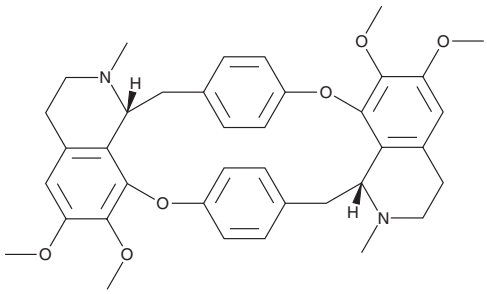
PRODUCT INFORMATION

Cycleanine

Item No. 36020

CAS Registry No.: 518-94-5
Formal Name: (12aR,24aR)-2,3,12a,13,14,15,24,24a-octahydro-5,6,17,18-tetramethoxy-1,13-dimethyl-8,11:20,23-dietheno-1H,12H-[1,10]dioxacyclooctadecino[2,3,4-ij:11,12,13-i'j']diisoquinoline
Synonyms: O,O-Dimethylisochondrodendrine, O-Methylnorcycleanine
MF: $C_{38}H_{42}N_2O_6$
FW: 622.8
Purity: ≥98%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Plant/*Stephania japonica* (Thunb.) Miers.



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Cycleanine is supplied as a solid. A stock solution may be made by dissolving the cycleanine in the solvent of choice, which should be purged with an inert gas. Cycleanine is soluble in acetone, dichloromethane, DMSO, and ethyl acetate.

Description

Cycleanine is an alkaloid that has been found in *T. subcordata* and has anticancer and antimalarial activities.[1,2] It selectively inhibits the growth of OVCAR-8, A2780, IGROV-1, and OVCAR-4 ovarian cancer cells (IC_{50}s = 10, 7.6, 14, and 7.2 µM, respectively) over non-cancerous ovarian surface epithelial cells (IC_{50} = 35 µM).[1] It also halts the cell cycle at the subG_1 phase and induces apoptosis in OVCAR-8 cells. Cycleanine (25 and 50 mg/kg) reduces parasitemia and increases survival in a mouse model of infection with a chloroquine-resistant strain of *P. berghei*.[2]

References

1. Uche, F.I., Drijfhout, F.P., McCullagh, J., *et al.* Cytotoxicity effects and apoptosis induction by bisbenzylisoquinoline alkaloids from *Triclisia subcordata*. *Phytother. Res.* **30(9)**, 1533-1539 (2016).
2. Uche, F.I., Guo, X., Okokon, J., *et al. In vivo* efficacy and metabolism of the antimalarial cycleanine and improved *in vitro* antiplasmodial activity of semisynthetic analogues. *Antimicrob. Agents Chemother.* **65(2)**, e01995-20 (2021).

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