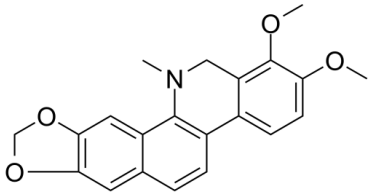
Data Sheet

Product Name:	Dihydrochelerythrine
Cat. No.:	CS-3820
CAS No.:	6880-91-7
Molecular Formula:	C21H19NO4
Molecular Weight:	349.38
Target:	Fungal
Pathway:	Anti-infection
Solubility:	DMSO : 50 mg/mL (143.11 mM; Need ultrasonic and warming)



BIOLOGICAL ACTIVITY:

Dihydrochelerythrine is a natural compound isolated from the leaves of Macleaya microcarpa; has antifungal activity. IC50 value: Target: in vitro: Dihydrochelerythrine showed the highest antifungal activity against B. cinerea Pers, with 98.32% mycelial growth inhibition at 50 μg/mL. Dihydrochelerythrine inhibited spore germination in vitro in a concentration-dependent manner [1]. Dihydrochelerythrine appeared to be less cytotoxic since the viability of cells exposed to 20 microM dihydrochelerythrine for 24h was reduced only to 53%. A dose-dependent induction of apoptosis and necrosis by chelerythrine and dihydrochelerythrine was confirmed by annexin V/propidium iodide dual staining flow cytometry [2]. Dihydrochelerythrine (4) exhibited strong activity against methicillin-resistant Staphylococcus aureus SK1 and moderate activity against Escherichia coli TISTR 780 with MIC values of 8 and 16 μg/mL, respectively [3].

References:

[1]. Feng G, et al. Inhibitory activity of dihydrosanguinarine and dihydrochelerythrine against phytopathogenic fungi. Nat Prod Res. 2011 Jul;25(11):1082-9.

[2]. Vrba J, et al. Chelerythrine and dihydrochelerythrine induce G1 phase arrest and bimodal cell death in human leukemia HL-60 cells. Toxicol In Vitro. 2008 Jun;22(4):1008-17.

[3]. Tantapakul C, et al. Antibacterial compounds from Zanthoxylum rhetsa. Arch Pharm Res. 2012 Jul;35(7):1139-42.

CAIndexNames:

[1,3]Benzodioxolo[5,6-c]phenanthridine, 12,13-dihydro-1,2-dimethoxy-12-methyl-

SMILES:

CN1C(C2=CC(OCO3)=C3C=C2C=C4)=C4C5=CC=C(OC)C(OC)=C5C1

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