

## Supplementary materials

### **Ginsenoside Rg1 inhibits glucagon-induced hepatic gluconeogenesis through Akt-FoxO1 interaction**

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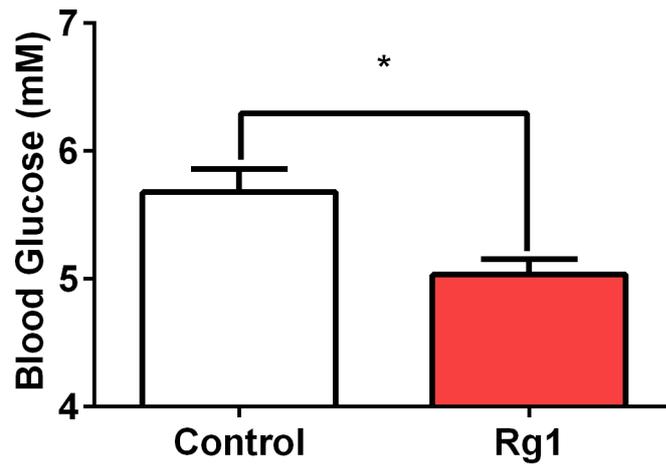
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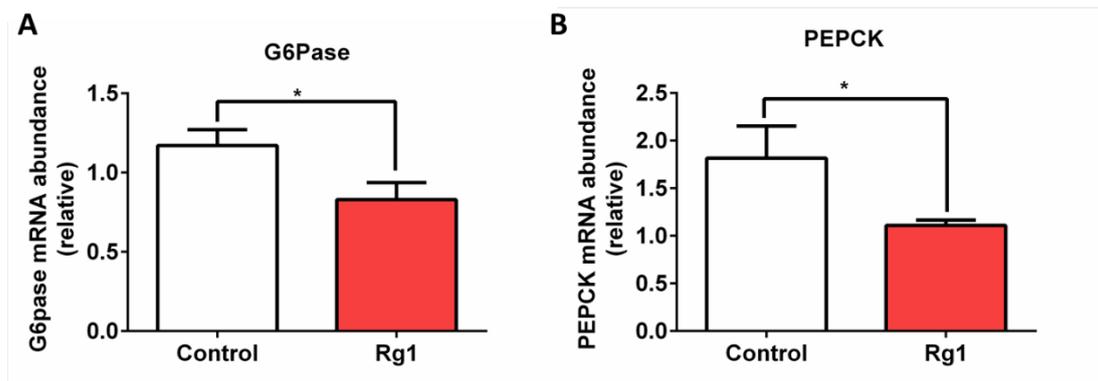
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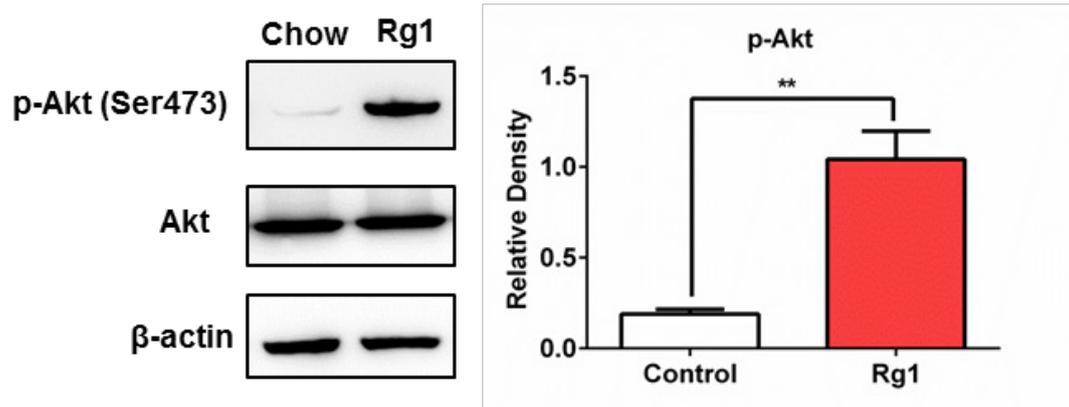
**Figure S1 Ginsenoside Rg1 reduced fasting glucose in normal mice.** Fasting blood glucose in mice was detected 1 h after oral administration of Rg1. Rg1, 50 mg/kg (n=8-9/group). Data were shown as the mean  $\pm$  SEM. \* $p < 0.05$  vs. control. The difference was determined using Wilcoxon rank test.



**Figure S2 Ginsenoside Rg1 inhibited hepatic G6Pase and PEPCK expression in normal mice.** Fasting mice administration of Rg1 for 1 h. Liver mRNA levels of G6Pase (A) and PEPCK (B) were determined by quantitative RT-PCR (n=6/group). Data were shown as the mean  $\pm$  SEM \* $p < 0.05$  vs. control. The difference was determined using Wilcoxon rank test.



**Figure S3 Ginsenoside Rg1 regulated Akt activity in normal mice.** Akt phosphorylation (Ser473) and total Akt expression in the liver of normal mice after oral administration of Rg1 for 1 h. Data were shown as the mean  $\pm$  SEM. **\*\* $p < 0.01$  vs. control.** The difference was determined using Wilcoxon rank test.



**Figure S4 Ginsenoside Rg1 inhibited FoxO1 activation dependent on Akt under the glucagon stimulation.** HepG2 cells were pretreated with Rg1 and followed by incubation by glucagon for 1 h. Akt phosphorylation in FoxO1 protein were determined by immunoprecipitation and western blot.

