A new flavonol glycoside from the aerial parts of *Epimedium koreanum* Nakai

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ABSTRACT

A new prenylated flavonol glycoside (1) was isolated from a 95% methanol extract of the dried and powdered aerial parts of *Epimedium koreanum* Nakai (Herba Epimedi), along with seven previously known flavonoids (2-8). The chemical structure of the new compound (1) was established to be 5-hydroxy-4’-methoxy-8-(2-hydroxy-3-methyl-3-butenyl)flavone 3-O-α-L-rhamnopyranosyl-7-O-β-D-glucopyranoside on the basis of spectroscopic methods. The antioxidant activities of these compounds were determined by the DPPH (2,2-diphenyl-1-picrylhydrazyl) free-radical scavenging assay, and kaempferitrin (8) showed a high reactivity with DPPH.

Keywords: *Epimedium koreanum* Nakai; flavonol glycoside; antioxidant activity
Supplemental Figure Legend

**Table S1.** DPPH radical scavenging activities of compounds 1-8 (n=3).

**Figure S1.** $^1$H-NMR spectrum of compound 1 (500MHz, Methanol-$d_4$).

**Figure S2.** $^{13}$H-NMR spectrum of compound 1 (125MHz, Methanol-$d_4$).

**Figure S3.** The HMBC spectrum and its main correlations of compound 1.
Table S1. DPPH radical scavenging activities of compounds 1-8 (n=3).

| Compound | IC$_{50}$ (µg/mL) | Compound | IC$_{50}$ (µg/mL) |
|----------|-------------------|----------|-------------------|
| Vit-C    | 36.9              | 5        | >1000             |
| 1        | >1000             | 6        | >1000             |
| 2        | >1000             | 7        | >1000             |
| 3        | >1000             | 8        | 45.5              |
| 4        | >1000             |          |                   |

Figure S1.
Figure S2.
Figure S3.