

Narciclasine

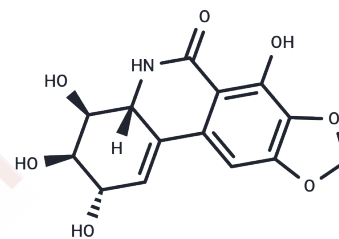
Chemical Properties

CAS No. : 29477-83-6

Formula: C₁₄H₁₃NO₇

Molecular Weight: 307.26

Storage: Store at low temperature, Keep away from direct sunlight, Keep away from moisture
 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	Narciclasine (Lycoricidinol), a natural product, modulates the Rho/Rho-kinase/LIM kinase/cofilin signaling pathway, greatly increasing GTPase RhoA activity.
Targets(IC50)	ROCK
In vitro	Narciclasine activates Rho and stress fibers in glioblastoma multiforme cells (mean IC ₅₀ : ~50 nM on the 6 human glioblastoma multiforme). It has a mean IC ₅₀ value of 47 nM across a panel of 60 cancer cell lines [1], and the IC ₅₀ for radicle growth inhibition is 0.1 μM for Narciclasine [2].
In vivo	Intravenous (i.v.) administration of Narciclasine at 1 mg/kg significantly increases the survival of GL19 glioblastoma multiforme-bearing mice. Oral administration at the same dose, five times a week for 5 consecutive weeks, similarly enhances survival in this model. Oral treatment with Narciclasine at 1 mg/kg also significantly increases the survival of Hs683 glioblastoma multiforme-bearing mice. However, increasing the frequency of doses per week does not further improve survival in Hs683 glioblastoma multiforme-bearing mice [1].
Cell Research	The Narciclasine IC ₅₀ concentration, the Narciclasine concentration that decreased by 50% the global growth rate of a given cell population, is assessed with the MTT assay. The cells are incubated for 72 h in the presence and absence of the Narciclasine (with concentrations ranging between 1 and 10000 nM concentrate) for the determination of Narciclasine IC ₅₀ values [1].
Animal Research	The Hs683 cell line and GL19 primoculture grafted into the brains of nude immunodeficient mice both produced invasive brain tumors. Xenograft-bearing mice receive vehicle alone, oral temozolomide at 40 mg/kg (5 administrations per week for 5 consecutive weeks), or Narciclasine at 1 mg/kg either oral (once per week for 5 weeks) or i.v. (twice per week for 5 weeks). Drug administration is initiated respectively on days 5 and 7 post-tumor graftings for the Hs683 and GL19 models. The temozolomide dose and treatment schedule are selected based on previously optimized regimens. Narciclasine dose and treatment schedule are selected based on Narciclasine toxicity study in rats after oral administration and pharmacokinetic study that we have recently published. In toxicity study, Narciclasine (25, 10, or 1 mg/kg) is administered five times a week for 3 weeks and the no adverse effect level dose is defined to be 1 mg/kg/d p.o.,

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Animal Research	with minimal acanthosis reactive changes and minor variations in some biochemistry parameters observed at this dose level considered to be nonadverse [1].
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Solubility Information

Solubility	DMSO: 25 mg/mL (81.36 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 1 mg/mL (3.25 mM),Sonication is recommended. <i>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.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.2546 mL	16.2729 mL	32.5457 mL
5 mM	0.6509 mL	3.2546 mL	6.5091 mL
10 mM	0.3255 mL	1.6273 mL	3.2546 mL
50 mM	0.0651 mL	0.3255 mL	0.6509 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

Lefranc F, et al. Narciclasine, a plant growth modulator, activates Rho and stress fibers in glioblastoma cells. Mol Cancer Ther. 2009 Jul;8(7):1739-50.

Xu T, Pan Z, Li X, et al.Narciclasine inhibits vaccinia virus infection by activating the RhoA signaling pathway. Biosafety and Health.2024

Wahyuni DS, et al. The use of bio-guided fractionation to explore the use of leftover biomass in Dutch flower bulb production as allelochemicals against weeds. Molecules. 2013 Apr 17;18(4):4510-25.

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