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## Product Data Sheet

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Product Name: Ajmalicine

Cat. No.: GC35272

### Chemical Properties

Cas. No. 483-04-5

SMILES O=C(C1=CO[C@@H](C)[C@](CN2CC3)([H])[C@]1([H])C[C@@]2([H])C4=C3C5=CC=CC=C5N4)OC

Formula  $C_{21}H_{24}N_2O_3$  M.Wt 352.43

Solubility DMSO : 5.56 mg/mL (15.78 mM; ultrasonic and warming and heat to 60°C) Storage Store 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

Ajmalicine is an terpenoid indole alkaloid that has been found in *R. serpentina*.<sup>1,2</sup> It is an  $\alpha_1$ -adrenergic receptor antagonist, reducing the phenylephrine-induced pressor response in pithed rats when administered at doses ranging from 1 to 4 mg/kg.<sup>3</sup> It also binds to  $\alpha_{2A}$ -,  $\alpha_{2B}$ -,  $\alpha_{2C}$ -, and  $\alpha_{2D}$ -adrenergic receptors ( $K_i$ s = 8.2, 14.5, 5, and 289 nM, respectively).<sup>4</sup> Ajmalicine, in combination with almitrine, improves hemodynamic and metabolic parameters following transient cerebral ischemia in dogs.<sup>5</sup>

1.Sharma, V., Chaudhary, S., Srivastava, S., et al.Characterization of variation and quantitative trait loci related to terpenoid indole alkaloid yield in a recombinant inbred line mapping population of *Catharanthus roseus*. Genet.91(1)49-69(2012) 2.Srivastava, A., Tripathi, A.K., Pandey, R., et al.Quantitative determination of reserpine, ajmaline, and ajmalicine in *Rauvolfia serpentina* by reversed-phase high-performance liquid chromatography. Chromatogr. Sci.44(9)557-560(2006) 3.Demichel, P., Gomond, P., and

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

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Roquebert, J.  $\alpha$ -Adrenoceptor blocking properties of raubasine in pithed rats *Br. J. Pharmacol.* 77(3)449-454(1982) 4. Ruffolo, R.R., Jr., Bondinell, W., and Hieble, J.P.  $\alpha$ - and  $\beta$ -adrenoceptors: From the gene to the clinic. 2. Structure-activity relationships and therapeutic applications *J. Med. Chem.* 38(19)3681-3716(1995) 5. Cahn, R., and Cahn, J. Curative effect of an almitrine-raubasine combination in the postischemic syndrome following transient cerebral ischemia in dogs *Pharmacology* 36(3)156-165(1988)

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