
Product Data Sheet

Product Name: Ajmaline (Cardiorythmine)

Cat. No.: GC34018

Chemical Properties

Cas. No. 4360-12-7

SMILES CN1C2=CC=CC=C2[C@@]34[C@]1([H])[C@@](CC5[C@H](CC)[C@H]6O)([H])N6[C@]([H])(C5[C@H]4O)C3Formula C₂₀H₂₆N₂O₂ M.Wt 326.43

Solubility DMSO : ≥ 66 mg/mL (202.19 mM) 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

Ajmaline is an alkaloid that has been found in *R. serpentina* and has ion channel inhibitory and antiarrhythmic activities.^{1,2,3,4,5} It inhibits the human-ether-a-go-go (hERG) potassium channel, also known as K_v11.1, and the voltage-gated potassium channel subtypes K_v1.5 and K_v4.3 with IC₅₀ values of 42.3, 293, and 186 μM, respectively, in *Xenopus* oocytes expressing the channels.^{2,3} Ajmaline (1 μg/ml) increases the action potential duration in isolated dog atrium and ventricle.⁴ It increases the functional refractory duration in the atrium, ventricle, and atrioventricular conduction system in anesthetized dogs when administered intravenously at a dose of 1 mg/kg.⁴ Ajmaline (2 mg/kg, i.v.) reduces the number of premature ventricular complexes and decreases the duration of ventricular tachycardia and ventricular fibrillation in coronary artery-ligated anesthetized rats.⁵

1.Srivastava, A., Tripathi, A.K., Pandey, R., et al. Quantitative determination of reserpine, ajmaline, and ajmalicine in *Rauvolfia serpentina* by reversed-phase high-performance

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

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liquid chromatography]. *Chromatogr. Sci.*44(9)557-560(2006) 2.Kiesecker, C., Zitron, E., Lück, S., et al.Class Ia anti-arrhythmic drug ajmaline blocks HERG potassium channels: Mode of action *Naunyn-Schmiedeberg's Arch. Pharmacol.*370(6)423-435(2004) 3.Fischer, F., Vonderlin, N., Zitron, E., et al.Inhibition of cardiac Kv1.5 and Kv4.3 potassium channels by the class Ia anti-arrhythmic ajmaline: Mode of action *Naunyn-Schmiedeberg's Arch. Pharmacol.*386(11)991-999(2013) 4.Bojorges, R., Pastelin, G., Sanchez-Perez, S., et al.The effects of ajmaline in experimental and clinical arrhythmias and their relation to some electrophysiological parameters of the heart]. *Pharmacol. Exp. Ther.*193(1)182-193(1975) 5.Hashimoto, Y., Hori, R., Okumura, K., et al.Pharmacokinetics and antiarrhythmic activity of ajmaline in rats subjected to coronary artery occlusion *Br. J. Pharmacol.*88(1)71-77(1986)

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