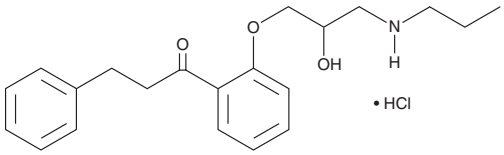
# PRODUCT INFORMATION

## Propafenone (hydrochloride)

*Item No. 21871*

**CAS Registry No.:** 34183-22-7
**Formal Name:** 1-[2-[2-hydroxy-3-(propylamino) propoxy]phenyl]-3-phenyl-1-propanone, monohydrochloride
**MF:** $C_{21}H_{27}NO_3$ • HCl
**FW:** 377.9
**Purity:** ≥98%
**UV/Vis.:** $\lambda_{max}$: 209, 247, 303 nm
**Supplied as:** A crystalline solid
**Storage:** -20°C
**Stability:** ≥4 years




*Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.*

### Laboratory Procedures

Propafenone (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the propafenone (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Propafenone (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of propafenone (hydrochloride) in these solvents is approximately 0.3, 30, and 20 mg/ml, respectively.

Propafenone (hydrochloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, propafenone (hydrochloride) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Propafenone (hydrochloride) has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Propafenone is a class I antiarrhythmic agent.[1] It inhibits calcium currents ($I_{Ca}$) in isolated guinea pig ventricular myocytes ($IC_{50}$ = 5 µM), as well as ATP-sensitive potassium currents ($IK_{ATP}$) in isolated rabbit atrial and ventricular monocytes ($IC_{50}$s = 1.26 and 4.94 µM, respectively).[1,2] Propafenone also blocks sodium ($I_{Na}$), potassium ($I_K$), and transient outward potassium currents in various cardiac cells.[2-4] *In vivo*, propafenone (2 and 3 mg/kg, i.v.) reverses sinus rhythm in a dog model of barium chloride-induced ventricular arrhythmia.[5] Formulations containing propafenone have been used in the treatment of cardiac arrhythmias.

### References


1. Delgado, C., Tamargo, J., Henzel D., *et al.* Effects of propafenone on calcium current in guinea-pig ventricular myocytes. *Br. J. Pharmacol.* **108(3)**, 721-727 (1993).
2. Christé, G., Tebbakh, H., Šimurdová, M., *et al.* Propafenone blocks ATP-sensitive $K^+$ channels in rabbit atrial and ventricular cardiomyocytes. *Eur. J. Pharmacol.* **373(2-3)**, 223-232 (1999).
3. Delpón, E., Valenzuela, C.F., Pérez, O., *et al.* Propafenone preferentially blocks the rapidly activating component of delayed rectifier $K^+$ current in guinea pig ventricular myocytes. Voltage-independent and time-dependent block of the slowly activating component. *Circ. Res.* **76(2)**, 223-235 (1995).
4. Simó-Vicens, R., Sauter, D.R.P., Grunnet, M., *et al.* Effect of antiarrhythmic drugs on small conductance calcium - activated potassium channels. *Eur. J. Pharmacol.* (2017).
5. Germiniani, H., and Germiniani, C.d.L.B. Effect of propafenone hydrochloride in ventricular arrhythmias experimentally induced by barium chloride. *Arq. Bras. Cardiol.* **36(2)**, 101-105 (1981).





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