

Product Data Sheet

Product Name: Anagryne

Cat. No.: GC46853

Chemical Properties

Cas. No. 486-89-5

SMILES O=C1N(C2=CC=CC=C2)C[C@]3([H])[C@@]4([H])CCCCN4C[C@@]2([H])C3

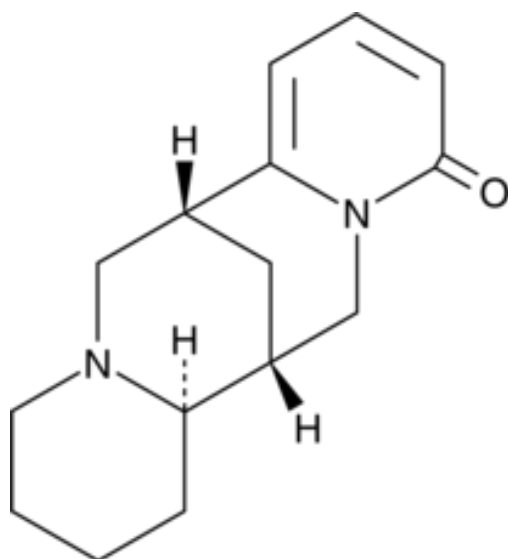
Formula $C_{15}H_{20}N_2O$ M.Wt 244.3

Solubility H_2O : 25 mg/mL (102.32 mM; Need ultrasonic); DMSO : 25 mg/mL (102.32 mM; Need ultrasonic) Storage Store at $-20^{\circ}C$, protect from light

General tips For obtaining a higher solubility , please warm the tube at $37^{\circ}C$ and shake it in the ultrasonic bath for a while. Stock solution can be stored below $-20^{\circ}C$ 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

Anagryne is an alkaloid that has been found in *L. albus* and has nematocidal and anticancer activities.^{1,2,3} It binds to muscarinic and nicotinic acetylcholine receptors (AChRs) with IC_{50} values of 132 and 2,096 μM , respectively, in radioligand binding assays using pig brain membranes that

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endogenously express high levels of the receptors.¹ Anagryne decreases survival of *B. xylophilus* worms.² It inhibits proliferation of TE-671 and SH-SY5Y cancer cells (EC_{50} s = 18.1 and 19.1 μ M, respectively).³ Maternal ingestion of anagryne during gestation is associated with the teratogenic condition crooked calf disease in cattle.⁴

1.Schmeller, T., Sauerwein, M., Sporer, F., et al.Binding of quinolizidine alkaloids to nicotinic and muscarinic acetylcholine receptorsJ. Nat. Prod.57(9)1316-1319(1994) 2.Matsuda, K., Kimura, K., Komai, K., et al.Nematicidal activities of (-)-N-methylcytisine and (-)-anagryne from *Sophora flavescens* against pine wood nematodesAgr. Biol. Chem.53(8)2287-2288(1989) 3.Green, B.T., Lee, S.T., Panter, K.E., et al.Actions of piperidine alkaloid teratogens at fetal nicotinic acetylcholine receptorsNeurotoxicol. Teratol.32(3)383-390(2010) 4.Keeler, R.F., Cronin, E.H., and Shupe, J.L.Lupin alkaloids from teratogenic and nonteratogenic lupins. IV. Concentration of total alkaloids, individual major alkaloids, and the teratogen anagryne as a function of plant part and stage of growth and their relationship to crooked calf diseaseJ. Toxicol. Environ. Health1(6)899-908(1976)

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