Data Sheet (Cat.No.T2974)

TargetMol

Cyclovirobuxine D

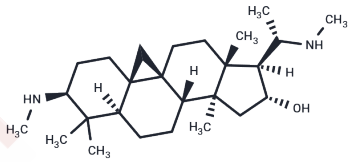
Chemical Properties

CAS No. : 860-79-7

Formula: C26H46N2O

Molecular Weight: 402.66

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	Cyclovirobuxine D (Bebuxine) is extracted from Buxus microphylla.
Targets(IC50)	Apoptosis,Akt,Autophagy,mTOR
In vitro	The LD50 of Cyclovirobuxine D in mice is found to be 8.9 mg/kg (i.v.), 9.2 mg/kg (i.p.), and 293 mg/kg (p.o.). This compound is observed to reduce the weight of venous thrombosis in rats. In anesthetized pigs, Cyclovirobuxine D initiates coronary vasodilation, a mechanism associated with the release of nitric oxide in endothelial cells. Furthermore, it also improves cardiac failure induced by myocardial infarction in rats.
In vivo	Cyclovirobuxine D facilitates the utilization of intracellular Ca(2+) and prevents its efflux, thereby exerting protective effects against heart failure. It enhances the vitality of cardiomyocytes damaged by oxidation or hypoxia. Furthermore, it significantly reduces the infarct size caused by ligation of the coronary artery in rats. Cyclovirobuxine D also protects the endothelial cells of rat aortas from hypoxic damage and increases the release of NO within these cells.
Kinase Assay	MDA-MB-231 cells treated as indicated or tumor tissues are harvested and lysed in Mg2+ lysis buffer containing 50 mM Tris (pH 7.5), 10 mM MgCl2, 0.5 M NaCl, and protease inhibitor cocktail. Equal amounts of lysates are incubated with PAK-PBD beads at 4°C for 1 h. PAK-PBD beads are pelleted by centrifugation and washed with ish buffer containing 25 mM Tris (pH 7.5), 30 mM MgCl2, 40 mM NaCl. Active Rac1 is detected by western blotting.

Solubility Information

Solubility	Ethanol: 14.23 mg/mL (35.34 mM),Sonication is recommended. H2O: Insoluble, DMSO: Insoluble,Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.4835 mL	12.4174 mL	24.8348 mL
5 mM	0.4967 mL	2.4835 mL	4.967 mL
10 mM	0.2483 mL	1.2417 mL	2.4835 mL
50 mM	0.0497 mL	0.2483 mL	0.4967 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

Hu D, et al. Eur J Pharmacol, 2007, 569(1-2), 103-109.
Wang Z, Wu Z, Chen J, et al.Cyclovirobuxine D Inhibits Triple-Negative Breast Cancer via YAP/TAZ Suppression and Activation of the FOXO3a/PINK1-Parkin Pathway-Induced Mitophagy.Phytomedicine.2024: 156287.
Grossini E, et al. Life Sci, 1999, 65(5), PL59-65.
Yu B, et al. Fitoterapia. 2011, 82(6), 868-877.
Yu B, et al. Fitoterapia. 2012, 83(8):1653-1665.