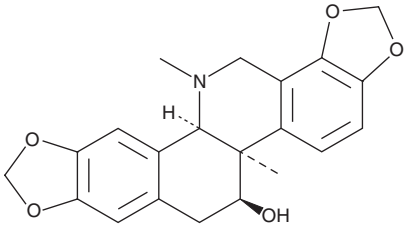
PRODUCT INFORMATION

Corynoline

Item No. 30712

CAS Registry No.:	18797-79-0
Formal Name:	(5bR,6S,12bR)-5b,6,7,12b,13,14-hexahydro-5b,13-dimethyl-[1,3]benzodioxolo[5,6-c]-1,3-dioxolo[4,5-i]phenanthridin-6-ol
Synonyms:	(+)-Corynoline, 13-methyl-Chelidonine, CRL, (d)-Corynoline
MF:	$C_{21}H_{21}NO_5$
FW:	367.4
Purity:	≥95%
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Plant/*Corydalis bungeana Turcz.*



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

Laboratory Procedures

Corynoline is supplied as a crystalline solid. A stock solution may be made by dissolving the corynoline in the solvent of choice, which should be purged with an inert gas. Corynoline is soluble in the organic solvent chloroform at a concentration of approximately 10 mg/ml. Corynoline is also slightly soluble in ethanol and dimethyl formamide.

Description

Corynoline is an isoquinoline alkaloid that has been found in *C. incisa* and has diverse biological activities.[1-5] It is an inhibitor of acetylcholinesterase (IC_{50} = 30.6 µM) and β-secretase 1 (BACE1; IC_{50}s = 33.59 and 89.07 µM for FRET and immobilized enzyme reactive assays, respectively).[1,2] Corynoline (1-4 µM) decreases LPS-induced NF-κB activation and further increases LPS-induced increases in Nrf2 and heme oxygenase-1 (HO-1) protein levels in human umbilical vein endothelial cells (HUVECs).[3] It increases the survival rate in a mouse model of LPS- and heat-killed *E. coli*-induced sepsis when administered at doses of 10, 20, and 40 mg/kg.[4] Corynoline selectively inhibits proliferation of B16/F10 mouse and A375 human melanoma cells (IC_{50}s = 12.87 and 10.47 µM, respectively) over non-cancerous melanocytes (IC_{50} = 126.61 µM).[5] It halts the cell cycle at the G_2 phase and induces apoptosis and the production of reactive oxygen species (ROS) in a dose-dependent manner in the same cells. It also reduces tumor growth in a B16/F10 mouse melanoma model when administered at a dose of 20 mg/kg.

References

1. Kim, D.K. *Arch. Pharm. Res.* **25(6)**, 817-819 (2002).
2. Chlebek, J., Simone, A.D., Hošťálková, A., *et al. Fitoterapia* **109**, 241-247 (2016).
3. Liu, B., Su, K., Wang, J., *et al. Inflammation* **41(5)**, 1640-1647 (2018).
4. He, Z.-B., Chen, P., Peng, Z.-Y., *et al. Trop. J. Pharm. Res.* **13(1)**, 81-86 (2014).
5. Yi, C., Li, X., Chen, S., *et al. Phytother. Res.* (2020).

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