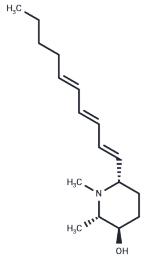
Data Sheet (Cat.No.TN6500)

TargetMol

Microgrewiapine A

Chemical Properties



CAS No. : 1420777-30-5

Formula: C17H29NO

Molecular Weight: 263.425

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	Microgrewiapine A is a selective cytotoxic agent for colon cancer cells over normal colon cells and to exhibit nicotinic receptor antagonistic activity for both the hα3β4 and hα4β2 receptor subtypes.
Targets(IC50)	AChR
In vitro	Microcos paniculata is a large shrub or small tree that grows in several countries in South and Southeast Asia. METHODS AND RESULTS: In the present study, three new piperidine alkaloids, microgrewiapines A, microgrewiapine B, microgrewiapine C (1-3), as well as three known compounds, inclusive of microcosamine A (4), 7'-(3',4'-dihydroxyphenyl)-N-[4-methoxyphenyl)ethyl]propenamide (5), and liriodenine (6), were isolated from cytotoxic fractions of the separate chloroform-soluble extracts of the stem bark, branches, and leaves of M. paniculata. Compounds 1-6 and 1a (Microgrewiapine A 3-acetate) showed a range of cytotoxicity values against the HT-29 human colon cancer cell line. When evaluated for their effects on human α3β4 or α4β2 nicotinic acetylcholine receptors (nAChRs), several of these compounds were shown to be active as nAChR antagonists. CONCLUSIONS: As a result of this study, Microgrewiapine A (1) was found to be a selective cytotoxic agent for colon cancer cells over normal colon cells and to exhibit nicotinic receptor antagonistic activity for both the hα3β4 and hα4β2 receptor subtypes.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.7961 mL	18.9804 mL	37.9607 mL
5 mM	0.7592 mL	3.7961 mL	7.5921 mL
10 mM	0.3796 mL	1.898 mL	3.7961 mL
50 mM	0.0759 mL	0.3796 mL	0.7592 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

Alkaloids from Microcos paniculata with cytotoxic and nicotinic receptor antagonistic activities. J Nat Prod. 2013 Feb 22;76(2):243-9.