Supplementary Figure 1. Saponins with diosgenin, pennogenin, or prosapogenin and their congeners as the aglycones constitute the most abundant types of steroid saponins in PRS.
Supplementary Figure 2. HPLC–ELSD chromatograms of RPS (1. Polyphyllin VII, 2. Polyphyllin H, 3. Polyphyllin VI, 4. Polyphyllin II, 5. Dioscin, 6. Gracillin, 7. Polyphyllin I, 8. Polyphyllin V).

The chemical composition of RPS was qualitatively identified utilizing HPLC-ELSD by retention time with standard mixture solution. Fig. 1 shows the HPLC chromatograms of RPS. The contents of Polyphyllin VII ($t_R$ 17.590 min), Polyphyllin H ($t_R$ 18.964 min), Polyphyllin VI ($t_R$ 19.674 min), Polyphyllin II ($t_R$ 31.110 min), Dioscin ($t_R$ 35.712 min), Gracillin ($t_R$ 36.568 min), Polyphyllin I ($t_R$ 41.823 min) and Polyphyllin V ($t_R$ 48.450 min) were 8.51±0.09 mg/g, 24.18 ± 1.40 mg/g, 2.70 ± 0.12 mg/g, 6.46 ± 0.16 mg/g, 20.24±0.86 mg/g, 41.03±1.62 mg/g, 24.91 ± 0.67 mg/g and 3.12±0.28 mg/g, respectively.
Supplementary Figure 3. Analgesic effect of INN and RPS with three dosages on normal mice in hot-plate test. Each value represents the mean ± SE. Values within treatment groups having different letters are significantly different by one-way ANOVA and Student’s t-test. Letters a-c, means with the same letter is not significantly different (p < 0.05).