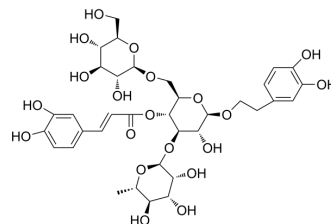


Echinacoside

Cat. No.:	HY-N0020												
CAS No.:	82854-37-3												
Molecular Formula:	C ₃₅ H ₄₆ O ₂₀												
Molecular Weight:	786.73												
Target:	Reactive Oxygen Species; Wnt												
Pathway:	Immunology/Inflammation; Metabolic Enzyme/Protease; NF-κB; Stem Cell/Wnt												
Storage:	<table border="0"> <tr> <td>Powder</td> <td>-20°C</td> <td>3 years</td> </tr> <tr> <td></td> <td>4°C</td> <td>2 years</td> </tr> <tr> <td>In solvent</td> <td>-80°C</td> <td>6 months</td> </tr> <tr> <td></td> <td>-20°C</td> <td>1 month</td> </tr> </table>	Powder	-20°C	3 years		4°C	2 years	In solvent	-80°C	6 months		-20°C	1 month
Powder	-20°C	3 years											
	4°C	2 years											
In solvent	-80°C	6 months											
	-20°C	1 month											



SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (63.55 mM; Need ultrasonic)
 H₂O : 35.71 mg/mL (45.39 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	1.2711 mL	6.3554 mL	12.7108 mL
	5 mM	0.2542 mL	1.2711 mL	2.5422 mL
	10 mM	0.1271 mL	0.6355 mL	1.2711 mL

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

In Vivo

- Add each solvent one by one: PBS
Solubility: 100 mg/mL (127.11 mM); Clear solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.5 mg/mL (3.18 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (3.18 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (3.18 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Echinacoside, one of the phenylethanoids isolated from the stems of *Cistanche deserticola*, effectively inhibits Wnt/β-catenin signaling. Echinacoside elicits neuroprotection by activating Trk receptors and their downstream signal pathways. Antiosteoporotic activity^{[1][2][3]}.

In Vivo

Echinacoside (30-270 mg/kg body weight; p.o.; daily for 12 weeks) significantly reverses the increases of body weight, serum hydroxyproline (HOP) levels, and the decreases of uterus wet weight and bone mineral density (BMD) in In ovariectomized (OVX) rats^[3].

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

Animal Model:	Fifty-six aged 6 months female Sprague-Dawley rats (OVX rat model) ^[3]
Dosage:	30, 90, 270 mg/kg body weight
Administration:	p.o.; daily for 12 weeks
Result:	The increases of body weight, serum hydroxyproline (HOP) levels, and the decreases of uterus wet weight and BMD were significantly reversed.

CUSTOMER VALIDATION

- Cell Mol Biol Lett. 2022 Oct 12;27(1):92.
- Int Immunopharmacol. 2023 May 13;120:110279.
- J Cell Mol Med. 2022 Oct 6.
- J Cell Mol Med. 2020 Dec 13.
- J Neurosci Res. 2019 Dec;97(12):1689-1705.

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REFERENCES

- [1]. Zhang D, et al. Echinacoside inhibits amyloid fibrillization of HEWL and protects against A β -induced neurotoxicity. Int J Biol Macromol. 2014 Sep 2;72C:243-253.
- [2]. Zhu M, et al. Transient exposure to echinacoside is sufficient to activate Trk signaling and protect neuronal cells from rotenone. J Neurochem. 2013 Feb;124(4):571-80.
- [3]. Li F, et al. Antiosteoporotic activity of echinacoside in ovariectomized rats. Phytomedicine. 2013 Apr 15;20(6):549-57.
- [4]. Li F, et al. Echinacoside promotes bone regeneration by increasing OPG/RANKL ratio in MC3T3-E1 cells. Fitoterapia. 2012 Dec;83(8):1443-50.
- [5]. Li X, et al. Echinacoside ameliorates D-galactosamine plus lipopolysaccharide-induced acute liver injury in mice via inhibition of apoptosis and inflammation. Scand J Gastroenterol. 2014 Aug;49(8):993-1000.
- [6]. Tang C, et al. Echinacoside inhibits breast cancer cells by suppressing the Wnt/ β -catenin signaling pathway. Biochem Biophys Res Commun. 2020 Mar 19. pii: S0006-291X(20)30530-1.

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

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