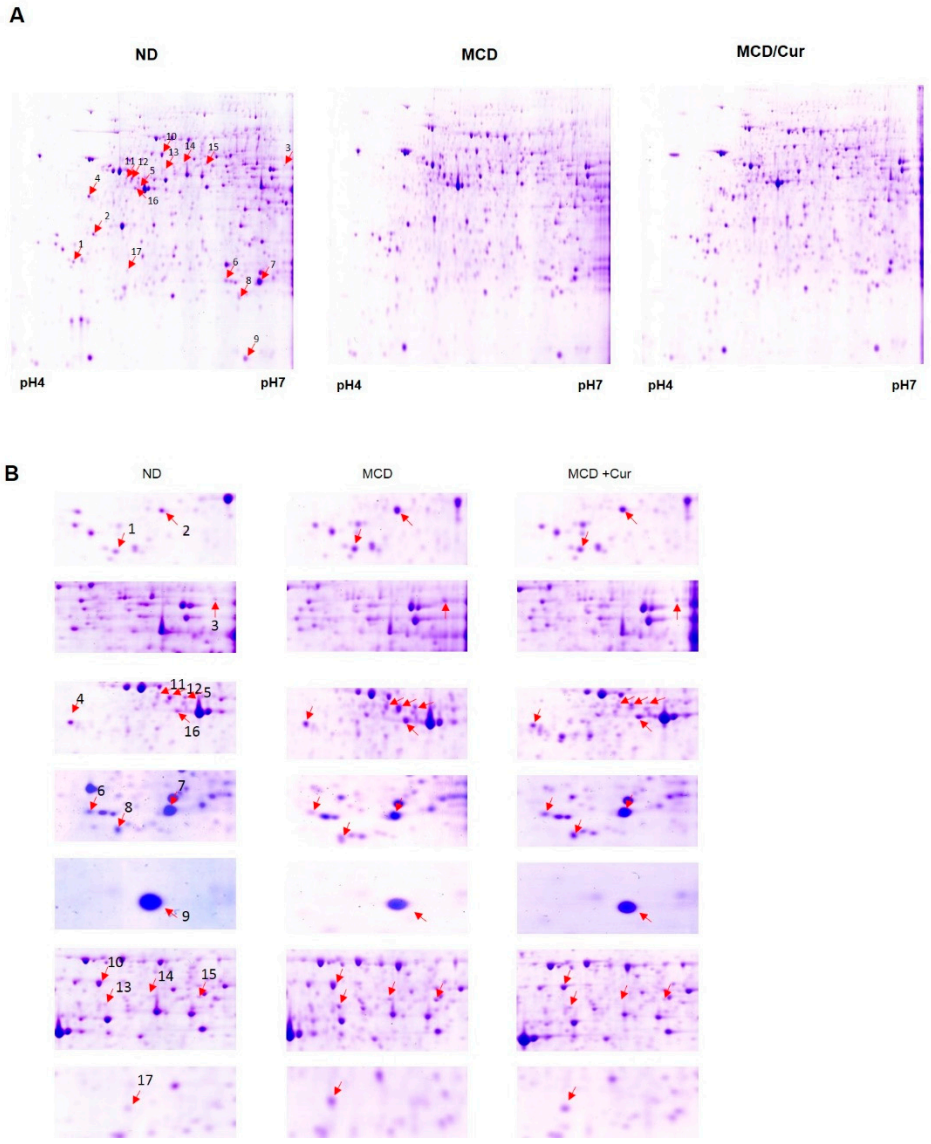

Figure S2. Protein expression map of mouse liver. Coomassie Blue-stained 2DE gel shows proteins derived from mice fed ND, MCD diet or MCD + curcumin diet. The proteins from mouse liver were loaded on a 24 IPG strip (pH 4–7) and then run on SDS-PAGE (12%). The protein spots significantly affected by different diet feeding are indicated by arrows. (**A**) and (**B**) The numbers on the gel correspond to the spot numbers in Table 1.

