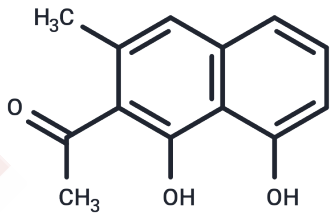
Data Sheet (Cat.No.TN1100)

TargetMol

Nepodin

Chemical Properties



CAS No. : 3785-24-8

Formula: C13H12O3

Molecular Weight: 216.23

Storage: Store at low temperature
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	Nepodin has antimalarial, and anti-inflammatory activities, it shows significant cyclooxygenase (COX) inhibitory activity. Nepodin has an antidiabetic effect, which is at least partly mediated by stimulation of GLUT4 translocation via AMPK activation by nepodin.
Targets(IC50)	AMPK,Parasite,COX,transporter
In vitro	To obtain a novel modulator of glucose metabolism, we conducted screening of a small compound library in cultured L6 myotubes. We identified Nepodin that stimulated glucose uptake dose-dependently in differentiated L6 myotubes. The stimulatory effect of Nepodin on glucose uptake was abrogated by a 5'-adenosine monophosphate-activated protein kinase (AMPK) inhibitor. In addition, Nepodin stimulated the phosphorylation of AMPK. Nepodin also stimulated the translocation of GLUT4 to the plasma membrane in L6 myoblasts transfected with a Glut4 cDNA-coding vector and in differentiated L6 myotubes. In in vivo study, Nepodin suppressed the increases in fasting blood glucose levels and improved the glucose intolerance of C57BL/KsJ-db/db mice, a type 2 diabetic animal model. Nepodin rescued the impaired phosphorylation of AMPK in the skeletal muscle of db/db mice[1]

Solubility Information

Solubility	DMSO: 150 mg/mL (693.71 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: < 10 mg/mL (46.25 mM),Lower concentrations may be soluble, but exact solubility limit is unknown. 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 10 mg/mL (46.25 mM),Solution. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.6247 mL	23.1235 mL	46.2471 mL
5 mM	0.9249 mL	4.6247 mL	9.2494 mL
10 mM	0.4625 mL	2.3124 mL	4.6247 mL
50 mM	0.0925 mL	0.4625 mL	0.9249 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

Antidiabetic effect of nepodin, a component of Rumex roots, and its modes of action in vitro and in vivo.Biofactors. 2014 Jul-Aug;40(4):436-47.