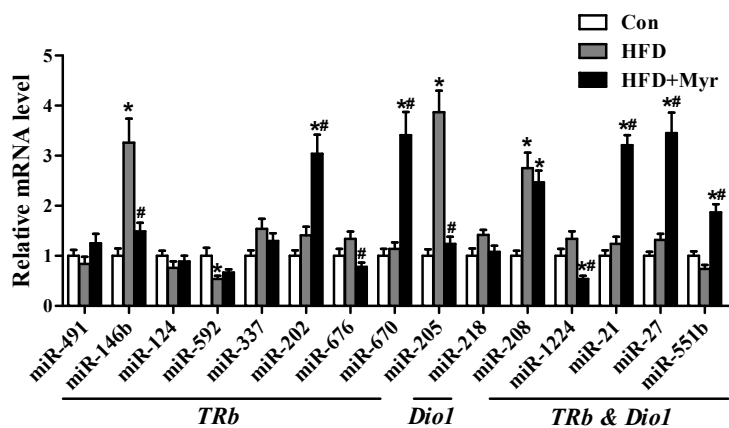**Supplementary information**
Supplementary Figure 1

**Fig. S1. Confirmation of the expression of differentially expressed miRs selected from next-generation sequencing technology by qRT-PCR.** Data were presented as mean ± SEM (n = 8) and were statistically analyzed using one-way ANOVA followed by Duncan's multiple-range test. Con, control; HFD, high-fat diet; HFD+Myr, high-fat diet with 100 mg/kg myricetin. $^{*}P < 0.05$ vs Con; $^{#}P < 0.05$ vs HFD.

Supplementary Figure 2
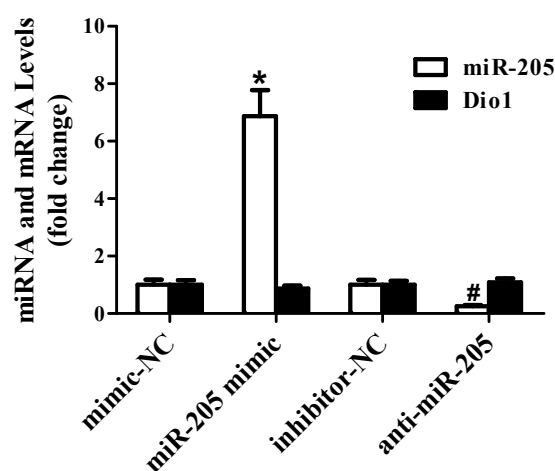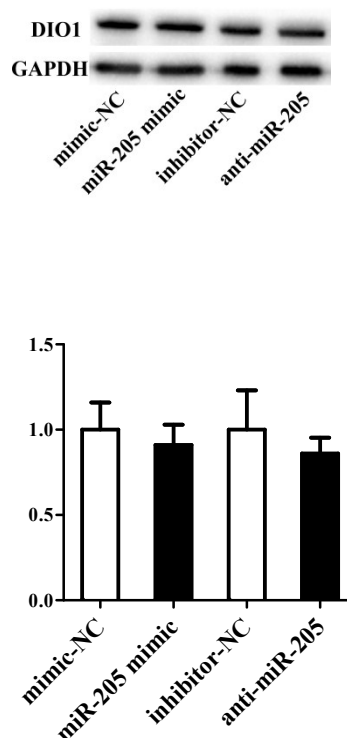
Fig. S2 miR-205 failed to regulate DIO1 expression in primary mouse hepatocytes. (A) miR-205 and *Dio1* mRNA levels, and (B) DIO1 protein levels were detected in primary hepatocytes transfected with miR-205 mimic or mimic negative control (mimic-NC) and the miR-205 inhibitor (anti-miR-205) or inhibitor negative control (inhibitor-NC). mRNA levels were detected in primary hepatocytes 24 h after transfection, while protein levels were detected by western blot 48 h after transfection. Mean ± SEM shown were representative of at least three independent in *vitro* experiments, Student's *t*-test was used when comparing two groups. * $P < 0.05$ vs mimic-NC, # $P < 0.05$ vs inhibitor-NC.