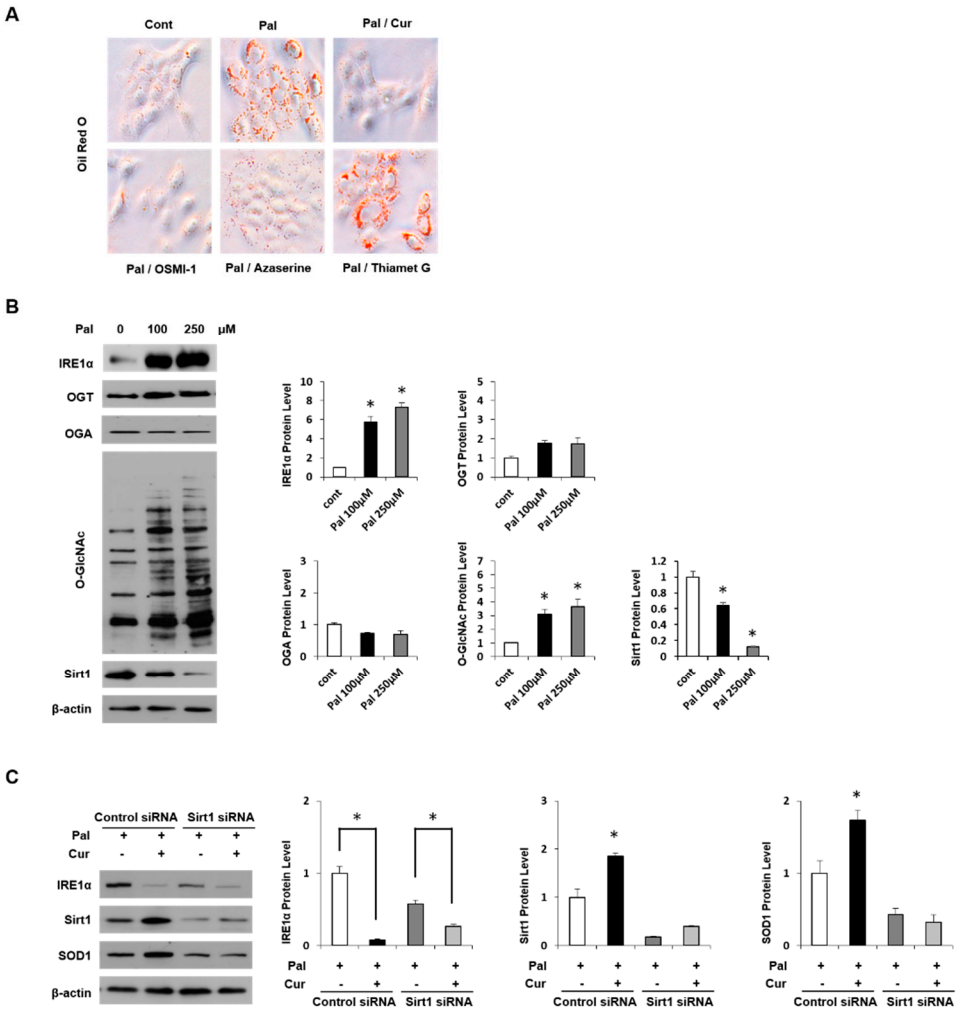

Figure S3. Effect of palmitate on lipid accumulation, *O*-glcNAcylation and SIRT1 siRNA in AML12 cells.(**A**) AML12 cells were either untreated or pretreated with 250 μM palmitic acid and incubated with curcumin, OSMI-1(20 μM), azaserine (100 μM) or Thiamet G (200 μM) for 12 h. Lipid accumulation in the cells was measured by Oil Red O staining. (**B**) The cells were not treated or pretreated with 100 or 250 μM palmitic acid for 12h. The expression levels of *O*-GlcNAcylated proteins, such as IRE1α, OGT, OGA, and SIRT1, were measured by immunoblot analysis. The data were presented as the means of ± SD. Of three independent experiments. * $p < 0.05$. (**C**) Cells were transfected with control or SIRT1 siRNA after 24h and then treated with 250 μM palmitic acid with or without curcumin (3 μM) for 12 h. Levels of IRE1α, SIRT1, and SOD expression were measured by immuneblot analysis. Expression levels were normalized relative to β-actin. The data from three independent experiments were presented as the means ± SD. * $p < 0.05$.