
Product Data Sheet

Product Name: Jatrorrhizine

Cat. No.: GC38433

Chemical Properties

Cas. No. 3621-38-3

SMILES COC1=C(OC)C2=C[N+]3=C(C4=CC(OC)=C(O)C=C4CC3)C=C2C=C1Formula $C_{20}H_{20}NO_4^+$ M.Wt 338.38Solubility H_2O : 5 mg/mL (14.78 mM; Need ultrasonic); DMSO : 3.33 mg/mL (9.84 mM; Need ultrasonic) Store Storage at -20°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure **Background**

Jatrorrhizine is an alkaloid that has been found in the Chinese herb *C. chinensis* and has diverse biological activities.^{1,2,3,4} It is active against *P. falciparum* (IC₅₀s = 422 and 1,607 ng/ml for D-6 and W-2 clones, respectively) and *E. histolytica* (IC₅₀ = 82.7 μM).^{1,2} Jatrorrhizine inhibits the growth of C8161 human melanoma cells *in vitro* (IC₅₀ = 47.4 μM) and inhibits C8161 cell-mediated neovascularization in a Matrigel? plug assay in mice when administered at a dose of 50 μg/animal.³ It reduces serum levels of triglycerides, LDL cholesterol (LDL-C), aspartate transaminase (AST), and alanine aminotransferase (ALT) in a high-fat diet-induced mouse model of hyperlipidemia when administered at doses of 20 and 100 mg/kg.⁴ Jatrorrhizine is also a metabolite of berberine .⁵

1.Vennerstrom, J.L., and Klayman, D.L. Protoberberine alkaloids as antimalarials. *J. Med. Chem.* 31(6)1084-1087(1988) 2.Wright, C.W., Marshall, S.J., Russell, P.F., et al. *In vitro*

Caution: Product has not been fully validated for medical applications. For research use only.

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antiplasmodial, antiamebic, and cytotoxic activities of some monomeric isoquinoline alkaloids. *Nat. Prod.* 63(12)1638-1640(2000) 3. Liu, R., Cao, Z., Pan, Y., et al. Jatrorrhizine hydrochloride inhibits the proliferation and neovascularization of C8161 metastatic melanoma cells. *Anticancer Drugs* 24(7)667-676(2013) 4. Yang, W., She, L., Yu, K., et al. Jatrorrhizine hydrochloride attenuates hyperlipidemia in a high-fat diet-induced obesity mouse model. *Mol. Med. Rep.* 14(4)3277-3284(2016) 5. Zuo, F., Nakamura, N., Akao, T., et al. Pharmacokinetics of berberine and its main metabolites in conventional and pseudo germ-free rats determined by liquid chromatography/ion trap mass spectrometry. *Drug Metab. Dispos.* 34(12)2064-2072(2006)

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