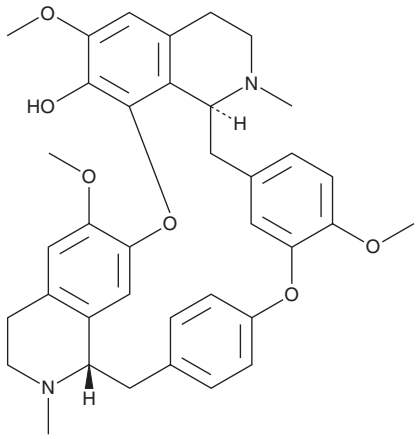
PRODUCT INFORMATION

Fangchinoline

Item No. 29243

CAS Registry No.:	436-77-1
Formal Name:	(4aS,16aS)-3,4,4a,5,16a,17,18,19-octahydro-12,21,26-trimethoxy-4,17-dimethyl-16H-1,24:6,9-dietheno-11,15-metheno-2H-pyrido[2′,3′:17,18][1,11]dioxacycloeicosino[2,3,4-ij]isoquinolin-22-ol
Synonyms:	7-O-Demethyltetrandrine, Hanfangchin B, NSC 77036
MF:	$C_{37}H_{40}N_2O_6$
FW:	608.7
Purity:	≥98%
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Plant/*Stephaniae tetrandrae radix*



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

Laboratory Procedures

Fangchinoline is supplied as a crystalline solid. A stock solution may be made by dissolving the fangchinoline in the solvent of choice, which should be purged with an inert gas. Fangchinoline is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of fangchinoline in these solvents is approximately 30 mg/ml.

Fangchinoline is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, fangchinoline should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Fangchinoline has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Fangchinoline is an alkaloid that has been found in *S. tetrandrae* and has diverse biological activities, including anti-inflammatory, neuroprotective, and anticancer properties.[1-3] It inhibits the activity of sheep COX and decreases IL-6-induced proliferation of MH60 mouse hybridoma cells with IC_{50} values of 129 and 3.7 µM, respectively.[1] Fangchinoline (1 and 10 µM) reduces cyanide-induced increases in secreted glutamate levels and cell death in primary neonatal rat cerebellar granule neurons.[2] It decreases proliferation of PC3 human prostate cancer cells by 63 and 86% when used at concentrations of 20 and 30 µM, respectively.[3] Fangchinoline reduces tumor growth in a PC3 mouse xenograft model when administered at a dose of 5 mg/kg per day for 12 days.

References

1. Choi, H.S., Kim, H.S., Min, K.R., *et al.* Anti-inflammatory effects of fangchinoline and tetrandrine. *J. Ethnopharmacol.* **69(2),** 173-179 (2000).
2. Cho, S.O. and Seong, Y.H. Protective effect of fangchinoline on cyanide-induced neurotoxicity in cultured rat cerebellar granule cells. *Arch. Pharm. Res.* **25(3),** 349-356 (2002).
3. Wang, C.D., Huang, J.G., Gao, X., *et al.* Fangchinoline induced G1/S arrest by modulating expression of p27, PCNA, and cyclin D in human prostate carcinoma cancer PC3 cells and tumor xenograft. *Biosci. Biotechnol. Biochem.* **74(3),** 488-493 (2010).

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