

## Product Data Sheet

Product Name: Ikarisoside A (Icarisoside-A)

Cat. No.: GC33863

### Chemical Properties

Cas. No. 55395-07-8

SMILES OC1=CC(O)=C2C(OC(C3=CC=C(O)C=C3)=C(O[C@H](O[C@@H](C)[C@H](O)[C@H]4O)[C@@H]4O)C2=O)=C1C/C=C(C)\C

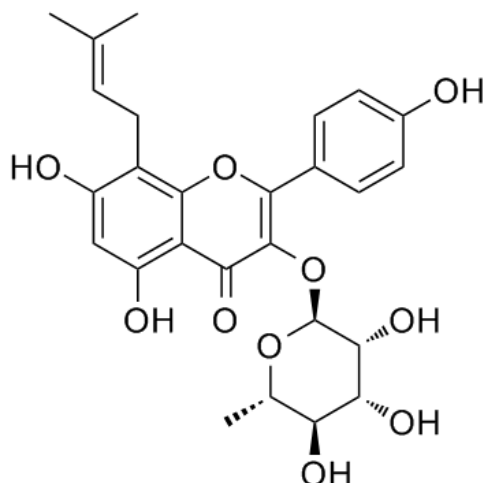
Formula  $C_{26}H_{28}O_{10}$  M.Wt 500.49

Solubility Soluble in DMSO Storage 4°C, protect from light

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



### Background

Ikarisoside A (Icarisoside-A) is a natural compound isolated from *Epimedium koreanum* (Berberidaceae); has anti-inflammatory properties. IC<sub>50</sub> value: Target: in vitro: Ikarisoside A inhibited the expression of LPS-stimulated inducible nitric oxide synthase (iNOS) and the production of nitric oxide (NO) in LPS-stimulated RAW 264.7 cells and mouse bone marrow-derived macrophages (BMMs) in a concentration-dependent manner. In addition, Ikarisoside A reduced the release of pro-inflammatory cytokines, such as tumor necrosis factor-alpha (TNF-alpha) and interleukin-1 beta (IL-1

**Caution: Product has not been fully validated for medical applications. For research use only.**

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beta). Furthermore, Ikariside A inhibited the activity of p38 kinase and nuclear factor-kappaB (NF-kappaB) [1]. Ikariside A is a potent inhibitor of osteoclastogenesis in RANKL-stimulated RAW 264.7 cells as well as in bone marrow-derived macrophages. The inhibitory effect of Ikariside A resulted in decrease of osteoclast-specific genes like matrix metalloproteinase 9 (MMP9), tartrate-resistant acid phosphatase (TRAP), receptor activator of NF-kappaB (RANK), and cathepsin K. Moreover, Ikariside A blocked the resorbing capacity of RAW 264.7 cells on calcium phosphate-coated plates. Ikariside A also has inhibitory effects on the RANKL-mediated activation of NF-kappaB, JNK, and Akt [2].

[1]. Choi HJ, et al. Ikariside A inhibits inducible nitric oxide synthase in lipopolysaccharide-stimulated RAW 264.7 cells via p38 kinase and nuclear factor-kappaB signaling pathways. *Eur J Pharmacol.* 2008 Dec 28;601(1-3):171-8. [2]. Choi HJ, et al. Inhibition of osteoclastogenic differentiation by Ikariside A in RAW 264.7 cells via JNK and NF-kappaB signaling pathways. *Eur J Pharmacol.* 2010 Jun 25;636(1-3):28-35.

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