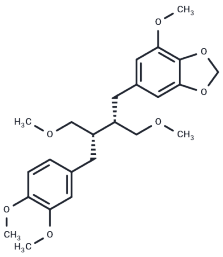
Data Sheet (Cat.No.TN4660)

TargetMol

Niranthin

Chemical Properties



CAS No. : 50656-77-4

Formula: C24H32O7

Molecular Weight: 432.51

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Niranthin is a potent anti-leishmanial agent, inhibits the relaxation activity of heterodimeric type IB topoisomerase of L. donovani and acts as a non-competitive inhibitor interacting with both subunits of the enzyme. Niranthin also exhibits anti-hepatitis B virus, antiinflammatory and antiallodynic actions.
Targets(IC50)	Anti-infection,Parasite,HBV,PAFR,Topoisomerase
In vitro	This study was designed to evaluate the anti-hepatitis B virus activity of Niranthin using HepG2.2.15 cells and duck hepatitis B virus (DHBV) infected ducks as in vitro and in vivo models. METHODS AND RESULTS:: Niranthin was isolated from Phyllanthus niruri L. (Euphorbiaceae) by extraction and chromatographic procedures and the anti-hepatitis B virus activity was evaluated both in vitro and in vivo. The human HBV-transfected liver cell line HepG2.2.15 was used in vitro assay. And the in vivo anti-hepatitis B virus activity was evaluated on the expression of HBV replication, HBsAg, HBeAg, ALT and AST on day 0, 7, 14, 17 after Niranthin was dosed intragastricly (i.g.) once a day for 14 days at the dosages of 25, 50 and 100 mg/kg/day in the duck hepatitis B virus (DHBV) infected ducks. In the human HBV-transfected liver cell line HepG2.2.15, the secretion of HBsAg and HBeAg were significantly decreased after treatment with Niranthin for 144 h, with IC50 values for HBsAg of 15.6 μM, IC50 values for HBeAg of 25.1 μM. In DHBV-infected ducklings, Niranthin significantly reduced the serum DHBV DNA, HBsAg, HBeAg, ALT and AST. Furthermore, analysis of the liver pathological changes confirmed the hepatoprotective effect of Niranthin. CONCLUSIONS:The experimental data demonstrated that Niranthin exhibits anti-hepatitis B virus activity both in vitro and in vivo. values for HBsAg of 15.6 μM, IC50 values for HBeAg of 25.1 μM. In DHBV-infected ducklings, Niranthin significantly reduced the serum DHBV DNA, HBsAg, HBeAg, ALT and AST. Furthermore, analysis of the liver pathological changes confirmed the hepatoprotective effect of Niranthin. CONCLUSION: The experimental data demonstrated that Niranthin exhibits anti-hepatitis B virus activity both in vitro and in vivo.

Solubility Information

Solubility	DMSO: 65 mg/mL (150.29 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.3121 mL	11.5604 mL	23.1209 mL
5 mM	0.4624 mL	2.3121 mL	4.6242 mL
10 mM	0.2312 mL	1.156 mL	2.3121 mL
50 mM	0.0462 mL	0.2312 mL	0.4624 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

In vitro and in vivo anti-hepatitis B virus activities of the lignan niranthin isolated from Phyllanthus niruri L. J Ethnopharmacol. 2014 Sep 11;155(2):1061-7.