Narirutin

Cat. No.: HY-N0804

CAS No.: 14259-46-2

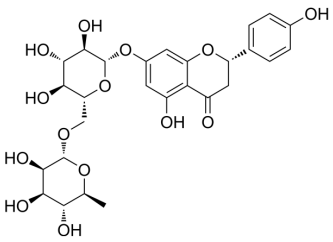
Molecular Formula: $C_{27}H_{32}O_{14}$

Molecular Weight: 580.53

Target: Bacterial

Pathway: Anti-infection

Storage: 4°C, sealed storage, away from moisture and light
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 125 mg/mL (215.32 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	1.7226 mL	8.6128 mL	17.2256 mL
	5 mM	0.3445 mL	1.7226 mL	3.4451 mL
	10 mM	0.1723 mL	0.8613 mL	1.7226 mL

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

In Vivo

1. Add each solvent one by one: 50% PEG300 >> 50% saline
   Solubility: 10 mg/mL (17.23 mM); Clear solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: 2.08 mg/mL (3.58 mM); Clear solution; Need ultrasonic
3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (3.58 mM); Clear solution
4. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (3.58 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Narirutin, one of the active constituents isolated from citrus fruits, has antioxidant and anti-inflammatory activities. Narirutin is a shikimate kinase inhibitor with anti-tubercular potency[1][2].

In Vitro

Narirutin (200 μM, 20 h) has no effect on the vitality of RBL-2H3 cells[3].
Narirutin (25 μM, 2.5 h) inhibits β-hex, histamine, IL-4 and TNF-a release were lower than 40% in RBL-2H3 cells. [3].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Narirutin (10 mg/kg, p.o) reduces eosinophil counts in peripheral blood in OVA-challenged mice[2].
Narirutin (10 mg/kg, p.o) block the OVA-induced increase in IL-4 but has no effect on the increase in IL-5 [2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Allergic asthma female NC/Nga mice model[2]
Dosage:	0.1, 1 or 10 mg/kg
Administration:	Orally, 7d
Result:	Reduced eosinophil counts in peripheral blood. Blocked the OVA-induced increase in IL-4.

CUSTOMER VALIDATION

- Biomed Pharmacother. 2023 Aug 24;166:115350.
- Int J Food Sci Technol. 2023 Aug 31.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Liyan Niu, et al. Inhibitory activity of narirutin on RBL-2H3 cells degranulation. Immunopharmacol Immunotoxicol. 2021, 43, 1.

[2]. Sahu PK, et al. Structure-based Discovery of Narirutin as a Shikimate Kinase Inhibitor with Anti-tubercular Potency.Curr Comput Aided Drug Des. 2019 Oct 25.

[3]. Funaguchi N, et al. Narirutin inhibits airway inflammation in an allergic mouse model.Clin Exp Pharmacol Physiol. 2007 Aug;34(8):766-70.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA