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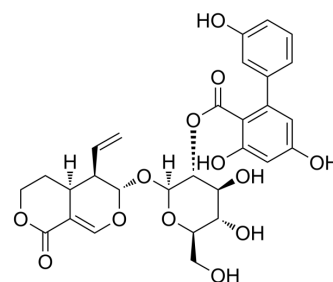
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Amarogentin

Cat. No.:	HY-N2447
CAS No.:	21018-84-8
Molecular Formula:	C ₂₉ H ₃₀ O ₁₃
Molecular Weight:	586.54
Target:	AMPK; Apoptosis
Pathway:	Epigenetics; PI3K/Akt/mTOR; Apoptosis
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (170.49 mM; Need ultrasonic)				
	Preparing Stock Solutions	Solvent Concentration Mass	1 mg	5 mg	10 mg
			1 mM	1.7049 mL	8.5246 mL
		5 mM	0.3410 mL	1.7049 mL	3.4098 mL
		10 mM	0.1705 mL	0.8525 mL	1.7049 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: ≥ 2.17 mg/mL (3.70 mM); Clear solution				
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.17 mg/mL (3.70 mM); Clear solution				
	3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.17 mg/mL (3.70 mM); Clear solution				

BIOLOGICAL ACTIVITY

Description	Amarogentin is a secoiridoid glycoside that is mainly extracted from Swertia and Gentiana roots. Amarogentin exhibits many biological effects, including anti-oxidative, anti-tumour, and anti-diabetic activities. Amarogentin exerts hepatoprotective and immunomodulatory effects. Amarogentin promotes apoptosis, arrests G2/M cell cycle and downregulates of PI3K/Akt/mTOR signalling pathways. Amarogentin exerts beneficial vasculo-metabolic effect by activating AMPK ^{[1][2][3]} .
In Vitro	Amarogentin (0-20 μM, 24 h) shows antiaging effect on yeasts, by inhibiting oxidative stress ^[3] . Amarogentin (0-10 μM, 24 h) inhibits H ₂ O ₂ -induced oxidative damage (decreased intracellular ROS level and MDA content) in

	the PC12 cells^[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
In Vivo	Amarogentin (100 mg/kg, p.o.) relieves Carbon tetrachloride (HY-Y0298)-induced liver fibrosis, decreases α-SMA and TGF-β1 expression in mice^[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
	Animal Model:	Carbon tetrachloride (HY-Y0298)-induced liver fibrosis mice model ^[1]
	Dosage:	100 mg/kg
	Administration:	p.o.
	Result:	Decreased hepatic α -SMA and TGF- β 1 expression. Inhibited phosphorylation of JNK, ERK, and p38.

CUSTOMER VALIDATION

- Biochim Biophys Acta Mol Basis Dis. 2023 Mar 9;166667.
- Animal Model Exp Med. 2022 Sep 21.

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REFERENCES

- [1]. Disasa D, et al. Amarogentin from Gentiana rigescens Franch Exhibits Antiaging and Neuroprotective Effects through Antioxidative Stress. Oxid Med Cell Longev. 2020 Aug 1;2020:3184019.
- [2]. Zhang Y, et al. Protective Effects of Amarogentin against Carbon Tetrachloride-Induced Liver Fibrosis in Mice. Molecules. 2017 May 6;22(5). pii: E754.
- [3]. Wölfle U, et al. Amarogentin Displays Immunomodulatory Effects in Human Mast Cells and Keratinocytes. Mediators Inflamm. 2015;2015:630128.

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

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