Supplementary Figure 3
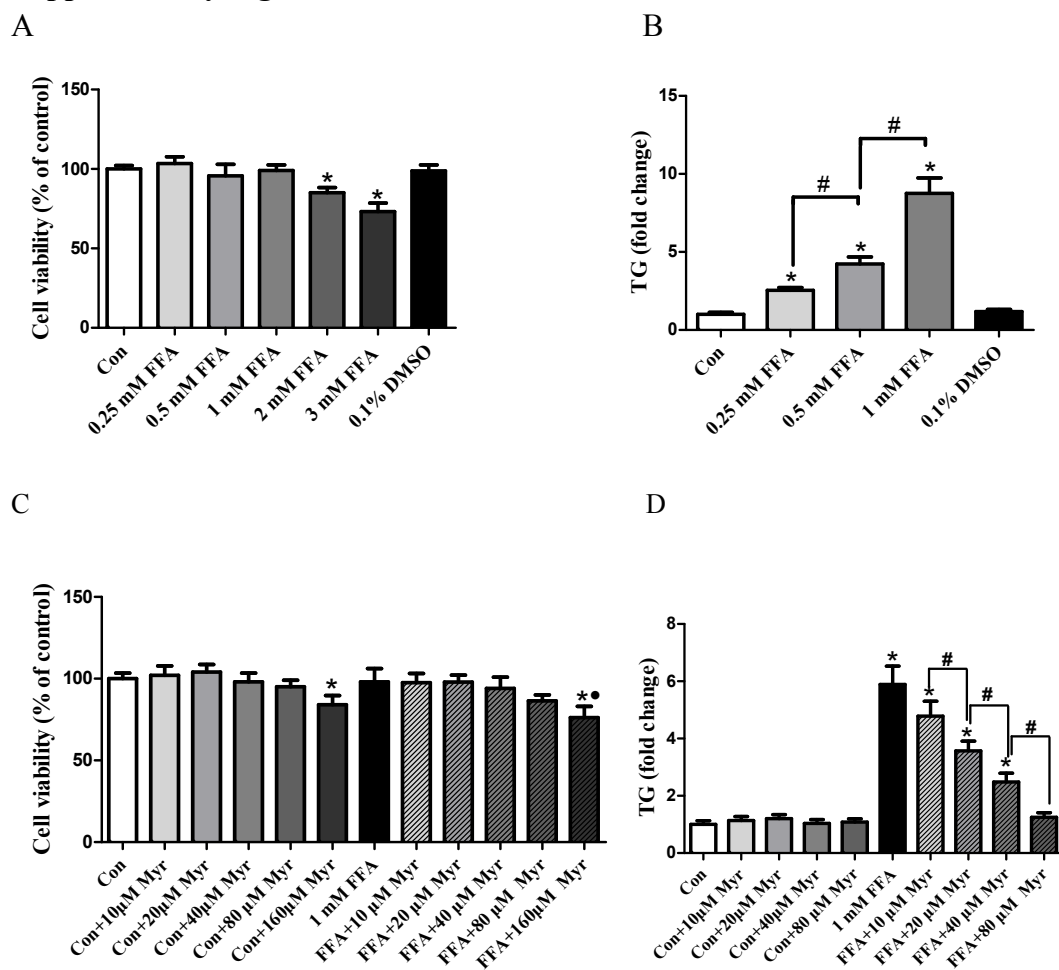
Fig.S3 Effects of FFA and myricetin on cell viability and lipid accumulation in primary mouse hepatocytes. Effects of FFA on cellular viability (as % of control) of hepatocytes as measured by MTT assay (A) and lipid accumulation (B). Effects of myricetin on cellular viability (as % of control) of 1 mM FFA treated hepatocytes as measured by MTT assay (C) and lipid deposition (D). All data were from three to five independent experiments performed in duplicate. Results were represented as mean ± SEM and were statistically analyzed using Student's t test or one-way ANOVA followed by Duncan's multiple-range test.* $P < 0.05$ vs. Con group; $^{\#}P < 0.05$ between different concentrations of FFA-treated groups in (B) and between different concentrations of myricetin in 1 mM FFA-treated groups in (D); $^{\bullet}P < 0.05$ vs. 1mM FFA-treated group.