Data Sheet (Cat.No.TQ0183)

TargetMol
A DRUG SCREENING EXPERT

Narciclasine

Chemical Properties

CAS No.:	29477-83-6
Formula:	C14H13NO7
Molecular Weight:	307.26
Appearance:	N/A
Storage:	0-4℃ for short term (days to weeks), or -20℃ for long term (months).

Biological Description

Description	Narciclasine, a natural product, modulates the Rho/Rho-kinase/LIM kinase/cofilin signaling pathway, greatly increasing GTPase RhoA activity.
In vitro	Narciclasine activates Rho and stress fibers in glioblastoma multiforme cells (mean IC50: ~50 nM on the 6 human glioblastoma multiforme). The mean IC50 value of 47 nM for Narciclasine across a panel of 60 cancer cell lines [1]. The IC50 measured for radicle growth inhibition is 0.1 μM for Narciclasine [2].
In vivo	The i.v. regimen of Narciclasine at 1 mg/kg significantly increases the survival of GL19 glioblastoma multiforme-bearing mice. Narciclasine when given orally at the same dose five times a week for 5 consecutive weeks also significantly increases animal survival in this model. Oral treatment with Narciclasine at 1 mg/kg significantly increases the survival of Hs683 glioblastoma multiforme-bearing mice. Increasing the number of doses administered per week does not increase the survival of these Hs683 glioblastoma multiforme-bearing mice [1].
Cell Research	The Narciclasine IC50 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 IC50 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., with minimal acanthosis reactive changes and minor variations in some biochemistry parameters observed at this dose level considered to be nonadverse [1].

Solubility Information

Solubility	DMSO: 25 mg/mL (81.37 mM) (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.255 mL	16.273 mL	32.546 mL
5 mM	0.651 mL	3.255 mL	6.509 mL
10 mM	0.325 mL	1.627 mL	3.255 mL
50 mM	0.065 mL	0.325 mL	0.651 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 ℃ for 6 months; - 20 ℃ for 1 month. Please use it as soon as possible.

Reference

1. 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.

2. 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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