Vicenin 2

Cat. No.: HY-N2165

CAS No.: 23666-13-9

Molecular Formula: $C_{27}H_{30}O_{15}$

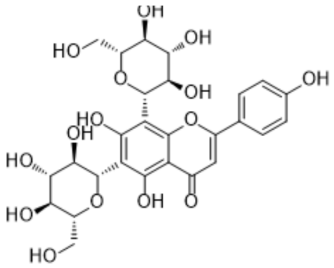
Molecular Weight: 594.52

Target: Angiotensin-converting Enzyme (ACE)

Pathway: Metabolic Enzyme/Protease

Storage: 4°C, protect from light

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



SOLVENT & SOLUBILITY

In Vitro

DMSO : 33.33 mg/mL (56.06 mM; Need ultrasonic)

H_2O : < 0.1 mg/mL (ultrasonic) (insoluble)

Preparing Stock Solutions

Concentration \ Solvent \ Mass	1 mg	5 mg	10 mg
1 mM	1.6820 mL	8.4101 mL	16.8203 mL
5 mM	0.3364 mL	1.6820 mL	3.3641 mL
10 mM	0.1682 mL	0.8410 mL	1.6820 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (4.21 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (4.21 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Vicenin 2, a flavonoid, is an orally active angiotensin-converting enzyme (ACE) inhibitor (IC_{50} of 43.83 μM)[1]. Vicenin 2 has radioprotective, anti-nociceptive effects, anti-glycation anti-inflammatory, antioxidant, anticancer, antiangiogenic properties[2][3].

In Vitro

Vicenin 2 (10-100 μM; 24 hours) shows cytotoxic effect in a dose-dependent manner in NCI⊠H23 cells. Vicenin 2 increases caspase-3 activity, increases DNA fragmentation, increasesd the levels of Rad50 and lowers levels of MMP-2 and p21 proteins while being non-toxic and radioprotective to the fibroblast cells[2].

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

Cell Viability Assay[2]

Cell Line:	NCI-H23 cells
Concentration:	10 μM, 20 μM, 30 μM, 40 μM, 50 μM, 60 μM, 70 μM, 80 μM, 90 μM, 100 μM
Incubation Time:	24 hours
Result:	Showed cytotoxic effect on NCI□H23 cells.

In Vivo

Vicenin 2 (50 mg/kg; orally administration; for 7 days) effectively reduces the MPO activity, attenuates the expression of pro-inflammatory cytokines and key inflammatory markers, in DSS-induced colitis mice[3].

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

Animal Model:	Male C57BL/6J mice (25 g) treated with Dextran sulfate sodium (DSS)[3]
Dosage:	50 mg/kg
Administration:	Orally administration; for 7 days
Result:	Effectively suppressed DSS-induced colitis by attenuating expressions of key inflammatory mediators.

CUSTOMER VALIDATION

- Resour Conserv Recycl. January 2023, 106722.
- Planta Med. 2021 Feb 5.

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REFERENCES

[1]. Taranga Jyoti Baruah, et al. Vicenin-2: a potential radiosensitizer of non-small cell lung cancer cells. Mol Biol Rep. 2018 Oct;45(5):1219-1225.

[2]. Yuti Yin, et al. Anti-inflammatory effects of Vicenin-2 on dextran sulfate sodium-induced colitis in mice. Drug Dev Res. 2019 Aug;80(5):546-555.

[3]. Zhang YQ, et al. Bioassay-guided preparative separation of angiotensin-converting enzyme inhibitory C-flavone glycosides from Desmodium styracifolium by recycling complexation high-speed counter-current chromatography. J Pharm Biomed Anal. 2015 Jan;102:276-81.

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