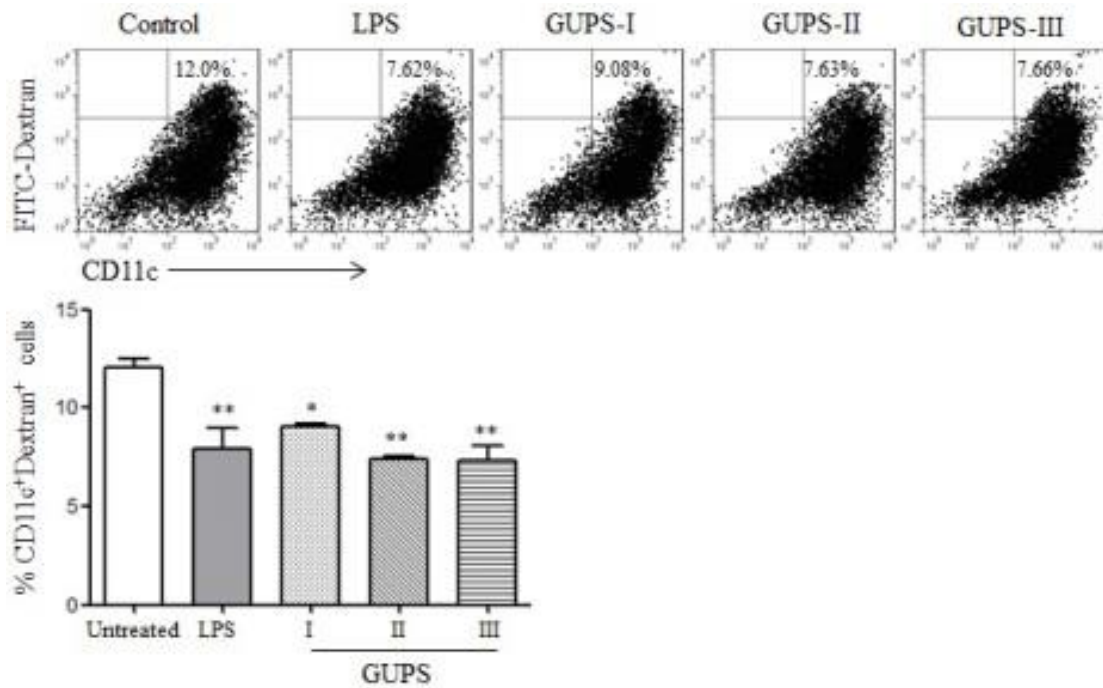
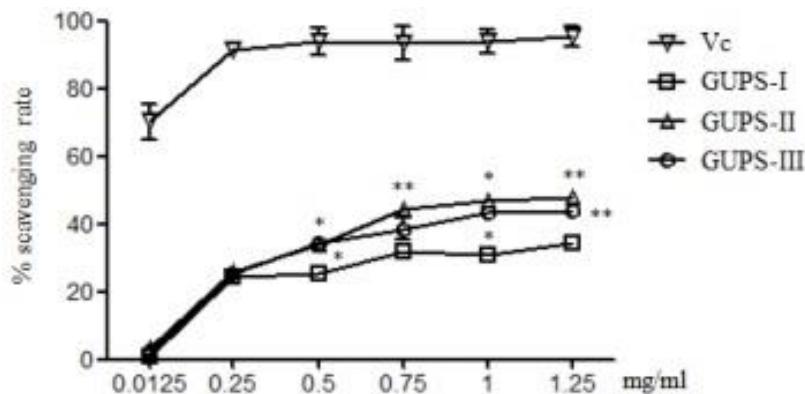


**Supplementary Figure S1. The UV spectra of GUPS-I, GUPS-II and GUPS-III.**



**Supplementary Figure S2. The capacity of antigen up-take of DCs upon GUPS treatment.** DCs were treated with GUPS fractions (50  $\mu\text{g}/\text{mL}$ ) for 12 h, and then inoculated with FITC-Dextran for 1 h. After staining with PE-CD11c, samples were analyzed by flow cytometry (upper panels). The summary data (mean  $\pm$  SEM) are shown in lower panel. Data are from 3 independent experiments and analyzed by ANOVA. \*  $p < 0.05$ ; \*\*  $p < 0.01$  compared to untreated DCs.



**Supplementary Figure S3. The antioxidant activities of GUPS fractions.** Vc was used as positive control. Data are from 3 independent experiments, the two-tailed unpaired t-test was used to compare GUPS-II and GUPS-III with GUPS-I. \*  $p < 0.05$ ; \*\*  $p < 0.01$ .