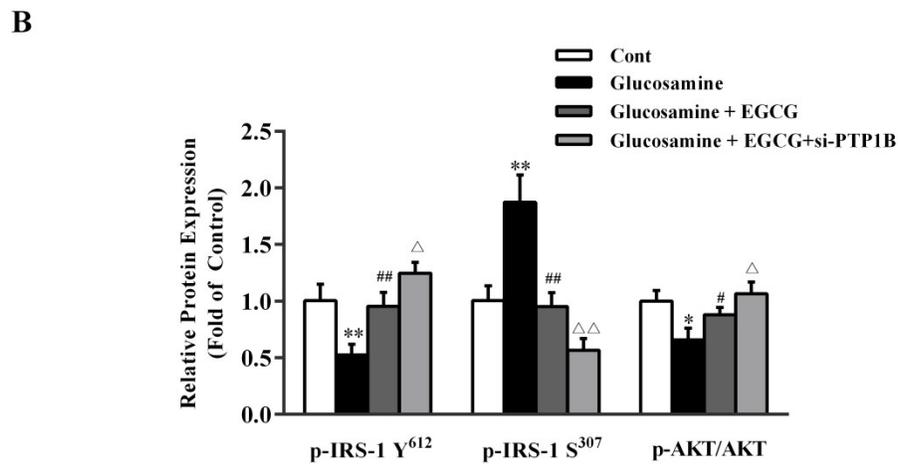
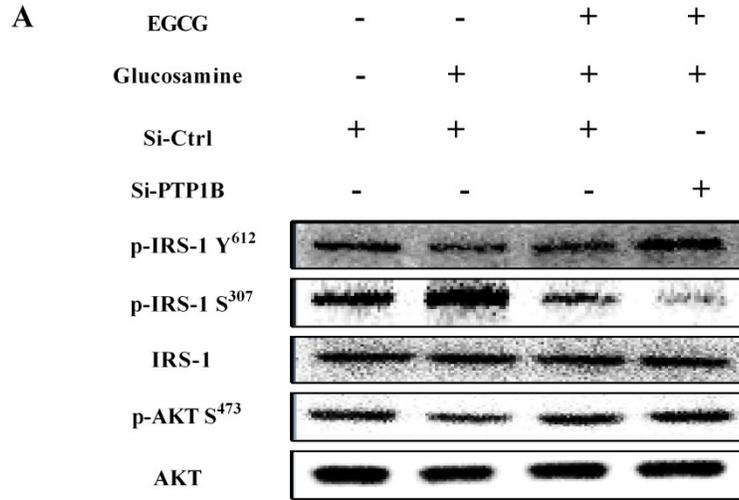


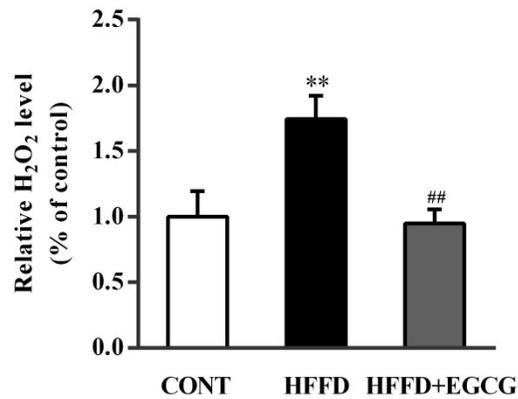
Supplementary Figure 1. The inhibitory curve of EGCG on PTP1B expression and its IC50 value.

HepG2 cells were cultured with/without glucosamine (20 mM) and co-treated with or without EGCG (0-50 μM) for 18 h. (A) The inhibitory curve of EGCG on PTP1B expression using densitometric analysis.



Supplementary Figure 2. PTP1B plays a critical role in EGCG-alleviated insulin resistance triggered by glucosamine.

HepG2 cells were exposed to si-Ctrl or si-PTP1B, respectively, for 48 h, and then treated with or without EGCG (50 μ M) and glucosamine (20 mM) for 18 h. (A) Expressions of p-IRS-1 tyrosine⁶¹², p-IRS-1 serine³⁰⁷, total IRS-1, p-AKT serine⁴⁷³, and AKT were measured by western blotting. Densitometry analysis is shown in (B). Data are presented as the means \pm SD, $n \geq 3$. * $p < 0.05$, ** $p < 0.01$, versus control group, # $p < 0.05$, ## $p < 0.01$ versus glucosamine group, $\Delta p < 0.05$, $\Delta\Delta p < 0.01$ versus glucosamine plus EGCG group.



Supplementary Figure 3. Protection effects of EGCG on H₂O₂ level in liver of mice treated with HFFD.

H₂O₂ level in mice liver was determined by using an Amplex Red Hydrogen Peroxide/Peroxidase Assay Kit. Data are presented as the means \pm SEM, n= 6-10. *p < 0.05, **p < 0.01, versus control group, #p < 0.05, ##p < 0.01 versus HFFD group.