IKarisoside A

Cat. No.: HY-N0875

CAS No.: 55395-07-8

Molecular Formula: $C_{26}H_{28}O_{10}$

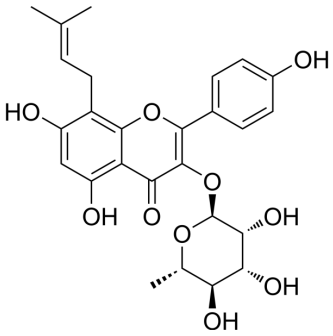
Molecular Weight: 500.49

Target: NO Synthase

Pathway: Immunology/Inflammation

Storage: 4°C, protect from light

* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (199.80 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.9980 mL	9.9902 mL	19.9804 mL
	5 mM	0.3996 mL	1.9980 mL	3.9961 mL
	10 mM	0.1998 mL	0.9990 mL	1.9980 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (5.00 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (4.16 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

IKarisoside A (Icarisoside-A) is a natural flavonol glycoside and has anti-inflammatory properties.

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 beta). Furthermore, Ikarisoside A inhibited the activity of p38 kinase and nuclear factor-kappaB (NF-kappaB)[1].

Ikarisoside 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 Ikarisoside 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, Ikarisoside A blocked the resorbing capacity of RAW 264.7 cells on calcium phosphate-coated plates. Ikarisoside A also has inhibitory effects on the RANKL-mediated activation of NF-kappaB, JNK, and Akt[2].

	MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- J Pharm Pharmacol. 2023 Nov 16:rgad103.

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REFERENCES

[1]. Li X, Toyohira Y, Horisita T, et al. Ikarisoside A inhibits acetylcholine-induced catecholamine secretion and synthesis by suppressing nicotinic acetylcholine receptor-ion channels in cultured bovine adrenal medullary cells. Naunyn Schmiedebergs Arch Pharmacol. 2015;388(12):1259-1269.

[2]. Choi HJ, et al. Ikarisoside 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.

[3]. Choi HJ, eta l. Inhibition of osteoclastogenic differentiation by Ikarisoside 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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