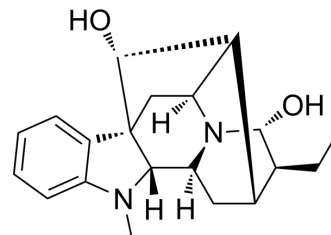


## Ajmaline

<b>Cat. No.:</b>	HY-B1167		
<b>CAS No.:</b>	4360-12-7		
<b>Molecular Formula:</b>	C <sub>20</sub> H <sub>26</sub> N <sub>2</sub> O <sub>2</sub>		
<b>Molecular Weight:</b>	326.43		
<b>Target:</b>	Sodium Channel		
<b>Pathway:</b>	Membrane Transporter/Ion Channel		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : ≥ 100 mg/mL (306.34 mM)  
 \* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	3.0634 mL	15.3172 mL	30.6344 mL
	5 mM	0.6127 mL	3.0634 mL	6.1269 mL
	10 mM	0.3063 mL	1.5317 mL	3.0634 mL

Please refer to the solubility information to select the appropriate solvent.

#### In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
 Solubility: ≥ 2.5 mg/mL (7.66 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
 Solubility: ≥ 2.5 mg/mL (7.66 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
 Solubility: ≥ 2.5 mg/mL (7.66 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

Ajmaline (Cardiorythmine) is a sodium channel blocking, class 1A anti-arrhythmic agent. Ajmaline blocks HERG currents with an IC<sub>50</sub> of 1 μM in HEK cells and 42.3 μM in *Xenopus* oocytes. Ajmaline can be used for the research of the ventricular tachyarrhythmia<sup>[1][2]</sup>.

#### In Vitro

Electrophysiological experiments are performed with human embryonic kidney (HEK) cells (whole-cell patch clamp) and *Xenopus* oocytes (double-electrode voltage clamp) expressing wild-type and mutant HERG channels. Ajmaline blocks HERG

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currents with an  $IC_{50}$  of  $1.0\mu M$  in HEK cells and  $42.3\mu M$  in *Xenopus* oocytes<sup>[2]</sup>.  
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

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## REFERENCES

- [1]. Sparidans RW, et al. Liquid chromatographic assay with fluorescence detection to determine ajmaline in serum from patients with suspected Brugada syndrome. *J Chromatogr B Analyt Technol Biomed Life Sci.* 2010;878(23):2168-2172.
- [2]. Kiesecker C, et al. Class Ia anti-arrhythmic drug ajmaline blocks HERG potassium channels: mode of action. *Naunyn Schmiedebergs Arch Pharmacol.* 2004;370(6):423-435.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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